

January 2nd, 1920

Mr. R. H. Morton,
C/o County Highway Commission,
Court House,
San Diego, Calif.

My dear Mr. Morton:

Personal friends, in whom I have every confidence, recommend this man quartly as an engineer. Would you kindly go into his recommendations and let him know whether or not there is an opening with the Commission?

Yours very truly,

EE/bm

[R. H. MORTON]
CSM

February 2, 1920.

County Highway Commission,
San Diego, California.

Gentlemen:

I submit herewith a report covering the activities of the forces of the Commission from the time of my assuming the duties of Chief Engineer on December 29, 1919, to January 31, 1920.

The first activities were in regard to obtaining office furnishings for the suite of rooms which will be the headquarters of the Commission in the Union Building. The office furniture has been purchased mainly from San Diego dealers, and a good, substantial type of furniture which will have a high second hand value has been obtained. Mention should be made of the many articles, such as chairs and tables, obtained from the Court House through the courtesy of the Board of Supervisors. We were able to get settled in the new offices during the week ending January 10, and since that time one of our greatest activities has been interviewing applicants for positions and organizing field parties.

The first party was placed at work on January 15 surveying a proposed new location on the Poway grade between Camp Kearny and Escondido. Two additional parties were put to work on the Chula Vista-Coronado and the La Mesa roads, on January 19. The fourth party began work on January 28 on the Mission

C
54

County Highway Commission--2

road north of Escondido. The fifth party, exclusively for running levels, will be placed at work on February 2.

On this date there are twenty-nine employees of the Commission, selected for their proficiency from many applicants.

To date, four alignment parties have completed alignment surveys of 22.7 miles of the highway system. This does not mean that the surveying work is completed, however, as it is still necessary to run bench marks, take cross-sections, work up notes in the office and prepare detailed plans.

During this period, trips of inspection have been made with each of the Supervisors over that portion of the highway system to be improved which lies in his district. The only highway not as yet visited on an inspection trip is the road from El Cajon to Julian. The preliminary inspection on this road will probably be made early in the coming week.

I believe it should be mentioned that, in my opinion, the main line roads as maintained by the different members of the Board of Supervisors are in exceedingly good condition. The system of maintenance is the most efficient that I have seen in any county of the State where I have had opportunity to observe. It has been my observation that in very few other counties do the Supervisors give their individual attention to the repairing of the highways, and the result is that in most other counties the highways show evidence of neglect. In San Diego County, the wise use of disintegrated granite and systematic dragging has kept the surface of many of the roads like that of boulevards. The Supervisors of many other counties could find a good object lesson in the roads of San Diego County.

County Highway Commission--3

The interest taken by the members of the Board of Supervisors in the highways is encouraging, and the Commission will benefit largely by their advice and co-operation.

I believe it will be to the advantage of the highway project to push the surveying work to an early completion, so as to clear the way for an active construction program, so directed as to endeavor to complete the highway system in two years.

Many contractors at the present time view highway work with suspicion, and we should endeavor to so arrange our contracts, specifications, and all other details of the work in such a manner as to encourage bidders and aid our contractors in making the most rapid progress.

It will probably be advisable to have contracts running concurrently in all parts of the county, in order to push the work to an early completion, and your engineering department will bend every effort toward preparing plans and specifications for advertisement during the spring months.

Respectfully submitted,

Chief Engineer.

RMM-M

February 9
1 9 2 0

Mr. R. M. Morton,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Inclosed find editorial which is explanatory. I think it a mistake to let the Sun print this editorial and not answer it.

My suggestion is that you write out an interview and answer somewhat along the following lines: For many years San Diego County was noted for their wonderful dirt roads. That was in the day when the travel was light. Any one will see that the present roads in the back country are deteriorating under heavy automobile and truck travel; that the cost of maintenance is excessive and a heavy burden on the tax payer; that with the increase of travel on the San Diego County dirt roads, means increased dust and discomfort and annoyance during the summer months particularly; that it will continue to increase as the travel increases and the only possible way of eliminating the dust annoyance is by a paved road; that a paved road is, if not more, valuable to the county in the mountains than a railroad; that it increased land values from 100% on the highway to 25% even three or four miles out from the paved highway; and that it is a God-send not alone to the farmers, but worth more in the city to those who desire to get out into our mountains; that the paved highway increases materially in the building up of the county, increases population and a large increase in visitors from other sections, therefore the day of the dirt roads is passed and we need a new type of road for the automobiles and truck.

The above is simply a suggestion, and if you have not met Mr. Porterfield, my advice is that you take it over and hand it to him and have a good talk with him.

March 4th, 1920

Mr. R. M. Morton,
Engineer,
Union Building,
San Diego, California.

My dear Morton:

Enclosed find letter from Mr. Nulton which is explanatory. I do hope you will make a thorough investigation of the road from Bernardo Bridge into Escondido. My private opinion is it should go straight.

After reading this letter, please turn it over to Mr. Wheaton.

Yours very truly,

BF/cm

I hope you will get over the Flu in good shape and soon be on your feet again.

Yours very truly,

EF/ER
Incls.

P. S.

At the meeting of the Highway Commission yesterday this matter was discussed. My suggestion is that you make the answer and submit same to the Highway Commission before delivering it to the Sun, in case you decide to answer it at all.

I believe the Commission is in favor that you answer this so long as it is answered in a way that there is no come-back and providing it does not start a controversy. The Sun is the largest paper in the City and those in control are very touchy and if you ignore them entirely, I fear that you would make a mistake.

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., March 20, 1920.

March
Eighteenth
1 9 2 0

Mr. R. M. Morton,
County Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

It was agreed among the Highway Commission that the first contract to be let was from Chula Vista to the strand; the second - San Diego to La Mesa; the third - a stretch out of Escondido toward San Marcos; fourth - a short stretch from El Cajon to Santee, and at the same time a stretch from Julian to the top of the Santa Ysabel grade.

My understanding is that you have not as yet surveyed that stretch from the top of Santa Ysabel grade. It should be surveyed immediately so that the contract can be let for that piece of work this summer and complete it before next winter's rains, otherwise there is no use letting the contract for another year.

I would like to know if you are making plans to let this contract for that stretch by the 1st of June, so that we can complete that four or five mile stretch by next winter. I shall be glad to hear from you on this subject.

Yours very truly,

EP:KLM

Col. Ed Fletcher,
920 Eighth Street,
San Diego, Cal.

My dear Col. Fletcher:

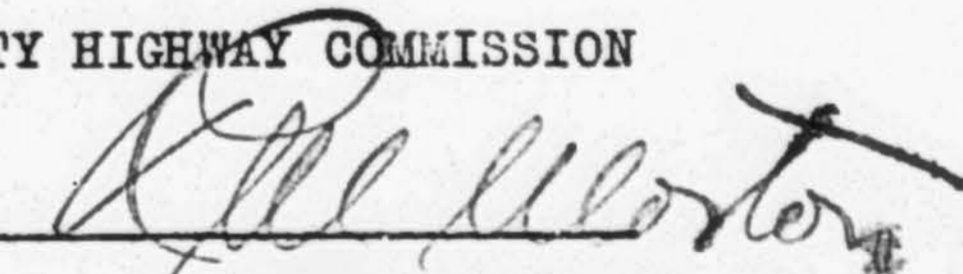
I would like to get your ideas about the road to be used between Ramona and Ballena. We have completed an alignment survey by way of the new road opened by Mr. Foster, and find that it is about 3600 feet longer than the old road. I have looked into the possibilities of shortening the distance on the old road, and believe we can easily cut off about 1300 feet, with the securing of some new rights of way at the Ramona end. This would make the old road 4900 feet shorter

In addition to extra length, the Foster road has a crossing at Hatfield Creek, where a bridge 40 or 50 feet long will be necessary, at a cost of from \$3000 to \$4000. The grading on the Foster road is in better condition than on the old road. I have not made a detailed study of location of materials for construction on either road, and if the improving of the new road has already been determined upon by yourself and Mr. Foster, I will drop any consideration of the present road. Outside of the saving in distance on the old road, there is not much choice between the two, so far as I can determine, from a casual inspection.

Yours truly,

COUNTY HIGHWAY COMMISSION

By



Chief Engineer.

March
Twenty-second
Nineteen
Twenty

Mr. R. M. Morton,
Union Building,
San Diego, Calif.

My dear Mr. Morton:

I thank you for your letter of the 20th. Glad to know that the Julian survey will be made immediately.

If it is a possible thing, I would like to see the grading and paving let at one contract this summer, and completed before the winter, or the 1st of the year. Of course, if there are any radical changes in the route, it would be advisable to do the grading first, and let the paving go over for another year, altho I hate to see this done.

I do not agree with you as to the logical time to pave that stretch of road, for I feel I am more familiar than you with that section of the country - and this is not meant in any way as a criticism of your judgment. Since Fletcher built the highway eight or ten years ago, there never has been a time when the road was not passable for automobiles to Santa Ysabel, but every year the road is made absolutely impassable for a week at a time from the top of the Santa Ysabel grade to Julian. The road from the top of the Santa Ysabel grade to Julian will of necessity have to be built in the summer. The roads are always in good condition during the summer months, and I see no reason why we should wait. The worst section is between Santa Ysabel and Lakeside and should be constructed first. By building the road now, several hundred people will not be isolated and Pine Hills Hotel, one of the favorite resorts in the back country, will be accessible winter and summer. Under these conditions why not build the worst stretch of road first?

The Highway Commission are favorable to it, have already committed themselves, and I will make a practical demonstration to you any day you want, right after a rain, to prove my statements - that you can average 25 miles an hour right after a rain from here to Santa Ysabel at any time, and find it practically impassable to Julian.

As to the type of road, I discussed this matter with Fletcher when we were in Sacramento the other day. It is almost impossible to get sand up there and the travel is light. There is plenty of good rock close by, and perhaps the cheapest and best road that can be built up there would be a water-bound macadam, with a Warranite or Topeka top.

What in your opinion would be the relative cost per mile of the two roads - a five inch concrete, or a road as above suggested?

Yours very truly,

EF:KIM

March 22nd, 1920

Mr. R. H. Morton,
Chief Engineer,
County Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

Answering yours of March 20th, as regards the roads Ramona to Ballina; I suggest that you drop any further consideration of the present road and for the following reasons:

First: The Highway Commission unanimously agreed on the northerly road, and it was specified in the bond issue. In addition, we will be severely criticized for violating a moral obligation. The business men of the City, including George Marston, H. T. Gilmore, and many others, have urged the northerly route, because it develops a better farming community. It has fewer adverse grade, fewer bad curves and less work necessary to prepare the grade for paving.

My estimate of the cost of grading, preparatory to paving the road on the south side, is between \$20,000 and \$30,000, while Mr. Foster will do all the grading free of cost, I believe, if the northerly route is taken.

There is absolutely no necessity of putting a bridge across Hatfield Creek. A small concrete ford is all that is necessary. There is not one day in five years that water will cause any trouble at all, and the bridge can be put in later by the County if desired.

I do not believe the County Highway Commission, excepting under extreme conditions, will depart from the route as voted by the people of San Diego County.

Yours very truly,

EF/bm
cc JF

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., March 27, 1920.

Co. Ed Fletcher,
920 Eighth Street,
San Diego, Cal.

We are going to be disappointed in our hopes of having Scripps' right of way agreement by Monday, unless some new line of action can be carried out.

The matter was given to Mr. Scripps' secretaries, Smithton and Hopkins, about March 16, and they were anxious to co-operate, and promised to get the matter to Mr. Scripps' attention as soon as he was disengaged. During our absence in Los Angeles, word was sent to the office by Mr. Smithton that Scripps would give the agreement we desired, under certain conditions, as follows:

- ✓ First: Connection to the present traveled road to be graded.
- ✓ Second: A 5-barbed wire fence to be built on each side. (Our cost estimate, \$2500)
- Third: Location of construction camps to be subject to Scripps' approval.
- ok Fourth: Trees not in actual path of construction to be preserved.
- 16 Fifth: Width of pavement to be at least 18 feet.

They also sent word that Attorney Harper, of their office, would write the agreement. On Friday I got in touch with Mr. Harper, and find that he considers it necessary to go over the ground before he writes the agreement. I am taking him out this morning. He dislikes being hurried in writing this agreement, as he wishes it to be iron clad, on account of previous experience with city and county officials. At the present rate, I do not believe he will have it by Monday, and he refuses to accept the agreement which we wrote up.

I have objected to the requirement for the width of road, on the ground that this is beyond Mr. Scripps' rights to dictate. I anticipate they will give in on that point.

Col. Ed Fletcher--March 27, 1920--2

The balance of the requirements are not considered unreasonable.

If you have any way of persuading Mr. Harper to see the necessity of fixing up the agreement today and getting Mr. Scripps' signature, would suggest that now is the time to act. Unless he is prodded, we will have nothing on Monday.

Yours truly,

COUNTY HIGHWAY COMMISSION

By R M Merton

Chief Engineer.

Per Mason

per K March

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., March 31, 1920.

Ed Fletcher Company,
920 Eighth Street,
San Diego, Cal.

Gentlemen:

We understand that you are the owner of the property known as the March property in Section 5, T.15 S. R. 2, W.

We are enclosing herewith a deed for a strip of land through this property, 50 feet in width, to be used as a county highway. This is on the line of the new roadway to be graded over the Poway hills.

We would appreciate it if you will have this deed executed and returned to the Highway Commission.

Yours truly,

COUNTY HIGHWAY COMMISSION

By 

Chief Engineer.

San Diego, Calif., April 1, 1920.

County Highway Commission,
San Diego, Cal.

Gentlemen:

There follows a report covering the activities of the forces of the County Highway Commission for the month of March, 1920.

The work of surveying and getting out plans in the office has occupied the full month. Many inspection trips have been made by the chief and assistant engineer over the various routes to be improved under the bond issue, and data is being accumulated which will bear on the construction of the highways.

During most of this period five field parties have been engaged in surveying, and considerable progress has been made in completing surveys of the various roads. It has been our endeavor to finish the field work as rapidly as possible on all of the routes the construction on which will probably be undertaken this year.

The following table shows the roads on which survey work is in progress or has been completed.

SE 1/4 Sec 31 - 14 - 2 W.

ROAD	MILES LENGTH	MILES SURVEYED	BENCH MARKS SET	CROSS-SECTIONS	REMARKS
Mission Road, Bernardo Section	18.73	18.73	18.73	18.73	Field work completed.
Mission Road, Vista Section	15.03	18.88	18.88	11.92	Alternate line thru Vista run and bench marks established; also 1 1/2 miles stadia survey on alternate line. Survey complete to San Luis Rey River on main line.
Mission Road, Fallbrook Section	19.1				No work done
Julien Road, Lakeside Section	22.6	14.11	10.41	5.57	No work done
San Luis Rey Road	8.80	3.89			No work done
Julien Road, Ballena Section	22.4	13.13			Field work completed
Lemon Grove Road	5.92	5.92	5.92	5.92	Field work completed
Highland Avenue	1.53	1.53	1.53	1.53	Field work completed
Chula Vista-Coronado Road	13.01	13.01	13.01	13.01	Field work completed
Bonita Road	2.00				No work done
Imperial Boulevard	2.00				No work done
San Pasqual Road	2.00				No work done
Totals	133.12	89.20	68.48	56.68	

Plans and specifications for the grading and culverts on the Poway grade were completed by this office, and accepted by the Board of Supervisors on March 29. Bids are called for, to be opened April 20.

Work in the office has been carried forward on the preparation of plans and specifications for the first units of the paving work. The units upon which the office forces are now engaged are the La Mesa Road, including Highland Avenue, and that portion of the Chula Vista-Coronado Road to the Silver Strand. Negotiations are under way for several pieces of right of way needed on these sections.

In so far as possible, we are endeavoring to avoid unnecessary surveying by first making the selection of the road to be paved. In this connection, we have found the maps and plans of the former Highway Commission to be of great assistance.

As the surveying is well along, it is our plan to reduce the number of surveying parties, carrying on the work more slowly, and to increase the force in the office, so that the plans for each section may be gotten out rapidly.

There has been considerable inquiry of late from ~~many~~ many contractors of this section regarding the contemplated work, and indications are that a goodly number of contractors will submit figures.

Arrangements have been made to co-operate with the City of San Diego in paying the expenses of the testing laboratory in Balboa Park. It is our intention to insist upon the proper selection and control of the materials to be used in the pavements. By careful laboratory testing of the materials, the concrete in our pavements should reach a high standard of strength.

Respectfully,
R. M. MORTON
Chief Engineer.

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., April 7, 1920.

April 5th, 1920

Mr. R. M. Morton,
Chief Engineer,
County Highway Commission,
San Diego, Calif.

Dear Sir:-

Returning the deed to the March property,
in Section 5, T. 15, S. R. 2 W. Beg to advise
that the property owned by Col. Fletcher is the
S.E. $\frac{1}{4}$ of Sec 51, T. 14 S.R. 2 W.

Yours very truly,

lm

Col. Ed Fletcher,
San Diego, Cal.

Your note of April 6 just received.

I do not feel apprehensive of any campaign that may be made against us on the type of road. If such a campaign is started, we can counter by suggesting the construction of a black base, with a Topeka top, which is a type of pavement upon which there is no royalty, and which does not come under the Warren company's supervision. It is a type, however, which is considered equally as good as their's. The Topeka top is the type which the State Highway Commission uses on their concrete when it needs a heavy surface.

Regret to inform you that both the Tribune and the Union neglected to publish the full recommendation of the Commission to the Board of Supervisors. It was furnished them, however; the Sun published it last Saturday, in its entirety. For some reason, the Tribune and Union cut it out, possibly, because we gave them too much.

The work is going along nicely; the only matter which is not settled is regarding the furnishing of materials. Utley has rendered an opinion that to furnish materials it will be necessary to advertise for the whole amount of work upon which it is desired to furnish materials, and reject bids, after which, he says, the Commission and Supervisors will be in a position to buy materials. The Supervisors, of course, feel bound to follow his opinion, but consider the advertising of 50 or 100 miles of road at one time to be impracticable on account of delay, deception of contractors, etc. I have suggested to them that prices be arranged, preferably by a committee from their Board and acting in conjunction with the Highway Commission, with the cement company for material to be furnished, on a gentlemen's agreement, only. This arrangement would also apply to other materials. Then, with the guaranty of these prices, we could, in each set of specifications, state that the contractor should include the cost of materials in his bid price, and state further that if he desired to obtain material from such and such a company the price for same would be such and such. The practical working of this would be that we would allow his estimate, including the cost of material, but the material estimate alone would be a separate warrant. This warrant he would assign to the county, or

directly to the material company, and the county would see that they received their money monthly. Such an arrangement was the basis of procedure in San Joaquin County for rock and gravel under the same act as we are working under, from 1909 until 1913. With this in mind, the Board has appointed Mr. Hornbeck and Mr. Utley to act, after their return from the convention, with the Highway Commission, and endeavor to obtain favorable prices. What do you think of this arrangement, as an alternative?

As we hope to advertise some work April 20, it looks as though we would be compelled to let the contractors furnish the material for the first contract.

Would like to have your ideas on a get together meeting of the Highway Commission and the association which Mr. ~~Mayer~~ *Maure* represents. We are sending a copy of the recommendation to the Board to your office, in accordance with your request.

I believe, if the auto dealers's association will appoint a committee to meet with us I can convince them that the adoption of the concrete pavement is proper, and perhaps, on the report of the committee we can get an endorsement from that association.

We expect the local engineers to endorse the action of the Commission next week.

Will be glad to call upon you at any time you feel like discussing these matters. I hope this finds you resting easily, and not worrying too much about any campaign that may be started against the Highway Commission's scheme. Personally, I think it will come to nothing. If there is anything I can do for you, do not hesitate to command me.

Yours truly,



April
Twelfth
1920

Dictated April 9th

Mr. R. M. Morton,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Thanks kindly for your letter of
April 7th.

Send me a copy of the proceedings of
the meetings, so I can just keep in touch with
them. It will be two months before I can ever
attend a meeting.

If you get into any trouble with the
Supervisors, or if you think you are going to
get into any trouble with them, come over and
see me and let me take it up personally in
advance. Come over and see me, anyhow, old man.
I want the pleasure, and you can see me most
any time.

Am improving every day.

Yours very truly,

EF:KIM

April
Twelfth
1920

Mr. R. M. Morton,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Enclosed find letter from Mr. A. O. Beard.

I would appreciate it if you would have him come to see you and see if you can give him some encouragement later on. I do not know much about him, but want to help him, for he is a worthy man.

Yours very truly,

EF:MIM

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE

H. M. MORTON, ENGINEER

533 UNION BUILDING
PHONE MAIN 6280

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., May 4, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Col. Fletcher:

I hope this finds you getting along nicely, and not worrying too much about business matters. I think every thing is getting along all right here.

The routing of the Chula Vista-Nestor section of road is beginning to work itself out by lining up all property owners in that section who favor a route other than the one into the Otay Valley. A petition with 206 signatures, asking that the road be routed along the present traveled road, was presented to the Commission yesterday. Those in charge of the petition promised to get a great many additional names if given the balance of the week.

What would you think of a specification for the road through Chula Vista to Nestor which would call for a 5-inch concrete base, with a 1½-inch to 2-inch wearing surface? The length would be about 3½ miles. The balance of the road from Nestor to the strand would be unsurfaced concrete. Aside from the fact that this section from Chula Vista to Nestor is probably our heaviest traveled road, the asking for bids for surfacing on a short section might be excellent policy for the Highway Commission. It is in line with our recommendation to the Board of Supervisors advocating surfacing when necessary. By recognizing the advisability of immediate surfacing of a heavy traveled road, our argument for omitting surfacing on the other roads would be strengthened. The cost would be \$5,000 to \$6,000 per mile above the cost of the bear concrete. The concrete base would be made of a weaker mixture than 1-2-4. The specification for surfacing should be open, to admit of bids on Warrenite, Topeka, and sheet asphalt.

The survey is completed for the Wynola-Julian road, and we are working up the notes in the office.

Yours truly,

R. M. Morton

Chief Engineer.

*OK
A. H. Fletcher
through about you
letter way
want and wearing
surface to Nestor
coming slow
but some
Ed F*

May
Fourth
Nineteen
Twenty

Mr. R. M. Morton, Chief Engineer,
Highway Commission,
San Diego, California.

My dear Morton:

Answering yours of May 4th, will say that whatever the two members of the Commission and you decide to do, whether it's changing the right of way and cutting out Otay, or paving by Palm City, or surfacing from Chula Vista to Nestor, anything you all agree upon will be satisfactory to me. As two of the supervisors have said they would put down their own surfacing as soon as the road is paved, it is a question in my mind whether we ought to do any surfacing now, or not. It is a bad example, however, I will abide by whatever you all decide to do.

Will be very much interested to see the survey of the Wynola-Julian road. The survey should be brought down about a mile west of Wynola to that level place where you overlook the canyon. It is from there to Julian that is impassable. I would like to see the survey and see what you are going to recommend there.

Am getting better every day, the doctor says.

With kindest regards, I am

Sincerely yours,

EF:KLM

Dictated over
the 'phone

c. c. to Col. Fletcher.

May 7, 1920.

Mr. C. A. Bradley,
c/o E. C. Campbell,
307 Hanerwass Bldg.,
Long Beach, Calif;

Dear Sir:

The San Diego County Highway Commission is contemplating the improvement of the road between San Diego and Escondido, on the section between the Poway hills and the Bernardo bridge, by the construction of a hard surfaced pavement.

We find that there are good deposits of sand and gravel on your property on both branches of the Poway creek. The gravel deposits adjoin the Mansfield property just south of you, extending up and down the creek from the concrete bridge. The sand deposits extend easterly from the wooden bridge at the county road station.

We would like to obtain authorization from you that would permit the county, or contractors who may be interested in the construction of this road, to enter upon your land to obtain gravel and sand for the road construction. The material will not be sold commercially, but will be used exclusively for the construction of the highway.

You will realize that the section of highway between the Poway grade and the Bernardo bridge is so remote from railroads that its construction is dependent upon obtaining suitable materials in the country adjacent and we are willing to leave it to your public spirit to grant us the right to use the material free or at a nominal cost.

A letter from you granting permission to enter the land and use the materials will be sufficient.

Yours truly,

COUNTY HIGHWAY COMMISSION

By R. M. Morton Chief Engineer.

May
Seventh
Nineteen
Twenty

Mr. R. M. Morton, Chief Engineer,
Highway Commission,
San Diego, California.

My dear Mr. Morton:

Enclosed find letter which is explanatory, in regard to the Vista situation. Can you furnish this information?

I suggested yesterday that they let us keep the main travelled road, under a contract with the property owners, and assisted by their supervisor that they build this to the Vista Station. This was only a suggestion, and I told them it was not at all authoritative. What is really your recommendation in regard to this matter.

We do not want to make that road one-half mile longer, just running into Vista and out again, where everybody in the back country and all over the country will be forced to make that extra distance. But I think we can get the Vista people to pay for that road to the Vista Station. What do you think about it?

Yours very truly,

EF:KIM

May 8th, 1920

Mr. R. M. Morton,
Engineer,
Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

I do not believe the letter you wrote Mr. Bradley (copy of which you sent me) will ever reach him. His initials are C. A. Bradley, and his address is Ft. Worth, Texas, c/o Bradley Oil Company. Tell him Ed Fletcher is one of the Commissioners and wants him to go the limit and give us anything he has in order to get the highway paved at the least expense.

Yours very truly,

EF/bm

Rec. from H.C. Bowman

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., May 11, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Col. Fletcher:

While searching for materials to use in the construction of the road from Camp Kearny to Escondido, we located what seems to be a pretty good deposit of sand, which I believe is on property owned or controlled by you, in the bed of a creek tributary to the Bernardo, or San Pasqual River.

The deposit in question was found about two miles upstream from the Bernardo bridge, at the mouth of a canyon which opens into the main stream from the right. There is an unlimited quantity of coarse sand at the junction of the two streams on both sides of the roadway which leads to the Fenton ranch. The material is just about at the highwater line of Lake Hodges.

If the tests which we are now running shows that this would be suitable sand for use in concrete, we would like to be authorized by you to advise prospective bidders on what terms or conditions they may use this material.

Yours truly,

COUNTY HIGHWAY COMMISSION

By 

Chief Engineer.

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., May 11, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Col. Fletcher:

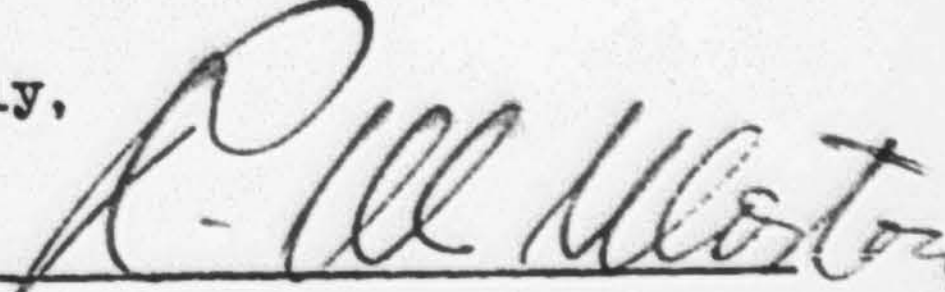
I have the letter from Mr. Bowman, regarding the distances at Vista. Will write and answer his questions.

Am still studying the matter of the route north of Vista, but will say that the more this matter is studied, the more the present road looks like the proper location. We do not want to make the road a half mile longer by running into Vista, turning a sharp curve, and going out again to the present road. The new line running from Vista has serious drawbacks, the worst of which is the impossibility of getting an acceptable connection with the Oceanside road unless you bear westerly about half a mile from the straight line. To do this would not shorten the distance from Vista to Fallbrook; in fact, would lengthen it.

It appears to me that the endeavor to connect Vista with the Oceanside road by going north from Vista on a new line, is simply an endeavor to accommodate Escondido and Vista traffic to Oceanside. The traffic from Escondido and Vista to Oceanside will not be satisfied with a connection from Vista to our Oceanside road. The best we can do, such a road would be much longer than the direct road from Vista to the southerly end of Oceanside. Ultimately, the people in the back country are going to demand an improved road to the coast direct from Vista or from Escondido, and when such a road is built, we would then find that our connection from Vista to the Oceanside road was not what the people wanted it to be, and we would find that it was a detriment to the main line from Escondido to Fallbrook.

Considering all the conditions, I believe the best thing to do for Vista would be the building of a spur from the main line near the water tank down to the hotel and depot. They should be satisfied with that until such time as a direct road can be given them from Vista to Oceanside. The length of such a spur would be 2300 feet.

Yours truly,



Chief Engineer.

May 12th, 1920

Mr. R. M. Morton,
Engineer,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Answering your favor of May 11th, will say I am in favor of keeping the present traveled road rather than building into Vista at all. I am sure that by private subscription, through Mr. Westfall, that spur will be built from the water tank down to the hotel, and I do not feel that this money should be spent out of our fund.

I have talked with the Vista Committee who came to see me the other day on other matters, and I am sure they will find a way to build that stretch from the tank to the depot.

Yours very truly,

RF/bm

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE

R. M. MORTON, ENGINEER

535 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., May 18, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Mr. Fletcher:

Enclosed is tabulation of bids received yesterday on the Lemon Grove road. No action has yet been taken by the Commission or by the Board of Supervisors, same having been postponed until Wednesday morning at 10 o'clock.

The general range of the bids is a little higher than I expected. Have talked the matter over with a couple of the low bidders, and find that their figures are certainly safe. But what can we expect in these times, when conditions surrounding such work as this are so unsettled? For instance, in the Hunkin-Conkey Construction Company figure of \$162,679.00 on the grading and paving work, a 20% profit allowance, over contingencies, was made. The Wells & Bressler figure has also a 20% profit allowance. These two bids on concrete alone were \$14.95 and \$15.10 per cubic yard, as against my estimate of \$15.00.

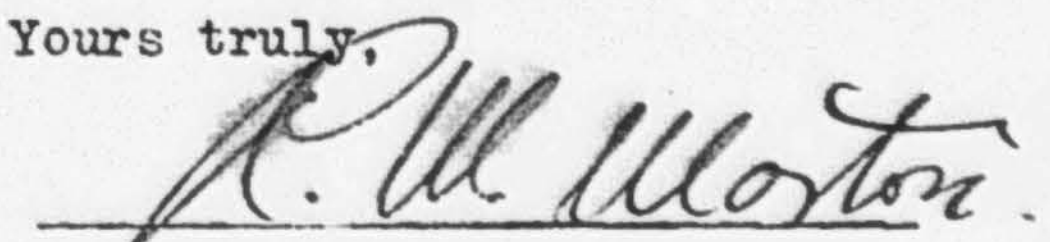
I am working on a proposition to get another contractor to offer to do the grading at his figure, with the idea of getting an offer from one of the men who bid low on the concrete alone to do the work with the grading eliminated. Have not much hope of being able to accomplish this, however, and on the whole, I believe that we will have to let the contract to the Kier Construction Company, if we expect to go ahead at all.

I do not anticipate any opposition on the part of the Board of Supervisors to the letting of the contract at Kier's figure.

Would like to talk this matter over with you, either about 5.30 this evening or tomorrow morning before we go to the Supervisors.

I trust this finds you feeling fine.

Yours truly,



Chief Engineer.

SAN DIEGO COUNTY HIGHWAY COMMISSION
 BIDS FOR GRADING & PAVING — BRIDGES & CULVERTS
 Opened May, 17th 1920.

LEMON GROVE ROAD — No 4

ITEMS	QUANTITIES	D. H. RYAN		B. B. BOYD		G. R. DALY		F. V. McPEAK		G. R. CURTIS		KIER CONST. CO.		WELLS & BRESSLER		J. ENGBRETSEN		HUNKIN CONKEY CONST. CO.		T. BREITEN	
		Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
Earth Excavation	14580 CY.	1 60	23 328 00			1 50	21 870 00	1 00	14 580 00	1 75	25 515 00	1 05	15 309 00	1 60	23 328 00	1 05	15 309 00	2 07	30 180 60	2 04	
Loose Rock Excavation	500 CY.	2 00	1 000 00			2 00	1 000 00	3 00	1 500 00	2 00	1 000 00	1 50	750 00	2 25	1 125 00	1 65	825 00	1 92	960 00	2 60	
Class "A" Conc. Pavement	8727 CY.	16 38	142 948 26			15 20	132 650 40	17 40	151 849 80	15 50	135 268 50	15 96	139 282 92	15 10	131 777 70	18 00	157 086 00	14 95	130 468 65	15 75	13
Reinforcing Mesh	26100 sq. ft.	04	1 044 00			05	1 305 00	04	1 044 00	04	1 044 00	035	913 50	07	1 827 00	04	1 044 00	041	1 070 10	043	
Total - Grading & Paving			168 320 26				156 825 40		168 973 80		162 827 50		156 255 42		158 057 70		174 264 00		162 679 35		16
Excavation & Back fill	471 CY.	3 00	1 413 00	5 00	2 355 00	1 50	706 50	1 00	471 00			1 50	706 50			2 00	942 00	1 90	894 90	1 40	
Class "A" Concrete	125.5 CY.	33 00	4 141 50	35 00	4 392 50	45 00	5 647 50	30 00	3 765 00			25 00	3 137 50			32 00	4 016 00	30 00	3 765 00	25 00	
Reinforcing Steel	5761 lbs.	11	633 71	10	576 10	10	576 10	10	576 10			08	460 88			19	1 094 59	10	571 60	11	
Concrete Gutter	125 lin. ft.	3 00	375 00	3 00	375 00	1 00	125 00	65	81 25			1 00	125 00			90	1 125 00	80	100 00	1 00	
One-inch Holes	38	3 00	114 00	1 00	38 00	1 00	38 00	5 00	190 00			1 00	38 00			1 00	38 00	1 00	38 00	1 00	
Total B. & Culv.			6677 21		7736 60		7093 10		5083 35				4467 88				6203 09		5369 60		
Grand Total			174 997 47				163 918 50		174 057 15		162 827 50		160 723 30		158 057 70		180 467 09		168 048 85		17

SAN DIEGO COUNTY HIGHWAY COMMISSION
 BIDS FOR GRADING & PAVING — BRIDGES & CULVERTS
 Opened May, 17th 1920.

LEMON GROVE ROAD — No 4

TIERS	D. H. RYAN		B. B. BOYD		G. R. DALY		F. V. McPEAK		G. R. CURTIS		KIER CONST. Co.		WELLS & BRESSLER		J. ENGEBRETSEN		HUNKIN CONKEY CONST. Co.		T. BREITENSTEIN		Engrs	Estimate
	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
80 CY.	1 60	23 328 00			1 50	21 870 00	1 00	14 580 00	1 75	25 515 00	1 05	15 309 00	1 60	23 328 00	1 05	15 309 00	2 07	30 180 60	2 04	29 743 20	1 00	14 580 00
00 CY.	2 00	1 000 00			2 00	1 000 00	3 00	1 500 00	2 00	1 000 00	1 50	750 00	2 25	1 125 00	1 65	825 00	1 92	960 00	2 60	1 300 00	2 50	1 250 00
27 CY.	16 38	142 948 26			15 20	132 650 40	17 40	151 849 80	15 50	135 268 50	15 96	139 282 92	15 10	131 777 70	18 00	157 086 00	14 95	130 468 65	15 75	137 450 25	15 00	130 905 00
00 sq. ft.	04	1 044 00			05	1 305 00	04	1 044 00	04	1 044 00	035	913 50	07	1 827 00	04	1 044 00	041	1 070 10	043	1 122 30	03	783 00
ing		168 320 26				156 825 40		168 973 80		162 827 50		156 255 42		158 057 70		174 264 00		162 679 35		169 615 75		147 518 00
71 CY.	3 00	1 413 00	5 00	2 355 00	1 50	706 50	1 00	471 00			1 50	706 50			2 00	942 00	1 90	894 90	1 40	659 40	2 50	1 178 00
25.5 CY.	33 00	4 141 50	35 00	4 392 50	45 00	5 647 50	30 00	3 765 00			25 00	3 137 50			32 00	4 016 00	30 00	3 765 00	25 00	3 137 50	25 00	3 137 00
61 lbs.	11	633 71	10	576 10	10	576 10	10	576 10			08	460 88			19	1 094 59	10	571 60	11	633 71	075	432 00
25 lin. ft.	3 00	375 00	3 00	375 00	1 00	125 00	65	81 25			1 00	125 00			90	1 125 00	80	100 00	1 00	125 00	1 00	125 00
38	3 00	114 00	1 00	38 00	1 00	38 00	5 00	190 00			1 00	38 00			1 00	38 00	1 00	38 00	1 00	38 00	2 00	76 00
c Culv.		6677 21		7736 60		7093 10		5083 35				4467 88				6203 09		5369 60		4593 61		4948 00
tal		174 997 47				163 918 50		174 057 15		162 827 50		160 723 30		158 057 70		180 467 09		168 048 85		174 209 36		152 466 00

May 21st, 1920

Mr. R. M. Morton,
Chief Engineer,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

This will introduce Mr. W. R. Brown, a
live wire, and a contractor who is going to bid on
some of our county work.

I wish you would show him every courtesy
possible, and furnish him with all the information
possible, as I should like to see him settle here
and become a successful contractor.

Anything you can do for him will be ap-
preciated.

Yours very truly,

EF/bm

May 21st, 1920

Mr. Frazer:

Please give to Mr. Brown, a new contractor,
copy of the plans and specifications for the three
jobs that we will soon advertise for, and furnish
him with any information you can, as he is a
personal friend of mine and I want to help him all
I can.

Sincerely,

EF/bm

HIGHWAY COMMISSION
SAN DIEGO COUNTY

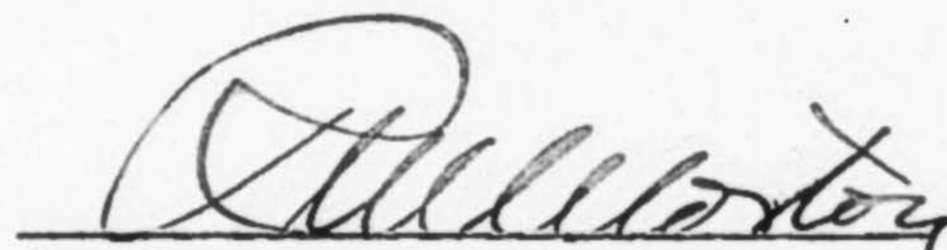
SAN DIEGO, CALIF., May 27, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Col. Fletcher:

In regard to the sand which is located on a property in which you are interested on the San Dieguito or San Bernardo River, I really believe that, considering the location of the property and the tremendous volume of the material there, that no damage will be done to the property by taking the sand, and that the property owners could well afford to let this sand be taken without compensation.

Yours truly,



Chief Engineer.

May 29th, 1920

Mr. R. M. Morton,
Chief Engineer,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Answering yours of May 27th: so long as it does not damage our property, we will give the sand to any contractors from the Bernardo Ranch, but we reserve the right to say whether or not our property is being damaged.

Yours very truly,

RF/bm

May 29th, 1920

Mr. R. M. Morton,
Chief Engineer,
County Highway Commission,
San Diego, California.

My dear Morton:

I have read your letter to the Board of Supervisors. Since our talk yesterday, I feel that we should write an entirely different letter to the Supervisors. Instead of writing a letter as if we were turning them down, we should address them something like this:

"In the matter of preparing specifications allowing alternative bids of both concrete and black base pavement, we ask that the Board of Supervisors do not consider the use of black base on our main arteries of travel into San Diego, and for the following reasons:"

and then commence and say, as per your letter:

"We believe we have made a thorough investigation of the Highway situation,"

and continue on. I should cut out "A" and "B", and add:

"If it is a matter of comparative cost, which your Board desires to settle -"

and then refer to Maricopa County and how the Government refused to assist in building the trans-continental highway if Warrenite was used, etc. You might mention Imperial County.

I suggest that you cut out, also the clause marked "C" and also "D" and wind up your letter with a statement that we attach plans and specifications for two or three (whichever there are) main arteries, and urge that the Board advertise for bids only in concrete, and that the Highway Commission is giving the Warrenite people an opportunity to bid immediately on other sections where the travel is lighter.

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
R. M. MORTON, ENGINEER

533 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., June 2, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Col. Fletcher:

We are sending you a map showing tentative plan for the elimination of sections of road, as worked over by Mr. White, Mr. Wheaton and myself. We thought that if you would study this today, we might call on you together this evening to receive your suggestions. If we can agree on a plan we will meet the Board of Supervisors in an informal conference Thursday afternoon. This conference is already arranged for. After working this matter over with the Board it will then be ready to take up with committees from the outside.

Under the scheme shown on the map, there would be 68.14 miles of concrete, 10.24 miles of macadam, or cheaper type on the Julian road, 16.74 miles of grading, making a total of 95.12 miles. I have figured the estimates pretty carefully, and believe that they will cover the work shown on the map. Of course, it is impossible to make the estimates close, but we ought to save on some portions, and perhaps other portions will cost more than they now figure.

The total of the estimate amounts to \$2,070,000 for doing the work shown on the map. This holds back 10% of the amount of the bond issue to cover overhead and contingencies. We do not want to give out this fact, but we certainly should play safe by having a little contingency fund to draw upon if we need it.

The line up as shown for the Mission Road would require the expenditure of \$920,000. This is \$90,000 more than the Mission Road would be entitled to, based on the proportion its mileage bears to the whole mileage in the original project. The improvements shown on the Julian Road are estimated at \$607,000, which is \$83,000 less than its mileage proportion would entitle it to receive.

Yours truly,

R. M. Morton

Chief Engineer.

A letter along these lines would be much better than a threat, and I believe we can get away with it, with the Board of Supervisors.

Yours very truly,

EF/bm

San Diego, California, June 1, 1964

Dear Mr. [Name]:

I am writing you regarding the [subject] which you mentioned in your letter of [date]. I am sorry that I cannot give you a more definite answer at this time, but I am sure that you will understand my position.

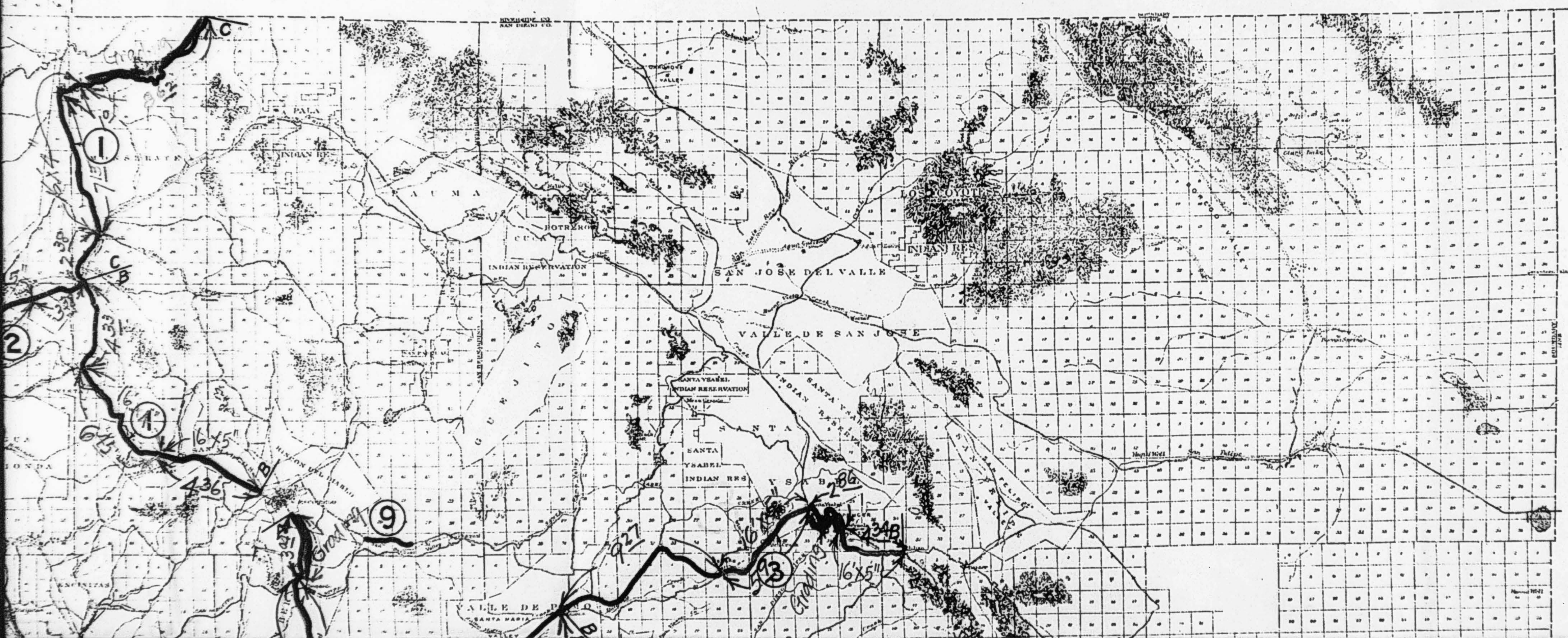
I am sure that you will understand my position. I am sure that you will understand my position. I am sure that you will understand my position.

I am sure that you will understand my position. I am sure that you will understand my position. I am sure that you will understand my position.

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R I V E R S I D E C O U N T Y

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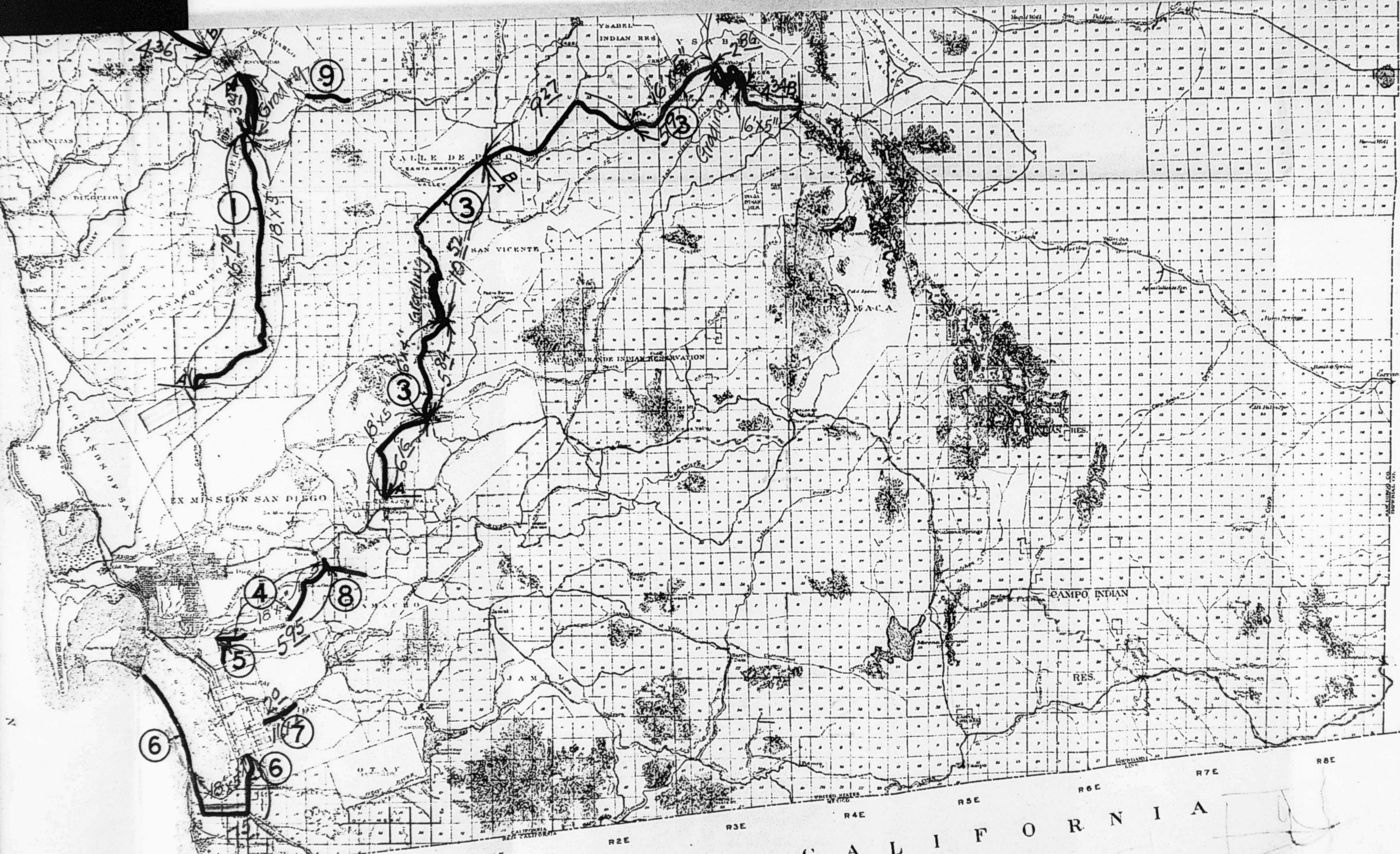


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Mr. R. M. Morton,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

Answering your letter of June 2d, together with map showing tentative plan for the elimination of sections of road as worked over by Messrs. White, Wheaton and yourself, will say that I do not feel that justice has been given the Julian road.

It is not fair to charge against the Julian road the expense from San Diego to Lemon Grove and La Mesa, any more than you should charge the expense of the Chula Vista - Nestor road to the Julian road, for we already have a paved highway to El Cajon, and if you are going to charge the Julian road up with Lemon Grove road expense, then you should charge up the Mission road, so-called, with the 16 miles of paved highway already built from San Diego to Camp Kearny. The Lemon Grove road is in Supervisor Good's district, not Supervisor Foster's, therefore when it comes to a process of elimination, it is only fair to eliminate from the El Cajon-Julian road the construction of as many miles in proportion as the distance from Camp Kearny to the Riverside County line.

To illustrate, it is 60 miles from the end of the present pavement at Camp Kearny to the Riverside County line, and it is 45 miles from El Cajon to Julian. If there is to be an elimination of 30 miles of paved highway, there should be 16 miles eliminated on the Camp Kearny-Riverside County line road, and 12 miles on the El Cajon-Julian line. #These proportions I think are fair.

I consider the Julian line more important than the construction of the road connecting with Riverside County - called the Mission Road, for the following reasons: First - the paved road to Julian is in reality a railroad, developing our back country, while already the Escondido, Fallbrook-Vista territory has a railroad, consequently their country is more highly developed. The Julian country has no access whatever to a railroad, and therefore has, up to date,

not properly developed. For the short haul of 60 miles, material can be hauled out of Julian country as cheap as a railroad can handle it. We already have one trunk line up the coast.

The road from Escondido to Riverside County is in reality only a lateral. It does not connect up with any large city, and there is practically no large farming territory to develop after you pass Fallbrook for 13 miles to the Riverside County line, and that section all has a beautiful granite base.

The Riverside County line road should not receive any more benefit, proportionately, than the road to Julian, in fact, for the best interests of developing the county, I believe the Julian road the more important of the two. It is only tourists that come via the Temecula way, and it is only a few miles farther for the Riverside people to come via the concrete highway to Santa Ana and thence down the coast.

I am opposed to any money being spent from this bond issue on the Mussey grade. It is well kept up by Supervisor Foster, and there is no day in the year that it cannot be travelled.

You made no plans for giving the Ramona Valley any pavement whatsoever.

I agree with you that the oil macadam or Warrenite road from Julian to a point about one mile this side of Wynola is the proper thing, and another bad stretch of road is from the foot of the Santa Ysabel grade west of Santa Ysabel to Ballina. That should be paved either with oil macadam or concrete. There will be a great deal more travel on the road from Santa Ysabel to Ballina, and if it is possible to put in a 16 ft. concrete road there it should be done.

I believe that at least 10 or 15 miles more of road should be taken away between Escondido and the Riverside County line and put on the El Cajon-Julian road - one portion of five or six miles between Julian and Ballina and another stretch of six or eight miles from the Ramona westerly to the summit of the Mussey grade.

Please keep in mind that if your program is carried out, there would be about 13 miles of highway that would only cost probably \$15,000 a mile, as against \$25,000 or \$26,000 elsewhere.

Yours very truly,

RF:KIM

Dictated over
the phone

August
Third
Nineteen
Twenty

August 20, 1920.

Mr. R. M. Horton,
County Highway Commission,
San Diego, Calif.

My dear Mr. Horton:

My wife and I have signed the deed, after adding a clause to same.

You had better get this deed recorded tonight, for the other deed is going to be recorded tomorrow, and take up with the Board of Supervisors the matter of closing the street later.

Yours very truly,

RM:KLM

Kier Construction Co.,
First National Bank Building,
San Diego, Calif.

Gentlemen:

We have inspected the two cars of sand on the track at Encanto on Thursday, August 19. The two cars are S. D. & A No. 1064 and S. D. & A. No. 1094. We find a great difference in the quality of sand in these cars, that in No. 1064 being too poor to accept. In tracing up the origin at the Otay plant, we find one was loaded from a ground stock pile, and the good one direct from the screening and washing plant. In the last week we have noticed that some of the sand which you are using on the Lemon Grove job has not been up to the standard of the preliminary samples of the material, which we tested last spring, and as you already know, the poor quality of the sand used on the afternoon of August 18 and on the morning of August 19 has caused many hair cracks in the pavement. Our tests on the poor quality sand, made on August 19, showed 9.1% of silt.

We trust that nor more of the poor sand will be sent you for use on your job. We cannot allow it to go into the pavement, and if you will co-operate with us in informing the engineer of the arrival of sand cars, we will inspect the sand on the car, and accept it or reject it at that time.

We regret the necessity of stopping the mixer yesterday by condemning the sand on the grade, but I believe that the Supervisors and Highway Commission of San Diego county, as well as all the taxpayers, expect us to take such action when conditions are so flagrant as to justify it. We shall insist on only the highest quality of sand as well as other materials being used.

Yours truly,

COUNTY HIGHWAY COMMISSION

By R M Horton

Chief Engineer.

August 20, 1920.

Mr. David H. Ryan,

San Diego, Calif.

Dear Sir:

This is to advise you that the Highway Commission is not pleased with the way you are postponing the beginning of active operations in the paving of the El Cajon-Foster section of road. We realize that perhaps you believe it inconvenient to start active operations on this road, particularly on the grading work, but we must call your attention to the fact that it is now about 50 days since you were awarded the contract and that you are losing valuable time and good weather.

We recollect that in July, on account of the absence of the engineer whom we desired to place on that road, we did not encourage you to begin operations, but since the first of August we do not see why you have not taken advantage of the conditions and proceeded to get this work under way. We would call your attention to Article 9 of the contract, page 18 of the specifications and contract, which states that in case extensions of time for completion are desired the Highway Commission and Board of Supervisors will have the right to charge the contractor such portions of the overhead expense which accrue during the period of such extensions. Delays like the present one in getting started, while it is necessary to maintain an engineering force on the ground, are the kind of matters which will be taken into consideration in granting extensions of time and in assessing extra costs of overhead to the contractor.

Yours truly,

COUNTY HIGHWAY COMMISSION

By R. W. Morton

Chief Engineer.

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
H. M. MORTON, ENGINEER

533 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., August 21, 1920.

Col. Ed Fletcher,
920 8th St.,
San Diego, Calif.

My dear Col. Fletcher:

Yours of August 20, with enclosed copy of letter from Mr. G. B. Savage is at hand.

We are today sending Mr. Savage an application blank for him to fill out.

Yours truly,

R. W. Morton

Chief Engineer.

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., August 26, 1920.

Col. Ed Fletcher,
San Diego, Calif.

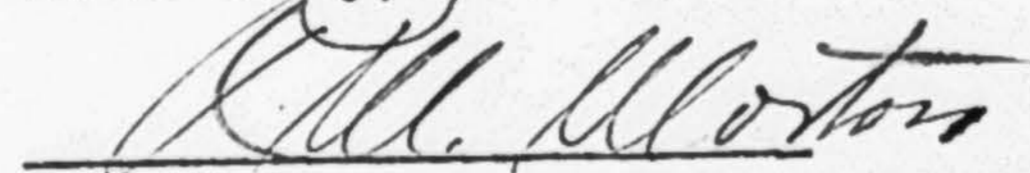
My dear Col. Fletcher:

On the 27th of April of this year we had a letter from the Riverside Portland Cement Company, stating that they would protect the county for a period of one year from that date on 100,000 barrels of cement to be used on road work, at a price of \$2.30 net F. O. B. mill.

The question has been brought up by the local representatives of the Riverside Portland Cement Company, as to how these prices will work on the Wynola-Julian job. Without doubt, if a contract is let on September 15, a great deal of the cement required will be obtained after April 27th of next year. In fairness to prospective bidders, we should be able to reassure them as to whether they must pay an increased price after April 27th of next year, or whether they will be protected on the price existing at the time they bid on the job.

You will understand that we are very anxious that there shall be no dubious or hazy or undecided questions in the minds of bidders on this job which would tend to raise the amount of the bid. We are making an effort to obtain a bid or combination of several bids which will be less than that received on August 16, and all undecided matters which might work to the disadvantage of the contractor should be cleaned up in so far as possible.

Yours truly,



Chief Engineer.

(Copy of letter sent to Resident and Assistant Resident Engineers.)

San Diego, California.
September 1, 1920.

Dear Sir:

The mixing of concrete and placing it in the road as a pavement is the final operation in the building of our roads, and usually the most costly operation. The San Diego County Highway Commission expects to obtain a uniform result in the concrete paving all over the county. For the paving work, as well as for the foundation work, we have a very high standard, and we insist that high standards be adhered to by the field men.

In order to obtain results of a high quality the engineers and inspectors must constantly keep high standards in their minds. The Highway Commission will not tolerate poor work of any description, and those men who cannot produce a uniform high standard pavement, or who tolerate on the job a lowering of ideals, will be given an opportunity to look for work elsewhere. The inspection at the mixer is a work which calls into play the utmost in force of character, diplomacy and skill.

Force of character is required to keep constantly before you, for every foot of the road, the same standards of mixing, placing and finishing, and to resist the temptation to allow something imperfect to slide by just because it is easier to overlook it than it is to incur the displeasure of the contractor by stopping the mixer, or by calling the men back to do the work over again.

The exercise of diplomacy is often required to get the perfect result demanded, and at the same time maintain such relations with the contractor that he will quickly and willingly do what is asked of him.

Skill is required in the eye training that knows at a glance when the least detail is not going right, whether it be loading of the wheelbarrows, improper appearance of the mixed concrete, poor spreading, tamping or finishing.

Two results are required in our pavements. First, good concrete; second, perfect finish, which gives the pavement smooth riding qualities. The details as to how to get these results are many. The main points which are constantly necessary to watch are set forth below in their chronological order:

FIRST: Full Water in the Checks. Do not permit the mixer to start in the morning if checks are dry. Insist that the contractor shall do early morning watering, so that all previously placed concrete will be wet before the sun is hot.

SECOND: Alignment and Grade of Headerboards. The competent inspector will constantly inspect his headerboards to make sure that they are solid and to proper line and grade, and will hold up the mixer, if necessary, to guard against uneven pavement caused by poor header grade.

THIRD: Character of Material. Because the rock and sand have been

hauled to the grade from a supply of supposedly good material does not relieve the inspector from watching these materials closely.

FOURTH: Loading the Wheelbarrows. Do not permit variations in the loading from the quantities which will give you the right run of cement and the specified mix.

FIFTH: Dumping of Skip. Be sure that your mixer man handles his skip so as to empty all the material each time it is brought up.

SIXTH: Time of Mixing. We insist absolutely on not less than one minute mixing after all the materials are in the drum.

SEVENTH: Water Content. Insist on a reasonably stiff batch. Your batch should be the stiffest which will run down the chute. The concrete should stand in conical shape on the ground when it is dumped. Batches too dry are to be avoided, but batches which are too wet should be thrown over the headerboards, if necessary, to educate your mixer man.

EIGHTH: Spreading. Experienced spreaders will make the work easy for the tamper men. They will spade the concrete next to the headerboards, and keep the low places filled up under the tamper.

NINTH: Water on Subgrade. Subgrade should have plenty of water. Insist that the subgrade be wet--not merely damp.

TENTH: Tamping. Tamping should consist of, first a striking off which should leave the concrete a trifle above the headerboards. Then a vigorous vertical tamping on each end of the tamping board, alternately, which will bring the mortar to the top and settle the rocks to position. Finally, a rubbing or smoothing of the surface with the bottom of the tamper to leave a good surface for the finishers. Good tamper men can finish a pavement with a tamper and leave it in almost perfect condition, so that but little finishing is required. Insist on clean headerboards in connection with tamping.

ELEVENTH: Finishing. The roller is to be used to remove excess water. It has practically no other use, and should be used when, where, and as often as there is excess water to remove. The longitudinal float is the making of your job, and must be used carefully, and all low places which show up under it must be filled with mortar. It must be used until the pavement is uniform longitudinally. It will usually require at least three round trips of the float to make your pavement perfect. A canvass belt may be substituted for the long handle float finish specified as the final operation. The belt should be used far enough back so that it will leave tiny ridges in the mortar and make a rough sand surface. If it is used too close, it will gloss over excess water that will show up on the surface of the concrete, and will tend to make a smooth finish, rather than a rough sand finish.

If the finished concrete does not act properly; if there

should be a great number of hair cracks, or if other defects should show up, the safest thing to do is to stop your mixer before you get in a large amount of what will turn out to be poor pavement. We will not tolerate the use of material or methods which gives an excess of hair cracks, and if hair cracks occur for which you do not know the explanation, put it up to the contractor to correct the defect.

The points mentioned above by no means constitute all of the details which the men in charge of the mixer must constantly watch. Numerous other essentials might be included in this list, such as careful use of the scratch templet to make sure there is no high subgrade; checking of the cement dumper to see that he does not skip a sack of cement in a batch once in a while; watching the building of earth checks to make sure the concrete is not too green. Other additional points are covered in the specifications with which each man should be thoroughly familiar.

Our engineers and inspectors will be rated by the office in accordance with their proficiency in producing perfect pavement, and anyone who undertakes the work of inspection at the concrete mixer with any other than the full intention to continuously use his best efforts is making a mistake. He will soon find himself out of sympathy with the policy of this Commission, and our organization has no place for such men.

Yours truly,

COUNTY HIGHWAY COMMISSION

By R M Morton

Chief Engineer.

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., October 19, 1920.

Col. Ed Fletcher,
San Diego, Calif.

My dear Mr. Fletcher:

At the last meeting of the Highway Commission, in a discussion of future paving on the Poway grade, also acquiring rights of way from Mr. Prentice and others to obtain the new road into Nutmeg Street, Escondido, there was brought up the question of the disposition of highway funds, and a motion was passed that a lineup of the funds be prepared prior to the next meeting.

Enclosed is a copy of a budget sheet, showing the manner and disposition of the funds on contracts let to date, also on future work which may be classed as definite projects.

The principal amount of the appropriation has been reduced by the deduction of 10% to cover overhead and contingencies, leaving a net amount to be distributed of \$2070000.00. From the enclosed table you can see the amount which would be allotted on the basis of percentage of mileage to each section of road. Under the heading, Contracts, are included the contracts now in force, to which is added our estimate of what the total work probably will amount to, including extra work for the completion of each contract. In the next column is the estimated cost of four additional projects which can be said to be finally decided upon. The next column shows unappropriated funds which are entirely on the four smallest sections of highway. The next column shows the surplus existing on roads where the contracts plus the projects are less than the appropriation. The last column shows the deficit which will occur where the contracts and projects exceed the amount of the appropriation.

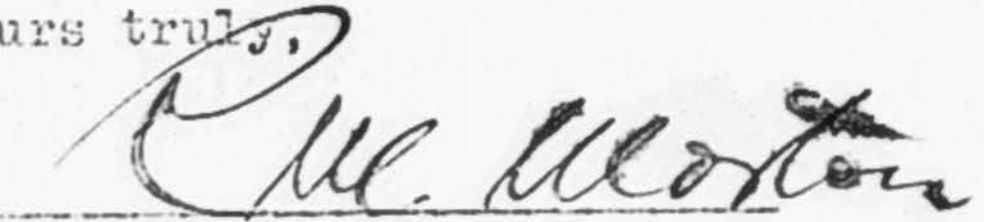
If you will study this table carefully, you will see that the deficit and surplus on the Mission and Oceanside roads in total just about balance all the existing contracts and three projected new contracts. The Julian road shows a surplus of about \$90,000. The roads in Dr. Good's district show a deficit of about \$14,000. The roads in Mr. Hornbeck's district show a surplus, including unappropriated money, of about \$71,000.

The time seems to be approaching when it will be necessary for the Commission to decide what they can afford to do under this bond issue, and what they cannot afford to undertake. The matter is now pertinent in connection with the paving of the Bonita road.

Col. Ed Fletcher --2.

Copies of this statement have been furnished Mr. White and Mr. Wheaton, and they probably will wish to discuss it at the next meeting.

Yours truly,



Chief Engineer.

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
R. M. MORTON ENGINEER

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF.. November 1, 1920.

October
20
1920

Mr. R. M. Morton,
County Highway Commission,
Union Bldg.,
San Diego, California.

My dear Morton:

Thanks for your letter of the 19th and information therein contained.

By the way, what was done at the meeting about the petition to the State Railroad Commission? The California Highway Commission are interested.

I attended one of their meetings, and they will, in my opinion, join us in petitioning the State Railroad Commission. All they want are the facts to show discrimination between the north and the south. Will you not please write a letter to the Highway Commission in Sacramento, and have it ready for me to look over, giving all the facts, and showing the discrimination between the north and the south, so we can take it up at our next meeting, or if you will send me a copy and let me look it over before the original goes.

Yours sincerely,

BF:KIM

Riverside Portland Cement Co.,
Los Angeles, Calif.

Attention Mr. Trainor:

Dear Sir:

We are advised by the Southwest Paving Company that you do not favor them accumulating a large stock of cement preliminary to beginning paving operations on their contract on the San Luis Rey road.

We consider it very essential that the contractor should be encouraged to accumulate a sufficient stock to take care of the mixing during the time when his cement is under test in our laboratory. On account of the remoteness of their job from San Diego, from three to five days will be required to get our laboratory results, then if the cement should not pass the test they should have a supply on hand to use while they are awaiting the arrival and testing of new cars. To me, this would seem to make it advisable that they should have on hand at least 10 days supply before starting paving operations. The difficulty for the contractor to work directly from the cars to his road is shown in the case of Daley, who has the contract south of San Diego and whose mixer has not run over half the time during the past month. A portion of this delay may be due to his poor system of ordering--by that I mean ordering less per day than he can use, changing orders, etc., but a considerable portion of the delay is on account of rejection by our laboratory of several carloads which he was depending upon to bridge over a few days awaiting for tests on the new cars when they arrive.

Inasmuch as you are unable to set aside bins for our testing, I urge upon you the necessity of giving our contractors from ten days to two weeks supply, and allowing them to store it.

Yours truly,

COUNTY HIGHWAY COMMISSION

By *R. M. Morton*

Chief Engineer.

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
R. M. MORTON, ENGINEER

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., Feb. 5th, 1921.

November
1
1920

Mr. R. M. Morton,
County Highway Commission,
San Diego, California.

My dear Mr. Morton:

That was a good letter you wrote under
date of October 27th to Darlington.

Sincerely,

EF:KLM

Mr. Ed. Fletcher,
920-8th Street,
City.

My dear Mr. Fletcher:-

Not having had an opportunity to talk to you recently I am writing you to advise you that we ran against a temporary snag in the preparation of plans for the Bonsal-Fallbrook road. We find that there will be about eight pretty fair sized concrete structures and that on several of them there is no suitable foundation except at excessive depth. We had not realized before the character of the foundation material in this section, but when we started boring to locate suitable foundation and when we examined the washouts which occurred on the down stream side of many of the structures, we found it necessary to be pretty careful in drawing plans for ~~its~~ ^{the} structures

On one of the largest structures it looks as though we should run a short re-location so that the bridge will come where there is a suitable rock foundation. This additional survey work has already been done.

Owing to the facts as above stated, our specifications will not be ready for advertisement on February 7th as I promised you recently.

Yours truly

COUNTY HIGHWAY COMMISSION

R. M. Morton
Chief Engineer

RLL:GT

February
Eighth
1921

Mr. R. M. Morton, Engineer,
County Highway Commission,
San Diego, Calif.

My dear Morton:

Answering yours of Feb. 5th, go to it
and get the specifications ready as soon as you
can.

Yours very truly,

EF:KIM

February
Twenty-eight
1 9 2 1

Mr. R. M. Morton,
County Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

I see that the rough grading is all done
down to the double "S", which I want to see
eliminated, immediately this side of Wynola, and
which the Highway Commission agreed should be
eliminated.

It is too bad that the contractors did
not do this work while their outfit was there. I
feel sure that the road should be cut thru and
graded, eliminating the double "S", and carry it
clear thru to the creek crossing.

I hope you will drop me a line to the
effect that this is your plan.

Yours very truly,

EF:KIM

Not reviewed
after
dictation

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
H. M. MORTON, ENGINEER

538 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

April Nineteen 1921

SAN DIEGO, CALIF., Aug. 23rd, 1921.

Mr. R. M. Morton,
County Highway Commission,
San Diego, California

Col. Ed Fletcher
810 Ash Street,
City.

My dear Mr. Morton:

My dear Colonel:-

Enclosed find something
that may be of interest, from the
California Highway Commission.

Enclosed are several documents in which I am
sure you will be interested. They include a report
of Mr. Patch on Ridge Route paving and Antelope high-
way work, also telegrams from A. B. Fletcher and my
comments on the situation made last Wednesday and
Thursday. This trip was very profitable to me,
although I regret being drawn into the controversy.

Sincerely yours,

I have given Mr. Fletcher my honest opinion of
the two projects and hope he will take it in the same
spirit in which it is given.

Yours truly,

RF:KIM

RMM:GT

R. M. Morton
R. M. Morton

N.B. Please return report and telegrams for my file.

August
Twenty-four
1921

Mr. R. M. Morton,
Highway Commission,
555 Union Building,
San Diego, Calif.

My dear Morton:

Answering yours of the 23rd, I return papers as per your request, and thank you very much for going.

Please remember that "to avoid criticism, say nothing, do nothing, be nothing". You are not one of that kind, and we are proud of it, and will back you to the limit.

Yours very truly,

EF:AH

August
Thirty-First
1921

Mr. Robt. M. Morton,
c/o County Highway Commission,
Union Building,
San Diego, Calif.

My dear Mr. Morton:

Will you please prepare for the next meeting of the Board a letter stating what it will cost in your opinion to grade and pave the following a year hence:

The necessary connecting lines to complete the pavement from Buena to the Riverside County line and connecting up with Oceanside at the Bonsall junction; also making the connecting lines between Fosters or Mussoys and Julian; also to pave the connecting line from South San Diego up the strand to Coronado.

I would like an estimate based on a 16' highway and an 18' highway for another proposed bond issue.

Yours very truly,

EF:AH

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF.. Nov. 4th, 1921.

Col. Ed Fletcher,
920-8th Street,
San Diego, Calif.

My dear Mr. Fletcher:-

Enclosed is copy of letter to go to the Board of Supervisors regarding the proposed protection work on the San Luis Rey River, also the blue print showing the various projects.

I would like to have you look this over for your information, before it is finally submitted to the Board of Supervisors.

Yours truly,

RMM:GT
encs.

COUNTY HIGHWAY COMMISSION

R. M. Morton
Chief Engineer

Mr Westphal already has a copy -

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF.. Nov. 7th, 1921.

Col. Ed Fletcher,
920-8th Street,
San Diego, Calif.

My dear Mr. Fletcher:-

I have had your request for an estimate for proposed bond issue for new highway construction under serious consideration for some time, and am prepared to render you a report of costs along the lines which you request. Have also considered some additional roads which I would offer as a suggestion if plans are to be gotten under way for another pavement bond issue.

Of the lines as laid out under the present bond issue, we find that 52.42 miles of the main roads are yet to be built, assuming that the Board of Supervisors will defray the cost of paving the Poway Grade in the near future. The various sections, their length and total cost is shown as set forth in the table below:

ROAD	SECTION	LENGTH	TOTAL
Mission 1-A	Bernardo-Escondido	3.04	65,180
Mission 1-B	Buena-San Luis Rey	7.68	227,410
Mission 1-C	San Luis Rey-Bonsall	2.30	75,175
Mission 1-C	Wallbrook-Rainbow	5.54	129,270
Mission 1-C	Rainbow-Riverside Co.	2.96	92,260
San Luis Rey 2	Amick Grade	0.41	11,500
San Luis Rey 2	San Luis Rey-Bonsall	2.58	82,160
Julian 3-A	Mussey Grade	2.92	75,460
Julian 3-A	Ramona Valley	8.28	272,030
Julian 3-B	Ramona-Vallena	9.30	323,450
Julian 3-B	Santa Ysabel Grade	2.82	88,830
Cor. Chula Vista (6)	Strand	4.59	125,085
Total.....		52.42	1,567,810

Page 2.....Col. Ed Fletcher

The total of \$1,567,810, I have very carefully checked up with the cost of the work which we have been doing and believe that this cost is high enough to cover contingencies and overhead.

Of the 52.42 miles as laid out above, 14.73 miles stands already graded with the culverts installed ready for the paving.

This estimate is based on a width of eighteen feet of pavement except on the Oceanside road, where a width of sixteen feet was used in the estimate. If a width of sixteen feet were generally adopted about \$140,000 would be deducted from the total given above.

In addition to the roads mentioned in your letter, it would seem to me that a second bond issue in San Diego County could be so planned as to close up all of the important gaps which interfere with the proper enjoyment and use of the roads on the part of both business and pleasure traffic.

Since the highway bonding act was amended to permit of including sections of ~~more~~ highway lying within incorporated cities, an opportunity is afforded to insure general support for a bond issue by including some of the gaps lying in the cities.

The additional lines which I would suggest are as follows:

Highland Avenue from La Mesa Road to National City	1.5 miles
National Avenue in Chula Vista	1.5 "
National Avenue in Sweetwater Valley	.6 "
Rose Canyon in San Diego City	5.5 "
Encanto Section in San Deigo	2 "
Biological Grade near La Jolla	1 "
Paving through Escondido on Nutmeg and Lime Streets	1.65 "
Paving in Oceanside to connect with San Luis Rey Road	2 "
Paving at El Cajon to connect with the Santee Road	.4 "
	<hr/>
	16.15 "

To this list it should seriously be considered adding the paving from Nestor to the Mexican Boundary at Fia Juana. From

Page 3.....Col Ed Fletcher

a viewpoint of an engineer this is very essential. The policy of including this section perhaps should be decided by others. This 16.15 miles based on the cost of the present bond issue could be built for about \$500,000, and would make the total estimate for the bond issue \$2,067,000.

It is believed this estimate is sufficiently high to include contingencies and overhead expense. If it was not decided to better our present specifications, the work should naturally be a little cheaper than our present work. This is off-set however by the large mileage on an expensive portion of the Julian Road and the difficulty of the work from Buena to the San Luis Rey River. The expensive nature of this work tends to raise the general cost estimate of the whole scheme.

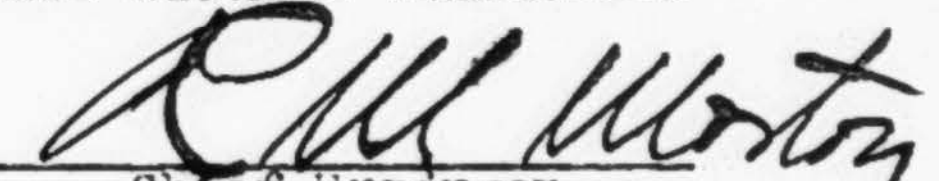
For a second bond issue it is not unreasonable to expect a lower price on cement. The tendency is for cement prices to go down in other sections of the country and eventually the price will be reduced in southern California.

Trusting that this is the information you desire, I am

Yours truly,

RMM:GT

COUNTY HIGHWAY COMMISSION


Chief Engineer

November 17, 1921

Mr. R. M. Morton, Engineer,
Highway Commission,
San Diego, California.

My dear Morton:

Answering yours of the 7th, I don't
see any estimate here for the highway from Coronado
along the Strand. Give me an estimate of this cost,
please.

Yours truly,

EF:KLM

November 18, 1921.

Mr. R. M. Morton, Engr.,
County Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

Inclosed find article on highways and over-
loaded trucks, etc., which is for your information.

Yours very truly,

EF:AH

December 8, 1921.

Mr. R. M. Morton,
County Highway Commission,
San Diego, Calif.

My dear Morton:

Can you prepare us a plan and estimate of
cost of two cattle runs up near Cuyamaca lake on the
county highway?

Yours sincerely,

EP:MM

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
R. M. MORTON, ENGINEER

533 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., Dec. 10th, 1921.

Col. Ed Fletcher,
920-8th Street,
San Diego, Calif.

Dear Sir:-

I am pleased to advise you that I have already mailed
check to Mr. Havelly to go with application for membership
in the California Highway Association.

In regard to plan and estimate for two cattle runs
near Cuyamaca Lake, will be glad to assist you on this if
you are not ⁱⁿ too much of a hurry. I have the Grand Jury
Committee to conduct over the highways next week and I anti-
cipate that it will require practically all week.

Will you please advise the exact location of the
cattle runs so that I can readily find them also whether
you desire to build of concrete or of wood.

With best wishes, I am

RMM:GT

Yours sincerely,

R. M. Morton

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., Dec. 10th, 1921.

December
Thirteenth
1921

Col. Ed Fletcher,
920-8th Street,
San Diego, Calif.

Dear Sir:-

I have your letter of December 6th with the enclosed statement for the press issued by the California Highway Commission.

I am quite enthusiastic about their experiments insofar as they pertain to the mixing of Portland Cement and Hydrated Lime with the soil. I believe that this is something which the Highway Commission could well have done several years ago and if they had they would now be in a much better position.

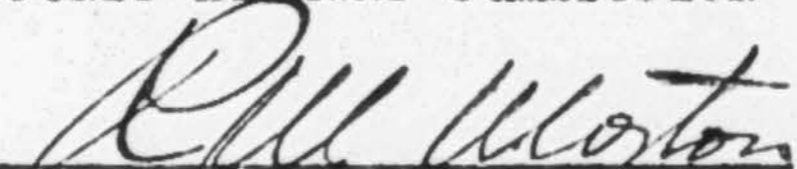
The science of highway construction needs the benefit of all the experiments that can be safely financed by all of the road building organizations in order that we may learn how to overcome the weaknesses which we all know exist.

It is the continual disregarding of known proven elements of weakness which result in arousing unfavorable public sentiment.

Yours truly,

RMM:GT

COUNTY HIGHWAY COMMISSION


Chief Engineer

Mr. R. M. Morton, Engineer,
County Highway Commission,
San Diego, Calif.

My dear Mr. Morton:

The cattle runs will be located, one near the north end of Cuyamaca dam on the county highway and the other about one mile south of Cuyamaca dam where you turn abruptly to the east and across the the small bridge before climbing the hill to the summit.

No hurry in regard to this matter.

Yours sincerely,

EF:KLM

file

Jan. 6th, 1922.

READ AT MEETING
OF COMMISSION 1-9 1922
Jensen

Highway Commission,
533 Union Bldg.,
San Diego, Calif.

Gentlemen:-

In compliance with your request made at a recent meeting, I herein set forth in some detail the damage, or the absence thereof, on the highways built under the jurisdiction of the County Highway Commission.

1. CORONADO-CHULA VISTA ROAD. This road was inspected after the first storm, and found to be unharmed. At no point did water rise high enough to flow over the pavement, and the drainage system worked well.

2. BONITA ROAD. Slight damage was done on the Bonita Road by a few earth slides from above where the road runs along the bluff. I inspected this road after the first storm and found that all of the culverts carried the water with the exception of four, where the water spilled over the pavement without damage.

Three of the culverts which did not carry the water were at the Chula Vista end of the pavement. The water poured down the hill along the street in Chula Vista. This condition could be remedied by installation of a two foot culvert across the city street at the end of our pavement. The other culvert which did not carry the water is at the Bonita end of the work where a large drainage is diverted from its natural course and carried across the end of the pavement. We provided a 24" pipe, but a ten foot span bridge would be required to carry the water. The overflow at this point did little damage, except to deposit silt on the pavement. It is to be hoped that if the paving is ever extended easterly, the drainage at this point will be carried to the proper location for a crossing, whereupon a culvert of sufficient size can be installed. Fifty dollars or less will repair the damage on this road.

3. LEMON GROVE ROAD. This road passed through the first storm practically without damage except for gullying of the side ditches on the upper side of the pavement between Encanto and

and Lemon Grove, there is evidence after the second storm of undermining of the shoulders, but the water did not cut closer than three feet to the pavement. The construction of a concrete wall at this point would prevent future damage.

The runoff from the second storm caused the Chollas Creek to rise over its banks and it seriously undermined the high embankment just beyond the Chollas Creek crossing. At this point we had constructed a concrete wall for a length of eighty feet from the bridge as a protection to the fill, and to retain the toe of the slope. This wall prevented more serious damage, but should be continued for the full length of the fill, or about two hundred feet.

At this point the water undermined the pavement for a length of about sixty to seventy feet and for a width of ten feet under the concrete and for a height of twelve to fifteen feet. The pavement is bridging across the gap; about 1000 yards of earth has been washed from the fill. Work by the district road forces is already under way to repair this damage and I understand that a small concrete mixer has been purchased to use in lengthening the concrete protection wall. To repair the damage and extend the concrete wall will probably cost \$2000.00.

4. EL CAJON TO FOSTER. This contract went through the first storm with no damage except a deposit of sand and silt across the pavement for a length of about fifty feet at about Station 190, between Santee and Lakeside. As a result of the second storm however, water washed across the pavement at a number of small culverts between El Cajon and Santee with practically no damage to the shoulders however. The wash at station 190 continued to deposit sand on the pavement, the first storm having completely filled up the culvert provided at that point.

As a result of the second storm the water in San Vicente Creek washed out about 100 feet of the sheet piling, built to protect the road where the creek went through in 1916. The water undermined the pavement for a width of five or six feet for a length of 75 feet. Repair work is already under way at this point by the district road forces. From this point the water followed down the valley two or three feet deep over the pavement and at a point about a mile southerly from the bulkhead undermined the pavement and shoulders so badly that a section of the pavement about seventy-five feet long and twelve feet wide sank into the wash. The sides of the pavement for several hundred feet in each direction is undermined and the only way the pavement can be saved will be to very carefully back fill under the edges. To repair the damage between Lakeside and Foster will probably cost \$2,500.

5. CROCK AND HENNO contract for grading from Foster to the top of the Kussey.

The work on this contract was hard hit by the water. About 3/4 of a mile of the upper end of the contract had been graded and

the installation of culverts was under way. The runoff hit this section of the road at the worst possible time, although the rainfall will do much to settle the new fills which had just been made. There was no serious damage except slides above Station 720, but here a stream of water came into the road from the mountain side at a point where the excavation for a culvert was partially made. This water took a course down the road and followed it for a thousand feet before it all got over the edge, and from Station 710 to 720 at least 1500 yards of roadbed was washed away.

Below this point there was little damage to the grade. At the foot of the grade one approach on each of the concrete bridges across the two streams was washed away. These approaches were washed away in the 1916 flood and had been backfilled with loose earth.

The best way to safeguard this location is to increase the size of these openings to add about 100 feet additional to each bridge. The necessity for this is probably the most expensive piece of work confronting the county as a result of the flood. It would be unwise to backfill the approaches as the present structures have twice proven inadequate.

Between Mussey Grove where the bridge approaches were washed out and Foster, there is little damage. This portion of the grade was also partially completed and none of the culverts had been installed. Those which were installed however seemed to handle the runoff in good shape. The necessity for one additional small culvert near Mussey Grove is apparent.

The removal of slides which occurred on the completed work is already under way. The extra earth handled will be considerable expense, either to the contractor or to the county.

6. On the Hard contract for grading from Ballena to Julian, also on the Bent contract for paving from Ballena to Julian a very small amount of material damage ensued from the storm. The outstanding damage consists of the slides which occurred on the Santa Ysabel grade, which Hard Brothers are now engaged in removing. There is perhaps 1000 yards of boulders and earth slid in from above and Hard's outfit is now engaged in removing this.

The culvert on this section proved adequate to take care of the water, with several minor exceptions where the early runoff filled the culverts with sand, forcing the later runoff over the pavement. There are other locations where earth from the banks filled in and obstructed the ditch on the upper side, thus forcing the water over the pavement. The most serious case of stopped-up culvert occurred on the Curley Grade where a two foot pipe became obstructed with brush raising the water level up into the fill, and the water found a new opening under the pavement, through the

fill at the side of the culvert. It will be necessary to open up the fill at the edge of the pavement to find the leak.

The concrete curbs installed have proved their efficiency in preventing the water from running over the high portion of the fill. At several points additional curb should be placed for the protection of the fills. At about Station 690 a curb and wall should be built for a length of about 500 feet. At this point the road lies in the trough of a saddle between the hills and the water can be kept on either side of the road. Only by the construction of a curb and the digging of a ditch on the easterly side of the grade can we prevent the water from crossing over at every storm. Repair work has already begun by Bent Brothers and by Hard Brothers on this section. On the upper end of the road from the Santa Ysabel grade to Julian there is practically no damage.

7. POWAY GRADE. This work stood very well, with the exception of one fill on the far side of the summit, from which about 1000 yards of earth was washed by drainage water from the surface which crossed the road and ran down the side of the fill. At the crossing of the valley this side of Scripps entrance the road was graded low, to pave as a spillway. The water has washed away the approaches to the reinforced concrete box culvert at this point for ten feet on either side. If a spillway is paved on the lower side similar to that across the mouth of the Fallbrook Creek, the present culvert should handle the water and there should be no damage in the future.

Between this crossing and the summit, all of the culverts in the large fills carried the water in a satisfactory manner. There is some slight damage in a few places by water which ran down the middle of the grades to the fills in the depressions, and went off at the side. Damage of this nature is very inconsiderable. Perhaps a half dozen small culverts could be placed to advantage at various points along the grade mostly near the summit to relieve the ditch at the bank.

In paving the grade curbs should be constructed to carry the drainage water to proper places and insure the high fills against future damage. At the summit cut perhaps one hundred yards have slid in from the banks at each side. I would estimate the cost of additional culverts, replacing of the large fill and minor repairs here and there would cost \$2500.

8. HUNKIN-CORREY PAVING JOB, foot of the Poway grade to Bernardo. This section of highway has sustained damage at more locations than any other piece of our work. Many of the culverts have proved inadequate to carry the water. Many of these culverts were the old structures which we found in good condition and considered that as they had weathered the 1916 flood they would prove to be sufficient.

The first serious damage is a wash out at the end of the bridge over the Poway Creek, which undermined the pavement for a width of six feet and a length of 30 feet. To prevent a recurrence of this a retaining wall should be built.

The next case of a seriously inadequate culvert is two 36" pipes on which we built headwalls at a point opposite Dagamar's Grove. It would have taken a twenty foot bridge to handle the water at this point. The water ran over the pavement and undermined the shoulder. The building of a paved spillway for a couple of hundred feet will prevent future damage except for deposit of silt in the roadway.

The next serious case of inadequate culvert is at the bridge by the school house about one-half mile beyond the county road station. This twenty foot span bridge did not carry the water, which ran over the pavement and washed off the lower shoulder for a distance of about 100 feet. It would have taken a 60 foot bridge to handle the water at this point.

The small culverts adjacent to the Lawson's place, where the large rock was removed from the center of the roadway, all proved inadequate, and the water spilled over the road, with almost no damage however.

Another serious case of inadequate culverts is near the Foster Ranch where we lengthened and built headwalls on two 36" pipes which were installed by the supervisor since the 1916 flood. It would have taken a twenty foot bridge to handle the water properly at this point. Two hundred yards of earth was washed from the shoulder at this culvert.

No serious damage is found except for gulleys at the sides until Green Valley is reached. Water went over the pavement here, as was expected, but in such large quantities that the shoulder on the lower side was removed for a length of about 300 feet. If a concrete spillway is provided at this point future floods will do no damage to the road in Green Valley.

Between Green Valley and Bernardo there is one place where the culvert proved inadequate. This was a 4 x 4 box built by the Highway Commission to replace two 24" pipes. A bridge of about ten foot span would have been required at this point. Very little damage was done by the water spilling over the shoulder however and a half day's work with a man and team would repair the shoulder.

I would estimate the cost of repairing shoulders on the Hankin-Conkey job, opening culverts, etc., at about \$1000.00. About \$2500 could be spent on curbing, retaining walls, and paved shoulders, to prevent recurrence of the damage.

9. HARD CONTRACT FOR GRADING BERNARDO TO ESCONDIDO. This was a light grade on a new location. It is impossible to state in regard to some of the culverts whether they are adequate or not, for the sand from the bare hillside washed down with the water, covering with deposit culvert, headwall and roadway. There is one case of inadequate opening however on the last crossing near Esccondido, where the two 36" pipes did not carry the water which ran over and washed out about 50 yards of earth. A 12 foot span of bridge would be necessary to take care of water at this point. I would estimate the cost of rebuilding the Hard grading job-Bernardo to Esccondido, at not to exceed \$500.00.

10. ESCONDIDO-SAN MARCOS ROAD. There is little damage on this section of highway. Most of the culverts proved adequate, and in one case of culvert which was not adequate the water can be diverted to another culvert provided to take care of it by ditching outside of the right-of-way. There is a 12" opening about one-half mile southerly from Richland, installed to replace a similar structure which was broken in, which should have had three or four times the capacity; the shoulder was badly washed at that point. Estimate of damage - \$50.00 or less.

11. SAN MARCOS-BUENA ROAD. This work now under contract to George R. Delay sustained damage to the shoulders in several places. On the section of road where the disintegrated granite was placed as foundation occurs the worst damage, caused by inadequate culverts. There are three cases where the openings provided are not sufficiently large. Two of these the size of opening corresponds with the opening of the old road. The other is a case where we installed a 12" pipe and about three times the area is required. There is another bad situation on this road where the water in the old ditch line was diverted by means of an earth fill to correspond to a change in alignment, and the drainage found its way back to the old channel, thus undermining the new fill. It will be necessary to build a small concrete wall and gutter to protect the fill and carry the water at this location. The wall will be about 150 feet long and will cost perhaps \$200.00.

At three other locations, inasmuch as the work is still in progress, I believe we should arrange for the installation of larger pipe. At every one of the points where the water ran over it washed off the shoulder on the lower side quite badly and this will be a constant source of expense unless larger pipes are installed. Cost of repairs, replacing shoulders, and building wall \$600.00. Cost of changing three culverts \$750.00.

12. BONVILLE-FALLBROOK ROAD. This section of highway was practically undamaged by the runoff. The only washes which have occurred are nominal and will be repaired by the contractor in the course of finishing shoulders before the road is completed. There is one case of inadequate culvert and shoulder wash where we built

headwalls on a pipe recently installed by the supervisor. It is at a location where the road is quite low about one mile south of Fallbrook, and it is doubtful whether a larger culvert would have prevented the damage, as there is no getting away for the water on the lower side of the road. Damage nil.

13. **SHERER & CROWLEY JOB.** This grading job came through the runoff practically without damage. The culverts carried the water in excellent shape with the exception of slight excess of water just opposite the new plant of the Union Oil Company out of Fallbrook. The culvert at this location is a 24 x 3 inch box concrete built to replace a similar structure which was built by the supervisor after the last flood. The damage here is not serious, and it is doubtful whether any expense for larger opening would be justified. The only change in conditions worthy of consideration would be to install about three small pipes.

14. **SAN LUIS REY ROAD.** This job stood the runoff with almost no damage at all. There is one case where the water ran on the shoulder alongside the pavement for a couple of hundred feet just east of the San Luis Rey Mission and undermined the pavement for a width of a foot or more. This can be repaired at slight expense. Fifty yards of earth was washed from one fill on the Amick Grade on account of the ditch on the hillside being closed by a slide. The damage however is nominal at both locations. The protection work installed recently by Supervisor Westfall probably prevented the river from cutting further toward the road in the San Luis Rey Valley between the Amick Grade and San Luis Rey. Damage does not exceed \$50.00.

In connection with this report I desire to bring out that the damage to the highways falls into several classifications: First there should be considered actual damage caused by water running over the pavement or by inadequate culverts, on work which has been accepted by the board of supervisors. Undoubtedly the repair of these sections is not within the province of the Highway Commission. On this class of road however, there are several places where the paving of shoulders on the lower side of the grade, the building of curbing or the building of retaining walls would safeguard against similar damage in the future. Additional work of this nature could properly be undertaken by the Highway Commission with the consent of the Board of Supervisors.

Another class of damage is on the work which is now under contract, including the Crook and Penno grading job, the Hard Brothers and Bent Brothers job between Ballena and Julian and the Daley job from San Marcos to Buena. These works are still in the hands of the Highway Commission and where inadequate features have developed it would seem that it is our business to correct them, or to provide supplemental construction to safeguard against a recurrence.

The third question which comes up as a result of the damage from the heavy downpour involves the question of payment of contractors for the extra quantities handled in making the necessary repairs on uncompleted contracts. For instance, slides to the amount of between 1000 and 1500 yards have come down on completed portion of the Lussey grade and at least 1000 yards of slide have occurred on Hard's contract. Because certain culverts did not carry the water which came to them, several hundred yards of shoulder material has been washed away on the Daley contract. The question of payment for the extra work involved in removing these additional quantities is one which should be carefully considered. In every case the contractor would expect extra payment for repairing the grade.

My personal view is that the county should reimburse the contractors with wholly, or in part, for the additional work, but I do not consider that I have the authority, without action of the Highway Commission and Board of Supervisors, to so inform the contractors.

R.M.E:GT

Respectfully,


Chief Engineer

SHERWOOD WHEATON, CHAIRMAN
ED. FLETCHER
F. M. WHITE
R. M. MORTON, ENGINEER

533 UNION BUILDING
PHONE MAIN 6230

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF., Feb. 2nd, 1922.

January 13, 1922.

Mr. R. M. Morton, Engineer,
Co. Highway Commission,
Union Building,
San Diego, Calif.

My dear Mr. Morton:

Inclosed find letter from the
Automobile Club of Southern California which
is explanatory.

Yours very truly,

Col. Ed Fletcher,
920-8th Street,
San Diego, Calif.

Dear Sir:-

I am told that you have a clinometer, which is
a hand level with an arc attached for reading angles.

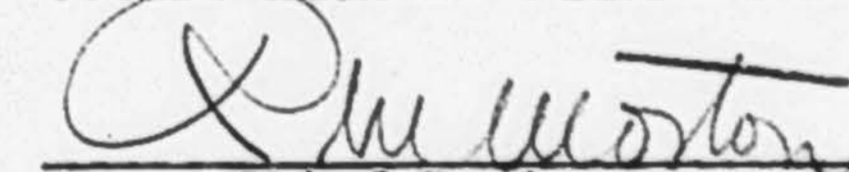
The Highway Commission has never purchased a
clinometer, and we have need for one now for a few weeks
to take some slopes on the Mussey Grade work.

I wonder if you would let one of our engineers
use the clinometer. We will return it to you in good
condition. If you think we ^{will use} ~~want~~ Mr. Fraser can put
up its cash value in escrow, payable to your order in
case the instrument is not returned in good condition.

RMM:GT

Yours very truly,

COUNTY HIGHWAY COMMISSION


Chief Engineer

*Edward took Col. Fletcher's
to them & got receipt
for it.*

15611

March 27, 1922

Mr. R. M. Morton,
Union Building,
San Diego, Calif.

My dear Morton:

Answering yours of the 24th, will say I am
going to take this matter up immediately with
Supervisor Foster, and you will hear from me later.
I certainly appreciate what you are doing.

Yours truly,

BF:KLM

April Eleventh
1 9 2 2

Mr. R. M. Morton,
c/o County Highway Commission,
Union Building,
San Diego, Calif.

My dear Mr. Morton:

How near done are you on that Pine Hills
project? I am sending a check for \$106.66 to
Mr. Book.

Yours very truly,

BF:AM

HIGHWAY COMMISSION
SAN DIEGO COUNTY

SAN DIEGO, CALIF.,

April 12th 1922.

Colonel Ed. Fletcher,
920-8th Street,
San Diego, Calif.

My Dear Colonel:

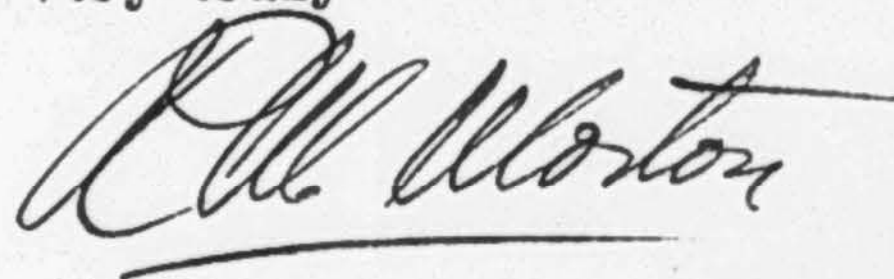
The Pine Hills plans, including the tracings are finished. Specifications are being held back awaiting word from you as to what you want, but I would advise that they be prepared now for the grading only, and then we will turn over plans and all to you.

If granite surfacing is adopted specifications can be prepared later, or the work could be done without a specification after the grading and culverts are finished.

The only bill remaining to pay is what is due Richard Miller for making the tracings. Have not yet ascertained the amount.

The total cost of the plans will be well below the estimate I gave you.

Yours very truly



April
Fourteen
1922

Mr. R. M. Morton,
c/o County Highway Commission,
Union Building,
San Diego, Calif.

My dear Mr. Morton:

Answering yours of April 12th, will say we are going to take your recommendation about surfacing the decomposed granite. Keep the estimate down as low as you can for we are going to ask Foster to put up one-half and we the other half, and if we put it up too high it is going to scare him off. When can you submit the maps and everything to me?

Yours very truly,

EF:AH

Ed Fletcher Papers

1870-1955

MSS.81

Box: 18 Folder: 27

General Correspondence - Morton, R.M.



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