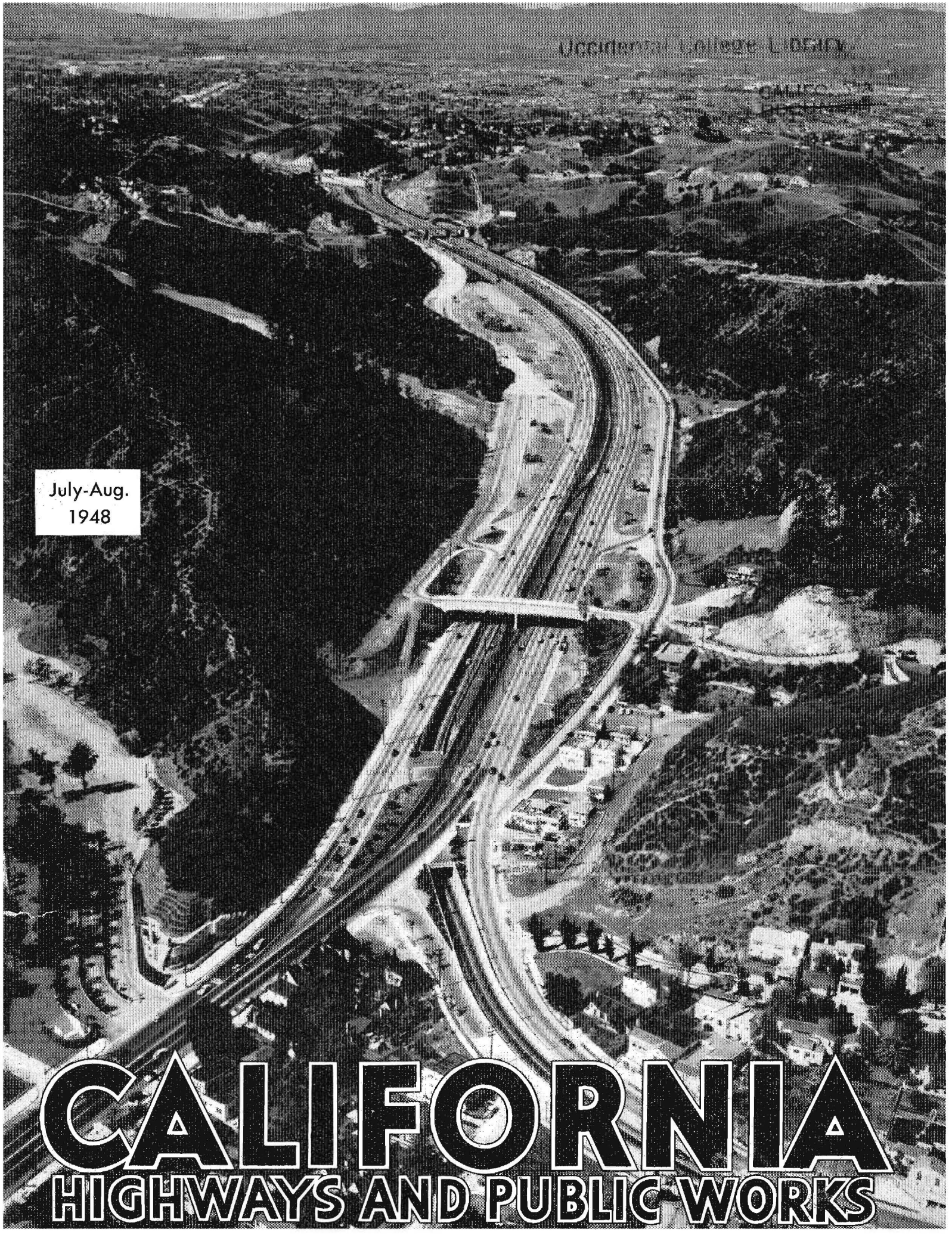

July-Aug.
1948

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California Highways and Public Works

Official Journal of the Division of Highways, Department of Public Works, State of California

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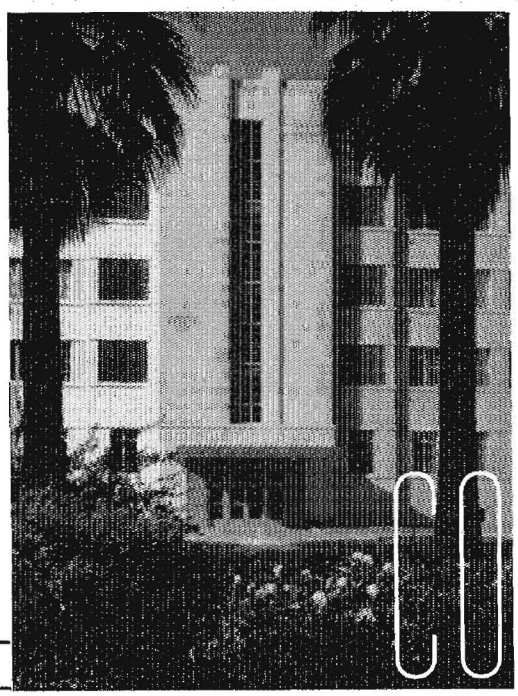

Public Works Building
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CONTENTS

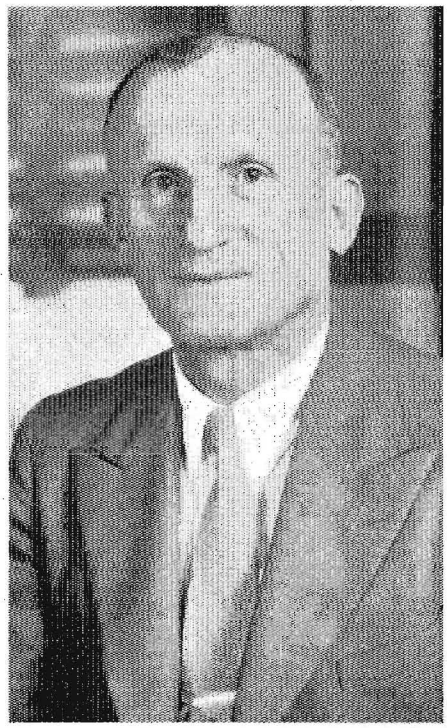
New Freeway

East Los Angeles Motorists Are Saved Driving Time

By SPENCER V. CORTELYOU, Assistant State Highway Engineer

MOTORISTS in the East Los Angeles area are now beginning to appreciate the value to them of the completed 1.6 mile section of the Santa Ana Freeway between the Aliso Street grade-separation project and Soto Street. They have found that several minutes of valuable time can be saved if they travel northerly and southerly on the Santa Ana Freeway between Aliso Street and Seventh Street, rather than driving the same distance on Main Street, Spring Street or Broadway in the congested downtown area in order to get between the Civic Center and Seventh Street.

The accompanying photographs show the portion of the Santa Ana Freeway construction that has recently been completed and opened to traffic. Photographs showing construction operations under way on this same section of the Santa Ana Freeway accompanied an article by A. N. George that appeared in the *California Highways and Public Works* issue of March-April, 1946.



Spencer V. Cortelyou

The Santa Ana Freeway is one of the most important of the freeways that have been established to serve Southern California areas. It is in effect an easterly extension of the Hollywood Freeway. It extends from the Los Angeles Civic Center in a general southeasterly direction through Los Angeles County and Orange County area to the City of Santa Ana.

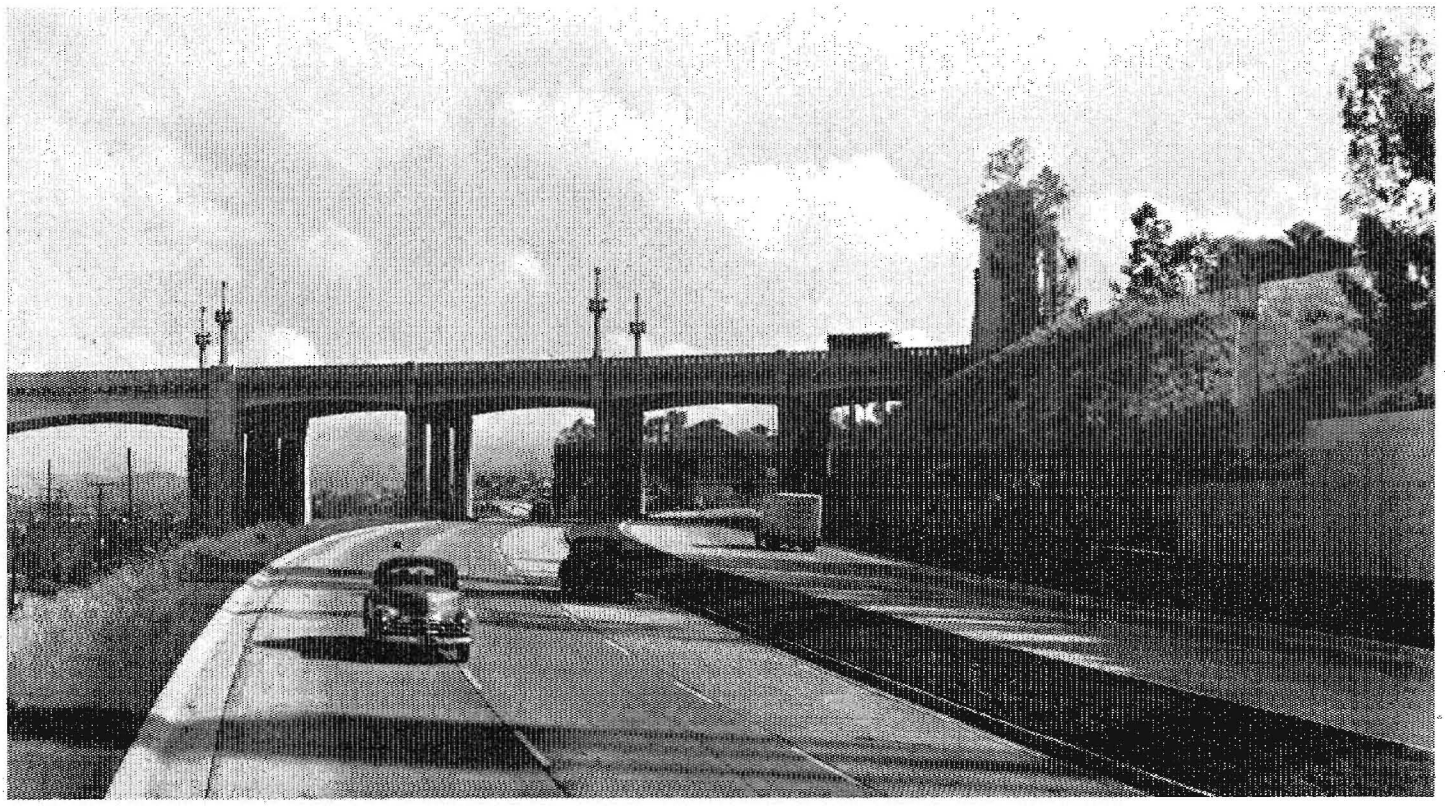
The fact that the Santa Ana Freeway follows a northwesterly-southeasterly direction makes it of particular strategic value because so many of the important existing traffic arteries of this portion of the State have been laid out in a general northerly and southerly or easterly and westerly direction.

Establishment of Freeway

On the Santa Ana Freeway the first freeway adoption resolution by the

. . . Continued on page 15

Santa Ana Freeway looking northerly, showing the Sixth Street Viaduct



Donner Summit

Highway Safety on U. S. 40 Will Be Improved by Elimination of Curves

By SCOTT H. LATHROP, Associate Highway Engineer

WORK was started in May on a project designed to improve the safety of portions of Highway U. S. 40 over the Donner Summit. In addition to being part of one of the main east-west transcontinental roads, this highway is being used more and more for access to winter sport areas, with the result that the average daily traffic is now between 2,500 and 3,000 cars daily and it is estimated that this will increase to about 5,000 cars daily by 1965. On weekends having weather favorable for snow sports the traffic is believed to approach the latter figure already.

This road is kept open all year and is used by a large number of heavy trucks and busses at all seasons. During the winter season, when icy conditions exist at intervals, this heavy traffic has had some difficulty at several locations within the limits of this project.

Between the beginning of the project at Kingvale and one mile east of Donner Summit there are seven curves where the superelevation is steep enough so that during snow storms and periods when the pavement is slippery because of ice or snow the heavier vehicles sometimes slide from the high sides of the curves to the low sides. Naturally this has been hazardous to all

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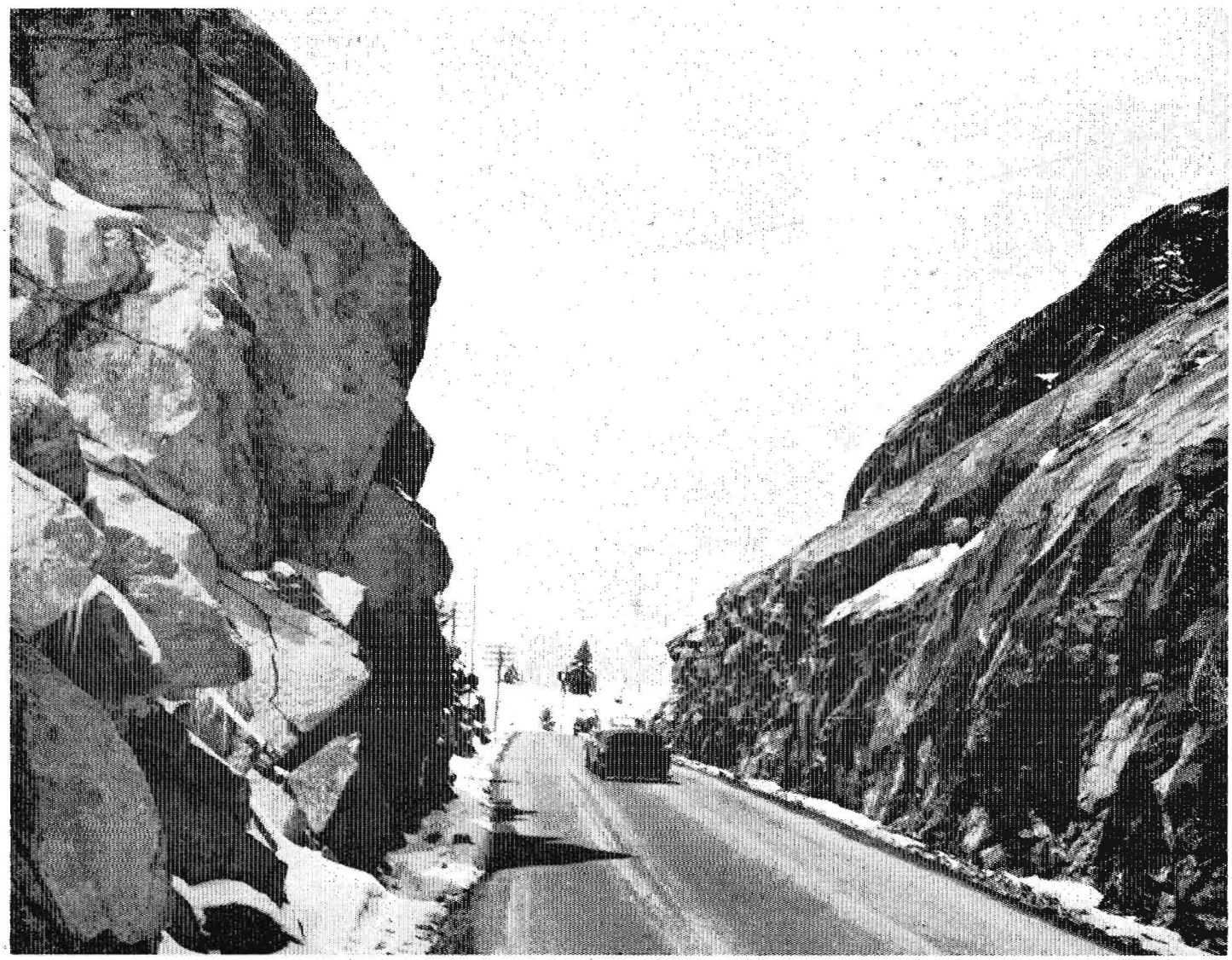
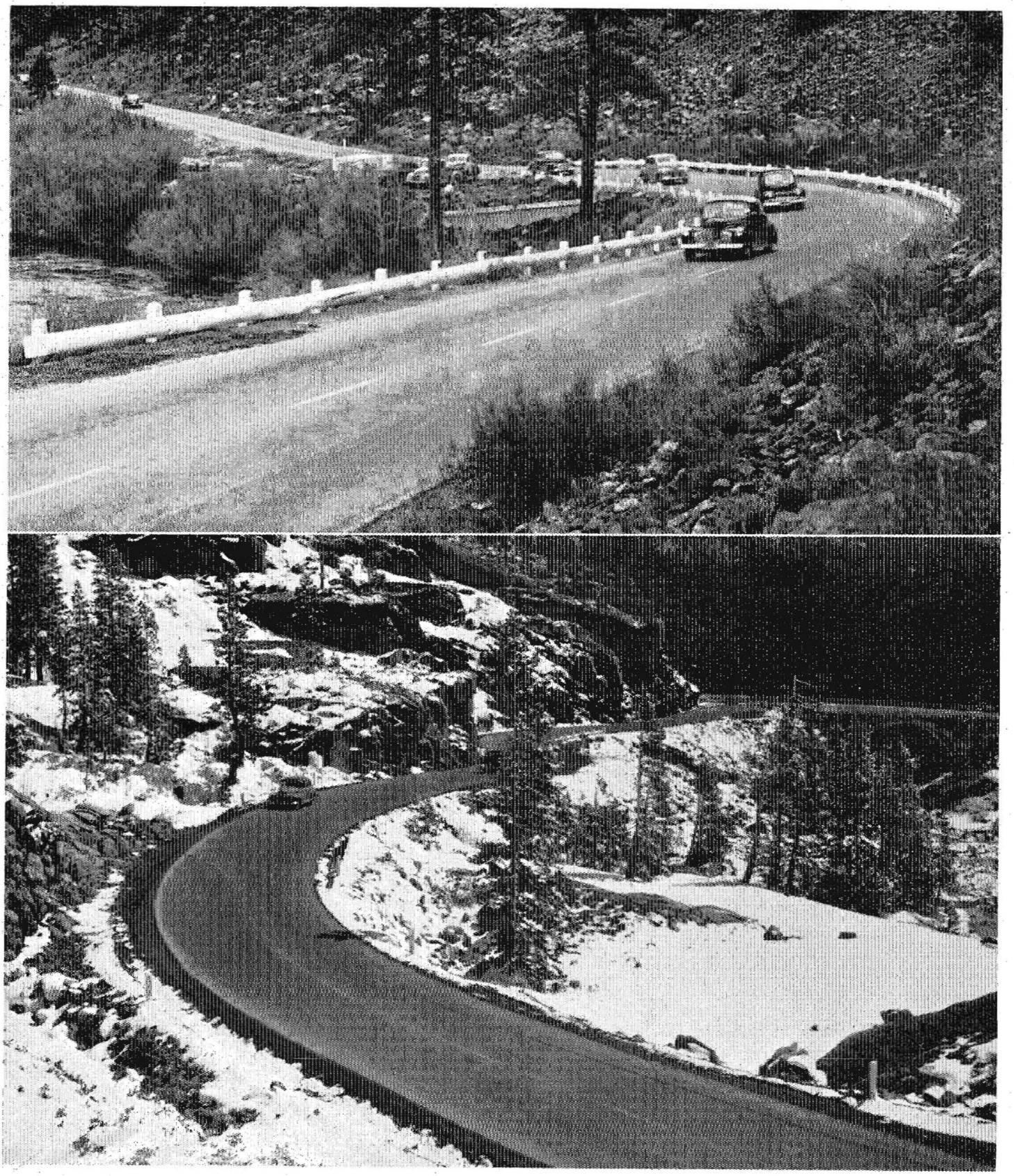
Looking west at rock cut to be widened at Donner Summit





UPPER—View of Flycasters Curve, looking east, which is to be widened. LOWER—Curves will be eliminated on this section of U. S. 40, looking east near Donner Summit, with Donner Summit Bridge in background

Traffic Safety

Colton-Ontario Freeway Reduces Accidents on Important Highway

By B. A. SWITZER, Associate Highway Traffic Engineer

For a number of years the State of California maintained a three-lane highway between Colton and Ontario. This highway was a part of U. S. Highway 99 and U. S. 70. In addition to interstate traffic, it carried the agricultural products of the Imperial Valley (the hothouse of California) to the markets of the Los Angeles metropolitan area.

The heavy mixed passenger and truck traffic had frequent accidents. Many of these accidents were spectacular, with resulting fatalities which caused general public criticism.

The road consisted of two 10-foot lanes and one 11-foot lane. The shoulders were surfaced with oil mix for a width of eight feet on each side. The area outside the surfaced section varied from 2 feet to 18 feet. Most of the highway was through a rural area, but at two different centers, business development was taking place and some strip development had started.

The average daily traffic in 1941 was 7,225, and the accident rate per million vehicle miles was 1.91. The accident rate rose in 1946 to 2.87 per million vehicle miles. Truck volume amounted to 26.4 percent of the traffic. There were 16 fatal accidents in this same year (1946). During the war years there was an average of nine fatal accidents a year, even through traffic was generally restricted.

Colton-Ontario Freeway

THE CONSTRUCTION of the Colton-Ontario Freeway was effected in three contracts. The first section extended from Mulberry Street near the Kaiser Steel Mill to Colton. The contractor was the Griffith Company, 1060 South Broadway, Los Angeles, California. Berndt Nelson was the Resident Engineer.

The second section extended from the east city limits of Ontario to Etiwanda Avenue. The contractor was the Matich Brothers, Colton Avenue and Willow, Colton, California. The Resident Engineer was J. M. Cowgill.

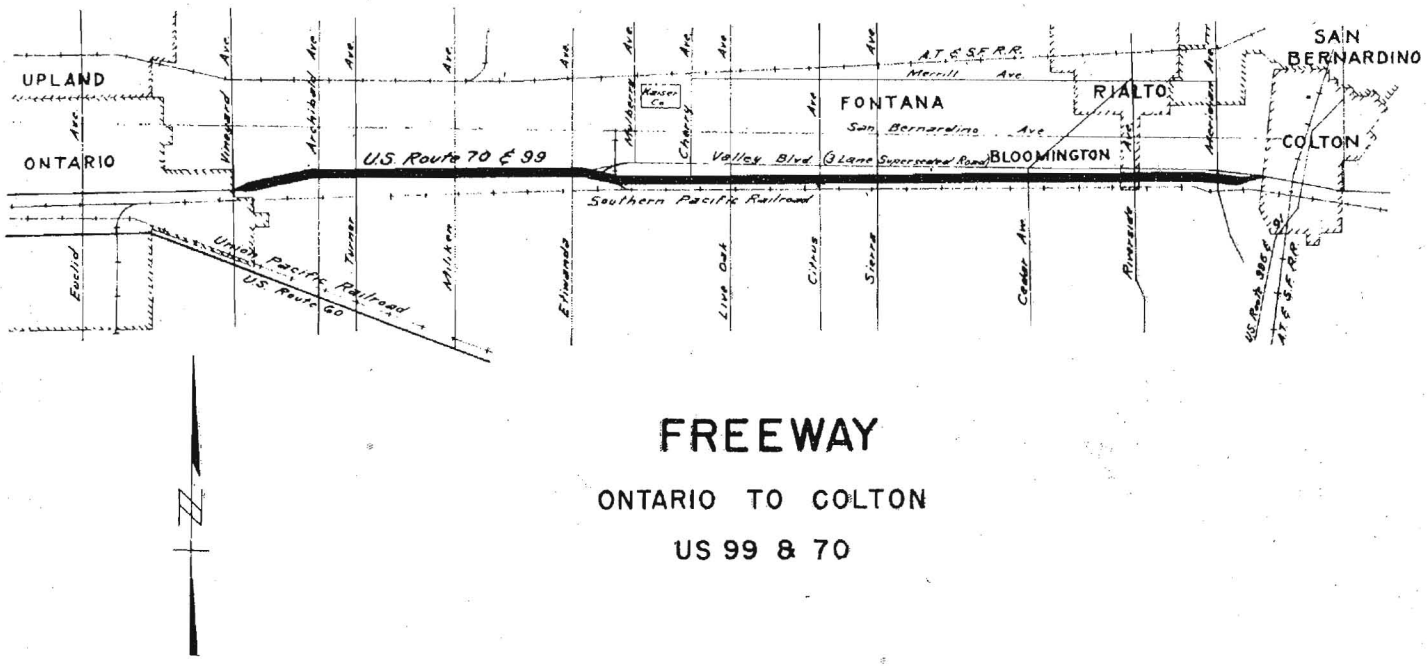
The third section consisted of structures over the spur track of the Southern Pacific Railroad and a braided intersection connecting to the old road extending from Etiwanda Avenue to Mulberry Street. The contractor was George Herz & Company, Box 191, San Bernardino, California. The Resident Engineer was J. M. Hollister.

FREEWAY PLANNED

Shortly after the beginning of the war the Federal Government appropriated funds for a postwar construction program, the plans to be prepared during the war, and the projects let to contract following its close. In view of its traffic and accident record, the State proposed the improvement of this highway.

The original intent was to construct a parallel facility to provide for a four-lane divided highway with limited access, or a full freeway with outer highways. Decision as to what type of improvement was to be decided by traffic and economic studies.

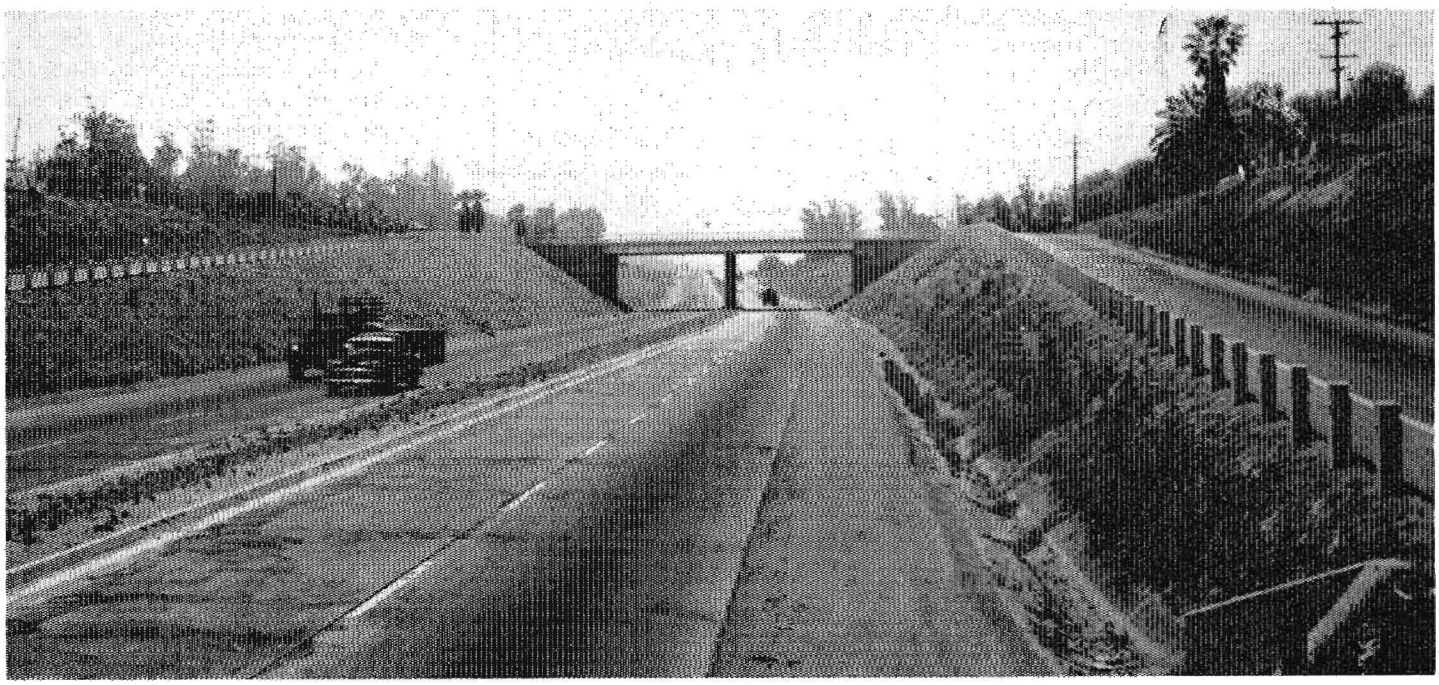
Through the developed area from Colton to Etiwanda Avenue, investigation determined that right of way could be acquired adjacent to the rail-



FREEWAY

ONTARIO TO COLTON

US 99 & 70



UPPER—Cedar Avenue grade separation at Bloomington, showing ramp connections to that community. LOWER—This is the Kaiser spur overpass. Spur railroad tracks may be seen entering underpass on left

road for a parallel road approximately 1,000 feet to the south of the existing road, and a new facility constructed at a cost much less than for widening the right of way and constructing on the existing route. This would not only permit the construction of a parallel facility but would also permit the old highway to serve as a local distribution road. Through the undeveloped area from Etiwanda Avenue to Ontario, it was found best to use the existing pavement and build two new lanes for westbound traffic.

CONSTRUCTION OF FREEWAY

With the close of the war, the postwar construction program was started. The portion of this highway on new location through the developed area extending from Mulberry Street near the Kaiser Steel Mill to Colton, a distance of 9.8 miles, was one of the first projects let to contract. The road was constructed as a limited freeway, but right of way for grade separations was obtained so that the road could ulti-

mately be constructed to a full freeway by stage construction. Connections were made approximately a mile apart. There are five grade crossings and connections and one separation in this first 9.8 mile section. The separation is at Cedar Street in the town of Bloomington. This grade separation was effected by depressing the freeway through the community and constructing a crossing over the freeway at the grade of the intersecting street. Approach ramps were constructed in each direction.

A minimum width of right of way of 208 feet was obtained. Construction consisted of a four-lane divided highway with two 12-foot cement concrete lanes in each direction with three-foot surfaced shoulders on the inside and eight-foot surfaced shoulders on the outside. The median strip varies from a minimum of 12 feet at structures to a maximum of 86 feet from edge of pavement to edge of pavement. The design speed was 60 miles per hour.

Temporary Connection

A temporary connection was made at Colton by means of two 500-foot radius reverse curves connecting the existing road ("I" Street) to the new freeway at the west city limit of Colton.

A temporary connection 0.6 miles in length was constructed from Mulberry Street (the west end of the first contract) to the existing three-lane road in the vicinity of the Kaiser Spur. This connection had a minimum curve radius of 600 feet.

This section of freeway from Colton to the Kaiser Spur, with its temporary connections, was opened to traffic February 27, 1947. Total cost, including connections, was $1,461,000.

Etiwanda Avenue Project

In April, 1946, a contract was let for a continuation of the project from Etiwanda Avenue to the east city limit of Ontario, a distance of 5.7. The section between Etiwanda Avenue and Mulberry Street, a distance of 1.0 mile, was delayed pending settlement of negotiations with the Southern Pacific Railroad for an overpass at the Kaiser Spur, which connected with the Kaiser Steel Mill.

SUMMARY

In Table I is presented a comparison between the accident record of the new freeway from its opening to traffic, to March 30, 1948, and for a similar period of time on the old highway before the freeway was in use.

Considering the total length from the east city limit of Ontario to the west city limit of Colton, the accidents were reduced from 154 on the Old Valley Boulevard to 75 on the freeway, which represents a decrease of 52 percent. Fatal accidents were reduced from 17 to 3, which amounts to 82 percent. The reduction in intersection accidents amounted to 60 percent. Accidents involving pedestrians have been entirely eliminated.

Twenty-eight percent of the accidents on the total length between Ontario and Colton occurred on the two short temporary connections. If the record of the temporary connections is eliminated, there is a reduction in accidents on the freeway amounting to 64 percent.

Table II comparisons are made of 15.2 miles of freeway exclusive of the temporary connections and a similar mileage on the old road. Daylight accidents have decreased to a greater extent than night accidents. Collisions in daylight involving two or more vehicles have been decreased by 83 percent. Daylight accidents involving property damage only have decreased by 78 percent.

Table III includes computations of accident rates per million vehicle miles.

The project from Etiwanda Avenue to Ontario consisted of two 12-foot cement concrete lanes parallel to and 29 feet north of the existing three-lane pavement. It, like the first contract, was constructed with a three-foot surfaced shoulder on the inside and an eight-foot surfaced shoulder on the outside. Four crossovers and connections were provided with provision for their future separation. At Etiwanda Avenue, provision was made for a future clover leaf. The design speed was 60 m.p.h., the same as the first section. It was opened to traffic March 12, 1947. Total cost was $493,000.

In May, 1947, a contract was let to complete the freeway by constructing the section between Mulberry Street and Etiwanda Avenue. This called for a braided intersection to connect the old three-lane pavement to the new freeway and a grade crossing over a spur track to the Kaiser Steel Mill. This work was completed and opened to traffic on March 2, 1948. Total cost was $399,000.

SAFETY INCREASED

A check on the safety record of the road to date yields the following information: The permanent section of freeway between the temporary connections at Colton and at Mulberry Street has been open for a year and has had 30 accidents, including two fatalities. There have been six accidents at the temporary connection at the west city limit of Colton, and 15 accidents on the temporary connection at the Kaiser junction before it was eliminated.

Comparing the 9.7 miles of permanent freeway with the similar section of the old road, it has been found that there were 117 accidents, 10 of which involved fatalities on the old road during the year preceding the opening of the freeway. On the freeway for a similar period of time, there were 30 accidents, two of which involved fatalities; this is a reduciton of 74 percent.

The temporary connections, totaling less than one mile and which were in use approximately one year, had 21 accidents or nearly as many as occurred on the 9.7 miles of freeway. The connections were on a much lower standard of construction than the freeway and the longer connection at Kaiser was eliminated as soon as possible.

The following tables give the comparative accident records of the old three-lane conventional road and the completed freeway:

TABLE I—COMPARISON OF ACCIDENTS ON THE FREEWAY AND THE SUPERSEDED THREE-LANE HIGHWAY FOR A TIME INTERVAL OF 394 DAYS

	Number of accidents on old highway	*Number of accidents on freeway*	*Percent decreased*	*Percent increased*
Entire length of road, including temporary connections	154	74	52%	.....
Entire length of road, including temporary connection, fatal accidents	17	3	82%	.....
Accidents at intersections, including temporary connections	53	21	60%	.....
Section of road between Ontario and temporary connection at Kaiser, 5.46 miles	29	23	21%	.....
Section between temporary connections at Mulberry Avenue and Colton, 9.74 miles	117	30	74%	.....
On the temporary connection between the Kaiser Spur and Mulberry Avenue, .58 mi.	8	15	.....	87%
On the temporary connection at Colton west city limit, .08 mi.	0	6	.....	.....
On the freeway sections, 15.20 miles (exclusive of temporary connection at Kaiser Spur)	146	53	64%	.....
Fatal accidents on 9.74 miles between temporary connections at Mulberry and Colton	10	2	80%	.....

TABLE II—COMPARATIVE ANALYSIS OF ACCIDENTS ON FREEWAY FOR TIME INTERVAL OF 394 DAYS (EXCLUSIVE OF TEMPORARY CONNECTION) AND SUPERSEDED THREE-LANE HIGHWAY

	Number of accidents on old highway	*Number of accidents on freeway*	*Percent decreased*	*Percent increased*
One vehicle involved	13	16	.....	23%
One vehicle involved, daylight	6	9	.....	50%
One vehicle involved, dark	7	7	0%	.....
Two vehicles involved	116	37	68%	.....
Two vehicles involved, daylight	66	11	83%	.....
Two vehicles involved, dark	50	26	48%	.....
Pedestrians involved	17	0	100%	.....
Pedestrians involved, daylight	3	0	100%	.....
Pedestrians involved, dark	14	0	100%	.....
Fatal accidents	15	3	80%	.....
Fatal accidents, daylight	8	3	62%	.....
Fatal accidents, dark	7	0	100%	.....
Non-fatal injury accidents	88	33	63%	.....
Non fatal injury accidents, daylight	40	11	73%	.....
Non-fatal injury accidents, dark	48	22	54%	.....
Property damage only	43	17	60%	.....
Property damage only, daylight	27	6	78%	.....
Property damage only, dark	16	11	31%	.....
All daylight accidents	75	20	73%	.....
All accidents at night	71	33	54%	.....

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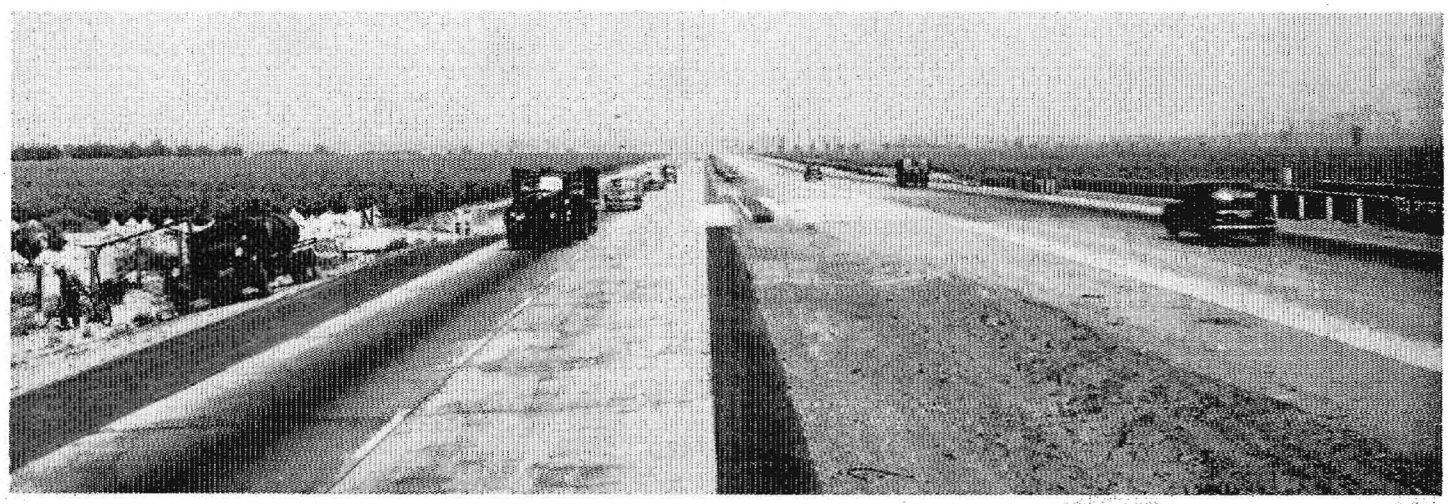
West of Etiwanda Avenue, showing heavy mixed truck and passenger traffic on new freeway. Pavement on right is former three-lane pavement now used for east bound traffic



U.S. 40 Project

Will Widen Highway to Four Lanes Divided Near Vallejo

By WILLIAM L. HURD, Resident Engineer

U. S. HIGHWAY 40 is an important interstate highway and also is a vital link in the California highway system, a portion of it being the main traveled route betwen the San Francisco Bay area and Sacramento and also the northern part of California.

The portion of this route being improved at the present time is in the vicinity of Vallejo, starting at the Vallejo Wye, or Fourth Street, and extending northeasterly for a distance of 5.6 miles to connect with a section of four-lane pavement constructed in 1941. The new construction will parallel the existing road which consists of a two-lane and three-lane pavement which is inadequate for the present volume of traffic. The average daily traffic count for July, 1947, was 21,800 vehicles, for a 24-hour period, of which 17 percent are heavy trucks.

One of Series

This project is one of a series of projects which have been completed or will be completed in the near future to provide a continuous four-lane divided highway between the Bay Area and Sacramento.

The southerly portion of this project is in the urban area of Vallejo which for the most part has been built up since 1941. The remainder of the project traverses a rural area.

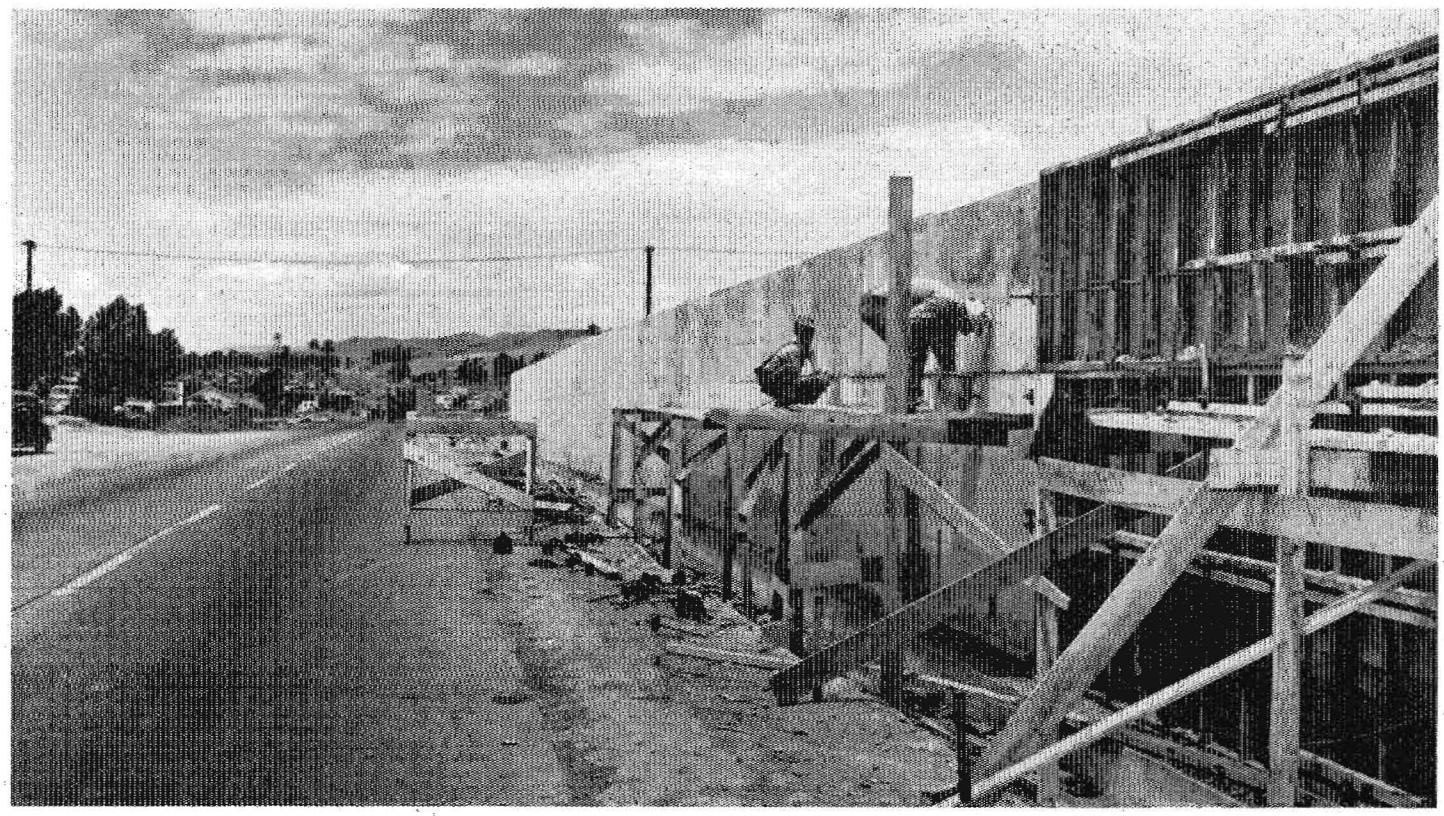
The present construction will provide a modern four-lane divided highway. The division strip will be variable with a minimum width of 12 feet and a maximum width of 32 feet.

This portion of U. S. Highway 40 was declared a Limited Access Freeway by the State Highway Commission on January 24, 1941, and by an agreement with the County of Solano certain of the county roads intersecting the highway are to be closed to the Freeway and connected by outer highways.

Outer Highways

Outer highways will be constructed to serve the more densely built-up sections. On the east side of the highway between Benicia Road and Georgia Street and on the west side of the highway between Solano Avenue and Alabama Street the grade of the outer highway and the main highway varies considerably and in order to provide a uniform width of roadway, for both

Constructing retaining wall between main highway, U. S. 40, and outer highway



Finishing rough grade near Fleming Avenue

the main highway and the outer highway, with a minimum width of right of way, retaining walls are being constructed to separate the roadways.

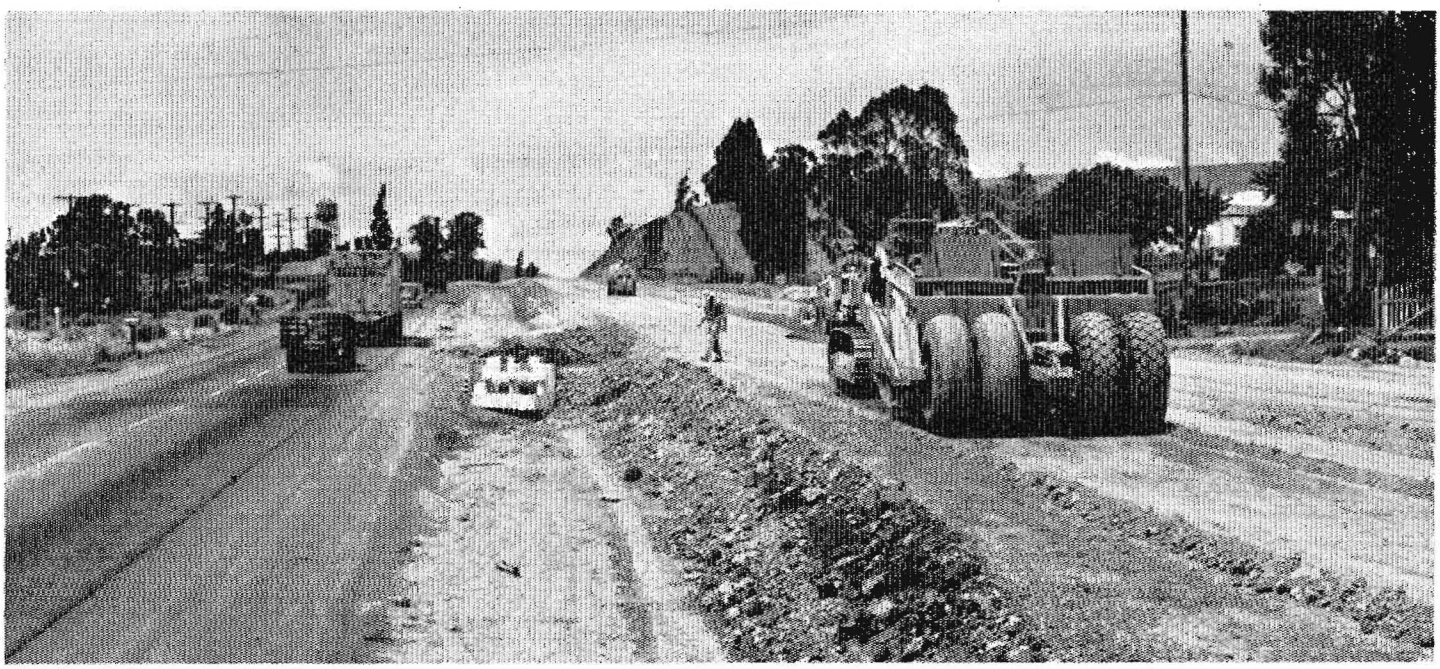
One grade separation structure will be constructed under the present contract. This structure will be located at the Vallejo Wye, or Fourth Street entrance to Vallejo. At this point the traffic from the south going to Vallejo will be taken through an underpass thus eliminating any left turn movement across traffic. All other intersections will be at grade. Acceleration and deceleration lanes will be provided at the major intersections.

Eight-inch Pavement

On this project much of the native material encountered has a high swell and a low bearing ratio, and in order to overcome these deficiencies the upper six inches of the basement material is being treated for a width of twenty-four feet with Portland cement. The cement is added at the rate of approximately four percent by volume. After the addition of the cement the material is mixed once dry and twice wet, the water being introduced on the second pass of the mixer by means of a pump mounted on the mixer.

In addition to the cement treatment of the basement material, six inches of untreated rock base is being placed under the Portland cement concrete

Finishing rough grade near Tennessee Street



Excavating for entrance to underpass at Fourth Street

pavement which is to be eight inches in thickness.

The Portland cement concrete pavement will be twenty-three feet in width, which will provide a twelve-foot passing lane and an eleven-foot traveling lane. The concrete pavement will be constructed without expansion joints, and weakened plane joints will be placed at fifteen-foot intervals. The two adjacent lanes of pavement will be interlocked by means of a longitudinal key and tie bolt assemblies, the tie bolts being spaced at thirty-inch centers.

Heavy Excavation

An eight-foot shoulder will be constructed on the right and a five-foot shoulder will be constructed on the left or passing lane on both sections of the divided highway. Plant-mixed surfacing will be placed adjacent to the pavement for a width of three feet on the right and two feet on the left, the remaining portion of the shoulder will have a Class "C" medium seal coat or a penetration treatment.

The grading on this project required the excavation of aproximately 390,000 cubic yards of material. Tractor and scrapers, "Jeeps" and a 2½ cubic yard power shovel were used for the grading. The tractors, scrapers and "Jeeps" were used for the shorter hauls and the power shovel and dump trucks were used for the longer hauls.

During the grading it was necessary to remove and relocate power lines, telephone lines, sewer lines, gas lines and water lines along portions of the project.

Bids for this contract were opened on January 28, 1948, the work was started on February 25, 1948, and with 300 working days being provided in the contract the project should be completed in the spring of 1949. The approximate cost of this construction will be $1,300,000.00. This is one of the postwar projects which is being partially financed by Federal Funds.

The contract was awarded to Parish Bros. of Benicia. M. F. Saporetti is superintendent for the contractor.

Traffic Award

National Safety Council Honors State for Highway Achievement

California was first in Traffic Safety Engineering advancement of all western states in 1947, Governor Earl Warren was informed recently when he was presented a special award from the National Safety Council by Earl F. Campbell, Director of Field Service for that organization. The award was a plaque, presented by the council's board of contest judges. It came in recognition of outstanding achievement in traffic safety engineering under the expanded California highway program provided for by the Collier-Burns Act.

In a brief ceremony, at the State Capitol, Mr. Campbell complimented Governor Warren and the State Division of Highways for the safety program supported by the State Administration and the people of California. Mr. Campbell flew to Sacramento from Chicago to make the award.

"We hope this award will be followed by many more," Mr. Campbell said. "I hear more and more about California's battle against accidents and you are beginning to reap dividends. Last year you showed a reduction of 320 deaths under the previous year and so far in 1948 your record indicates further reductions."

"We still are not proud of our record and we will not be until we have shown far greater gains," Governor Warren said. "We are confident we can have greater safety on our highways and we intend to get it."

Governor Warren later presented the plaque to Charles H. Purcell, Director of Public Works, who in turn presented the award to State Highway Engineer J. W. Vickrey.

In commenting upon the award, Mr. McCoy stated that the effect of increased efforts on highway work made possible through the Collier-Burns Act is now evident. It is hoped that the year 1948 will be equally outstanding. He added that in 1946 there were 3,820 fatalities in California, while in 1947 this number was reduced to 3,498, a decrease of 8.4 percent.

Director of Public Works C. H. Purcell presents National Traffic Safety Contest Award to State Highway Engineer George T. McCoy (center) and J. W. Vickrey, Assistant State Highway Engineer

Bailey Hill

Railroad Separation Structure On U. S. 99 Nears Completion

By FRED C. MARSHALL, Associate Bridge Engineer

AT BAILEY HILL on U. S. Route 99, about three miles south of the Oregon line, in Siskiyou County, a railroad separation structure is nearing completion, which will be a major link in the realignment of approximately eight miles of the highway in this area from the Klamath River to Bailey Hill.

Heavily traveled all year round with a large proportion of heavy trucks, the existing road with its curves and 7 percent grades has become increasingly hazardous, especially during the winter season.

At Bailey Hill the highway passes under the tracks of the Southern Pacific Railroad. At this location the highway is following down a deep ravine which the railroad crosses on a high fill on a 3 percent grade. The existing underpass constructed in 1916 by the Southern Pacific Company provides a clear width of only 20 feet with an impaired clearance over much of the roadway. This bottleneck in the highway has been the scene of many accidents, inasmuch as the opening will not accommodate a large truck and passenger vehicle at the same time.

The new underpass will provide 32 feet of roadway width with full legal clearance, which will be a width equal to that being provided by the new highway being built under an adjacent contract. The adjacent highway which is now being constructed provides two 12-foot traffic lanes, with 8-foot shoulders, long radius curves, and a maximum grade of 6 percent.

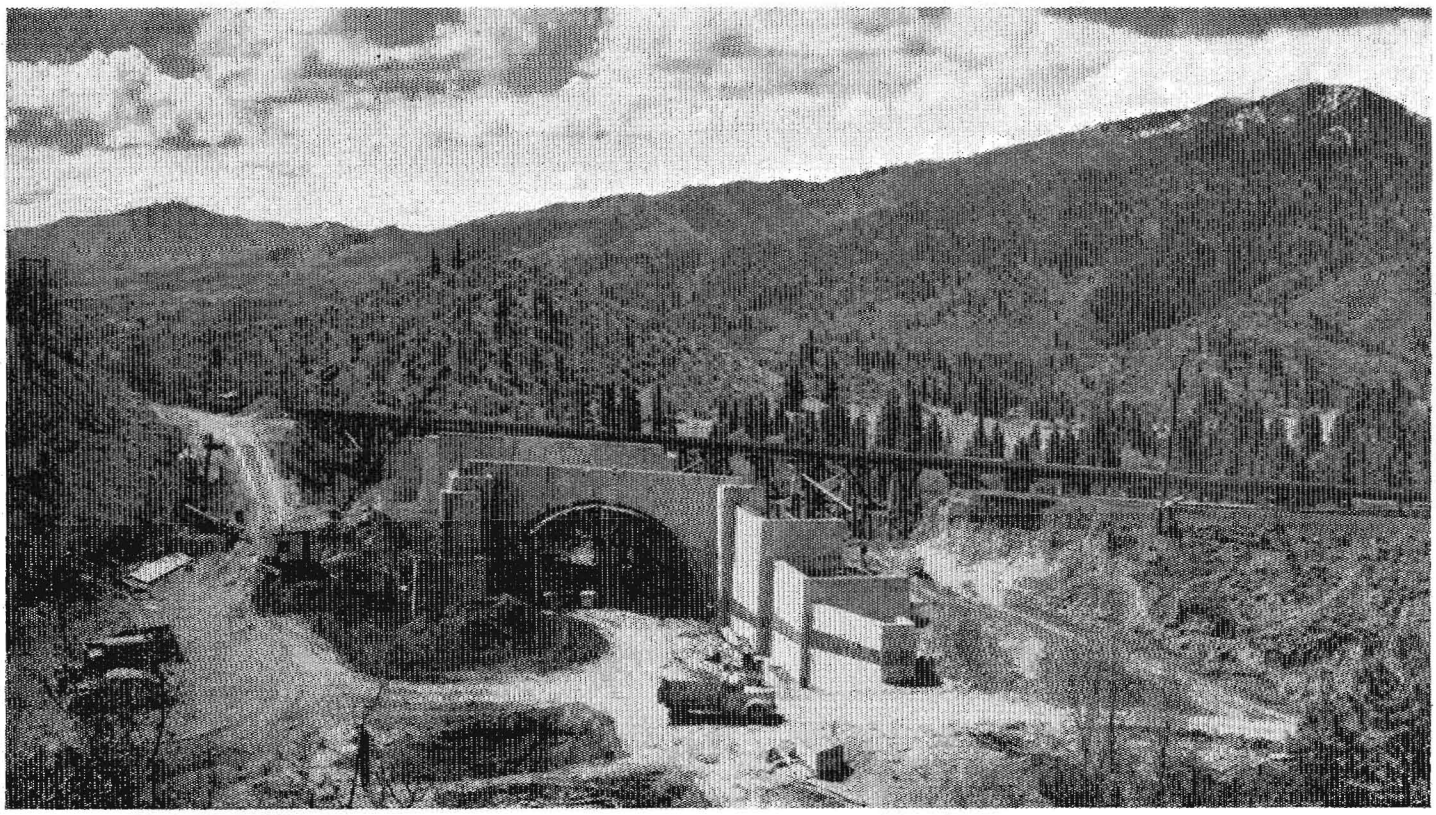
The underpass structure is of the filled-spandrel type, the arch barrel being 87 feet long built on a skew of 30 degrees to the center line of the railroad. The arch has a clear span of 44 feet and a rise of nearly 25 feet. The use of large plain surfaces in the wingwalls gives the structure a massive appearance, combined with pleasing architectural lines.

The footings of the main structure and the higher portal walls are founded on steel H piles driven into the rock formation which underlies the site. The test loading of two of these piles was included in the contract.

In order to adequately care for the railroad traffic over this important route, it was necessary to construct a timber shoofly trestle nearly 450 feet long. The trestle was a single track structure with a maximum height of 45 feet off the ground. It was of standard

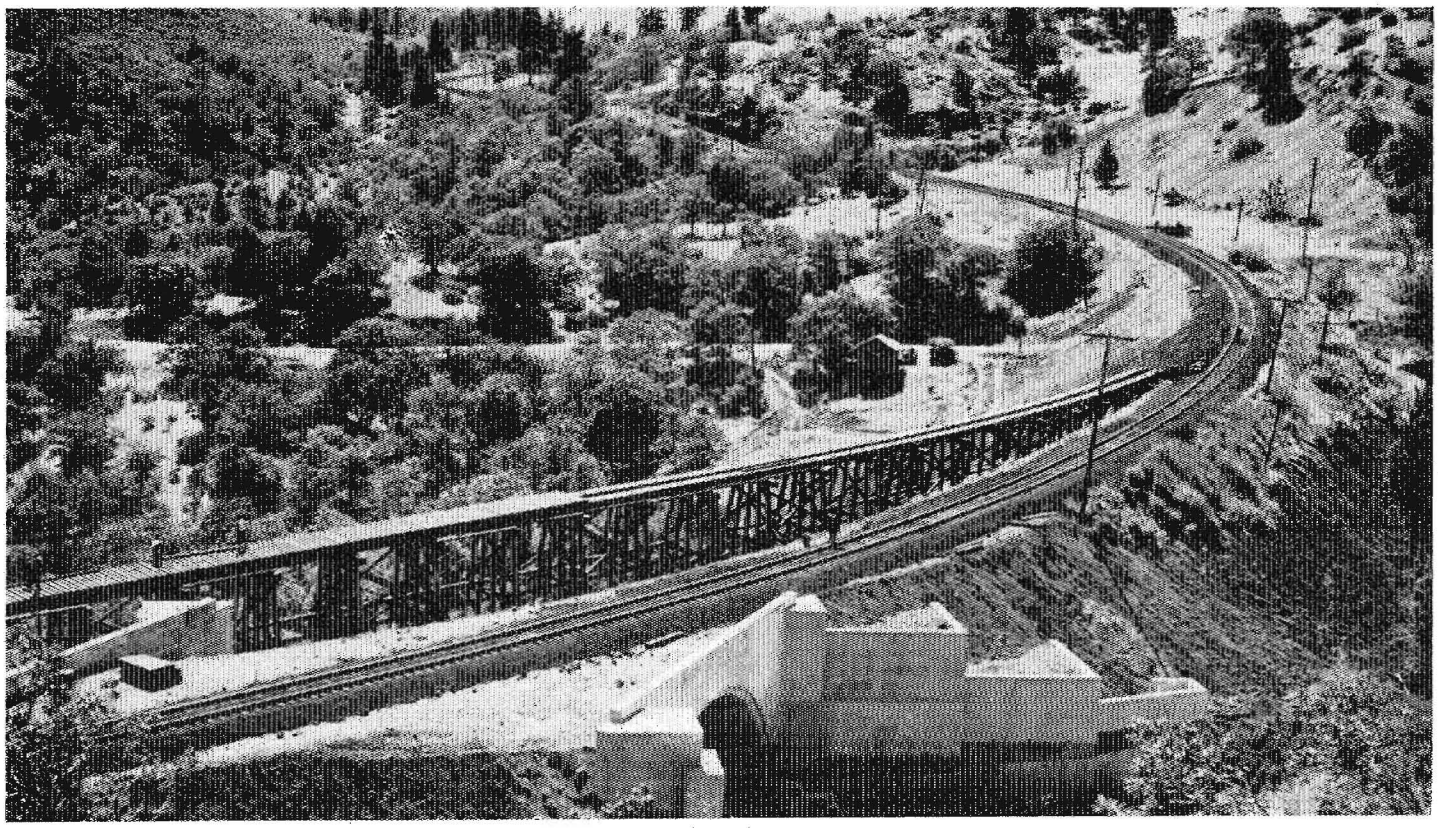
. . . Continued on page 32

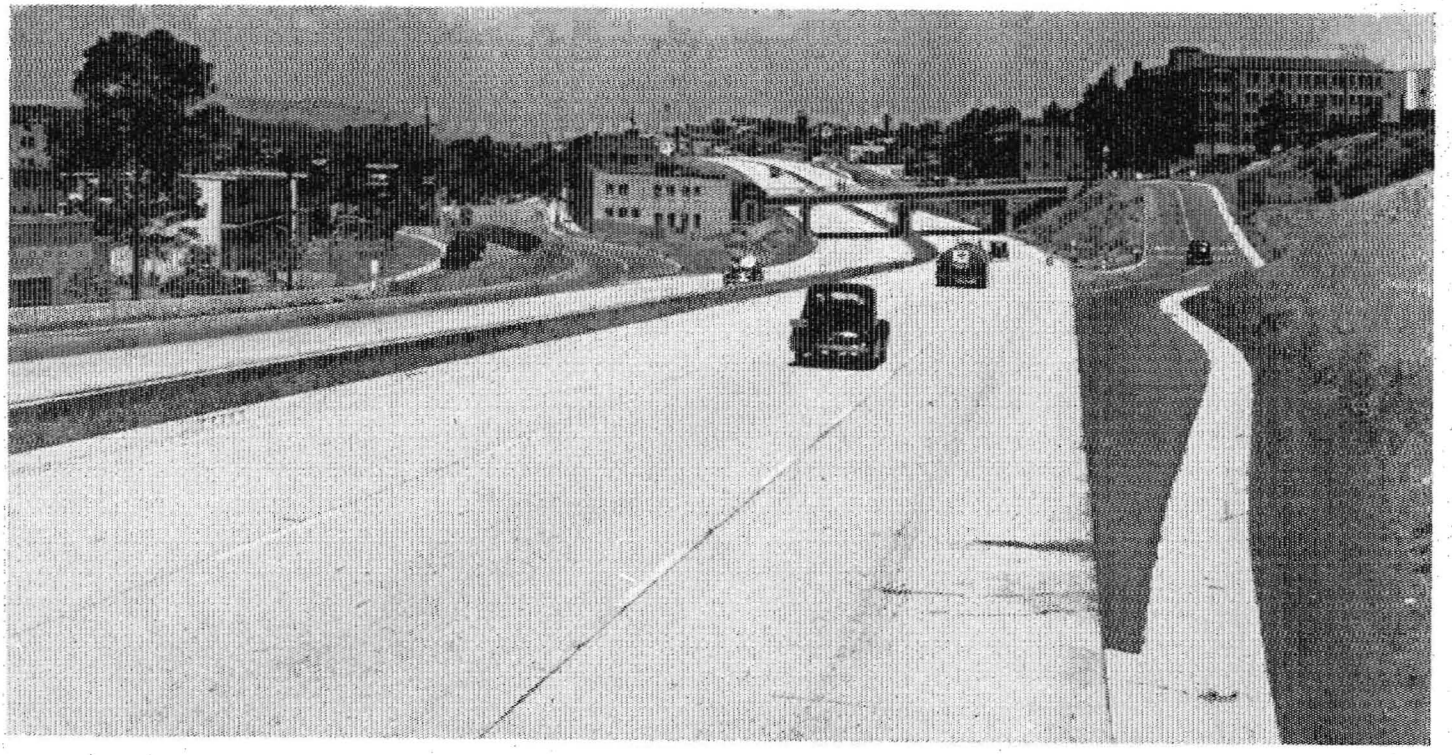
Looking westerly along the highway centerline toward the new structure. This is a view visitors will get soon after entering California



Old narrow underpass which is being replaced by the new Bailey Hill Underpass

Looking westerly along the railroad track across the barrel of the Bailey Hill Underpass. The existing highway and underpass are in the background





Santa Ana Freeway, looking northerly, showing Fourth Street Overpass grade separation with First Street Underpass in distance

LOWER—Junction between Ramona Freeway and Santa Ana Freeway, looking westerly, showing general view of the fully completed Aliso Street grade separation crossing

New Freeway

Continued from page 1 . . .

California Highway Commission was made October 28, 1939, and covered the portion of the freeway location from the Los Angeles-Orange County line to Euclid Avenue, and from the south city limits of the City of Anaheim to Main Street in Santa Ana. This freeway adoption was among the first if not the first establishment of a freeway by the State in any of the counties. Other freeway adoption resolutions followed covering the entire routing.

A total of 12 freeway agreements covering all the various sections of the Santa Ana Freeway have been entered into during the past eight years. Details have been worked out for the location and design of the Santa Ana Freeway, working cooperatively with the other governmental agencies, and freeway agreements have been entered into with the City of Los Angeles, the County of Los Angeles, the City of Santa Ana, the City of Anaheim, and the County of Orange. We can now report that the entire length of the Santa Ana Freeway betwen its northerly terminus at the Los Angeles City Civic Center and its present southerly terminus at First Street, Santa Ana, has been covered by freeway agreements.

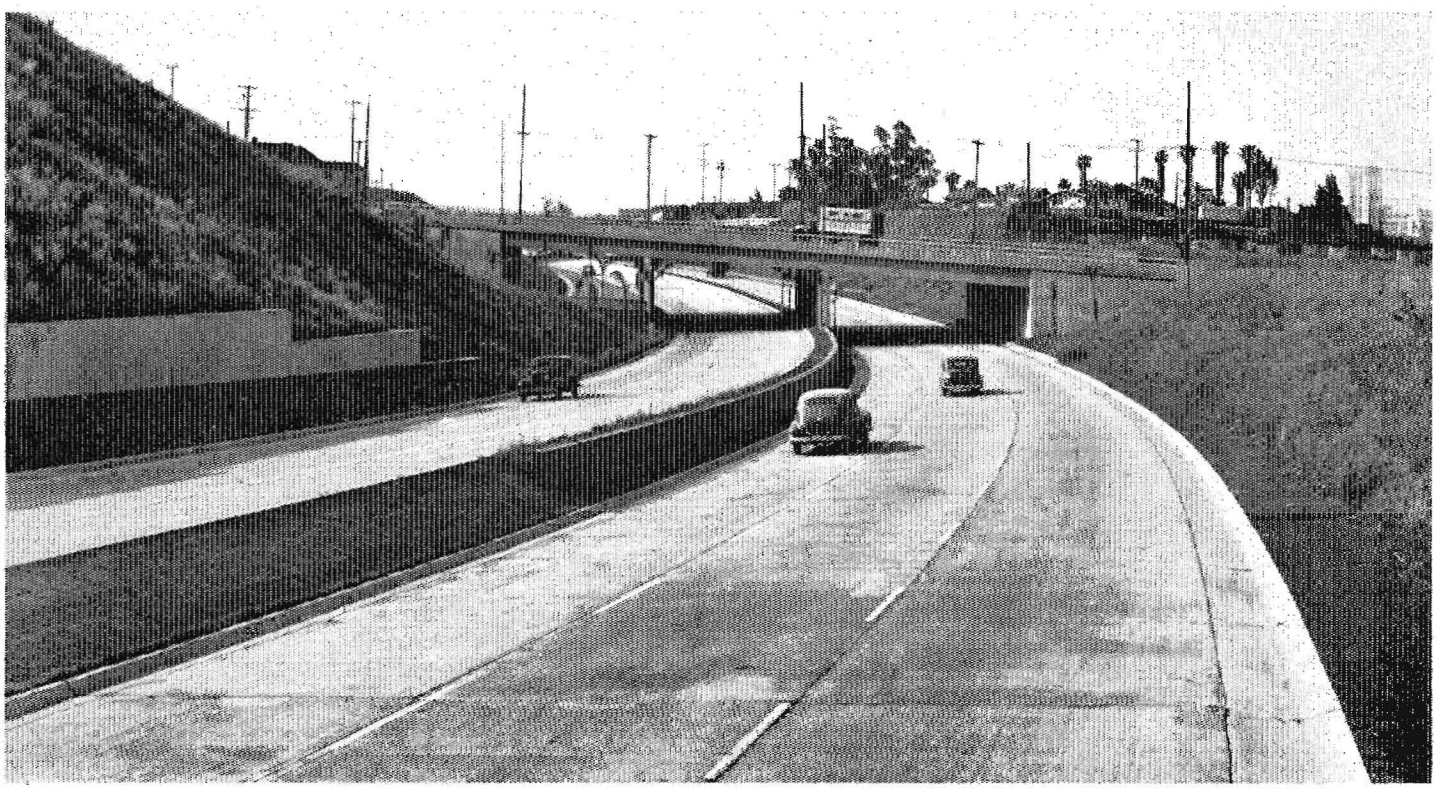
The consummation of freeway agreements represents steps of prime importance because from that point on detailed designs can be worked out for construction plans and right of way acquisition negotiations can go forward. It is in large measure because of the cooperative spirit and helpfulness on the part of governmental authorities in the cities and counties through which the Santa Ana Freeway passes that so much has been accomplished.

Rights of Way Obtained

Rights of way have been obtained over the entire length of the freeway. Not all the rights of way that are required have been secured, but a good idea of the progress that has been made is shown by the fact that to date the expenditures for rights of way total more than $4,000,000. The amounts paid for rights of way to the property owners are based on the fair market values at the time the negotiations between the owners and the State are undertaken, or they are the amounts established by the courts when condemnation proceedings have to be carried out.

Right of way negotiations were started eight years ago and much of the land needed was purchased by the State when the general price levels for real estate were much lower than now prevail. Also in many cases the land needed for right of way was purchased before extensive private improvements had been carried out. If this same land had to be acquired at present day price levels, and paying for improvements that would normally have been put on the land, the rights of way which the State owns on the Santa Ana Freeway would have cost a great deal more than the $4,000,000 that was paid for it.

Santa Ana Freeway looking southerly to the Seventh Street grade separation



Completed Construction

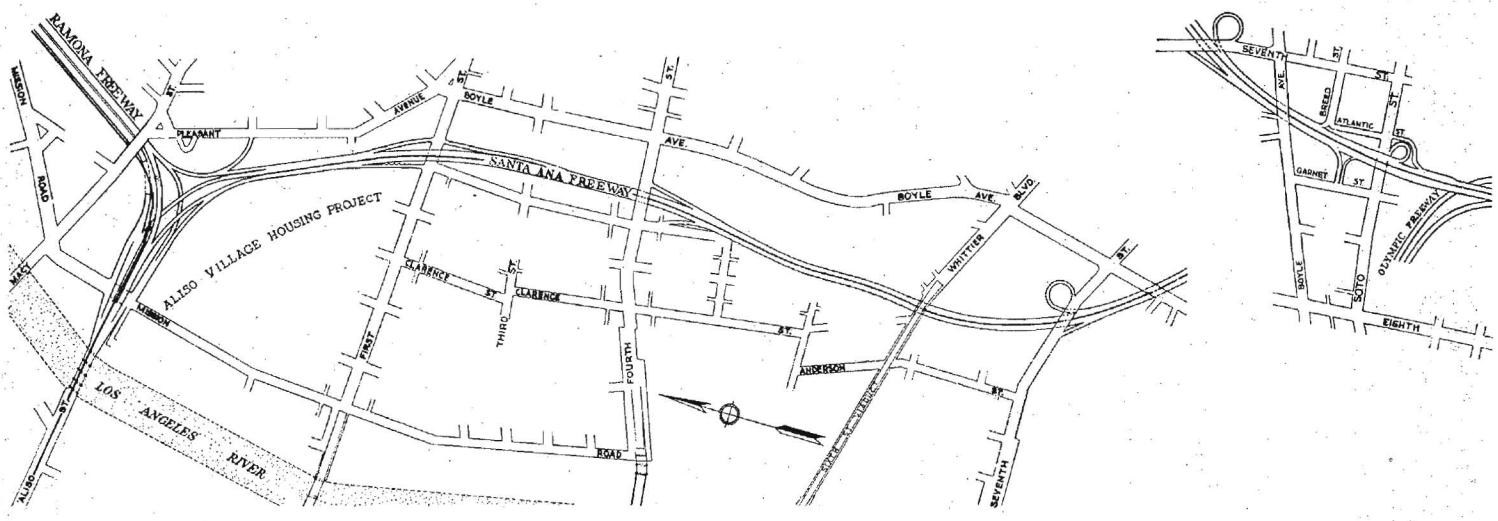
State highway construction contracts have been completed as follows:

Contract number	Description	Contractor	Construction Cost
7VC16	Road Construction, Kearney St. to Soto St.	Peter Kiewit Sons' Co.	$1,374,000
14VC8-F	Seventh St., Grade Separation	Byerts & Dunn	239,800
14VC23-F	Lorena St., Grade Separation	W. J. Disteli	147,800
7VC21-F	Storm Drain and Sewers, Soto St. to Indiana St.	Mike Radich & Co.	416,500
14VC11-F	Fourth St., Grade Separation	Byerts & Dunn	145,200
14VC15-F	First St., Grade Separation	J. E. Haddock	183,000
14VC9	Aliso St., Ramp 4 Bridges	Contracting Engrs. Co.	132,100
14VC14-F	Boyle Ave., Grade Separation	Peter Kiewit Sons' Co.	202,600
7VC28-F	Landscaping, Kearney St. to Soto St.	Jannoch Nurseries	79,700
14VC24-F	Olympic Parkway, Grade Separation	J. E. Haddock	332,900
14VC25-F	Esperanza St. and Marietta St., Grade Separations	J. E. Haddock	272,100
14VC28-F	Soto St., Grade Separation	Oberg Bros.	205,800
14VC30-F	Euclid St. and Marietta St., Grade Separations	Spencer Webb	265,000
7VC37-F	Road Construction, Aliso St. to Kearney St.	Vido Kovacevich Co.	235,500
7VC44-F	Landscaping, Aliso St. to Kearney St.	Jannoch Nurseries	11,300
		Total	$4,243,300

Aliso Street Viaduct Project

Probably the most important traffic interchange system on the Santa Ana Freeway is the Aliso Street Viaduct project. This project is located at the junction point on the east side of the Los Angeles River where the Ramona Freeway joins the Santa Ana Freeway. This construction was completed in August, 1944. It was a cooperative project, much of which was done under a Los Angeles City sponsored WPA project extending over a period of about 3½ years. It was jointly financed by the Pacific Electric Railway, the Santa Fe Railway Company, the Union Pacific Railroad Company, the Southern Pacific Railroad Company, the City of Los Angeles, the County of Los Angeles, the Federal Government, and the State Division of Highways.

The total cost of the Aliso Street Viaduct project was about $5,000,000. The project included a bridge over the Los Angeles River and a bridge over Mission Road, to provide for carrying the Santa Ana Freeway, the Ramona Freeway, and the Pacific Electric Railway on separated grades over the Mission Road traffic. While the Aliso Street Viaduct project provided connection with the Ramona Freeway, it did not provide all necessary bridge structures and interchange roadways



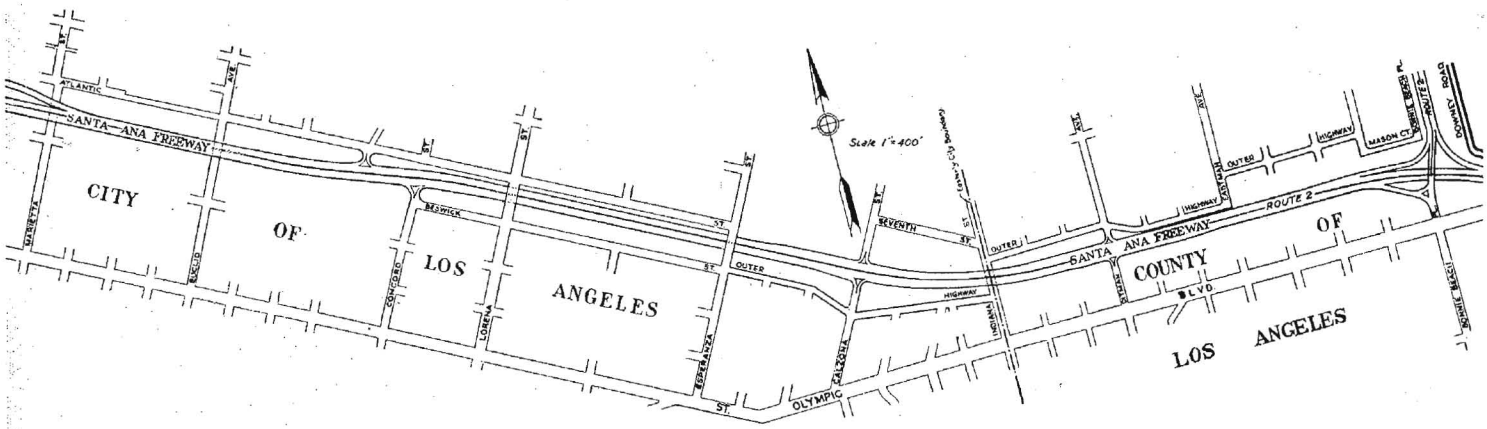
for the Santa Ana Freeway connection. These items of construction have been carried out by State Division of Highways contracts that have recently been completed and opened to vehicular vehicular traffic.

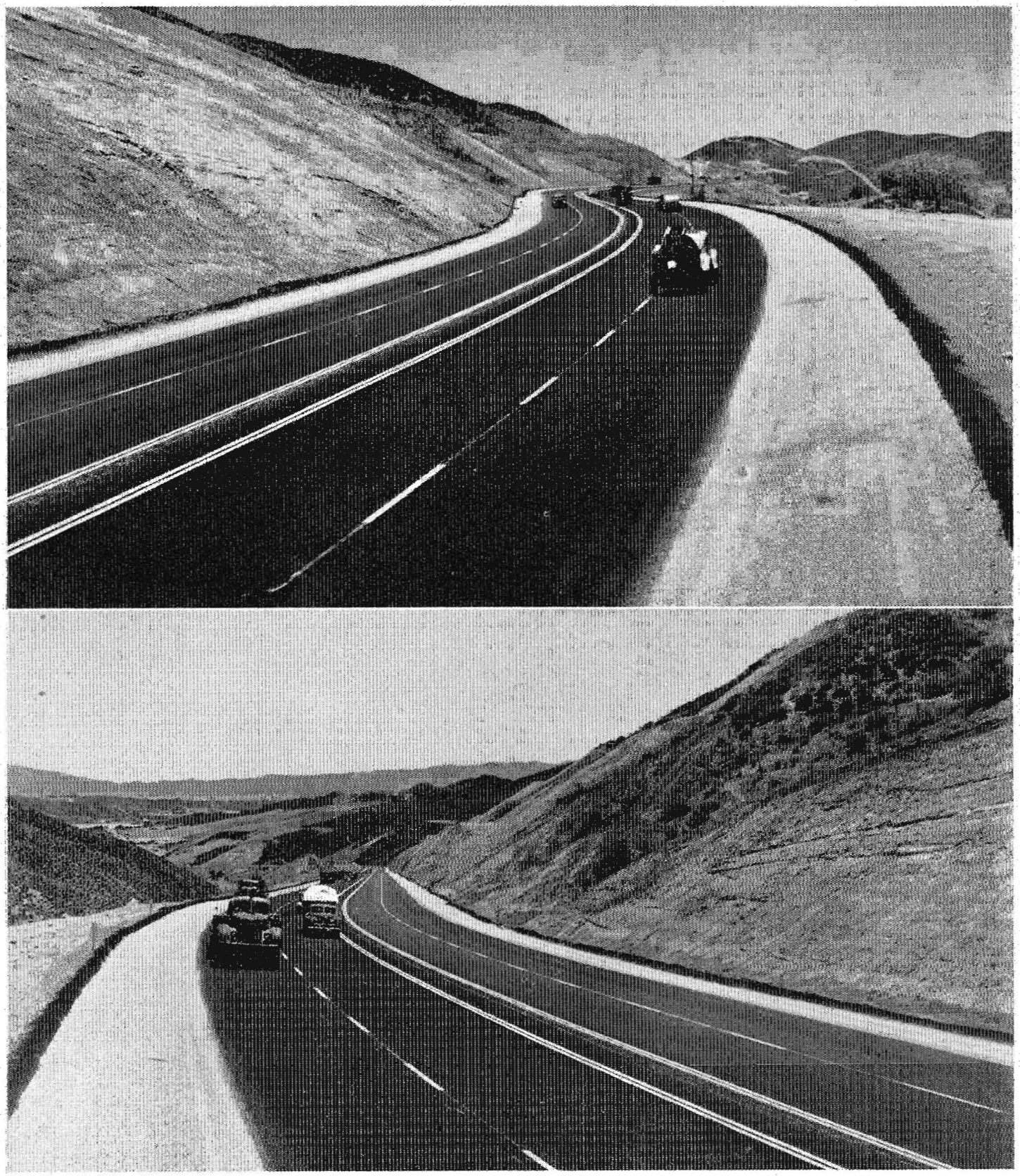
Work Now Under Way

State highway construction estimated to cost about $1,200,000 is now in progress. This section of the Santa Ana Freeway where work is under way extends southeasterly from Soto Street to Eastman Street, which is a short distance beyond the east city limits of Los Angeles. This is the section where all of the grade-separation bridge structures as listed above have been completed, and the present construction consists of providing the necessary grading, paving, and other miscellaneous work to connect the already built grade-separation structures and provide a usable freeway. It will not be many months before this work will be completed and then an additional 1.6 miles of the Santa Ana Freeway will be made available to the motorists.

The very serious housing shortage existing in this portion of Southern California as well as elsewhere is well known to everyone. It has been determined that it would not be good public policy for the State Division of Highways ruthlessly to evict tenants who are living in houses on right of way that is needed for freeway construction, because to carry out wholesale evictions in order to get a freeway project started would make still worse the critical housing shortage. In clearing the right of way the State takes measures to assist the families whose living quarters have to be moved or demolished to make way for freeway work. Arrangements have been made with Los Angeles City and the federal housing authorities for the use of a number of federally-owned house trailers and many families have moved into these. Arrangements have also been made whereby the tenants in many buildings are allowed to occupy the buildings while they are being moved to a new site and for at least six months thereafter. In other cases, houses have been sold to be moved, with the provision that the purchaser would provide rental quarters for the tenants for at least six months. In this way the State is able to clear critical right of way areas without the need for arbitrary evictions which would work so great a hardship on so many families. As the future construction work on the Santa Ana Freeway proceeds into the more open country the difficulties of clearing rights of way will become much less.

(Construction work now in progress on this freeway and proposed construction that has been financed by inclusion in the State Highway Budget will be the subject of a future article in "California Highways and Public Works.")





Conversion of the Ridge Route on U. S. 99 to a four-lane divided highway is under way. These photographs show completed sections of the first unit of the project north of Castaic. This route carries exceptionally heavy truck traffic

Synopsis

Procedure and Funds Involved In Building State Highways

ADMINISTRATION and control of the State Highway System is vested by law in the Department of Public Works, of which the Division of Highways is an integral part. Within the department, also, is the California Highway Commission, its powers and duties, conferred by statute are hereinafter discussed in detail.

CALIFORNIA HIGHWAY COMMISSION

The California Highway Commission is a statutory body of six appointive members and the director of Public Works as ex officio member and chairman. The commission is empowered by law with definite duties and definite responsibilities to the State.

The law prescribes seven principal functions for the Highway Commission:

(1) Adoption of Routes
(2) Allocation of Funds
(3) Declaration of Routes as Freeways
(4) Adoption of Resolutions for Condemnation of Rights of Way
(5) Abandonment or Relinquishment of Rights of Way
(6) Authorization for Director of Public Works to execute deeds
(7) Approval of each county's system of primary county roads

(1) ADOPTION OF ROUTES

The State Highway System includes all roads which have been designated as state highways by the State Legislature or by constitutional amendment. Legislative designation of state routes usually consists in the naming of only the termini. Adoption of the general location of such routes is one of the most important functions of the Highway Commission. This adoption is customarily accomplished by a vote of the commission which names and describes the highway by reference to a route map on which are shown the termini and the general location of the road. The route map bears the signature of the District Engineer of the State Highway District in which the road is located; the signatures of the State Highway Engineer or Assistant State Highway Engineer; the Director of Public Works, and of the members of the commission present at the time the vote is passed.

The law does not permit expenditure of state highway funds on a route until the commission has voted its adoption. It is not, however, required that such adoption include detail of alignment, as the final grade and line usually have not been determined at the time of adoption. Engineering details necessary for construction are shown upon the sets of layout plans which are prepared for each route and section of state highways. The title sheets for these layouts are signed by the State Highway Engineer or Assistant State Highway Engineer, and are approved by the Director of Public Works.

(2) ALLOCATION OF FUNDS

The various revenues apportioned for state highway purposes can only be allocated for expenditure by action of the Highway Commission. As is the case with all state departments, the Division of Highways operates upon an annual basis. Therefore, the Highway Commission adopts a budget based upon anticipated revenues for a one-year period, and submits it to the Governor.

The budget provides for allocation of funds for administration, maintenance, money legally required to be expended within the limits of incorporated cities, and construction and improvement. The laws limits expenditures for administration and maintenance to an amount equal to the net revenue derived from one cent of the gasoline tax.

Funds included in the budget for construction and improvement are further allocated to the various phases of highway activity after statutory division between the 13 southern and 45 northern counties.

Funds so allocated include specific amounts to be used for preliminary engineering, construction engineering, rights of way, joint highway districts, major construction projects, and contingency reserves.

With the exception of major construction projects, the funds provided for these various state highway functions are allocated by the commission in blanket amounts for the northern and southern county groups. Although funds for preliminary engineering are allocated by the commission in blanket amounts, they must be alloted for expenditure to projects for which surveys and plans have been authorized by the commission. These same procedures apply to funds budgeted to right of way. Approved allotments are issued as the money is needed for highway work.

In the case of major construction, the individual projects which are proposed for improvement are specifically listed in the budget adopted by the commission.

Selection of construction projects receives the careful consideration of the California Highway Commission, the State Highway Engineer, and the district engineers. The district engineers, who are familiar with the deficiencies on those portions of the State Highway System in their districts, prepare a list of needed projects. All district recommendations are reviewed at

Commission Members

MEMBERS of the California Highway Commission are:

Director of Public Works C. H. Purcell, Chairman
Harrison R. Baker, Pasadena
Homer P. Brown, Placerville
James A. Guthrie, San Bernardino
F. Walter Sandelin, Ukiah
C. Arnholt Smith, San Diego
Chester H. Warlow, Fresno

Headquarters Office, with serious consideration given to the relative importance of each project on a state-wide basis.

Critical Projects Selected

A list of the most critical projects is then selected by the State Highway Engineer, and presented to the Director of Public Works, and the California Highway Commission for their consideration. Projects adopted by the commission are then included in a budget and submitted to the Governor.

No increase or decrease shall be made in any of the listed construction projects, nor shall any project be eliminated or added without the approval of the Director of Finance.

The contingency reserve provides available money for unexpected overruns on construction projects, the allocation of which is made by the commission.

A separate fund is used for earmarking savings made on construction projects and for unexpected increases in revenue. Allocations from this fund must be made with the approval of the Director of Finance, and are used to finance additional projects or to pay for unexpected overruns on construction projects under way.

In connection with the allocation of funds to state highway activities as described above, the following definitions are pertinent.

Preliminary Engineering includes cost of surveys and plans and all expenses prior to construction.

Construction Engineering includes cost of supervision and inspection on construction projects.

Rights of Way may include purchase of right of way, payments for damages sustained by property owners because of highway location, loss of access rights or costs of adjustments of private improvements made necessary by highway construction.

Joint Highway Districts are districts formed under statutory provisions by two or more counties, or city and county, for the purpose of the construction of some specific highway. The state law provides that the California Highway Commission may allocate funds, not to exceed one half of 1 percent (0.5 percent) of the total construction funds allocated to the north or south county groups, for state aid to such joint highway districts.

(3) DECLARATION OF ROUTES AS FREEWAYS

A freeway may be defined as a street or highway in respect to which the owners of abutting lands have no right or easement of access to or from their abutting lands, or in respect to which such owners have only limited or restricted right or easement of access.

Legislative recognition of the "freeway" principle in highway construction was given at the regular 1939 Session of the State Legislature by

C. H. Purcell, Chairman

enactment of a law establishing the freeway as a public convenience and providing procedure for the State to acquire from property owners their rights of access in addition to rights of way. Under this procedure the Highway Commission is empowered to declare routes to be "freeways." After such a declaration has been voted by the commission the rights of access are acquired by negotiation or by condemnation.

(4) CONDEMNATION OF LANDS FOR RIGHTS OF WAY

Under the theory of the right of eminent domain, which provides for the taking of private real property for public use, under due course of law and with proper compensation, the California Highway Commission is empowered with the duty of passing resolutions authorizing the Director of Public Works to institute condemnation proceedings for the acquisition of rights of way, building or material sites, when, in the opinion of the commission, such action is deemed for the best interests of the State. This function is one of utmost importance in furthering the development of the State Highway System, for, were it not for this power of the commission, one or two individual property owners might successfully block highway progress. This function was likewise exercised for acquision of right of way for access road projects and flight strips in connection with war time construction.

(5) ABANDONMENT AND RELINQUISHMENT

As the Highway Commission is vested with the authority for the adoption of the routes to be followed in construction of the roads comprising the State Highway System, so is it given the right to eliminate from the system such portions of highways as it considers are no longer necessary for state highway purposes.

In case the portion to be eliminated may still serve as a public road, the commission passes a vote relinquishing it to the county or city in which it is situated.

In case it will no longer serve as a public highway, the vote abandons to adjacent property owners the portions of right of way no longer required for state highway purposes.

Copies of votes of both relinquishment and abandonment are recorded with county authorities.

(6) DIRECTOR'S DEEDS

In the acquisition of right of way to provide for highway development, the State frequently finds itself in possession of parcels of land which are not essential to the right of way needs. Statutes have, therefore, provided for a means of transfer of title from the State by a director's deed. The statutory provisions require that such deeds may be executed by the Director of Public

Harrison R. Baker

Works only after the Highway Commission has authorized such transfer by vote.

DIRECTOR OF PUBLIC WORKS

The executive officer and administrator of the Department of Public Works is the Director of Public Works, who is also ex officio chairman of the California Highway Commission.

At the present time the divisions of the Department of Public Works are:

Division of Highways Division of Water Resources Division of Architecture	By Statute
Division of Contracts and Rights of Way Division of San Francisco Bay Toll Crossings	By Director's Order

In so far as the activities of the California Highway Commission, heretofore discussed, are concerned, most matters are presented for consideration by the department, the information and recommendations originating in the Division of Highways.

The director has adopted the policy of authorizing the State Highway Engineer to present matters to the California Highway Commission for consideration and action. While in some instances these matters are presented by the director, such presentation is made only to open the matter for discussion and consideration by the commission as a whole, including the chairman.

In other words, when the adoption of a routing or a vote for the allocation of highway funds is presented to the commission, it may represent the recommendations of the Division of Highways, but the director as an ex officio member of the commission has not by reason of the recommendation of the Division of Highways foreclosed his final consideration thereof along with the other members of the commission.

Steps After Route Adoption

After the commission has adopted a routing and allocated funds, the department locates by surveys the exact line of the highway, if that has not been already determined, and negotiates for the right of way. If it develops that it is not possible to close with the property owners in time to permit construction, a request is made to the commission for a resolution of condemnation. The policy of concluding all right of way transactions as far as possible, before resorting to condemnation, has long been in effect.

Following an allocation of funds by the commission, expenditures are made from such allocation only after specific work orders specifying the purpose of the expenditure are approved by the director or someone designated by him for that purpose.

Following the adoption of a resolution authorizing condemnation for a right of way or access rights, where the Right of Way Agents of the Division of Highways are unable to effect settlement, and court action is therefore necessary, condemnation suits are filed by the attorneys in the Division of Contracts and Rights of Way and the suits prosecuted to final judgement.

Freeway Procedure

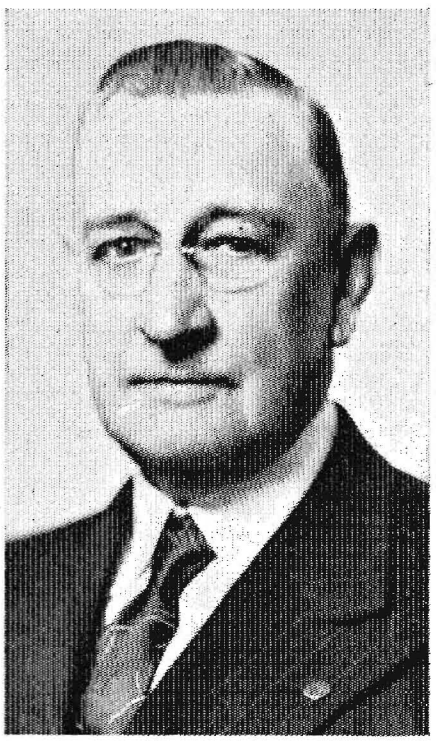
After the commission has adopted a resolution declaring a certain highway to be a freeway, the department negotiates a contract with the city or county concerned as to the closing or other changes to be made in the city streets or county roads involved. It also proceeds to acquire the access rights from the private property owners necessary for the accomplishment of the project. If condemnation is necessary, the condemnation of the access rights is handled in the same way as the acquisition of rights of way generally.

It is the policy to perform all state highway work where possible, by contract after competitive bidding by contractors who have been prequalified as to financial ability and experience. The method of performing work by contract is prescribed in detail by statute and the department follows the procedure. It calls for the execution of the contracts by the director, and the approval thereof by the Attorney General.

STATE HIGHWAY ENGINEER

The State Highway Engineer is the Chief of the Division of Highways and all the work of the division, both technical and financial, is under his direct supervision.

For convenience in the administration of the Division of Highways, the State is divided into 11 districts with more or less equalized state highway mileage in each. Each district is in charge of a district engineer who supervises surveys, right of way, con-



Homer P. Brown

James A. Guthrie

struction, maintenance and all activities necessary for the improvement and development of that part of the State Highway System in the district. At the headquarters of the division in Sacramento are the engineers who head the various departments under which the work is classified.

The State Highway Engineer is aided in carrying on the administrative work of the division by the Deputy State Highway Engineer and five Assistant State Highway Engineers.

The headquarters organization includes the following engineers and department heads.

(1) State Highway Engineer
(2) Deputy State Highway Engineer
(3) Assistant State Highway Engineer—(five)
  (a) Determination of prevailing wages, personnel, contractors, prequalification, etc.
    Principal Highway Engineer
  (b) Operations
    Construction Engineer
    Maintenance Engineer
    Equipment Engineer
    Materials and Research Engineer
  (c) Administration
    Office Engineer
    County Projects Engineer
    Engineer of City and Cooperative Projects
    Stores Engineer
  (d) Planning
    Traffic Engineer
    Design Engineer
    Highway Planning Economist
    Budget Engineer
  (e) Bridges
    San Francisco-Oakland Bay Bridge Engineer (Operations)
    Design Engineer
    Bridge Construction Engineer
    Bridge Office Engineer
    Special Studies Engineer
(4) Chief Right of Way Agent
  (a) Assistant Chief R/W Agents
    (1) Northern California R/W
    (2) Southern California R/W
    (3) Administration
    (4) Appraisals
(5) Comptroller—Department of Public Works
  (a) Assistant Comptroller—Division of Highways
    (1) Accounting Office
    (2) Fiscal Controls

Through the organizations under the direction of these departmental heads the work of constructing and maintaining the State Highway System is coordinated. With this degree of centralization, the work of the 11 districts is unified, insofar as is practicable, under general policies of engineering standards in each field of operation.

FUNDS

In the following brief outline of funds, an attempt has been made to present the picture of state highway financing with a minimum of words.

STATE HIGHWAY INCOME AND EXPENDITURES

(1) SOURCE OF FUNDS

Funds available for expenditure are derived from the following sources:

(a) Gasoline tax of 4½ cents per gallon (state tax only. The 1½ cents federal gasoline tax is not made available for state use, and is not considered here)

(b) Use fuel tax of 4½ cents per gallon (diesel tax)

(c) Motor Vehicle Department
  Registration Fees
  Weight fees
  Operators' license fees
  Miscellaneous

(d) Motor Vehicle Transportation Tax (3% tax on gross receipts of for-hire)

(e) Special Legislative Apportionments

(f) Federal Funds*
  (1) Primary Federal Aid
  (2) Federal Aid Secondary or Feeder Funds
  (3) Federal Emergency Relief Funds
  (4) Federal Lands Highway Funds
  (5) Federal Aid Grade Crossing Funds
  (6) Federal Access Road Funds, Flight Strip Funds and Advance Engineering Funds

*NOTE—Federal emergency relief funds, access road funds and flight strip funds are apportioned by the Government to the States on special application only. All other funds listed have been continuing sources of revenue.

The revenue obtained from items (a) through (d) are transferred to a common fund, identified as the Highway Users' Tax Fund, after deductions are made for refunds, collections and operation of collecting agency.

Highway Users' Fund

From the Highway Users' Fund, revenue is distributed as follows:

The sum of five million four hundred thousand dollars ($5,400,000) annually shall be apportioned among the counties from the Highway Users' Tax Fund as provided in Section 2110 of the Streets and Highways Code. The base sum of five million four hundred thousand dollars ($5,400,000) per year shall be increased or decreased for each fiscal year in the ratio that the total number of motor vehicles registered in this State for the preceding calendar year bears to the total number of motor vehicles registered in this State for the calendar year 1946.

(This sum is roughly equivalent to revenue previously derived from the Department of Motor Vehicles.)

A sum equal to $0.01⅜ of the gasoline tax is apportioned among counties, for use by the counties.

Statutes also require that an amount equal to the revenue from five-eighths of 1 cent ($0.00⅝) of the gasoline tax to be expended on major and secondary streets (except state highways) in each city and city and county.

Except as provided in Section 200, Streets and Highways Code, three-fifths of the moneys allocated to cities

F. Walter Sandelin

C. Arnholt Smith

under the provisions of Section 194, Streets and Highways Code, shall be expended for the construction of streets included in the system of major city streets.

City Streets

Two-fifths of the moneys allocated under the provisions of Section 194 shall be expended for the maintenance of the system of major city streets and of the secondary city streets within such city or city and county; provided that, with the approval of the department, a portion of such moneys so allocated for maintenance may be expended for construction of streets included within the system of major city streets within such city or city and county.

The balance in the Highway Users' Fund, after making the apportionments listed above, is transferred to the State Highway Fund for expenditure on state highways.

The State is responsible for the construction and maintenance of state highways in cities.

Total highway construction money available is to be divided 45 percent to the northern county group and 55 percent to the southern county group.

County Funds

Minimum state highway construction expenditure guarantees are set up for each county for each of three 5-year periods, commencing July 1, 1947. During the first 5-year period, 50 percent of available construction money in each county group is "frozen" for expenditure in the several counties. During the second 5-year period, 55 percent, and during the third 5-year period, 65 percent, is frozen in this manner. The minimum construction expenditures in each of the counties of each county group are determined by applying percentages to the frozen money based upon each county's share of the total highway deficiency program submitted by the Division of Highways and published in the corrected Senate Daily Journal of February 5, 1947. Estimated construction money available to the State and its division between county groups is shown in Table 4 of the financial report of the Joint Fact-Finding Committee on Highways, Streets and Bridges. The minimum amounts required to be expended in each county by the Collier-Burns Highway Act are shown in Table 5 of the financial report of the Joint Fact-Finding Committee on Highways, Streets and Bridges. These sums are the maximum amounts that may be expended on construction of state highways added to the system by the act in any county with such added mileage until critical deficiencies on existing highways in the county group are corrected.

The 1943 Session of the State Legislature appropriated from the general fund the sum of $12,000,000 for use by the Division of Highways in making surveys; preparing plans, specifications, and estimates; and for the acquisition of right of way for projects planned for postwar construction.

Federal Funds

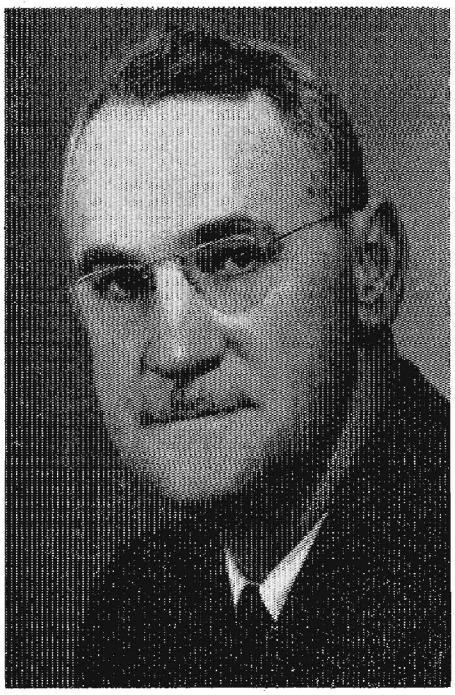
Federal funds, (1) to (5) above, are apportioned to the States by the Federal Works Administrator from moneys appropriated by Congress for aid to the States in highway development. Federal approval and supervision of federal aid projects is performed by the Public Roads Administration which is a unit of the Federal Works Agency.

(1) Federal aid, often referred to as "Primary Federal Aid," is apportioned to the states from congressional appropriations under an established statutory formula for expenditure on the Primary Federal Aid Highway System. This system has been designated on portions of the State Highway System by the State and approved by federal authorities as prescribed by the Federal Aid Acts of 1916 and 1921 as amended and supplemented. This federal money must be matched by state funds in the approximate ratio of 58 percent federal to 42 percent state. Construction is financed by the State and reimbursement made by the Federal Government after the work is done.

Feeder Funds

(2) Federal aid secondary or feeder funds must be expended for projects on the Secondary System which are not on the Primary Federal Aid System and outside of urban areas. This system is selected by the State Highway Department in cooperation with the county boards of supervisors and must be approved by the Public Roads Administration. This system of roads is integrated with the Primary System and includes the principal county roads and

Chester H. Warlow



State Highway Engineer George T. McCoy

state highways not included in the Primary Federal Aid System. In August, 1947, this system, as approved, included 3,698 miles of state highways and 5,177 miles of county roads for a total of 8,875 miles. These secondary and primary federal aid funds must be matched by state money if expended on the State Highway System, or by county money if off the State System, or they may be matched by special state legislative appropriations.

Urban highway funds must be expended on extension of the Primary Federal Aid System in urban areas. Urban areas are areas included in municipalities or other urban places of a population of 5,000 or more according to the 1940 federal census. The boundaries of these Urban Areas are to be fixed by the State Highway Department, subject to the approval of public roads and may extend beyond the corporate limits of the municipalities.

(3) Federal emergency relief funds are provided for special grants to assist states in repair of highway damage from catastrophes. California has availed itself of these funds after extraordinary storms.

(4) Federal lands highway funds are specifically marked for use in improvement of roads through federal public lands, such as unappropriated public lands, Indian Reservations, etc. These funds do not require matching and may be used for engineering construction and maintenance.

Grade Crossing Funds

(5) Federal aid grade crossing funds are apportioned for elimination of hazards at railroad grade crossings and may be expended for projects on state highways, county roads or city streets. Federal aid grade crossing funds do not have to be matched with state money, however, rights of way must be acquired by the interested agency. These are prewar funds and no new appropriations have been made for their continuation.

The allocation of federal aid grade crossing funds differs from other federal aid funds in that the Federal Government will pay all construction costs of grade crossing projects with the exception of expenditures for right of way. As previously noted, grade crossing funds may be expended on County roads, federal aid routes, or state highways not on the Federal Aid System.

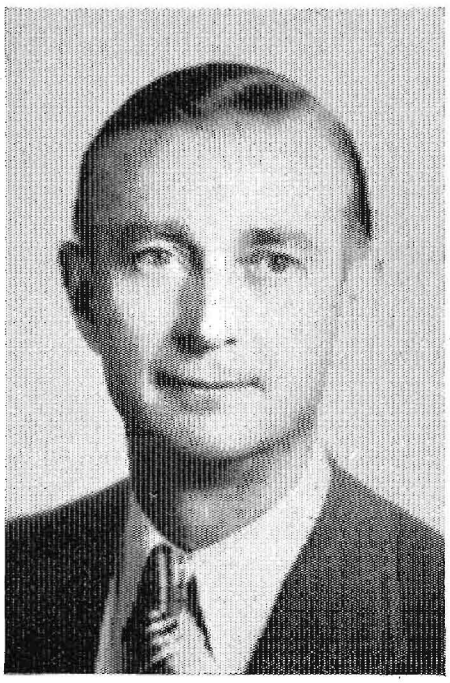
Access Funds

(6) Under the National Defense Highway Act of 1941 Congress appropriated a sum of $150,000,000 (subsequently increased to $290,000,000) for construction of roads serving as access to military and naval establishments, industrial plants engaged in war production and sources of raw materials. Access road construction is financed with 100 percent federal funds, however, federal authorities desire that, where there is some civilian use of the improvement, the local governmental agency (state, county or city) which will assume control of the road, contribute at least 25 percent of the cost of the project. On access projects located on the State Highway System, the State has made contributions, usually in the form of right of way acquisition, to meet this request of the government. The Public Roads Administration issued a directive that no more of these funds would be available after June 30, 1947.

In access road construction, the state acts in the capacity of engineer and construction agent for projects certified by the Secretary of War, Secretary of the Navy or, in the case of industrial access roads and roads to sources of raw materials, the War Production Board. For expenditure of access funds apportioned to California projects to be built by the Division of Highways the Highway Commission votes the necessary allocations to the access road fund account after federal certification is granted.

Flight strip construction is handled in a manner similar to access road construction, although determination of the general location of the strip rests in the hands of the U. S. Army Air Corps. A sum of $10,000,000 was included in the Defense Highway Act for these flight strips.

Also included in the Defense Act was an additional $10,000,000 for advance engineering. The purpose of these funds is to provide for preparation of projects for construction after the war. California has been apportioned $400,000 of these advance engineering funds. It is necessary that the State match these funds in the ratio of 58 percent Federal to 42 percent State. All of this apportionment has been allocated to specific projects. Funds for access roads, flight strips and advance engineering were emergency war measures and approval of additional projects for their use culminated with the cessation of hostilities.



Fred J. Grumm, Deputy State Highway Engineer

Bids and Awards

Contracts Awarded for May and June, 1948

May, 1948

CONTRA COSTA COUNTY—Between Alameda County line and 0.2 mile south of San Ramon Creek, about 4.2 miles, to be resurfaced with plant-mixed surfacing on crusher run base and shoulders to be constructed of crusher run base and seal coat. District IV, Route 107, Section A. Gallagher & Burk, Inc., Oakland, $188,591; Lee J. Immel, San Pablo, $194,763; J. R. Armstrong, El Cerrito, $197,686; Clements & Co. Hayward, $199,513; E. A. Forde, San Anselmo, $205,933; Browne & Krull, Palo Alto, $216,173; J. Henry Harris, Berkeley, $220,350. Contract awarded to Granite Construction Co., Watsonville, $184,434.

DEL NORTE COUNTY—At Turwar Creek about three miles east of Klamath a steel plate girder bridge to be constructed and about 0.7 mile of approaches to be graded and surfaced with base material and seal coat, District I, Route 46, Section A. Mercer, Fraser Co., Eureka, $214,058; Fred J. Maurer & Son, Eureka, $220,282; Clements & Co. & Underground Construction Co., Hayward, $222,-840; Grant L. Miner, R. G. Clifford & A. R.McEwen, Willits, $236,458. Contract awarded to Baldwin Straub Corp. & Arthur B. Siri, Inc., San Rafael, $195,358.

FRESNO COUNTY—Between Belmont Circle and Clinton Avenue, furnishing and installing a full traffic actuated signal system and highway lighting at one intersection and furnishing and installing highway lighting at two interesections. District VI, Route 4, Section Fre,C. Severin Electric Co., San Francisco, $20,810; L. H. Leonardi Electrical Construction Co., San Rafael, $19,060. Contract awarded to Tri-Cities Electrical Service, Oceanside, $18,123.

KERN COUNTY—Between Hoskins Road and Brundage Lane, about 5.1 miles to be graded and paved with Portland cement concrete on cement treated subgrade and plant-mixed surfacing on crusher run base. District VI, Route 4, Section C. Morrison-Knudsen Co., Inc., San Francisco, $1,109,-384. Contract awarded to Griffith Co. Los Angeles, $735,584.

KERN COUNTY—Between Ittner's and Ricardo, about 2.4 miles, seal coat to be applied the entire length, trenches to be excavated, and rock slope protection to be placed on portions, imported borrow and base material and road-mixed surfacing to be placed on portions. District IX, Route 23, Section C. Basich Bros. Construction Co. & Basich Bros., San Gabriel, $55,887; Rexroth & Rexroth, Bakersfield, $59,334; Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $64,017. Contract awarded to Westbrook & Pope, Sacramento, $38,223.

KERN COUNTY—In the city of Bakersfield at Niles and Baker Streets, furnish and install fixed time traffic signal system. District VI, Route 57. L. H. Leonardi Electrical Construction Co., San Rafael, $4,215; Oilfield Electric Co. Inc., Bakersfield, $5,605. Contract awarded to Tri-Cities Electrical Service, Oceanside, $3,477.

LAKE COUNTY—Construction of reinforced concrete cattlepass about 2.6 miles east of Upper Lake. District I, Route 15, Section B. James H. McFarland, San Francisco, $6,072; O'Connor Bros., Red Bluff, $7,310; B. S. McElderry, Berkeley, $8,734. Contract awarded to C. C. Gildersleeve, Nevada City, $6,027.

LOS ANGELES COUNTY—On Hollywood Parkway at Bonnie Brae Street and at Beaudry Avenue in the City of Los Angeles, a reinforced concrete overcrossing and a reinforced concrete undercrossing to be constructed. District VII, Route 2. Spencer Webb Co., Inglewood, $435,311; Guy F. Atkinson Co., Long Beach, $459,877; Oberg Bros., Inglewood, $470,415; Bates & Rogers Construction Corp., San Francisco, $474,802. Contract awarded to Haddock Co., Pasadena, $416,712.

LOS ANGELES COUNTY—On Arroyo Seco Parkway, at Alpine Street, in the City of Los Angeles, a reinforced concrete box girder over-crossing to be constructed. District VII, Route 165. Haddock Co., Pasadena, $133,773; R. M. Price Co. & O. B. Pierson, Altadena, $135,856; Chas. MacClosky Co., San Francisco, $141,865; C. B. Tuttle Co., Long Beach, $143,209; Oberg & Cook, Gardena, $146,933; E. S. & N. S. Johnson, Fullerton, $147,057; Oberg Bros., Inglewood, $147,787; Byerts & Dunn, Los Angeles, $149,501; Guy F. Atkinson Co., Long Beach, $155,-562; Griffith Co., Los Angeles, $158,235; Covina Construction Co., Covina, $160,300. Contract awarded to G. W. Peterson, Los Angeles, $126,346.

MENDOCINO COUNTY—At St. Ores Creek, 11.5 miles south of Point Arena, about 0.5 mile to be graded, surfaced with road-mixed surfacing, and a seal coat to be applied. District I, Route 56, Section A. C. M. Syar, Vallejo, $84,938; Johnston Rock Co., Stockton, $108,383. Contract awarded to Arthur B. Siri, Inc. & Baldwin Straub Corp., Santa Rosa, $68,647.

MONO COUNTY—Between Sheep Corral and Adobe Creek, about 16.0 miles, bituminous surface treatment to be applied. District IX, Route 40, Section D. Clyde W. Wood, Inc., North Hollywood, $47,072; Baker & Pollock, Ventura, $47,431; Ken H. Jones, Van Nuys, $47,464; Geo. E. France, Inc., Visalia, $47,942; Browne & Krull, Palo Alto, $49,-845; Roland T. Reynolds, Anaheim, $50,383; Dicco Inc. and Dix-Syl Construction Co., Inc., Bakersfield, $53,178; Rice Brothers, Inc., Marysville, $62,191; Arthur A. Johnson, Laguna Beach, $62,962; C. M. Syar, Vallejo, $79,423. Contract awarded to Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $45,484.

MONTEREY COUNTY—Across Prewitt Creek, about 32 miles north of San Simeon, the existing bridge to be repaired. District V, Route 56, Section B. E. G. Perham, Los Angeles, $16,642; Thomas Construction Co., Santa Barbara, $16,855; O. R. Ochs & Sons, San Luis Obispo, $16,922; N. M. Saliba Co., Los Angeles, $17,206; Minton & Kubon, San Francisco, $17,430; E. L. Thorsten, Santa Monica, $18,-191; James H. McFarland, San Francisco, $18,263; C. C. Gildersleeve, Nevada City, $18,921; Stolte Inc., Monterey, $20,668; Repsher Bros., Bakersfield, $20,950; Beverly G. McElderry, Berkeley, $28,536. Contract awarded to Chas. O. Bodenhamer, Redwood City, $15,776.

ORANGE COUNTY—In the City of Newport Beach, between junction of Route 43 and Irvine Ave, about 0.59 mile to be surfaced with plant-mixed surfacing and shoulders to be widened. District VII, Route 60. Cox Bros. Construction Co., Stanton, $46,-981; O'Brien & Bell Construction Co., Santa Ana, $48,488; Griffith Co., Los Angeles, $48,757; Sully-Miller Contracting Co., Long Beach, $60,787. Contract awarded to Baker & Pollock, Ventura, $45,740.

RIVERSIDE COUNTY—Between east city limits of Banning and Route 187, portions, about 10.5 miles in length, plant-mixed surfacing to be placed over the existing pavement and shoulders, and seal coat applied. District VIII, Route 26, Section C. Griffith Co., Los Angeles, $167,450; Peter Kiewit Sons Co., Arcadia, $167,815; Matich Bros., Colton, $176,135; R. A. Erwin, Colton, $188,910; R. P. Shea Construction Co., Indio, $206,475; Pacific Rock & Gravel Co., Monrovia, $228,375. Contract awarded to Basich Bros. Construction Co. & Basich Bros., San Gabriel, $162,450.

RIVERSIDE COUNTY—Between 0.1 mile and 0.6 mile east of Cathedral City, about 0.5 mile to be graded and surfaced with plant-mixed surfacing on imported borrow and a detour to be constructed. District VIII, Route 187, Section C. Bonadiman-McCain, Inc., Los Angeles, $54,854; Matich Bros., Colton, $65,629; R. A. Erwin, Colton, $73,413; E. L. Yeager, Riverside, $76,154; Peter Kiewit Sons Co., Arcadia, $76,518; Cox Bros. Construction Co., Stanton, $96,389. Contract awarded to Westbrook & Pope, Sacramento, $53,831.

RIVERSIDE COUNTY—Between 3.0 miles southeast of Mecca and 2.3 miles southeast of Thermal, about 6.8 miles to be graded, imported borrow and imported base material to be furnished and placed, bituminous surface treatment to be applied to the central portion and penetration treatment on the outer shoulders. District XI, Route 187, Sections B,F. Clyde W. Wood, Inc., North Hollywood, $394,-269; Arthur A. Johnson, Laguna Beach, $402,868; R. P. Shea Construction Co., Indio, $411,353; Basich Bros. Construction Co. & Basich Bros., San Gabriel, $437,953; Griffith Co., Los Angeles, $449,011; Cox Bros. Construction Co., Stanton, $462,952; Matich Bros., Colton, $484,186. Contract awarded to Hensler Construction Corp., Glendale, $386,232.

SACRAMENTO COUNTY—At Sloughhouse, about 1.6 miles to be graded and surfaced with plant-mixed surfacing on imported borrow and crusher run base and three reinforced concrete slab bridges to be constructed. District III, Route 54, Section B. A. Teichert & Son, Inc., Sacramento, $204,156; J. R. Reeves, Sacramento, $216,124; Louis Biasotti & Son & M. E. Shuper, Stockton, $217,400; H. Earl Parker, Inc., Marysville, $220,-383; George Pollock Co., Sacramento, $229,544; Chittenden & Chittenden, Auburn, $231,088; Lord & Bishop & M. J. B. Construction Co., Sacramento, $232,810; Charles MacClosky Co. & Miles & Bailey, San Francisco, $237,721; H. F. Lauritzen & Asta Construction Co., Rio Vista, $251,849. Contract awarded to Brighton Sand & Gravel Co. & Lew Jones Construction Co., Inc., Sacramento, $202,034.

SANTA BARBARA COUNTY—Between Las Cruces and San Julian Creek, about 6.5 miles, imported borrow to be placed and treated with Portland cement and imported surfacing material to be placed and bituminous surface treatment applied. District V, Route 56, Section A. Clyde W. Wood, Inc., North Hollywood, $166,290; Cox Bros. Construction Co., Stanton, $172,281; Brown-Doko, Pismo Beach, $271,590. Contract awarded to N. M. Ball Sons, Berkeley, $163,856.

SAN LUIS OBISPO COUNTY—Across Santa Maria River at Santa Barbara-San Luis Obispo County line, rustproofing and painting a steel bridge. District V, Route 56, Section E. Jerry Foosaner, Sacramento, $8,530; Fred T. Judd Co., Berkeley, $9,504; Acme Painting Service, Sacramento, $12,-672; Williams & Kelly, Los Angeles, $14,833; D. E. Burgess Co., San Francisco, $19,170. Contract awarded to Timmons Painting & Engineering Co., Long Beach, $7,175.

SAN MATEO COUNTY—At Whitehouse Creek and at Gazos Creek, about 12 miles north of Davenport, about 0.2 mile to be graded, bituminous surface treatment applied to a portion and a field assembled plate culvert installed, and a bridge to be repaired. District IV, Route 56, Section A. Granite Construction Co., Watsonville, $44,672; Huntington Bros., San Anselmo, $45,550; Jansen & Pitts, San Rafael, $49,477. Contract awarded to Gordon L. Capps, Stockton, $43,371.

SAN MATEO COUNTY—Between Colma Creek in South San Francisco and Broadway Avenue in Burlingame, about 4.9 miles of armor coat to be applied to existing shoulders. District IV, Route 68. I. J. Ely Company, San Anselmo, $21,916; E. A. Forde, San Anselmo, $22,550; Clements & Co., Hayward, $22,820; T. M. Blomquist, Atherton, $23,800; J. Henry Harris, Berkeley, $24,557; Chas L. Harney, Inc., San Francisco, $28,520. Contract awarded to Frank W. Smith, San Mateo, $21,214.

SHASTA AND SISKIYOU COUNTIES—Between Montgomery Creek and 2.5 miles east of Hillcrest, about 5.7 miles, road-mixed surfacing to be placed over cement treated base and existing pavement and between 3.4 miles south of Cougar and Cougar about 3.3 miles road-mixed surfacing to be placed over existing pavement. District II, Routes 28, 72, Sections C,A. A. R. McEwen, Willits, $124,612. Contract awarded to W. C. Railing, Redwood City, $116,377.

SONOMA COUNTY—Between 2 miles north of Santa Rosa and 0.7 mile south of Santa Rosa, about 4.3 miles to be graded and paved with Portland cement concrete pavement on cement treated subgrade and bridges to be constructed. District IV, Route I, Sections, B,E, SRo, C. Granite Construction Co., Watsonville, $1,346,671; Guy F. Atkinson Co., South San Francisco, $1,421,395; Harms Bros. & N. M. Ball Sons, Berkeley, $1,429,726; Fredrickson

& Watson Construction Co., Oakland, $1,453,640; H. Earl Parker, Inc., Marysville, $1,470,306; Fredrickson Bros., Emeryville, $1,494,868; A. G. Raisch Co. & Westbrook & Pope, San Francisco, $1,531,987; Chas. L. Harney, Inc., San Francisco, $1,525,389; Morrison-Knudsen Co., Inc., San Francisco, $1,538,643. Contract awarded to Stolte Inc. and The Duncanson Harrelson Co., Oakland, $1,318,315.

STANISLAUS COUNTY—Furnishing and installing traffic signals in the City of Turlock on Front Street between Olive Street and Marshall Street. District X, Route 4, Tri-Cities Electrical Service, Oceanside, $7,791; R. Goold & Son, Stockton, $8,028; L. H. Leonardi Electrical Construction Co., San Rafael, $8,599; Severin Electric Co., San Francisco, $8,129. Contract awarded to Collins Electrical Co., Stockton, $6,666.

TRINITY COUNTY—Between Prairie Creek and Weaverville, about 25.7 miles, seal coat to be applied the entire length and road-mixed surfacing and stockpiling to be placed on portions. District II, Route 20, Sections E,F. W. C. Railing, Redwood City, $54,075; C. M. Syar, Vallejo, $70,452. Contract awarded to Clements & Co., Hayward, $54,060.

YOLO COUNTY—At the north end of Sacramento Weir, about 0.2 mile of graded roadbed to be constructed and surfaced. District III, Route 50, Section F. Robert A. Farish, San Francisco, $23,059; Brighton Sand & Gravel Co., Sacramento, $27,232. Contract awarded to A. Teichert & Son, Inc., Sacramento, $14,277.

June, 1948

CONTRA COSTA COUNTY—Repairing a bridge across San Joaquin River at Antioch. District X, Route 11, Section A. Lord & Bishop, Sacramento, $7,155. Contract awarded to H. F. Lauritzen, Pittsburg, $5,097.60.

CONTRA COSTA COUNTY—At Old River Bridge about 6 miles northeast of Byron, about 0.2 mile to be constructed of imported borrow and plant-mixed surfacing to be placed. District IV, Route 75, Section D. J. Henry Harris, Berkeley, $75,589; Granite Construction Co., Watsonville, $81,627; P. J. Moore & Son & Harms Bros., Sacramento, $82,204; Elmer J. Warner, Stockton, $96,752; Lee J. Immel, San Pablo, $96,911. Contract awarded to J. R. Armstrong, El Cerrito, $74,404.

FRESNO AND MADERA COUNTIES—At San Joaquin River, about one mile north of Herndon, a structural steel truss bridge to be constructed and about one mile to be graded and surfaced with plant-mixed surfacing on cement treated base and on untreated rock base. District VI, Route 4, Sections C,A. United Concrete Pipe Corp. & Ralph A. Bell, Baldwin Park, $666,354; Stolte Inc. & Duncanson-Harrelson Co., San Francisco, $677,441; MacDonald-Young & Nelson, Inc., & J. H. Pomeroy, Inc., San Francisco, $677,966; Guy F. Atkinson Co., South San Francisco, $685,136; Charles MacClosky Co. & Harms Bros., San Francisco, $688,593; John C. Gist, Sacramento, $692,931; Granite Construction Co., Watsonville, $710,207; R. M. Price Co., Rex B. Sawyer and O. B. Pierson, Altadena, $719,240; George Pollock Co., Sacramento, $770,657. Contract awarded to Erickson, Phillips & Weisberg, Oakland, $652,063.

KERN COUNTY—Across Poso Creek, about 14 miles north of Bakersfield, a reinforced concrete slab bridge on concrete piles to be constructed. District VI, Route 129, Section A. Trewhitt-Shields & Fisher, Fresno, $52,794; N. M. Saliba Co., Los Angeles, $53,176; Thomas Construction Co., Santa Barbara, $54,020; E. G. Perham, Los Angeles, $57,774; Grant L. Miner, Palo Alto, $58,782; Wheeler Construction Co., Oakland, $65,653. Contract awarded to F. Fredenburg, Temple City, $47,975.

LASSEN COUNTY—Between Westwood Road and Coppervale, about 6.2 miles plant-mixed surfacing to be placed over exitsing roadbed on portions of the project and seal coat to be applied to the entire project. District II, Route 29, Section A. Contract awarded to Sheldon Oil Co., Suisun, $27,960.

LOS ANGELES COUNTY—Between 0.4 mile southerly of Santa Clara River and Castaic Creek, about 2.6 miles to be graded and paved with asphalt concrete on Portland cement concrete base and on existing pavement. District VII, Routes 4, 79, Sections F, A, B, A. J. E. Haddock, Ltd., Pasadena, $543,925; Fred D. Chadwick, Lynwood, $557,796; Peter Kiewit Sons Co., Arcadia, $567,011; R. E. Campbell, Compton, $647,635. Contract awarded to Griffith Co., Los Angeles, $473,286.

LOS ANGELES COUNTY—In the City of Santa Monica, between Colorado Street Tunnel and Lincoln Boulevard, about 0.6 mile, existing pavement and base to be removed and imported borrow and untreated rock base to be placed and surfaced with plant-mixed surfacing. District VII, Route 60. Oswald Bros., Los Angeles, $85,889; Fred D. Chadwick, Lynwood, $89,795; Bonadiman McCain, Inc., Los Angeles, $91,872; Covina Construction Co., Covina, $99,306; Griffith Co., Los Angeles, $100,222. Contract awarded to J. E. Haddock, Ltd., Pasadena, $77,632.

LOS ANGELES COUNTY—In the cities of Santa Monica and Los Angeles on Olympic Blvd. from Lincoln Boulevard to Bundy Drive, furnish and install fixed time traffic signal systems at six intersections and reconstruct signal system at one intersection. District VII, Route 173, Section SMca, LA. Econolite Corp., Los Angeles, $50,272. Contract awarded to C. D. Draucker Inc., Los Angeles, $47,700.

MENDOCINO COUNTY—In Fort Bragg, from south city limits to Oak Street, about 0.2 mile, to be graded, surfaced with base material, and road-mixed surfacing and a seal coat applied. District I, Route 56. C. M. Syar, Vallejo, $17,005. Contract awarded to Arthur B. Siri, Inc., Santa Rosa, $14,497.

MENDOCINO COUNTY—At Virgin Creek 1.4 miles north of Fort Bragg, about 0.3 mile to be graded, surfaced with road-mixed surfacing on imported base material, and seal coat to be applied. District I, Route 56, Section F. C. M. Syar, Vallejo, $58,427; Arthur B. Siri, Inc. & Baldwin Straub Corp., Santa Rosa, $60,168. Contract awarded to John Burman and Sons, Eureka, $55,980.

MODOC COUNTY—Widening a bridge across North Fork of Ash Creek, about two miles east of Adin, District II, Route 28, Section A. C. C. Gildersleeve, Nevada City, $9,044; O'Connor Bros., Red Bluff, $9,290. Contract awarded to Evans Construction Co., Berkeley, $7,474.

MONO COUNTY—Between seven miles north of Coleville and Nevada State Line, about 2.2 miles to be graded and surfaced with road-mixed surfacing on imported borrow and seal coats to be applied. District IX, Route 95, Section A. Contract awarded to Westbrook & Pope, Sacramento, $96,778.

ORANGE COUNTY—Between 1.3 miles southerly of Los Patos Avenue and Route 43, about 5.5 miles to be resurfaced with plant-mixed surfacing on imported borrow. District VII, Route 60. Covina Construction Co., Covina, $241,639; John J. Swigart Co. & O'Brien & Bell Construction Co., Torrance, $247,850; Cox Bros. Construction Co., Stanton, $247,952; R. E. Campbell, Compton, $256,309; Peter Kiewit Sons Co., Arcadia, $264,854; Griffith Co., Los Angeles, $265,154; C. R. Butterfield Co., San Pedro, $267,151. Contract awarded to Sully-Miller Contracting Co., Long Beach, $238,490.

RIVERSIDE COUNTY—In the City of Hemet, between State Street and east city limits, 0.8 mile to be resurfaced with plant-mixed surfacing. District VIII, Route 64. Herz Paving Co., San Bernardino, $13,307; Matich Bros., Colton, $14,450. Contract awarded to R. A. Erwin, Colton, $11,320.

RIVERSIDE COUNTY—Between Bellgrave Avenue and junction Route 19, about 3 miles, existing roadbed to be widened and surfaced with plant-mixed surfacing. District VIII, Route 193, Section B. Matich Bros., Colton, $55,514; E. L. Yeager, Riverside, $59,250; Cox Bros. Construction Co., Stanton, $69,010. Contract awarded to R. A. Erwin, Colton, $53,072.

SACRAMENTO COUNTY—Between one mile west of Nimbus and about 0.25 mile east of railroad crossing near White Rock, about 7.3 miles to be graded and surfaced with plant-mixed surfacing on crusher run base and reinforced concrete overhead crossing to be constructed. District III, Route 11, Sections B, A. Harms Bros., Sacramento, $706,177; H. Earl Parker and Clements Co., Marysville, $750,701; A. Teichert & Son, Inc., Sacramento, $876,112. Contract awarded to George Pollock Co., Sacramento, $666,381.

SAN BERNARDINO COUNTY—At two intersections on Colton Avenue at Waterman Avenue and at Anderson Street-Tippecanoe Street, traffic signal systems and highway lighting to be furnished and installed. District VIII, Route 26, Section A. Tri-Cities Electrical Service, Oceanside, $19,105; Paul Gardner, Ontario, $19,483; Drury Electric Co., San Bernardino, $19,700. Contract awarded to Ets-Hokin & Galvan, San Diego, $18,634.

SAN BERNARDINO COUNTY—Between 28 and 70 miles east of Barstow, thirteen timber trestle bridges to be redecked with reinforced concrete slabs. District VIII, Route 31, Sections H, J, K, L. E. S. & N. S. Johnson, Fullerton, $77,926; E. G. Perham, Los Angeles, $79,558; Covina Construction Co., Covina, $87,807; N. M. Saliba Co., Los Angeles, $87,949; Hensler Construction Co., Glendale, $91,122; E. L. Thorsten, Santa Monica, $99,693; O'Brien & Bell Construction Co., Santa Ana, $104,630. Contract awarded to Thomas Construction Co., Santa Barbara, $62,080.

SAN BERNARDINO COUNTY—On Cajon Pass highway near Blue Cut, installing truck scales and scale house. District VIII, Route 31, Section B. R. A. Erwin, Colton, $12,175; Herz Paving Co., San Bernardino, $14,025. Contract awarded to Matich Bros., Colton, $8,889.

SAN DIEGO COUNTY—Traffic signal system and highway lighting, Hill Street and Vista Way in Oceanside. District XI, Route 2. Ets-Hokin & Galvan, San Diego, $9,272; California Electric Works, San Diego, $9,585. Contract awarded to Tri Cities Electrical Service, Oceanside, $8,773.

SAN DIEGO COUNTY—Between Miramar and Lake Hodges, about 12 miles to be graded, base material to be furnished and placed; and cement treated base, reinforced concrete bridges, and miscellaneous structures to be constructed. District XI, Route 77, Sections A, B. Peter Kiewit Sons Co., Arcadia, $1,648,333; United Concrete Pipe Corp. & Ralph A. Bell, Baldwin Park, $1,659,791; Morrison-Knudsen Co., Inc., Los Angeles, $1,660,568; Daley Corp., San Diego, $1,697,307; N. M. Ball Sons & Spencer Webb Co., Berkeley, $1,699,307; Clyde W. Wood, Inc., North Hollywood, $1,717,180; Haddock Engineers, Ltd., Oceanside, $2,425,230. Contract awarded to Griffith Co., Los Angeles, $1,642,999.

SAN LUIS OBISPO COUNTY—Construction of a frame office building, 20 feet by 50 feet, with concrete floor. District V, SLO. Contract awarded to Harald N. Nielsen, San Luis Obispo, $6,760.

SAN LUIS OBISPO COUNTY—Reconstructing portion of a bridge across Salinas River, 2.3 miles east of Atascadero. District V, Route 125, Section B. Contract awarded to O. R. Ochs & Son, San Luis Obispo, $12,525.

SAN LUIS OBISPO COUNTY—Between State Route 137 and Rinconada-Las Pilitas Road, about 6.1 miles, bituminous surface treatment and penetration treatment to be applied. District V, Route 1086. Clyde W. Wood, Inc., North Hollywood, $16,935; Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $18,825; Brown-Doko, Pismo Beach, $19,416; Gillum Construction Co., Bakersfield, $22,894; Madonna Construction Co., San Luis Obispo, $24,491. Contract awarded to Ned H. Mulleneaux, Oceanside, $15,211.

SANTA BARBARA COUNTY—Between Hollister Wye and Tecolote Creek, about 8.4 miles to be improved by placing plant-mixed surfacing over the existing pavement and shoulders. District V, Route 2, Sections Q, G. N. M. Ball Sons, Berkeley, $54,870; Nichols & Berry, Santa Barbara, $53,862; Brown & Doko, Pismo Beach, $53,087. Contract awarded to Baker & Pollock, Ventura, $48,747.

SANTA BARBARA COUNTY—Relocating traffic signals at Hollister Wye between Santa Barbara and Goleta. District V, Route 2, Section P. Contract awarded to L. H. Leonardi Electric Construction Co., San Rafael, $1,077.

SANTA CLARA COUNTY—Between San Antonio Avenue and Saratoga Road, portions, about 1.5 miles in length, existing pavement to be widened to provide channelization of intersections and traffic signal systems to be installed. District IV, Route 2, Section A, MVw, Sunv. Leo F. Piazza, San Jose, $250,164; Chas. L. Harney, Inc., San Francisco, $267,218; L. C. Smith, San Mateo, $267,342. Contract awarded to A. J. Raisch Paving Co., San Jose, $248,632.

SANTA CLARA COUNTY—Between Gish Road and Route 5, about 0.5 mile, existing surface to be excavated and Portland cement concrete pavement placed. District IV, Route 68, Sections B, SJs. A. J. Raisch Paving Co., San Jose, $77,596; Leo F. Piazza, San Jose, $113,286. Contract awarded to Chas. L. Harney, Inc., San Francisco, $67,109.

SISKIYOU COUNTY—Between Gazelle and 5.5 miles north, about 5.5 miles to be widened with imported borrow, and placing plant-mixed surfacing on cement treated base. District II, Route 3, Section B. Contract awarded to Clements & Co., Hayward, $135,735.

SOLANO COUNTY—Reconstructing fender and dolphin on bridge across Napa River at westerly city limits of Vallejo. District X, Route 208, Section A. Healy Tibbitts Construction Co., San Francisco, $6,277; Duncanson-Harrelson Co., San Francisco, $6,330. Contract awarded to H. F. Lauritzen, Pittsburg, $5,742.

TULARE COUNTY—Between 0.5 mile south of Tagus and Route 10, about 5 miles to be graded and paved with Portland cement concrete on cement treated subgrade and plant-mixed surfacing on crusher run base and a reinforced concrete bridge to be constructed. District VI, Route 4, Section F. Peter Kiewit Sons Co., Arcadia, $822,878; N. M. Ball Sons, Berkeley, $827,106; Cox Bros. Construction Co., Stanton, $838,943; Morrison-Knudsen Co. Inc., San Francisco, $895,318; R. E. Campbell, Compton, $913,674. Contract awarded to Guy F. Atkinson Co., South San Francisco, $797,502.

VENTURA COUNTY—City of Ventura on Main, Garden, Meta Streets and Thompson Boulevard, between Olive Street and Howard Street, fixed-time traffic signal systems to be furnished and installed at 14 intersections. District VII, Route 2. C. D. Drauker, Inc., Los Angeles, $39,860; L. H. Leonardi Electric Construction Co., San Rafael, $39,999; Electric & Machinery Service Inc., South Gate, $40,580; Ets-Hokin & Galvan, San Diego, $41,642; C. J. B. Construction Co., Oxnard, $47,500. Contract awarded to Tri-Cities Electrical Service, Oceanside, $36,744.

HUMBOLDT COUNTY—Between Stone Lagoon and one mile south of Orick, about 5.25 miles to be improved with imported base material and a prime coat applied. District I, Route 1, Section J. John Burman & Sons, Eureka, $68,815. Contract awarded to Mercer, Fraser Co., Eureka, $47,260.

KERN & TULARE COUNTIES—Between Poso Creek and Ducor, about 3.9 miles, seal coat to be applied. District VI, Route 129, Sections AB,A. Griffith Co., Los Angeles, $21,350; Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $24,005; Dicco Inc. & Dix-Syl Construction Co. Inc., Bakersfield, $24,586; Brown & Doko, Pismo Beach, $24,953; Ted F. Baun, Fresno, $27,530; J. Henry Harris, Berkeley, $28,820. Contract awarded to Clyde W. Wood, Inc., North Hollywood, $21,090.

LOS ANGELES COUNTY—Between Pico Canyon Road and Route 79, about 3.3 miles to be graded and paved with Portland cement concrete on cement treated subgrade. District VII, Route 4, Section F. Griffith Co., Los Angeles, $418,320; Clyde W. Wood, Inc., North Hollywood, $419,468; Silva & Hill Construction Co., Los Angeles, $441,565; Basich Bros. Construction Co. & Basich Bros., San Gabriel, $442,747; Peter Kiewit Sons Co., Arcadia, $446,771; Fred D. Chadwick, Lynwood, $449,237; United Concrete Pipe Corp. & Jessie S. Smith, Baldwin Park, $454,754; J. E. Haddock, Ltd., Pasadena, $456,762. Contract awarded to N. M. Ball Sons, Berkeley, $409,124.

MARIN COUNTY—At the intersection of Route 1 and Sir Francis Drake Boulevard in Greenbrae, about 0.2 mile, existing pavement to be widened to provide channelization of intersection and traffic signal system to be furnished and installed. District IV, Route 1, Section C. Jensen & Pitts, San Rafael, $71,565; Chas. L. Harney, Inc., San Francisco, $72,741; A. G. Raisch Co., San Francisco, $99,537. Contract awarded to Brown-Ely Co. Contractors, El Cerrito, $64,825.

MERCED COUNTY—Across San Luis Creek, about 12 miles west of Los Banos, a reinforced concrete girder bridge to be constructed and about 0.7 mile of approaches to be graded and surfaced with plant-mixed surfacing on untreated rock base. District X, Route 32, Sections A,B. Dan Caputo & Ed. Keeble. San Jose, $127,995; Elmer J. Warner, Stockton, $136,257; Browne & Krull & Grant L. Miner, Palo Alto, $142,319; E. C. Young & Co., Bakersfield, $142,631; Ted F. Baun, Fresno, $156,851. Contract awarded to Granite Construction Co., Watsonville, $122,040.

MONTEREY COUNTY—Between 15 and 26 miles south of Monterey, six reinforced concrete cattlepasses to be constructed. District V, Route 56, Sections F, G. N. M. Saliba Co., Los Angeles, $29,023; James H. McFarland, San Francisco, $29,700; E. G. Perham, Los Angeles, $29,817; B. S. McElderry, Berkeley, $29,846; Granite Construction Co., Watsonville, $33,576; Grant L. Miner, Palo Alto, $34,818; Stolte Inc., Monterey, $35,387; Minton and Kubon, San Francisco, $38,388. Contract awarded to C. O. Bodenhamer, Redwood City, $27,533.

PLUMAS, SHASTA & TRINITY COUNTY—Near Keddie, Schilling and Douglas City, truck scales to be installed, approaches to be graded, surfaced with plant-mixed surfacing and road-mixed surfacing on imported borrow and plant-mixed surfacing on crusher run base, and a seal coat applied. District II, Routes 21, 20, 20, Sections B,B,A. O'Connor Bros., Red Bluff, $24,688; J. Henry Harris, Berkeley, $36,980; Chittenden & Chittenden, Auburn, $37,287. Contract awarded to Liston Ehorn, Red Bluff, $20,953.

RIVERSIDE COUNTY—Between San Diego County line and one mile north of Temecula, about 5.9 miles to be graded and surfaced with plant-mixed surfacing and two reinforced concrete bridges to be constructed. District VIII, Route 77, Section A. Clyde W. Wood, Inc., North Hollywood, $711,883; Matich Bros. & E. L. Yeager, Riverside, $816,743; Peter Kiewit Sons Co., Arcadia, $848,249; Westbrook & Pope, Highland, $862,645; United Concrete Pipe Corp. & R. A. Bell, Baldwin Park, $881,742. Contract awarded to Morrison Knudsen Co., Inc., Southgate, $653,132.

RIVERSIDE COUNTY—Between four miles west of Blythe and Colorado River, about 8.3 miles to be surfaced with plant-mixed surfacing on cement treated base and existing surfacing. District XI, Route 64, Sections E, Bly, F. R. A. Erwin, Colton, $15,925; Arthur A. Johnson, Laguna Beach, $243,520; R. P. Shea Construction Co., Indio, $244,058; Clyde W. Wood, Inc., North Hollywood, $255,157; G. W. Ellis Construction Co. & MacArthur & Son, North Hollywood, $274,535. Contract awarded to Basich Bros. Construction Co. & Basich Bros., San Gabriel, $215,850.

SAN DIEGO COUNTY—In the cities of La Mesa, El Cajon and San Diego, at various locations, about 5.1 miles to be surfaced with plant-mixed surfacing. District XI, Routes 198,2, Sections LMsa, ECj, SD. Daley Corp., San Diego, $34,104; V. R. Dennis Construction Co., San Diego, $34,327; R. E. Hazard Contracting Co., San Diego, $34,461; Contract awarded to Griffith Co., Los Angeles, $33,184.

SOLANO COUNTY—Between 3.5 miles east of Fairfield and 0.4 mile east of Alamo Creek, about 4.3 miles to be graded and paved with Portland cement concrete and a reinforced concrete bridge to be constructed. District X, Route 7, Section C. Morrison-Knudsen Co. Inc., San Francisco, $802,153; N. M. Ball Sons, Berkeley, $883,256; Fredrickson Bros., Emeryville, $874,452; Parish Bros., Benicia, $893,646; A. Teichert & Son, Inc., Sacramento, $930,404; Fredrickson & Watson Construction Co., Oakland, $952,671; H. Earl Parker Inc. and Clements & Co., Marysville, $965,448; Chas. L. Harney Inc., San Francisco, $1,074,553. Contract awarded to Harms Bros., Sacramento, $789,867.

HUMBOLDT COUNTY—Across Eureka Slough, near the City of Eureka, fenders at the existing bridge to be reconstructed. District I, Route 1, Section H. Mercer Fraser Co., Eureka, $21,130; Fred J. Maurer & Son, Eureka, $25,260. Contract awarded to Tom Hull, Eureka, $17,960.

SONOMA COUNTY—About 1.5 miles south of Cloverdale, install truck scales, construct scale house, grade approaches, and surface with plant-mixed surfacing on crusher run base. District IV, Route 1, Section A. Baldwin Straub Corp. & Arthur B. Siri, Inc., San Rafael, $19,058; James H. McFarland, San Francisco, $22,327; J. E. Bentley, Cloverdale, $22,506; B. S. McElderry, Berkeley, $22,880; J. Henry Harris, Berkeley, $23,049. Contract awarded to Stolte Inc. & The Duncanson-Harrelson Co., Oakland, $18,982.

SOLANO COUNTY—Construction of outer highway at Milk Farm, and 0.3 mile to be graded and surfaced with plant-mixed surfacing. District X, Route 7, Section I. A. Teichert & Son, Inc., Sacramento, $23,235; Delta Construction Co., Rio Vista, $16,510. Contract awarded to Harms Bros., Sacramento, $14,968.

KERN COUNTY—Between Hoskins Road and Brundage Lane, furnish and install traffic actuated signal system and highway lighting at street intersection and flood light grade crossing. District VI, Route 4, Section C. Tri-Cities Electrical Service, Oceanside, $12,690. Contract awarded to L. H. Leonardi Electric Construction Co., San Rafael, $10,603.

KERN COUNTY—Between Minkler Underpass and Snow Road, about 1.4 miles to be surfaced with plant-mixed surfacing. District VI, Route 4, Sections C, D. Griffith Co., Los Angeles, $18,299. Contract awarded to Dicco Inc. & Dix-Syl Construction Co., Inc., Bakersfield, $16,733.

CONTRA COSTA COUNTY—Between Christie Underpass and 1.5 miles west of Glen Frazer Station, about 1.7 miles to be graded and surfaced with plant-mixed surfacing on crusher run base. District IV, Route 106, Section A. Eaton and Smith, San Francisco, $382,068; Parish Bros., Benicia, $388,607; Granite Construction Co., Watsonville, $412,952; Fredrickson Bros., Emeryville, $423,180. Contract awarded to Fredrickson & Watson Construction Co., Oakland, $380,116.

IMPERIAL COUNTY—In the City of El Centro at Adams Avenue and Imperial Avenue and in the City of Imperial at Main Street and State highway, furnish and install traffic actuated signal systems and highway lighting. District XI, Route 26, Sec. ECn, Imp. Tri-Cities Electric Service, Oceanside, $20,654; L. H. Leonardi Electric Construction Co., San Rafael, $22,665; Ets-Hokin & Galvin, San Diego, $23,921; C. E. Seymour, Long Beach, $24,500. Contract awarded to California Electric Works, San Diego, $20,357.

IMPERIAL COUNTY—At East Highline Canal, about 7 miles east of Holtville, a steel girder bridge to be constructed and about 0.5 mile of approaches to be graded and paved with Portland cement concrete pavement on cement treated subgrade. District XI, Route 27, Sections D,A. Contract awarded to Basich Bros. Construction Co. & Basich Bros., San Gabriel, $105,665.

LOS ANGELES COUNTY—In the City of Los Angeles, on Hollywood Parkway between Vineland Avenue and Barham Boulevard, furnish and install highway lighting system. District VII, Route 2. Electric & Machinery Service, Inc., South Gate, $39,988. Contract awarded to Tri-Cities Electrical Service, Oceanside, $38,273.

SAN DIEGO COUNTY—Between 0.9 mile south and 0.3 mile north of Escondido, about 3 miles to be graded and surfaced with plant-mixed surfacing on cement treated base and two reinforced concrete bridges to be constructed. District XI, Route 77, Section B, Esd, F. Peter Kiewit Sons Co., Arcadia, $622,569; Cox Bros. Construction Co., Stanton, $629,841; Chas. MacClosky Co. & C. G. Willis & Sons, Inc., San Francisco, $732,312. Contract awarded to Griffith Co., Los Angeles, $617,338.

SAN DIEGO COUNTY—About 16 miles east of Oceanside, across Live Oak Creek, a reinforced concrete bridge to be constructed. District XI, Route 195, Section B. N. M. Saliba Co., Los Angeles, $19,109; O'Brien & Bell Construction Co., Santa Ana, $19,225; H. R. Breeden, Compton, $21,390; H. C. Johnson, Long Beach, $21,717. Contract awarded to E. G. Perham, Los Angeles, $19,077.

VENTURA COUNTY—Between Seacliff and Mussel Shoal, about 1.2 miles to be graded and surfaced with plant-mixed surfacing. District VII, Route 2, Section F. Peter Kiewit Sons Co., Arcadia, $995,510; J. E. Haddock, Ltd., Pasadena, $1,082,056; Guy F. Atkinson Co., Long Beach, $1,281,000; A. Teichert & Son, Inc., Sacramento, $1,637,200. Contract awarded to Clyde W. Wood, Inc., North Hollywood, $960,695.

VENTURA COUNTY—About 1.1 miles west of Montalvo, truck scales to be installed and approaches thereto to be graded and surfaced with plant-mixed surfacing on untreated rock base. District VII, Route 2, Section C. Baker & Pollock, Ventura, $46,713; Thomas Construction Co., Santa Barbara, $59,150. Contract awarded to Jesse S. Smith & A. A. Edmondson, Oxnard, $42,815.

F. A. S. County Projects

KERN COUNTY—About 4 miles east of Lost Hills, between State Highway Route 33 and Lerdo Highway, about 8.4 miles to be graded, imported borrow to be placed, and penetration treatment to be applied. District VI, FAS 895. Spicer Company, Los Angeles, $249,651; Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $259,855; P. J. Moore & Sons & Harms Bros., Sacramento, $277,991; Dicco, Inc. & Dix-Syl Construction Co. Inc., Bakersfield, $280,034; Griffith Co., Los Angeles, $282,353; Clyde W. Wood, Inc., North Hollywood,

$287,466; Brown & Doko, Pismo Beach, $302,148; Basich Bros. Construction Co. & Basich Bros., San Gabriel, $311,920; Cox Bros. Construction Co., Stanton, $312,478; Rexroth & Rexroth, Bakersfield, $312,894; Volpa Bros., Fresno, $335,534; Morrison-Knudsen Co. Inc., San Francisco, $356,254. Contract awarded to George E. France, Inc., Visalia, $214,-373.46.

MENDOCINO COUNTY—Across Chamberlain Creek about 17.5 miles west of Willits, a reinforced concrete bridge to be constructed. District I, Route FAS 982. Thomas Construction Co., Santa Barbara, $24,702; Baldwin Straub Corp., San Rafael, $29,862; Reed & Tuttle, Redwood Valley, $29,965; Kenneth Whited, Oakland, $30,721; Wheeler Construction Co., Oakland, $33,609; Charles MacClosky Co., San Francisco, $33,645; N. M. Saliba Co., Los Angeles, $35,173; James H. McFarland, San Francisco, $38,-180; O'Connor Bros., Red Bluff, $38,365. Contract awarded to Evans Construction Co., Berkeley, $21,993.

YOLO COUNTY—On Netherlands Road between State Highway Route 99 and Clarksburg, about 4.5 miles, crushed gravel base to be placed and penetration treatment and seal coat applied. District III, Route 1156. Brighton Sand & Gravel Co., Sacramento, $94,897; McGillivray Construction Co., Sacramento, $98,432; Claude C. Wood Co., Lodi, $103,602; Asta Construction Co., Rio Vista, $104,-466; Sheldon Oil Co., Suisun, $120,119; Harms Bros., Sacramento, $121,003. Contract awarded to A. Teichert & Son, Inc., Sacramento, $91,495.

MONO COUNTY—On Pole Line Road, between State Route 23 and 10.5 miles easterly, about 10.5 miles to be graded and penetration treatment applied. District IX, Route 1092. Basich Bros. Construction Co. & Basich Bros., San Gabriel, $54,407; Oilfields Trucking Co. & Phoenix Constructing Co., Bakersfield, $56,740; Nevada Constructors, Inc., Reno, $60,212; Swedlow Engineering Co. Inc., Van Nuys, $65,353; Bonadiman-McCain, Inc., Los Angeles, $67,165. Contract awarded to Browne & Krull, Palo Alto, $42,975.

SACRAMENTO COUNTY—Under the tracks of the Southern Pacific Company on 12th Street near "B" Street, in the city of Sacramento, an existing underpass to be removed and a new underpass consisting of steel beam superstructure to be constructed and about 0.2 mile of approaches to be graded and paved with Portland cement concrete. District III. George Pollock Co., Sacramento, $553,739; John C. Gist, Sacramento, $588,407; Lord & Bishop & A. Teichert & Son, Inc., Sacramento, $598,927. Contract awarded to Bates & Rogers Construction Corp., San Francisco, $550,630.

SONOMA COUNTY—Across Russian River at Jimtown, a bridge consisting of steel truss spans and reinforced concrete girder and slab spans to be constructed and approaches to be graded. District IV, Route 788. A. Soda & Son, Oakland, $373,647; Stolte Inc. & The Duncanson-Harrelson Co., San Francisco, $438,962; John C. Gist, Sacramento, $441,967; Fredrickson Bros., Emeryville, $445,030; Bates & Rogers Construction Corp., San Francisco, $453,837; Charles MacClosky Co., San Francisco, $464,786; Guy F. Atkinson Co., South San Francisco, $473,352. Contract awarded to C. B. Tuttle Co., Long Beach, $358,588.

STANISLAUS COUNTY—Across San Joaquin River, 4.5 miles east of Crows Landing, a structural steel and reinforced concrete bridge to be constructed. District X, Route FAS 915. Chittenden & Chittenden, Auburn, $196,624; Dan Caputo, San Jose, $196,859; Granite Construction Co., Watsonville, $197,580; John C. Gist, Sacramento, $218,948; Charles MacClosky Co., San Francisco, $224,673. Contract awarded to Bos Construction Co., Oakland, $172,151.

TULARE COUNTY—Between Federal Aid Secondary Route 1129 and State Highway Route 134, about 8 miles to be graded, imported borrow to be placed and bituminous surface treatment applied thereto. District VI, Route 1126. Clyde W. Wood, Inc., North Hollywood, $157,293; Dicco Inc., & Dix-Syl Construction Co., Bakersfield, $172,593; Brown-Doko, Pismo Beach, $181,280; Rexroth & Rexroth, Bakersfield, $186,335; Oilfields Trucking Co. & Phoenix Construction Co., Bakersfield, $190,-910; Roland T. Reynolds, Anaheim, $195,567; Ted F. Baun, Fresno, $195,710. Contract awarded to George E. France, Inc., Visalia, $145,669.

No Thanks Necessary

Office of the
General Inspector of the Supply Corps, Pacific Coast
Naval Station, Treasure Island
San Francisco, California

Mr. G. T. McCoy,
State Highway Engineer,
Department of Public Works,
Division of Highways,
Sacramento, California.

My dear Mr. McCoy:

On a recent trip, I noticed fumes of gasoline in my automobile. I stopped at Crestview, California, to determine the source. Immediately upon stopping, there was an explosion, and the front end of the automobile caught on fire. I heard a call from a gentleman at the highway maintenance office in front of which I had happened to stop, to the effect that the automobile was on fire and to get out immediately. Upon raising the hood, the flames enveloped the motor and burned part of the car. Fortunately for me, the gentleman whom I later found to be Mr. Charles T. Carter, Highway Maintenance Superintendent at Crestview, rushed to the car with a large fire extinguisher and extinguished the flames before too great damage was done.

I wish, through you, to thank Mr. Carter for having saved the automobile from burning, and possibly my wife and myself from serious burns. Mr. Carter refused to accept any gratuity, but he certainly has my lasting thanks and I believe deserves commendation for his immediate and remarkably quick reaction in the emergency.

I may say that it is my belief that it is such men as he who are invaluable to any organization, and bring great credit to the Division of Highways for rendering service beyond the call of normal duty. I will thank you very much if you will inform Mr. Carter of this letter, which, I may say, was entirely unsolicited by him.

Your name and that of Mr. T. H. Dennis, to whom a copy of this letter has been sent, were secured from the local office of the Division of Highways.

With kindest regards to your organization and personnel,

Most sincerely yours,

D. W. MITCHELL
Rear Admiral,
Supply Corps, USN

Donner Summit

Continued from page 2 . . .

traffic at such times and has been the direct cause or a contributing factor of some serious accidents. In order to correct this situation, all the curves involved are being widened on the inside enough to provide an additional lane with a flat cross-slope on which heavy trucks and busses may travel during snow storms and other periods when the pavement becomes slippery. The widening of the pavement will necessitate the extension of several culverts and the removal of about 15,000 cubic yards of roadway excavation.

About 4½ miles east of Truckee, at Flycaster's Curve, the existing alignment consists of 800 foot and 300 foot radii reversing curves at the lower end of a 6 percent grade. This combination of poor alignment and grade has been hazardous, particularly when ice was present. To correct this condition, a line change is being constructed which will substitute a 1200-foot radius curve for the existing 300-foot radius curve. Revision of existing drainage facilities will be required and it will be necessary to move about 25,000 cubic yards of roadway excavation.

A considerable portion of the roadway excavation on the portion of the project near Donner Summit will be in solid rock, the removal of which will require the use of explosives. Communication facilities near the road in this vicinity include transcontinental telephone lines and leased lines serving various national radio hookups. Since it is quite important that there be no interruption to the services furnished by these lines, it is anticipated that duplex installations will have to be made around the areas where blasting will be required.

Completion of the work included in the present contract, which is expected to cost about $190,000, is scheduled for the fall of this year and it is expected that the number of winter accidents in this area will be reduced materially. The contractor on the project is H. Earl Parker and the resident engineer for the State is L. H. Bradley.

U.S. 395

Progress Being Made on Project in Modoc County

In spite of the unfavorable weather that has interfered with grading operations, evidence of progress is being made on the new highway being built between the junction of the road to Cedarville and New Pine Creek in Modoc County under supervision of F. W. Haselwood, District Engineer from Redding.

Construction is now confined to the unit between Kincaids and New Pine Creek. Work is directed by W. B. Stout, Superintendent of the Prison Camp located on the hillside on the Hess Ranch. In the camp are 50 prisoners and 26 free men.

The grading work so far has been done between the Hess place and the road to Willow Ranch, north of Willow Creek. Beyond this road and extending to New Pine Creek, the right of way fence is nearly all constructed and the position of the road is well defined.

The new road departs from the existing road for most of its length and while much work has been done, none of the road is yet usable. At the location of the existing road, known as Sugar Hill, the new road is far below. Its prevailing direction is such that the troubles with drifting snow, so common on the present road, should be almost entirely absent. The standards of design on the new road are high. The roadbed will be 32 feet wide and cut slopes will be flatter than those heretofore constructed on California highways. There will be no sharp curves and the maximum grade will be 3 percent. This grade will be easy for trucks at fair speeds and the congestion and delay that results from trucks operating at slow speeds in low gear will be avoided.

To obtain a highway of such standards of alignment and grade requires that its position be carefully chosen and that its course be as direct as possible between control points. This means that property lines as control points must be ignored, with the result that on this road there is much severance of property, both of the stock ranges and the developed fields and meadows.

It is the policy of the Division of Highways to do its best to see that the owners received fair and equitable payments for their land taken as right of way and for the damage resulting from the taking. Since there had not been many property transfers in the area, appraisal to determine the proper payments to each owner took more than usual time and study. Everything, including the minute variations in soil characteristics, the surface and underground flow of water, the various methods of operating employed by different owners, and even the varying behavior of different herds of stock, were considered. As a result of this intensive study of the individual properties, 83 out of a total of 85 right of way cases were settled to the mutual satisfaction of all concerned. Although two condemnation complaints were filed, it seems apparent that one will be settled.

Later in the season it will be possible to answer the question in the minds of the people of Modoc County as to when portions or all of the road now being graded will be usable. One thing to be kept in mind is that budgets, to and including that for the 100th Fiscal Year ending June 30, 1949, do not contain any provision for surfacing. For this reason, only limited use of completed sections may be expected before that date.

The prison camps are operated with a fixed personnel and with a fixed rate of expenditure. No spectacular bursts of construction speed are possible. The patience of the citizens of the county with what at times may not appear to be a high rate of progress is gratifying and helpful to Superintendent Stout and the district employees.

From Siam

THE SIAM CITY BANK, LIMITED
Chiengmai, Siam
April 13, 1948

Mr. Charles H. Purcell
Director, California Department of Public Works
Sacramento, California, U. S. A.

Dear Mr. Purcell: Please accept my thanks for still keeping me on your mailing list for your official publication, *California Highways and Public Works*, after a long lapse caused by the war. Your journal contains much educational information, which, I believe, will be of great value to the betterment of the highway construction of this country, Siam.

I have shown my previous copies of this journal to several of our local highway and other administrative officials here, and every one of them is anxious to receive the journal regularly from you.

K. NIMMANAHAEMINDA

CALIFORNIA MID-WINTER FAIR
IMPERIAL VALLEY
45th District Agricultural Association

Mr. E. E. Wallace
District Engineer
Division of Highways
San Diego 1, California

Dear Sir: On behalf of the Fair Board and myself I sincerely wish to convey to you our appreciation for the cooperation extended to us by Mr. R. C. Payne, resident engineer and his assistants during the 1948 fair. They cooperated to the utmost.

Due to the heavy winds which we had during the fair, Mr. Payne was able to keep down the dust to a minimum in regards to the highway. It is this cooperation between state departments that makes working for the State worth while.

D. V. STEWART
Secretary-Manager

Importance of Maintenance in the Highway Program

MAINTENANCE men, writes Charles M. Upham, Engineer-Director of the American Road Builders' Association, are the unsung heroes of highway transportation. Yet these same highway employees are the ones with whom highway users come in contact. From what they do and the way they do it, the public judges the activity of a highway department. This gives them a role in public relations in addition to their other chores. No wonder that maintenance is considered a hard and important job. It is steadily growing harder and more important.

Just what is highway maintenance? Here is a definition used by the Public Roads Administration: "Highway maintenance is the preserving and keeping of each type of roadway, roadside, structure and facility as nearly as possible in its original condition as constructed or as subsequently improved, and the operation of highway facilities and services to provide satisfactory and safe highway transportation." That's a pretty big order.

The average highway user does not realize the extent of maintenance operations. Highway maintenance manuals have a dozen general sections and these are divided into scores of subheadings. The maintenance man has all these things to remember in keeping open hundreds of miles of roads and streets throughout a state. This should establish the size of the job from the physical standpoint.

Maintenance Man

He patches his pavements and toils with his blade,
Cleans up his ditches and builds up his grade,
Replaces his guardrail and trims up his trees,
Crawls through his culverts to clean out the leaves.
Lays dust oil in summer, sprays weed oil in spring;
Drives over each mile, never missing a thing.
In short, he does all that he possibly can—
This poor, patient guy called the Maintenance Man.

—Gladys Craig Potter

But maintenance has also become a formidable item in the cost of operating a highway system. Back in 1921, $442,000,000 was the total for maintenance and administration. In 1946, this had grown to $890,000,000.

Three factors account for these mounting maintenance expenses—price trends, increased traffic requirements and worn-out and obsolete highways.

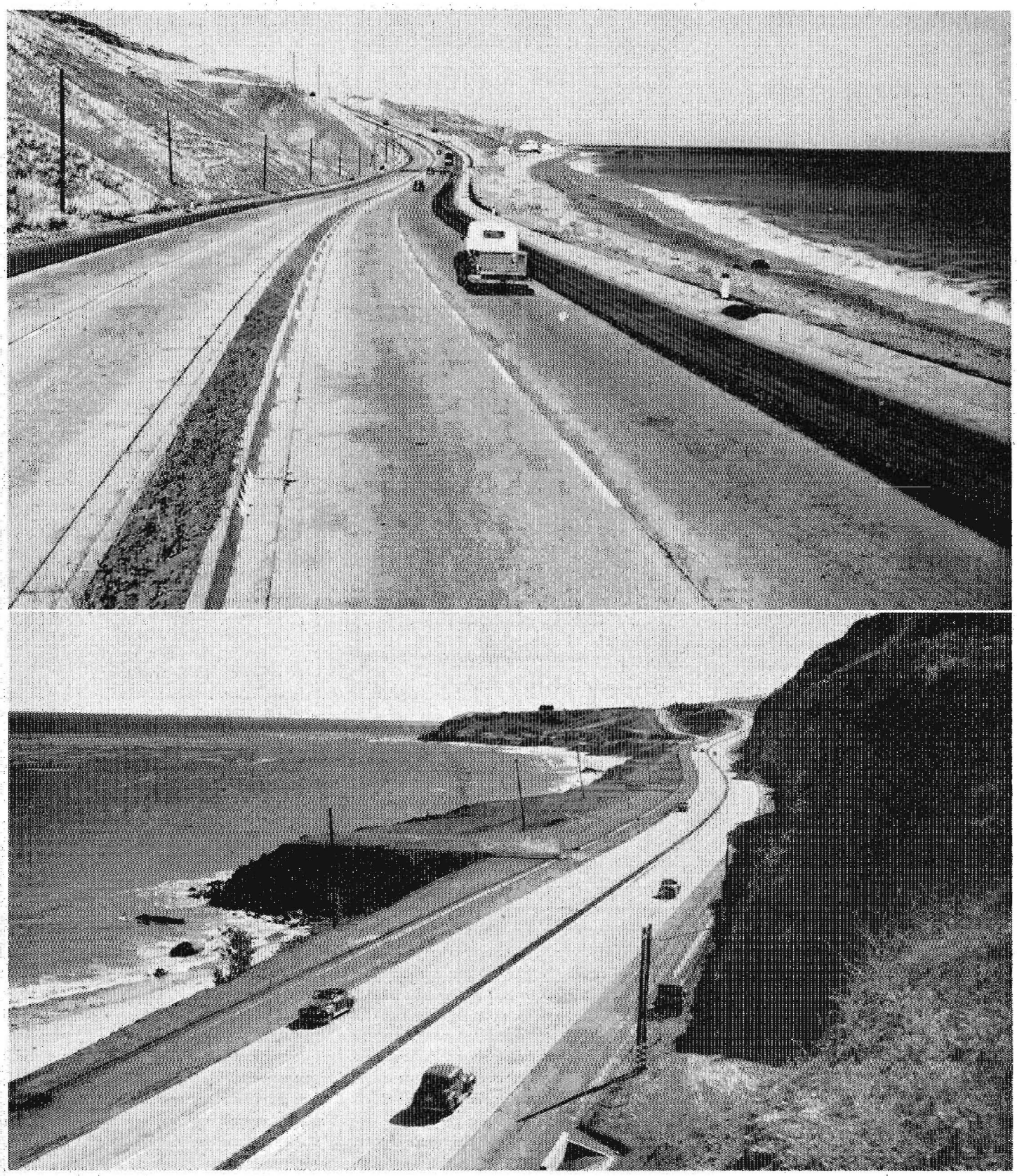
Maintenance will always be with us. Even when the road surface is new and needs little attention, there are still trees to trim, ditches and culverts to clean, snow to remove and miles of inspection to travel. The maintenance man's job is never done. But with the application of new and improved methods, together with the kind of road equipment now coming off the assembly line, the over-all cost of maintenance can be cut to its proper proportion and be brought into balance with the rest of the road building program.

The picked maintenance men of the various state highway departments—there's nearly 120,000 of them—may be counted on to do their part in bringing maintenance back to normal. They are not only engineers, technicians, expert repairmen and ambassadors of goodwill to the public—they are also economists who try to make the maintenance dollar go farther and do more. Upon the ingenuity and resourcefulness of the maintenance men rests the success or failure of our highways. We need therefore have no fear for the future of our roads. It is in good hands!

Continued from page 7 . . .

TABLE III—COMPARISON OF ACCIDENT RECORD PER MILLION VEHICLE MILES ON THE FREEWAY AND THE SUPERSEDED THREE-LANE ROAD

	Accidents with			*Accidents involving*			
	Fatalities	*Personal injuries*	*Property damage only*	*One vehicle*	*Two vehicles*	*Pedestrians*	*Total*
Three-lane road: 15.88 miles 5 yrs. 1941-45 Avg. Daily Veh.=6403							
Avg. accidents per year	9	38	21	11	51	6	68
Accidents per M. V. M.	.24	1.02	.57	.30	1.37	.16	1.83
Three-lane road: 15.88 miles 427 days—1946-47 Avg. Daily Veh.=8797							
Number of accidents	20	103	47	22	130	18	170
Accidents per M. V. M.	.33	1.73	.79	.37	2.18	.30	2.85
Freeway, 15.20 miles 394 days—1947-48 Avg. Daily Veh.=7165							
Number of accidents	3	33	17	16	37	0	53
Accidents per M. V. M.	.07	.77	.40	.38	.86	.00	1.24
Percentage of decrease on freeway compared to superseded three-lane road							
1941-1946	71%	25%	30%	—27%	37%	100%	32%
1946-1947	79%	56%	49%	—3%	61%	100%	57%



Realignment of U. S. 101 between Malibu Creek and Latigo Canyon in Los Angeles County was recently completed. These photographs show two sections of the new four-lane divided highway between these two points

Contracts Totaling $76,528,300 Let During Fiscal Year

DURING the fiscal year from July 1, 1947, to June 30, 1948, the Division of Highways awarded 339 contracts with a construction value of $76,528,300.

For 1947-48 construction projects on the state highway system, 141 contracts were awarded with a construction value of $44,361,700, representing all of the projects authorized by the California Highway Commission for construction contracts from funds budgeted for the 1947-48 Fiscal Year.

The Collier-Burns Highway Act of 1947 authorized award of contracts in the 1948-49 budget on or after April 1, 1948, and 72 of these state highway projects were awarded to contract with a construction value of $19,256,600, making a total of 213 contracts with a construction value of $63,618,300 awarded during the 1947-48 Fiscal Year for construction on the state highway system.

In addition, 126 contracts with a construction value of $12,910,000 were awarded for construction on county roads on the Federal Aid Secondary highway system, park roads, and other miscellaneous work handled by the Division of Highways.

Most U. S. Highways Plagued By Detours and Repairs

California motorists planning out-of-state trips this Summer are likely to encounter the most deplorable road conditions in years. More than 50 individual road construction projects, involving some 400 highway miles, currently are in progress along main arteries between this State and other leading travel centers.

Lengthy delays caused by detours and repair work can be expected on nearly all major highways if advanced routing is ignored, according to the Automobile Club of Southern California.

In Memoriam
Claude F. Price

A FORMER valued member of District IV's organization passed away on May 11, 1948, in Berkeley.

Claude F. Price was born October 3, 1885, in South Dakota. He received his early education at the Dixon High School, Illinois, and attended the University of Wisconsin for two years in the School of Civil Engineering. He received his early professional training in the middle west in municipal and railroad work.

He entered the employment of the Division of Highways in 1912 in District V as a rodman. A few years later he transferred to District IV and rapidly rose to Chief of Party, Resident Engineer, Assistant District Engineer, and Office Engineer. In June 1923 he resigned to become City Manager of San Mateo. He continued in this capacity for about two years when he entered the consulting engineer field in association with former District Engineer W. C. Howe. He returned to state employment in May 1929 as Resident Engineer and worked in that capacity until his retirement for disability in September 1943.

He is survived by his widow, Mrs. Joanna Price, and two daughters, Jo Ann Price and Mrs. Claudyne Petri.

His many friends in District IV and throughout the State deeply regret his passing.

Bailey Hill

Continued from page 12 . . .

railroad design and was built to the west of the new structure on the inside of the long curve on which the tracks will cross the highway. A steel skidrig driver was built specially to drive the piles for this trestle. The driver embodied a number of extra refinements to enable it to drive the considerable number of batter piles from the narrow single track trestle. As the result of unforeseen delays it was necessary that the railroad operate its trains over this trestle on the curved steep alignment for nearly nine months, including the entire winter period. However, in spite of the season and the temporary alignment, no difficulties were encountered.

After the shoofly trestle was constructed, the old railroad fill was excavated and the new structure built. The arch was supported on fifty 28-foot span bowstring timber trusses.

The spandrel fill was placed and railroad traffic initiated over the new structure during the month of June. At the present time the shoofly trestle has been removed and the site is being cleaned up. The contractor building the adjacent highway is progressing rapidly with his work and it is anticipated the grading work will be completed this fall. As a portion of this same bridge contract, a three-span continuous concrete girder bridge is being constructed across Cottonwood Creek about 3½ miles south of the underpass. This structure also will be a link in the new highway in this area.

With the completion of the structures and the adjacent grading work this fall, another substandard section of state highway will be eliminated.

The State Flower

Kingsburg, California
California Highway Commission
Sacramento, California

Gentlemen:

We, the members of the Kingsburg High School Biology Class, would like to make a suggestion.

Lately we have studied conservation and we have noticed that our state flower is becoming rather extinct. Poppies are quite hardy and require a minimum amount of time and work. We also feel that it would be suitable to plant these because, after all, they are our state flower. It would make a very memorable memento to people traveling through this section of our state.

We, the undersigned, therefore, think that poppies should be planted in the islands separating the new portions of the U. S. 99 Highway.

Sincerely

Joe Ponce, Romana Fabris, Joyce Lindgren, Norma Swanson, John Sandoval, Gary Gustafson, Bill Baker, Ramona Hiesler, Joanne Larson, Richard Larson, Peggy Erwin, Jack Porter, "Mouse" Ohashi, Eugene Redemer, Donald Redemer, Bob Moore, Lawrence Carlson, Donald Creed, Iva Lou Howell, Marie Erickson

Mr. H. Dana Bowers, Landscape Engineer of the Division of Highways, plants poppies as part of his landscaping of freeways in metropolitan areas where conditions preclude the possibility of weeds killing the poppy plants. Quite a few poppies have been planted in the landscaped sections of freeways in Los Angeles. A poppy that is subjected to encroachment by weeds lasts for only about a year, requiring new planting each year. He plans to plant poppies more extensively.—Editor

EARL WARREN
Governor of California

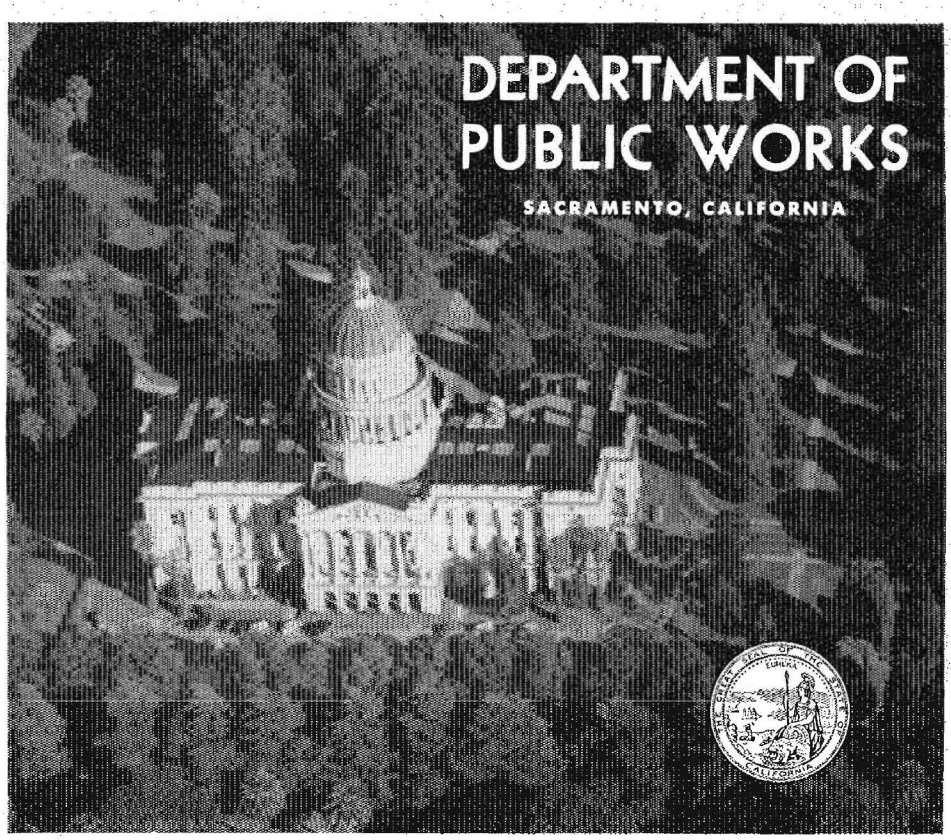
●

CHARLES H. PURCELL
Director of Public Works

●

FRANK B. DURKEE
Acting Deputy Director

●



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