

**FOR CONTRACT NO.: 09-334004**

# **INFORMATION HANDOUT**

## **MATERIALS INFORMATION**

**PORCELAIN ENAMEL DISPLAY SIGN PANELS**

**ROUTE: 09-Iny-190, 395-Var**

## **PORCELAIN ENAMEL DISPLAY SIGN PANELS**

The attached files contain the layout, images and text to be reproduced on the porcelain enamel display sign panels. The files will be available in electronic formats including, but not limited to: .cdr, .ai, .wmf. Additional electronic formats may be available upon request. Information can be obtained from the Duty Senior, Rob Sanchez, at (760) 872-0656.

35-7/8"

23-7/8"

## On Names and Routes

The numbering of the current State and Federal highways reflects the piecemeal manner in which these highway systems were conceived, constructed and signed. Most highways replicate or replace older local routes, and with the exception of much of the modern Interstate highway system, are not new routes created as part of a large regional infrastructure plan. As a result, the numerical designation of both State and Federal highways has changed over the years to reflect changing and sometimes idealistic notions of order.

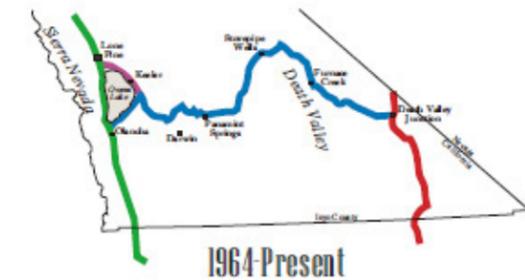
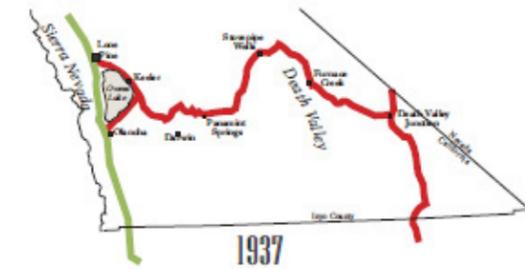
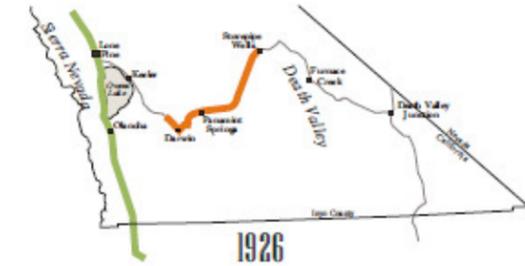
Before the establishment of the state route sign system in 1934, automobile clubs, rather than the State, usually signed the roads. To add to the confusion, state highways sometimes carried two or more route numbers, none of which necessarily appeared on either maps or the roads themselves.

In the late 19th and early 20th centuries this region was a major mining area served by numerous dirt roads and trails that connected the mines at Cerro Gordo in the Inyo Mountains to the Owens Valley. The State acquired some of these old roads, including the Eichbaum Toll Road, and graded links between them to create SR-127 (unsigned route). The new road linking Lone Pine to Stovepipe Wells was opened in 1931. With the development of tourist facilities and Death Valley becoming a national monument in 1933 the graded dirt road was not going to be adequate for the forthcoming traffic. The State paved the highway in 1934, bypassing a 17.5-mile section from near Darwin to Panamint Springs in the process.

SR 127 (unsigned) was the eastern section of what would become SR 190 (signed route). SR 190 was originally intended to run from SR-99 in the San Joaquin Valley to Baker, California. The route was extensively promoted on both sides of the Sierra, and the section from SR-99 to Quaking Aspen on the west side was opened in July 1931. The eastern section from Lone Pine to Baker was paved and open for traffic in October 1937.

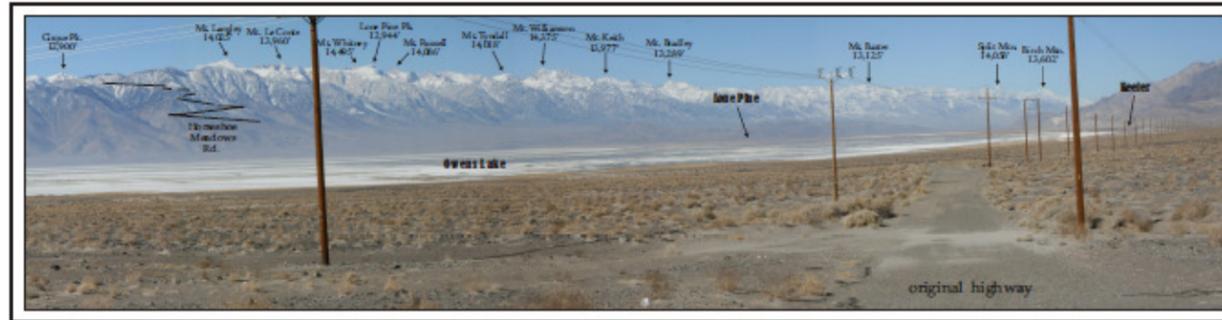
In 1964 the current highway numbering system was adopted. The highway between Baker and the Nevada border near Death Valley Junction was designated as SR-127. The formerly unsigned SR-127 between Lone Pine and the intersection here became SR-136. SR-190 now starts in Olancho, not Lone Pine, and ends at Death Valley Junction.

The remainder of the route between Quaking Aspen and Olancho was surveyed but never built, and likely will not be. The distance, formidable terrain, and wilderness status of much of the route makes completing the route challenging from an environmental and cost standpoint.



35-7/8"

23-7/8"



Sierra crest above Owens Lake.

### Serving the Mines...

The highways here were once part of a local transportation system that included a tramway, a flume, a steamboat, and later narrow-gauge railroads, that linked mines in the Inyo Mountains, Saline Valley and the Death Valley Region to the Owens Valley. Ore was brought down from Cerro Gordo in the Inyo Mountains and salt from Saline Valley by a tramway whose remains can still be seen, to Swansea (just north of Keeler), where it was shipped by steamboat to the northwestern shore of Owens Lake near Lone Pine. There it was loaded on mule teams and hauled to Los Angeles for processing and distribution. The mines were productive enough to justify the construction of narrow-gauge railroads on both sides of Owens Lake.

Ranches, orchards and farms in the Owens Valley supplied the mines with food. Timber was sent by flume from the Horseshoe Meadows area in the Sierra Nevada down to the once full Owens Lake. The timber was then shipped across the lake and hauled up the Inyo Mountains for mine construction and fuel. Horseshoe Meadows is now accessed by the road winding up toward Mt. Langley.

The mines and the activity they generated were a major factor in developing a local farming, ranching and timber industry, which helped transform Los Angeles from a sleepy village into a bustling city in the late 1800s.



State Route 127 in Keeler, 1941.



Modern highway crossing original highway below Malpais Mesa.

### Then Bringing the Tourists

As the mines played out, tourism replaced mining as the chief economic activity in the region. New roads and the growing automobile industry were integral in developing tourism in the Eastern Sierra Region. Recognizing this, local entrepreneurs and business groups like the Inyo Good Road Club aggressively promoted road projects in the early part of the 20th Century in order to bring tourists to this scenic region.

One of the chief attractions in this region is Death Valley, but because of its remote location in mountainous desert the trip was long and difficult well into the 1920s. The first tourist roads into Death Valley were graded dirt roads built by entrepreneurs like Herman Eichbaum, who built the Stovepipe Wells Hotel in Death Valley, and then the Eichbaum Toll Road so tourists could get to it. The toll road was completed in 1927. The toll was \$2.00 per vehicle plus 50 cents per person.

Death Valley National Monument was established on February 11, 1933. By this time its popularity justified the construction of a paved highway. The State rerouted and paved SR-127 the following year. The new highway bypassed Darwin, and the Eichbaum Toll Road is now a four wheel drive route.

Remnants of this original state highway can be seen across the road from this sign, and crossing the highway about one mile southeast of here.

35-7/8"

23-7/8"



Homestead Maintenance Camp

## Working on the Road- 1919

Prior to 1920 state road work in this region was done by day laborers rather than contractors. They typically lived in tent camps and slept on cots. Below are the road construction jobs of the time and what those jobs paid. Foremen made from \$28.75 to \$31.50 a week. One dollar a day was deducted for room and board.

Truck Driver	\$4.00 per day
Laborer	\$3.75 to \$4.00 per day
Concrete Laborer	\$4.00 to \$4.25 per day
Teamster	\$4.00 to \$4.25 per day
Dumper	\$4.00 to \$4.75 per day
Flunky	\$4.00 to \$4.25 per day
Barnman	\$17.50 per week plus board
Driller	\$4.00 per day
Rollerman	\$4.25 to \$4.50 per day
Blacksmith	\$4.50 to \$4.75 per day
Blacksmith Helper	\$4.00 per day
Powderman	\$4.25 to \$4.50 per day
Carpenter	\$5.00 to \$8.00 per day
Carpenter Helper	\$4.25 per day
Plow Shaker	\$4.00 per day
Painter	\$6.00 per day
Mixerman	\$4.75 to \$5.00 per day
Mechanic	\$4.25 to \$6.00 per day
Steam expert	\$6.00 per day plus board



"12 horse power" steam tractor in Bishop- early 1900s

## Highway Construction Changes In Technology; Changes In Business

The first roads here were field engineered and built by locally hired workers using horse-drawn equipment and hand labor. They were built for local transport, and not part of a regional or statewide highway system. The need for a state highway system emerged with both the rapid growth of California and the beginning of the automobile era. In response to the need for a state highway system the California Highway Commission (CHC) was formed. The CHC proposed and surveyed routes, and coordinated local road building efforts when possible. State highway construction began in earnest in the 1910s and early 1920s.

Technology and business practices changed rapidly during the initial phase of state highway construction. At the close of World War I the State acquired a fleet of surplus army trucks and heavy equipment that was adapted for road work. Highway construction became mechanized.

Local highway work began going out to competitive bid in 1920. The Eastern Sierra was the last region in California to use private contractors for state highway construction. Contractors rapidly advanced the technology of road building. Highway design and construction is a now a high-tech business using computer-aided design, terrain modeling software, Global Positioning Systems (GPS) and laser-guided equipment. Today all major highway construction and maintenance projects are constructed by private contractors.

35-7/8"

23-7/8"



Remnant of original highway with turnout-2010

Original highway



## A Misplaced Sidewalk

The idea of building a highway from Los Angeles to Lake Tahoe was very popular with the residents of Inyo and Mono Counties in the early 20th Century. However, the first section to be paved in the region, the 8-foot wide, single-lane concrete road behind this sign, was not popular with local residents, who regarded it as inadequate before it was even completed. A 1919 editorial in the *Inyo Register* described the concrete strip as “a misplaced sidewalk.” Still, paving this notoriously rough section of the Owens Valley made it possible for motorists to pass through here without having to carry a shovel and chains.

The 8-foot wide, 4-inch thick strip of concrete on the west side of the highway here was part of the first highway paving project in Inyo County, and may represent one of the earliest uses of concrete pavement in California. Construction of this 10.35-mile long section of road was authorized by the California Highway Commission on September 9, 1916, to replace the old graded dirt road that ran through the alternately rocky and sandy terrain.

Construction began the following April, but because of the remote location, limited facilities, and the fact that the road was built by day laborers who did not work during the cold winter and hot summer months, this section of highway was not completed until the spring of 1920. The cost was \$107,075, plus \$3,518 for engineering charges, to build this section of what was then State Highway 23

Pullouts were provided every 1/4 mile to allow cars going in opposite directions to pass each other, but motorists seldom used them. Instead they would typically pass each other by driving with their right wheels off the road. One of these pullouts can be seen approximately 150 yards south of this sign.

## From Trail to Highway

Graded dirt roads grew out of old Native American use trails. These were adequate for foot and horse traffic, as well as for the horse-drawn wagons that followed as this isolated region was settled. The local population enthusiastically promoted and often built these roads in order to establish and maintain access with the outside world, and to promote tourism, which early on was recognized as a potential source of revenue for this scenic region. The Inyo Good Road Club was established in 1910 to promote local highway construction both here and at the State Capitol in Sacramento.

With the arrival of the 20th Century automobiles began replacing horses and buggies on the local roads. It soon became clear that the old wagon roads were not adequate for automobile traffic, and that building highways was too big an enterprise for small, isolated rural communities.

In 1909 the State Legislature passed a bond issue of \$18,000,000 for the acquisition and construction of a state highway system. Despite its unpopularity with urban California the bond was ratified the following year thanks to overwhelming support from rural voters.

Prior to 1920 roads in this region were built using locally hired day laborers, unlike the rest of California, where contractors were primarily used. This was considered adequate when it was generally assumed that the roads would not get the kind of traffic they now see, and it was commonly believed that the job of building roads would someday be complete.

The first local highway building contract was awarded on January 19, 1920 to Chas. B. Solteras for grading US-395 (then SR-23) from Independence to Division Creek. The final cost for both grading and oiling this section of highway was \$37,658. In contrast, the Blackrock Four-Lane project, which added two lanes, widened shoulders and rehabilitated existing lanes between Ft. Independence and the Poverty Hills, was completed in July 2007 at a cost of more than \$31,000,000.



## Old Highway 23

On July 6, 1921 contract #309 was awarded to the Nevada Contracting Company to pave 11.66 miles of SR-23, the precursor to US-395, from just north of Big Pine to near Bishop. The winning bid was \$126,794. The section of road angling toward the small bridge at the south end of this pullout is part of the original highway. At the far end of the section visible from here the remnant of the original highway crosses the road to Keough's Hot Springs - already a popular resort when the original highway was built.

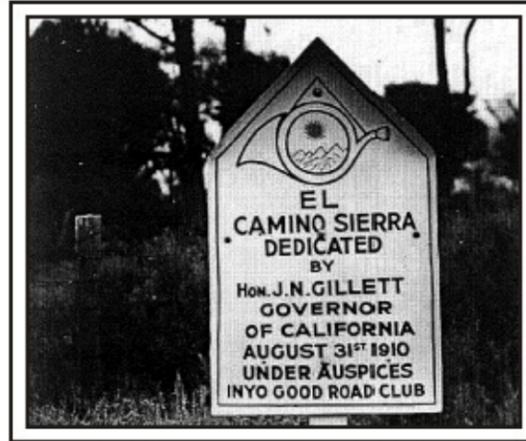
The original highway ran along the base of the mountains rather than more directly between Bishop and Big Pine. As highways are upgraded they are often realigned, shortening the distance between major destinations while enhancing the operation of the highway.

Additional improvements to highways include widening. The original two-lane highway here was fifteen-foot wide, adequate for both the speed and volume of traffic when it was constructed. Modern roads have twelve foot wide lanes. On major highways, like US-395, the trend is to separate opposing lanes with medians whenever possible.



35-7/8"

23-7/8"



Site of the first paved section of El Camino Sierra Eaton Ranch- south of Big Pine

## El Camino Sierra

The modern four-lane highway here was once part of a Native American trade route linking the Owens Valley with tribes to the west via Walker Pass. Jedediah Smith may have passed this way in 1826, but the first recorded journey through the Owens Valley, paralleling what would eventually become US-395, was by Joseph Walker in 1834. The Gold Rush brought prospectors into the area, and by the late 1800s the former trail had become a wagon and stage road. The road linked the local mines to the ranches, farms, and small communities that supplied them. It was called *El Camino Sierra*, and was envisioned to eventually run from Los Angeles to Reno.

While El Camino Sierra was never built in its entirety, sections were built linking local destinations. This construction was spurred by local individuals, entrepreneurs and business groups with the blessing, if not direct help, from the State. The vision of a state highway system made up of roads of the scale and ambition of the originally conceived El Camino Sierra would have to wait until the 20th Century and the rise of the automobile.



### Highway design and layout reflects both the culture and technology of the times.

This map shows the original highway between this pullout and the Poverty Hills, a few miles south of Big Pine. Note how much more direct the modern highway is compared with the original route.

#### Why is that?

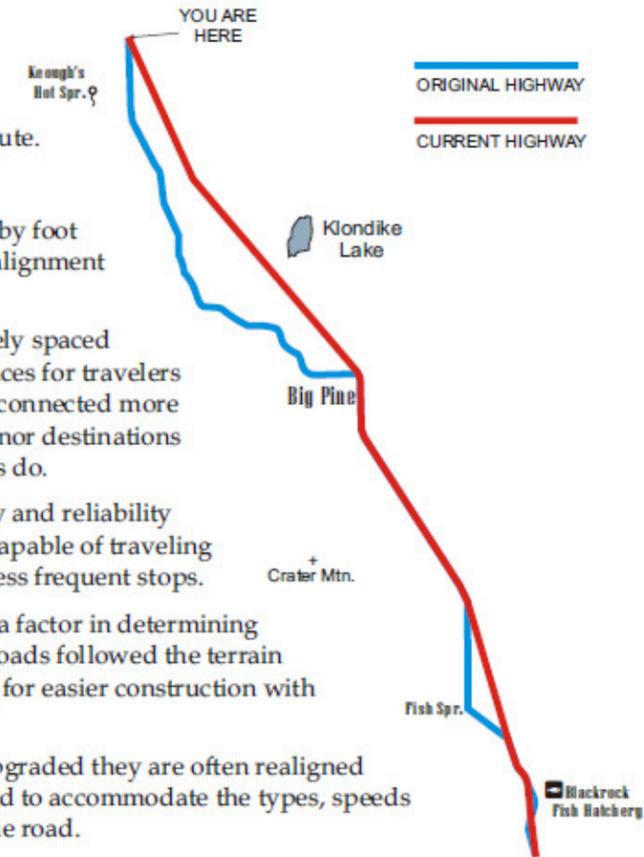
Perhaps the original route followed the most passable terrain by foot or wagon. As the route evolved into a roadway the original alignment may have been sufficient for the slower vehicles of its day.

With the slower pace of travel of the period, more closely spaced destinations may have been necessary to provide services for travelers crossing the high desert terrain. Older roads directly connected more places, rather than serve as arteries, which bypass minor destinations and connect major destinations, as modern highways do.

Improvements in automobile design, efficiency and reliability may be a factor as well. Modern vehicles are capable of traveling longer distances at higher speeds, requiring less frequent stops.

Construction capabilities may have been a factor in determining the location of the original road. Older roads followed the terrain rather than plowed through it, allowing for easier construction with the equipment of the era.

As highways are realigned and upgraded they are often realigned to enhance highway operation and to accommodate the types, speeds and numbers of vehicles using the road.



Old Hwy 23 at Aberdeen, approximately 1 mile west of the current US 395. This road is now an Inyo County road.

