

to the west curb line of Sixth street, be improved by having the following street work done thereon, to wit:

(a) That the roadway of said East State street, between said points (excepting 27 inches in width from the curb line on each side of said street, along the gutter way thereof) shall be paved with asphaltic cement and broken stone base, with asphalt wearing surface in accordance with plans, profile and cross-sections therefor on file in the office of the City Engineer, and specifications therefor on file in the office of the City Clerk, to all of which reference is hereby made; and

(b) That all cobble stone gutters along each side of said East State street to be paved as aforesaid for a width of 27 inches from the curb line of said street (excepting where already grouted or surfaced with cement) shall be grouted and surfaced with cement, in accordance with plans therefor on file in the office of the City Engineer, and specifications therefor on file in the office of the City Clerk, to all of which reference is hereby made.

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CTOR'S PROPOSAL WITH BOND.

Redlands, July 29th 1903
CITY OF Los Angeles,
If the City of Redlands:
the advertisement calling therefor, a copy of which is hereto annexed The
to perform the work mentioned upon East State
line of the roadway of Fifth street to the west curb
and furnish materials in accordance with the

specifications, and execute the contract therefor, to the satisfaction and under the supervision of the Street Superintendent of said city, at the following prices, viz.:

	DOLLARS	CENTS
<u>Bulverts, per lineal foot of bulverts</u>		
<u>Grading and graveling complete, per lineal foot</u>		
<u>Curb, per lineal foot of curb</u>		
<u>Gutters, per lineal foot of gutter</u>		<u>30</u>
<u>Sidewalk, per square foot of sidewalk</u>		
<u>Sewer complete, with manholes, flushtrunks and lamp holes, per lineal foot</u>		
<u>Crosswalks, per lineal foot of crosswalks</u>		
<u>Asphalt paving, per square foot of asphalt paving</u>		<u>16 1/2</u>

Fairchild Gilmore Wilton Co Contractor.
By E. H. Gilmore city

BOND

Know all Men by these Presents, That we, Fairchild Gilmore Wilton Co.
as principal, and The Union Surety and Guaranty Co. of
Philadelphia Pa. as sureties, are held and firmly bound unto the Mayor of the City of
Redlands State of California, in the sum of \$400.00 Dollars
for the payment whereof we hereby bind ourselves, our (if a corporation, successors,) heirs, executors
and administrators, jointly and severally, firmly by these presents.

Given under our hands and with our seals, on this 29th day of July
A. D., 1903 (if a corporation—said company subscribing and setting its corporate seal hereto,
by E. H. Gilmore its Secretary
thereto authorized.)

Now, the condition of the foregoing obligation is such that, whereas the above bounded Fairchild-
Gilmore Wilton Co. is about to hand in and submit to the Board of Trustees Redlands the
foregoing bid or proposal, for the performance of the work therein mentioned, which includes the fur-
nishing of all materials in compliance with the specifications therefor, under an invitation of said
Board of Trustees contained in the notice or advertisement attached to said bid or proposal: Now, if the bid or
proposal of the said Fairchild Gilmore Wilton Co. shall be accepted, and the
said work awarded to them thereupon by said Board of Trustees, and if the said Fairchild-
Gilmore Wilton Co. shall fail or neglect to enter into a contract therefor, and to execute an
adequate bond to the satisfaction of the Mayor and Superintendent of Streets of said city, with two or
more good and sufficient sureties, conditioned for the faithful performance of such contract on their
part, in such case required by Statute, then in that case the above named obligors will pay to the President of the
Board of Trustees of said City of Redlands the full sum of Four hundred
Dollars, as liquidated damages for such failure and neglect.

WITNESS:
The Union Surety and Guaranty Co.
By Charles A. Tut
RESIDENT SECRETAR
STATE OF CALIFORNIA,
CITY AND COUNTY OF LOS ANGELES. } ss.

FAIRCHILD-GILMORE-WILTON CO.
(INCORPORATED)
By E. H. Gilmore [SEAL]
The Union Surety and Guaranty Co. [SEAL]
By [Signature] [SEAL]
RESIDENT VICE-PRESIDENT

and
being severally duly sworn each for himself and not one for the other, says that he is one of the sureties
named in the foregoing bond, and that he executed the same, and is worth double the sum mentioned
therein over and above all statutory exceptions.

Subscribed and sworn to before me this
____ day of _____

SPECIFICATIONS NO. 3.

For street paving with asphaltic cement and broken stone base, with asphalt wearing surface, on Orange Street, from the south curb line on Central Avenue to the north curb line on Citrus Avenue, and on State Street from the east curb line on Fourth Street to the west curb line on Fifth Street in Redlands, San Bernardino County, California.

The work herein provided for is to be done in accordance with the plans, profiles and cross-sections on file in the office of the City Engineer of the City of Redlands, and all work shall, during its progress and on its completion, conform to the lines and levels which may be given by the City Engineer, in accordance therewith.

1st. The work to be done is as follows:-

1st. To remove the top layer of brick and the sand between the top and bottom layers, and deposit both brick and sand within 1/4 of mile from point where excavated.

2nd. To thoroughly roll the bottom layer of brick with a roller weighing not less than 250 lbs. to the inch run till the surface is unyielding.

3rd. To remove the pipes, cement covering and asphalt (where it is in the way) at the south, east and south-west corners of Water and Orange Streets) and the north east and northwest corners of Citrus Avenue and Orange Street.

4th. To lower the gutters according to the grade given by the Engineer, at the northeast corner of Citrus Avenue and Orange Street, at the south-east and north-east corners of Orange Street and State Street and at the southeast corner of Orange and Central Avenue.

5th. To build brick walls; put in new gutters where above mentioned gutters have been lowered, and furnish and put

put in place, iron plates one half inch thick by two feet wide over all gutters at corners on East side of Orange Street as shown on plan; to construct and lay all the necessary asphalt approaches and coverings to these covered gutters. To furnish and put in place at the corners on west side of Orange street, half pipes, having a diameter of 14 inches, these to be circular, and of sheet iron coated with asphalt, and according to dimensions shown on plan. Also to construct and lay the necessary asphalt approached and coverings to these half pipes.

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The sub grade for the roadway shall be parallel to and six inches below the finished surface of the roadway. In some cases holes will be encountered where the depth below the finished surface is more than six inches, and at these places, asphalt concrete of same quality as the rest of the work must be used to fill up to sub grade. Such portions of the street or alley as cannot be reached by the roller, shall be tamped solid.

-3-

Asphalt Concrete Base.

After the lower course of brick has been thoroughly rolled, there shall be constructed an asphalt concrete base from one and a half inches in thickness after compression, which shall be composed of asphaltic cement and broken Dolton rock. The asphaltic cement may be composed of either natural or artificial asphalt which shall conform to the tests required for the bitumen in the wearing surface hereinafter described.

The broken rock shall be clean, hard rock, roughly cubical in shape, with angular edges, and ranging from a pea minimum to the largest size which will pass through an inch ring.

The broken rock shall be heated to a temperature of about

250 degrees Fahr. after which, the asphaltic cement above specified, heated to a temperature of about 300 degrees Fahr. shall be applied to the same in the proportion of eight pounds of asphaltic cement to one cubic foot of broken rock, and the whole shall be thoroughly mixed in a suitable electric, hydraulic or steam power mixer.

The mixing shall continue until each particle of broken rock is coated with the asphaltic cement. When thus prepared, it shall be delivered at the point of laying at a temperature of not less than 200 degrees Fahr. and shall be immediately spread on the previously prepared sub-grade to such a depth that it shall have a thickness of at least 4 1/2 inches after compressing.

The compression of this cement layer shall be done as follows; As soon as the material has been spread for rolling, it shall be rolled with a hot iron roller weighing not less than 250 pounds to the lineal foot, and as the material cools it shall be rolled with a roller weighing not less than 250 pounds to the inch run. Said rolling shall be continued until the material is thoroughly compacted.

-4-

Asphalt Wearing Surface.

Upon the foundation prepared and laid as specified, there shall be spread and constructed a layer of asphalt wearing surface, not less than 1 1/2 inches in thickness after rolling, which shall be composed by weight as follows:-

Refined asphaltic cement	12 to 14 per cent
Sand	78 to 71 " "
Powdered carbonate of lime or	
Mineral dust	10 to 15 " "

The finished pavement or asphalt wearing surface must

show on analysis, not less than 10.20 per cent bitumen soluble in chemically pure carbon disulphide, which bitumen must not contain over thirty per cent of its weight insoluble in petroleum ether (or light gasoline) of a gravity 0.650 to 0.700.

The bitumen soluble in carbon di sulphide must not be brittle, but must be firm, elastic and cohesive, at temperature varying from 40 degrees to 80 degrees Fhr., between 80 degrees and 90 degrees Fhr. it must still retain considerable elasticity and cohesiveness. From 90 degrees to 100 degrees Fhr., it must not become too soft and must still have elasticity and cohesiveness.

The powdered carbonate of lime or mineral dust must be of such degree of fineness that the whole of it will pass through a thirty mesh screen, and at least 75 per cent shall pass through a hundred mesh screen. The mineral dust must be of such nature as not to be affected by water.

The sand must be clean, sharp, washed sand, free from clay and loam, of such size that the whole of it will pass through a ten mesh screen, and between 12 to 17 per cent shall pass through a 100 mesh screen, and shall not contain over 5 per cent of alumina, sulphate of lime and oxide of iron.

The asphaltic cement shall be composed of refined, natural California, solid asphalt, and refined, natural, California, liquid asphalts unmixed with any of the products of coal tar, residuum of petroleum oil, or any other inferior bituminous materials of any kind. The use of artificial asphalts or bitumens is expressly prohibited.

The natural, solid asphalt used in the composition of the asphaltic paving cement shall be free from all deleterious substances, such as non-bituminous organic matter, soluble

in order to saturate the pavement with an excess of asphalt. No wearing surface shall be laid during rainy weather or when the temperature of the air is less than 40 degrees Fahr.

Whenever the portion of the street to be paved is that portion which is required by law to be kept in order and repair by any person or company having railroad tracks thereon, granite blocks of size not less than 3 1/2 nor more than 4 1/2 inches wide, from 6 to 12 inches long and 6 inches deep, shall be laid against the inside and outside of each rail, the stones to be placed *header and stretcher*.

The bidder must deposit with the City Clerk, prior to or at the time of submitting his bid, samples of material he intends to use, together with statements under oath, as follows; 1st. A specimen of the natural California, solid asphalt to be used.

2nd. A specimen of the refined natural California liquid, asphalt used in refining the rock and to be used in fluxing the paving cement when heated.

3rd. A specimen of the asphalt cement to be used with a statement of its composition.

4th. A specimen of the sand to be used.

5th. A specimen of pulverized carbonate of lime or other mineral dust to be used.

All work shall be executed in a thorough and workman-like manner. When persons employed by the Contractor are found to be incompetent, or doing the work contrary to the specifications, they shall be immediately discharged.

The Contractor shall remove all obstructions that may be in the way of making said improvements.

The Contractor will be required to observe all the Ordinances of the City Council, in relation to the obstruction

of streets, keeping open passagesways and protecting the same where they are exposed or should be dangerous to public travel.

A red light must be maintained at night, and proper fences or barriers, at each end of the work and on either side, so as to protect the public effectually from liability to accident. This must be done during the entire progress of the work.

All railroad tracts, water pipes, sewer pipes, sewer or other connections of any character belonging to the city, or others, shall be properly protected, and the contractor shall be responsible for any damage that may be caused by negligence or carelessness on the part of his employees.

The contractor shall remove all the surplus material and rubbish from the work after its completion, and before he makes application for the acceptance of work.

The contractor shall notify the Superintendent of Streets when he desires a final inspection of the work when the latter will make the necessary examination and accept the work, if it is found completed according to the plans and specifications.

The Contractor is required to guarantee all repairs that may be needed for two years, from the time of completion of work.

Contractors are required to put in an alternative bid, in which both layers of brick shall be taken up, and the asphalt concrete base will be six inches in thickness and the asphalt wearing surface will be two inches in thickness. The specifications to be the same in all other respects.

Contractors are expected to send in a bid in a lump sum for all material and labor necessary for the completion of the work.