MUELLER Record

WINTER • 1973

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OUR COVER shows the main offices of the Dominguez Water Corp., Carson, California. The new headquarters building, set among landscaped gardens and water fountains, was built in 1972 on the site of the original mutual water company that served the Rancho San Pedro's farming operations.

A California Rancho Becomes SITE for CITIES

Almost everything about Los Angeles was different when John Victor Carson was a boy.

In those days there was no tinseled Hollywood, no freeways, no suburbs in search of a city and—very few people.

But today Carson, the descendant of a pioneer Southern California family, can look out of his office window and see automobiles and trucks rolling along the world's largest freeway system.

He can see suburbs that have materialized into cities, such as the one that bears his family name. Incorporated in 1968, Carson is the newest and one of the fastest-growing cities among the 77 that make up the Los Angeles metropolis.

As for Hollywood, it has become renowned as the birthplace of fantasies but few of its productions can match the real-life drama of a region right in its own backyard—storied Rancho San Pedro.

The rancho, located 20 miles south of downtown Los Angeles, was the first Spanish land grant in Southern California.

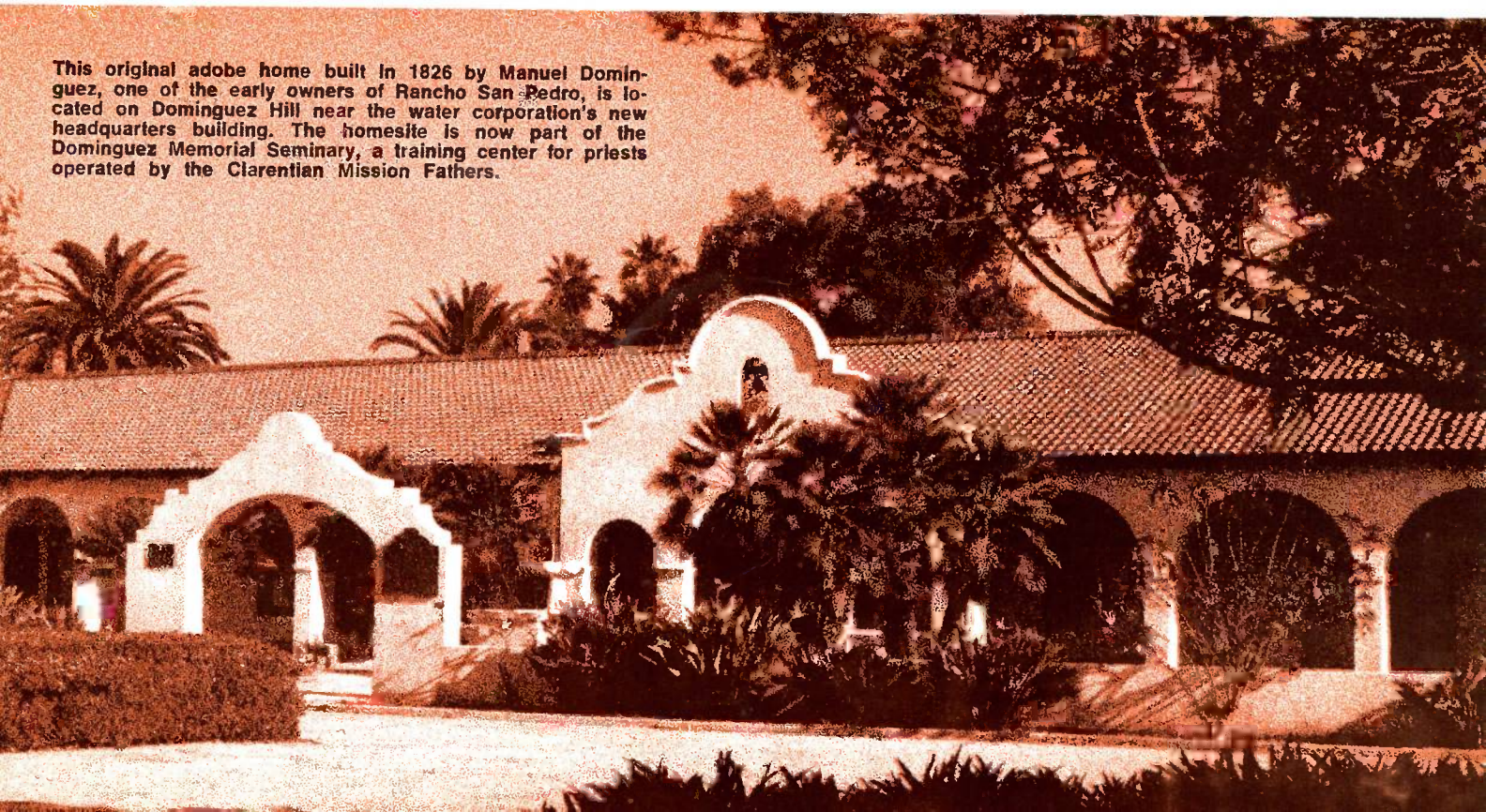
The Spanish crown gave the rancho to Juan Jose Dominguez, a retired Colonial Army sergeant, whose family members were among John Victor Carson's early ancestors. The rancho was so large nearly a dozen cities, including Carson, were carved from it.

Now—11 years short of two centuries after the grant to Sgt. Dominguez—the cities that have sprung up on his land comprise an urban cluster unique for its variety, activity and economic strength.

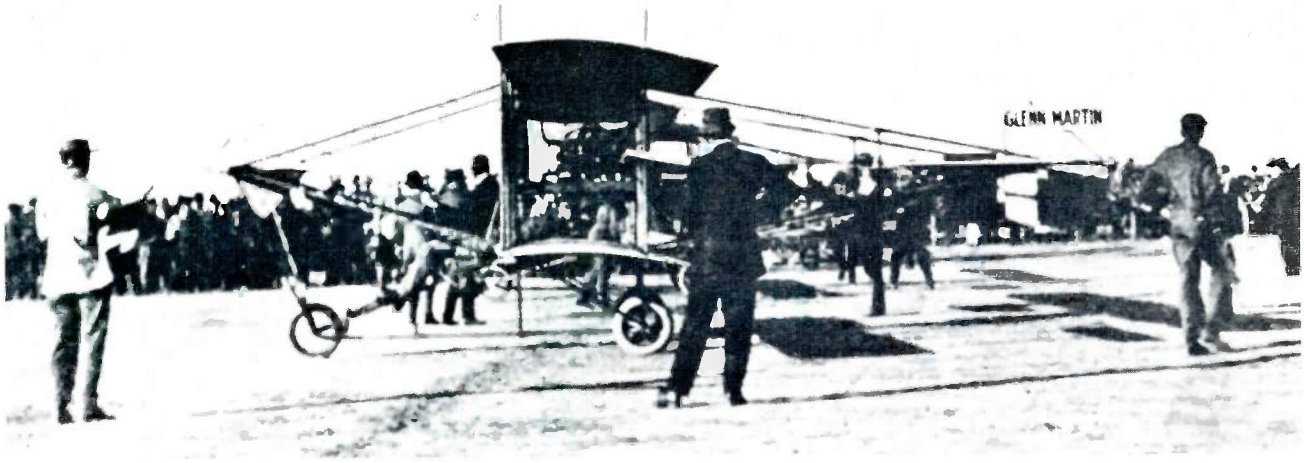
The original rancho lands range today from busy Los Angeles Harbor, which has retained the San Pedro name, to huge oil refineries, shopping centers, college campuses and quiet residential neighborhoods.

They also include some land undeveloped and little changed from the way it was two centuries ago.

In addition, the area embraces a few diminishing acres where strawberries, asparagus and celery still are grown much as they were before the post-World War II population and building boom hit the Los Angeles region.



This original adobe home built in 1826 by Manuel Dominguez, one of the early owners of Rancho San Pedro, is located on Dominguez Hill near the water corporation's new headquarters building. The homesite is now part of the Dominguez Memorial Seminary, a training center for priests operated by the Clarentian Mission Fathers.



This Glenn Martin airplane (top) took part in the nation's first air meet held on Dominguez Hill in 1910. The hill is one part of the Old Rancho San Pedro, California's first Spanish land grant. John Victor Carson, senior vice-president of the Dominguez Water Corp., recalls his boyhood on the old Rancho San Pedro where the nation's first air meet was held in 1910. Carson, as a youth, attended the pioneer show. Oil rigs (left) are a familiar sight on Dominguez Hill, named after Juan Jose Dominguez, a Spanish soldier who first settled on the rancho in 1784.

But as surely as contrast emerges now as one of the eye-catching features of the old rancho, so has its ability survived, despite intense urbanization, to hold onto the old names and places that had their beginnings with Sgt. Dominguez' original grant.

For example, a hill—no more than a subtle rise in the land between the original Los Angeles pueblo and the sea—has kept the Dominguez name.

The name also is alive in many other landmarks and facilities, including the Dominguez Water Corp., a public utility that started as a mutual water company in 1911.

The company was formed to serve the rancho's expanding agricultural operations. But when the successor Dominguez Water Corp. was created in 1937, farming already was on the downhill and the shift to residential and industrial activity was in high gear.

Today the utility's modern plant is located in the city of Carson, at the intersection of Alameda and Carson Streets, on the same site occupied by the old water company.

The same intersection is a busy railroad stop. Railroad men call it Dolores, a name carried down from one of the six Dominguez family daughters who shared in a division of the original Rancho San Pedro.

Although the Dominguez Water Corp.'s offices are in a new Spanish-style building, it literally has its roots in the area.

For example, the original pumphouse, since modernized, still stands and the old redwood pipelines which carried water for many years have been salvaged and used for decorative paneling in the headquarters office building.

"The pipelines were made from real redwood—hauled here from forests in Northern California," says Carson, senior vice-president and a director of the Dominguez Water Corporation. "Some of those lines have lasted for 60 years."

Carson is a walking storehouse of knowledge about the old rancho, the Dominguez legend and the cities that have sprouted on the rancho lands.

He has lived and worked in the area most

of his life and recalls, as a youth, attending the nation's first air show held in 1910 on Dominguez Hill a few blocks north of the water utility's headquarters.

"The show lasted for 10 days and it rained cats and dogs," he says. "They put up a grandstand for 20,000 people and despite the rain they came—by steam and electric trains and by horse and buggy.

"But even with the rain there was no water to drink and they sold it from wagons for 10 cents a glass."

The show was no carnival attraction but an honest attempt to spotlight the dawn of the aviation age. Such pioneers as Glenn Martin, Lincoln Beachy and Roy Knabenshue and the Wright brothers took part in the events, which included an air race from Dominguez Hill to Pasadena.

A few years ago the Dominguez Estate Co. was liquidated, except for its subsidiary Dominguez Water Corp. (now a publicly held corporation) and some other holdings, in the largest single offering of real estate in Southern California history.

By then—in 1967—the $58.5 million offering represented only a fragment of the original 76,000 acre Spanish land grant—an area nearly three times the size of San Francisco—to Sgt. Dominguez.

The sale involved only 1,608 acres. But significantly, as evidence of the land's potential, the purchasers included Union Pacific Railroad, the Northwestern Mutual Life Insurance Co. and the State of California.

The state wanted the land for its new Dominguez Hills college campus near the site of the 1910 air show and the original Dominguez home.

Never before, in the rancho's nearly 200-year history, had those 1,608 acres changed hands. They had been held by Dominguez heirs since they were given to the Colonial Army sergeant as part of his original grant for service in Spain's exploration of California.

On today's maps the original rancho would comprise most of the southwestern part of the Los Angeles metropolitan area—a region crisscrossed by three major freeways, the San Diego, Harbor and Long Beach, and bolstered by one of the most vigorous economies in Southern California.

The area's strength and variety, as well as its ability to mix history with rapid urbanization, is reflected in the operations of the Dominguez Water Corp.

For example, the company's service area, according to C. Marvin Brewer, its president and chief executive officer, includes a population of 100,000.

The area embraces all the city of Carson, as well as much of neighboring Torrance, a new industrial park in Compton, portions of Long Beach and Los Angeles and part of unincorporated Los Angeles County.

Seven years ago the company had 25,333 customers, 21,320 of them residential. Now there are more than 30,000 customers. And, mirroring the influx of new homeowners, nearly 25,000 are residential users.

In the same period, the company has increased the number of large industrial customers—those who use water for processing, such as oil refineries—by nearly one-third.

Actually, about half the company's 35-square-mile service area is occupied by sprawling industrial facilities. For example, the Shell and Atlantic Richfield refineries, as well as the big Watson industrial developments, are among its largest customers.

As a further indication of the area's rapid urbanization, agricultural customers have dwindled from 260 in 1966 to less than 200 now.

Even so, a few colorful roadside fruit and vegetable stands dispensing homegrown produce remain. Once plentiful throughout the area, several still dot the Dominguez Hill region not far from the site of the 1910 air meet.

Their lands are served, just as the Dominguez Water Corp's other customers are, by the utility's more than 300 miles of pipelines. Most of these lines are cast iron, cement asbestos and steel. They were installed under a modernization program which has seen the gradual removal of the old redwood system.

The Mueller Co. has been an active partner in the replacement program, which dates back to the post World War II days. It has provided more than 500 gate valves to regulate the flow of water to Dominguez customers.

Mueller control and shut off devices are now an integral part of the system. Built to American Water Works Assn. Standards, they range from four inches to 24 inches and are used in the system's mains to control water flow to various sections of Dominguez' service area.

Dominguez also has installed Mueller strainers at each of its wells to catch sand and other foreign particles before the water reaches the purification system.

In addition, according to Garnett A. Smith, Mueller's representative in Southern California, Mueller tapping machines are used by Dominguez' crews to make service connections to home as well as business and industrial customers.

Over the years the development of water supplies has been a problem for many sections of Southern California. Dominguez, however, has been fortunate.

More than 60 years ago the city of Los Angeles began tapping runoff from the High Sierras 250 miles to the north to meet its mounting water needs. And, in 1930 a nucleus of 13 cities, including Los Angeles, formed the Metropolitan Water District to get water from the Colorado River 250 miles to the east.

Since then Metropolitan has become the largest wholesaler of water in the world. It supplies more than 100 Southern California cities.

While many areas have relied almost entirely on water transported to Southern California through large aqueducts, the lands of the old Rancho San Pedro are in the unique position of

having their own substantial underground reserves.

The Dominguez Water Corp. is a major beneficiary of these subsurface basins with its rights adjudicated by court decree. It owns 13 producing wells, which have a capacity of nearly 30 million gallons of water a day.

In addition, the company has connections with Metropolitan's distribution lines serving the southern section of Los Angeles County. These connections have a capacity of 81 million gallons a day but Dominguez purchases only about one-quarter of that amount.

By keeping the flow from Metropolitan at a constant rate, Dominguez is able to meet its peak demands by pumping lower cost groundwater from its own wells.

Recently a new supply of water started flowing through Metropolitan's distribution system and into the homes and factories served by Dominguez.

Twelve years ago California began building a $2.8 billion statewide water project—the world's largest—to redistribute surplus water from Northern California rivers. Transported nearly 450 miles, this water now is available to Dominguez' customers.

Its arrival is providing a new reserve supply for the water company's growth-oriented service area.

The region served by Dominguez still has room to grow, but Brewer is looking 40 or 50 years ahead for its full development. Based on the Los Angeles area's growth patterns, Dominguez has a potential of nearly 50,000 customers and a population of 175,000, almost double today's figures.

Much of the future development, Brewer says, will be industrial. The area is a prime plant site because it is only a few minutes away from Los Angeles and Long Beach Harbors for truckers and rail shippers.

Brewer says some single family homes also will be built, such as the large Casa Dominguez subdivision being developed on the south slopes of Dominguez Hill.

But because of rising property values, he points out, the predominant residential trend now is toward large apartment complexes. Recently a handsome apartment complex was opened almost in the shadow of the Shell Oil refinery. Attractive buffer zones made the two—a residential area and an industrial complex— compatible.

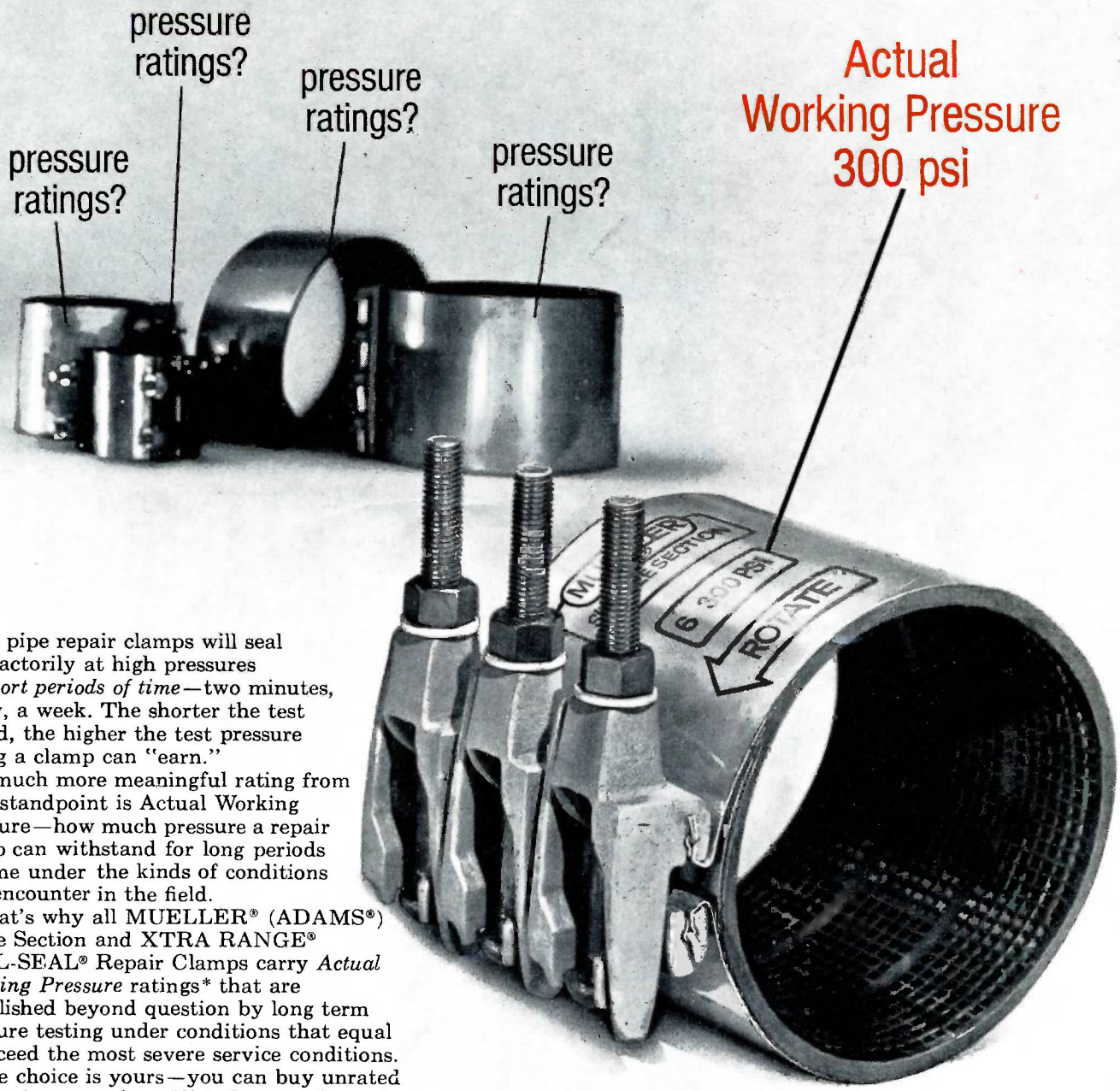
Driving through the Dominguez Water Corp.'s service area, Brewer sees changes occurring almost daily—a new shopping center opening, trucks hauling dungarees or computer components or automobile parts to and from new factories.

But it is Carson who is able to capture the full,changing panorama of the old rancho where, as a youth, he played baseball and watched the nation's first flimsy airplanes soar over Dominguez Hill.

"It seems like only yesterday," he says. "It makes you wonder what tomorrow will bring . . ."

Shirley A. Bates, corporate secretary of the Dominguez Water Corp., is backgrounded (above) by a special redwood paneling made from the original wooden water lines installed more than 60 years ago. Garnett A. Smith, Mueller Co. sales representative in Southern California (left) and C. Marvin Brewer, president of Dominguez Water Corp., inspect one of several hundred Mueller gate valves in the Dominguez distribution system.

Which of these repair clamps gives you the best assurance of positive, long term repairs?



Most pipe repair clamps will seal satisfactorily at high pressures *for short periods of time*—two minutes, a day, a week. The shorter the test period, the higher the test pressure rating a clamp can "earn."

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W-307

Jack Boxley back in the office in Hopkinsville, Kentucky

Waterworks Group Thirsts

WATER WAS POPULAR TOURIST ATTRACTION

"At times, the most sought—after thing was a cool, clear glass of water."

Sounds like a comment from a desert traveler rather than someone touring Europe, but Jack Boxley, Manager of the Sewerage and Water Works and Solid Wastes Commission of the City of Hopkinsville, Kentucky, said, "During our three-week tour of Europe, including the Soviet Union, one of the most refreshing sights to us was a good drink of water."

The emphasis on water was understandable since the tour group was made up of water utility managers, engineers and manufacturers and wives of some of the members as a People-To-People goodwill travel delegation.

Included on the tour were London, Leningrad, Moscow, Kiev, Budapest, Prague and Vienna. Although this wasn't strictly a business trip, efforts were made to visit water systems and to learn about each country's water supply methods.

Commenting broadly about the water departments, Mr. Boxley said, "Most of the countries are doing what we are today in the areas of treatment and distribution — but to a lesser degree. Their methods are less sophisticated and their equipment more limited than that available in the United States, but we can still learn a lot from them."

In London, the group toured the Water Research Laboratory and spent part of the day getting acquainted with methods. London's water supply comes from the Thames River and nature does most of the system's settling before filtration and chlorination. Cement-asbestos, cast iron and PVC are the most popular kinds of pipe and a 12-inch line is considered "large" Boxley said.

"Got a pitcher of water by begging — how about that?" was a comment in Mr. Boxley's travel diary during their stay in London. "There were no drinking fountains and you had to ask for a glass of water, no matter how fancy your meal was, he said.

In Leningrad, "the beds were hard, the plumbing rustic, but generally the accommodations were good." At least plenty of mineral water was available. "Everything was stark and barren. The water plant there would not compare to ours in cleanliness. However, they practice modern treatment and appear to do it very well," he observed. Women were prominent in water utility operations in jobs other than clerical.

In Leningrad, a soft drink stand is a popular gathering place.

The water vendors on the streets of Moscow caught the attention of the group, Mr. Boxley said. "People there drink water—bottled, soda, and mineral. The water vendors don't use paper cups. Everyone uses the same glass. They certainly do not practice sanitary conditions the way we do in the U.S." Generally, the buildings in the Russian water systems are austere and dark. Little effort is extended to keep up the exterior of the buildings and the grounds around them, he said.

In Moscow the water wasn't yellow like it was in Leningrad. "There was even a drinking spout in the Moscow water plant with one glass for everyone. In Leningrad we couldn't even get a glass of water at the plant," he lamented.

"We watched women clean the filters at the plant. It was a huge installation, but rather rustic compared to plants in the United States." Small meters are not found in Russia where four-inch water services are typical for apartment buildings.

In Czechoslovakia water is in short supply and industries must get permits to withdraw water. Industry pays about five times the price for water that the citizen pays. The average cost to a consumer is about 18¢ per 1000 gallons, but industry must pay about five times that rate.

"The best water we had was in Vienna. It was cold and good, much like Budapest — but still there were no drinking fountains. The first visible fire hydrant was in Vienna. In the other countries, the hydrants were all hidden under manhole covers. The parking meters must have been hidden too, because we sure didn't see any," Boxley said.

After three weeks in Europe the obvious question is: "Would you go again?" The Iron Curtain countries hold little appeal for Mr. Boxley, but he'd "like to see England and Austria again."

"Fellowship on the trip was wonderful, but I don't like being thirsty for good water," he added. Spoken like a dedicated waterworks man.

Mr. Boxley is a dedicated waterworks man. He has 38 years of experience in water utilities and has been a member of AWWA since 1943. He has served as chairman of the Kentucky-Tennessee Section and been its national director, plus being "Water Utility Man of the Year' 'in 1970 from that area. He has served on the governor's water resource study commission and been a member of the Kentucky Water and Sewage Operator's Certification Board.

Strictly *Off the Record*

Sign on a doctor's door: "The doctor is on vacation. Stop smoking, eat sensibly . . . and stop by again in a month."

"What model is your car?" asked the insurance agent filling out the application.

"It ain't a model," replied the applicant. "It's a horrible example."

Wife: "Wasn't it disgusting the way those men stared at the girl getting on the train?"

Husband: "What train?"

The small boy asked his father if he had any work he could do around the house to replenish his finances. The father assured him that he could think of nothing.

"Then," suggested the modern child, "how about getting me on relief?"

Nowadays apples are so expensive you might as well have the doctor.

The harried mother took a sip of Scotch whiskey to settle her nerves, then proceeded to tuck her son into bed. He looked up at her after she kissed him good night and said, "Mama, you're wearing daddy's perfume."

A Yankee entered a Georgia bar and asked for a martini. "You want the regular or the deluxe?" the barmaid asked.

"What's the difference?" asked the Yankee.

"The deluxe has grits in it."

"My kid is so spoiled," said the young fellow, "that the only way I can punish him is to take away his grandmother."

Employer: "For this job we want a responsible man."

Applicant: "That's me. Everywhere I've worked, when something went wrong, they told me I was responsible.

One husband reports his wife is really hip. "Every time I take out my checkbook, she says, 'Write On'!"

It was the new golfer's first day on the course. All of his shots were bad, but at the 18th hole, he missed the ball completely and tore up quite a chunk of turf.

Attempting to cover his fury and embarrassment, he chuckled and remarked to the caddy, "Golf certainly is a ridiculous game, isn't it?"

"It isn't supposed to be," replied the boy glumly.

Gas station attendant to woman motorist with dented fender: "I don't know if I should sell you any gasoline or not. It looks to me like you've had enough already."

A certain friction between the generations is inevitable. That's because the young and the old have all the answers and those in between are stuck with the questions.

Specialist: "Could you pay for an operation if I find one necessary?"

Patient: "Would you find one necessary if I couldn't pay for it?"

A young lady walked into a bank the other day and addressed the paying teller, "I want to have this check cashed."

"Yes, madam," replied the teller, "please endorse it,"

"Why my husband sent it to me. He is away on business."

"Yes, madam, but just endorse it. Sign it on the back, please, and your husband will know we paid it to you."

She went to the desk and a few minutes later returned to the window with the check endorsed . . . "Your loving wife, Edith."

A gypsy reports that fortune-telling is on the way out among his people. "The future just isn't what it used to be," he says.

An angry man charged into the postmaster's office howling and raging. "I'm getting threatening letters in the mail and I want them stopped!" he screamed.

"This has been going on for months and I'm tired of it!"

"I'm sure we can help," said the postmaster soothingly. "Sending threatening letters is a Federal offense. Have you any idea who's sending them to you?"

"Of course!" snapped the man. "It's those screwballs down at the Internal Revenue Service!"

"My dears," gushed the elderly matron at a bridge party, "my resolution this year is never to repeat gossip, so for goodness sake, listen carefully the first time."

Another sign of middle age: When the phone rings on Saturday night and you hope it isn't for you.

If you think old soldiers just fade away, try getting into your old service uniform.

A young man approached the counter where greeting cards were sold. "Have you anything sentimental?"

"Here's a lovely one," said the salesgirl. " 'To the only girl I ever loved.' "

"That's fine," said the young man. "I'll take four."

"I'm supposed to tell you that there will be a small Parent-Teachers meeting tomorrow night," explained the small boy to his dad.

"Well, if it's going to be a small one, do I have to go?" asked the father.

"Oh, yes," replied the son. "It's just you, me, the teacher and the principal."

"My husband would never chase after another woman," said the lady.

"He's too fine, too decent . . . too old!"

Springfield, Missouri

Water System Growing With The Community

The first settlement was made near Fulbright Spring in 1830 and 50 years later these clear waters gushing from the hillside served as the source of supply for a city of nearly 15,000 appropriately named Springfield.

After more than 140 years of use, Fulbright Spring still serves as a supplemental supply of water for Springfield, Missouri — Queen City of the Ozarks.

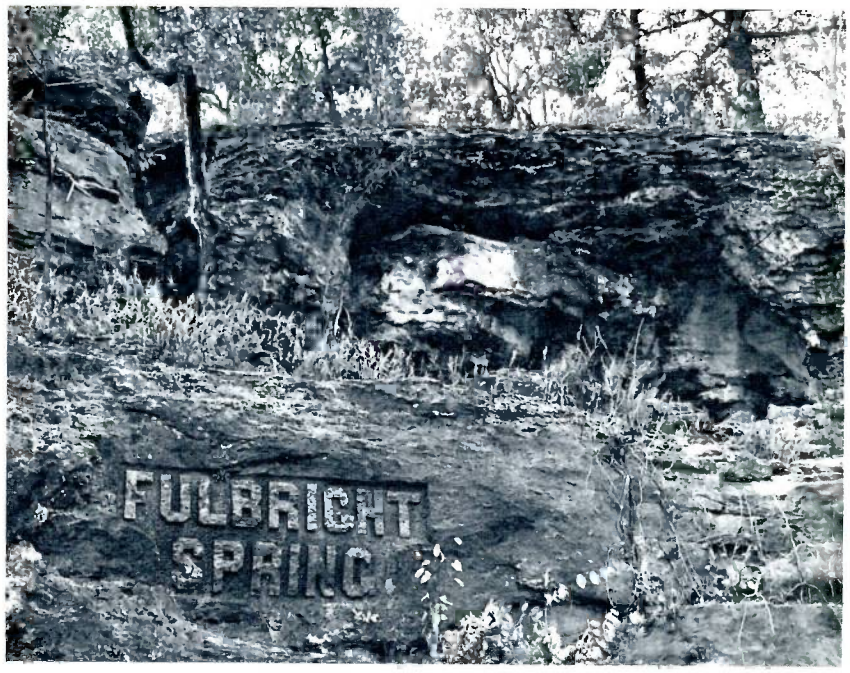
This city of more than 120,000 in the heart of the Ozark Mountains, is a booming industrial city with a broad diversification of businesses and manufacturers producing a range of goods from paper cups to specialty motors. For years, it has served as a regional trade center and is recognized today as a center for higher education, boasting five colleges within its city limits.

The Water Department under the direction of R. D. Plank is a part of the City Utilities of Springfield, which also includes electric, natural gas and transportation departments. Similar to water operations around the country the Springfield system strives to meet increasing needs by building, anticipating and, at times, catching up.

The next decade will be one of the busiest for the Water Department if it follows recommendations of consultants and the city continues to grow at the rate currently anticipated. In the immediate future are such needs as a new major source of supply, another reservoir and a second treatment plant. Bond issues of $16 million are in the offing.

Until this expansion program planning, the Fulbright Springs area on the north side of the city served as the focal point of department facilities since the community began in 1830 and the formal water company was organized in 1883.

The water company was formed because 15,000 citizens needed water and a few individuals combined their abilities to operate a successful company. Fulbright Spring water was powering a grist mill for a time, but after 10 miles of pipe were laid into the city most of its outpouring went to serve about 1,000 paying customers. An earthen reservoir was constructed next to provide proper storage, followed by the addition of steam pumps which moved the water from the reservoir into a tower, and the city distribution system.



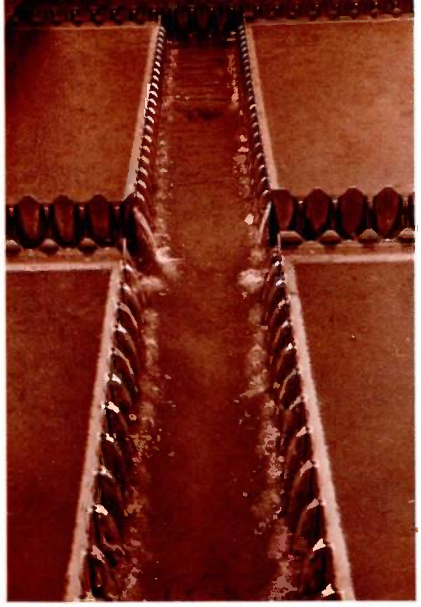
After more than 140 years, Fulbright Spring near Springfield, Missouri, still serves the community as a supply supplement to the local water system.

In 1887, the growth of the city required that additional water supply be obtained and Jones Spring, then at the eastern edge of the city, was leased and added, briefly, to the company's supply. Soon, however, a large expenditure was necessary for additional water supplies and pipelines, and ownership of the utility was assumed by Consumers Water Company, Portland, Maine. Improvements were made at Fulbright Spring with the addition of steam pumps and another cast iron supply line into the city.

With the establishment of a complete sewer system in Springfield in 1892, further additional water supplies were necessary. At Valley Water Mill, four miles east of Fulbright, another water-powered grist mill was operating. It was discovered that there was a subterranean passage just below the mill spillway leading directly to Fulbright Spring. Valley Water Mill was acquired and controlled release of water there added to the supplies at Fulbright.

An electric pumping station and the first filtration plant were built at Fulbright in 1915. Well No. 1 was drilled behind the new pump station the same year. The biggest project in the 1920s was the construction of McDaniel Lake with its storage capacity of 1,100,000,000 gallons of water. The lake impounds the water from a drainage area of about 20 square miles along the Little Sac River and is connected to the Fulbright Treatment Plant and Pumping Station by two transmission mains.

From 1937 to 1941, a new pump station and treatment plant at Fulbright were constructed and through various improvements the plant now has a rated capacity of 24,000,000 gallons per day. By the 1950s the need for more storage became obvious and Fellows Lake with its capacity of nine billion gallons was completed in 1955. Fellows Lake impounds the wa-



ter from a 22-square-mile watershed along the Little Sac River. As needed, water from Fellows Lake is released to flow along the natural stream bed into McDaniel Lake. The water is conveyed from the lower lake to Fulbright by means of the pumping station built in 1931 and modernized in 1964.

In 1957 the citizens of Springfield voted to purchase the water utility and on Dec. 30, the operation was transferred to City Utilities, where a nine-member Public Utilities Board assumed responsibility for it, in addition to the city's electric, gas and transportation services.

Since that time a number of improvements have been made to maintain the standards of the system and the high quality of water in Springfield. New transmission and distribution mains have been added, along with new storage facilities. Renewals of water systems annexed to the city have been completed and miles of new water mains were installed to reach the perimeter of the spreading city.

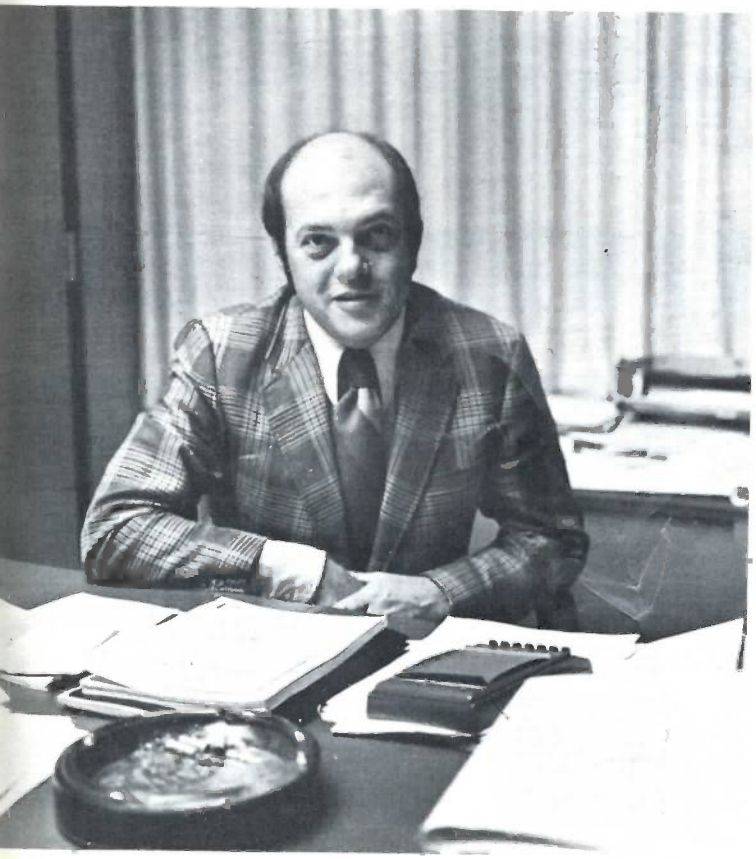
About 1,200 new services were added in 1971 and about 1,300 went into the system in 1972 to make a total of about 44,500 customers. About 601 miles of main and 3,300 hydrants are included in the water department's system which delivers four billion gallons a year.

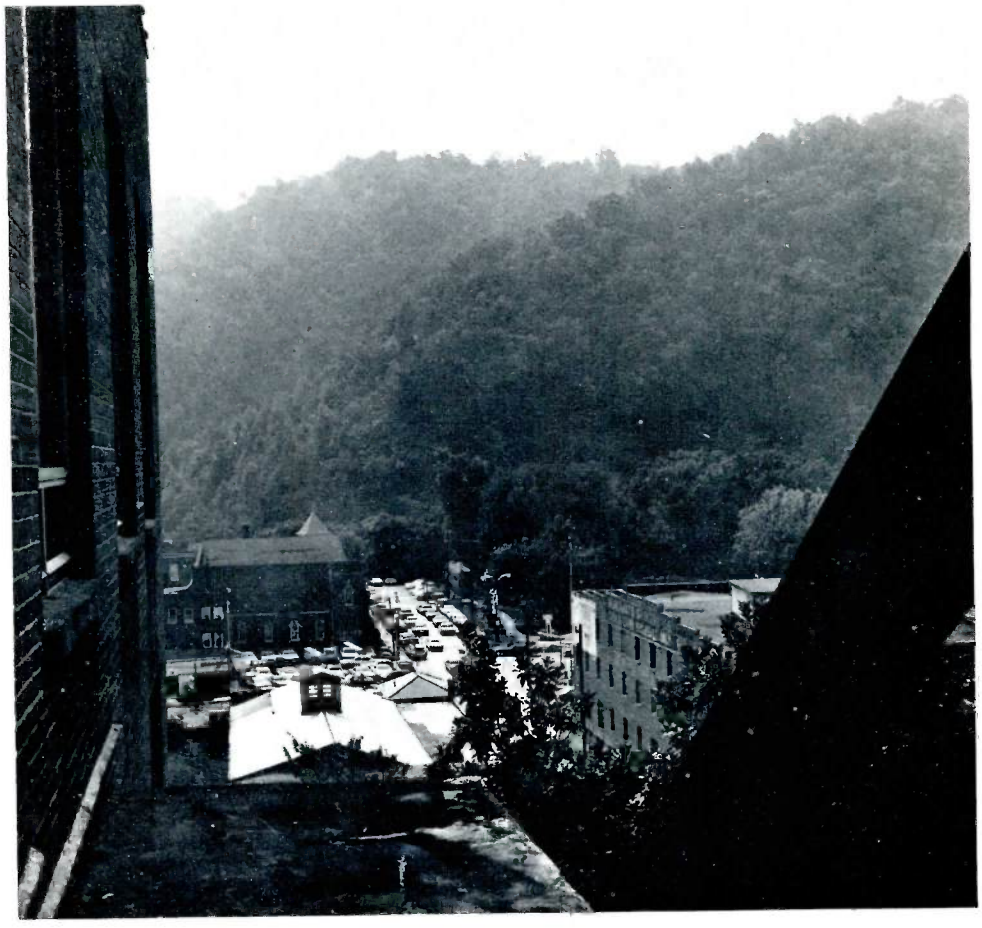
R. D. (Dave) Plank, manager of the water department, joined City Utilities in 1959 as an engineer. He is assisted by Denzil Jones in the department's operations. M. E. Castleberry, general manager of public utilities for the past 13 years and an employee for more than 36 years, retired this summer and was succeeded by J. R. Neeley, who was assistant general manager.

With total assets of more than $154 million involved in furnishing electricity, gas, water and transportation to the citizens of Springfield, City Utilities will continue serving the growing needs of the city.

Water main construction is a "must" in every growing community.

The new design of the City Utilities general offices (left) contrasts the more traditional construction seen at the Fulbright Treatment Plant (right). In the lower photos, Water Department Manager R. D. Plank is shown at his desk, while Assistant Manager Denzil Jones (left) talks to Mueller Co.'s George Swanson.





Pikeville, Kentucky

MOVERS OF

From the campus of Pikeville College, this small Kentucky town of Pikeville is scenic and attractive, nestling in the Appalacian Mountains. To the citizens "down below" a river and its floodlands (left), congestion in the streets (right) and railroads (far right) have made Pikeville "landlocked" in its horseshoe-shaped pocket.

FAITH CAN MOVE MOUNTAINS!

Trucks, buckets and scrappers will do the actual work of removing the millions of tons of dirt and stone to cut away an Appalacian mountain, but it has been the faith (and dreams, and energy and persistance) of the people which has served as the prime moving force behind a gigantic project designed to release the smothered community of Pikeville, Kentucky.

Landlocked by the Appalacian Mountains and waterlogged by the Levisa Fork of the Big Sandy River for generations, Pikeville had not been able to expand in its horseshoe-shaped pocket blocked at the end by Peach Orchard Mountain.

Tunneling out was the first suggested route, but that would solve only part of the problems. A more comprehensive plan followed and it looks now like the mountain, or at least part of it, will be moved and a 350-foot wide man-made valley 500 feet high will open new avenues into the area.

Through this valley will flow the re-routed river, the mainline of the Chesapeake & Ohio Railroad and a modern highway system. Currently the river, the railroad and a number of local highways wind their ways through Pikeville's business district, clogging it or using valuable land needed for development.

The river originally cut the crooked path through the mountain area and the railroad paralled its route as it sought out level land. As it turned out, the railroad and its many coal-loading stations today have about 25 per cent of the level land and the river about 50 per cent, leaving little for the town. The community grew, however, until it ran out of land worth developing.

When the 3,700-foot-long cut is made, many of the 16 million cubic yards of stone and earth will be taken into the city to fill and reclaim the riverbed, its adjacent lowland and railroad right-of-way, creating as many as 200 acres of desparately needed level land in an area where two-thirds of the acreage is too steep for development.

Early estimates placed the cost of the project from $20 to $40 million, but city officials in this town of 5,000 expect the dividends to be high, anticipating Pikeville could become the regional service center for 200,000 people within a 40-mile radius in hundreds of tiny coal mining communities in Kentucky, West Virginia and Virginia. The creation of a physical and social environment necessary for industrial development and personal enrichment are the long-sought objectives of all the efforts and price tags cannot be placed on these advantages.

Pikeville Mayor William C. Hambley said, "The area suffers from isolation, cultural confinement, depreciated human values and underdevelopment of its greatest asset—its people—one-third of whom are forced to leave the area to be educated or employed."

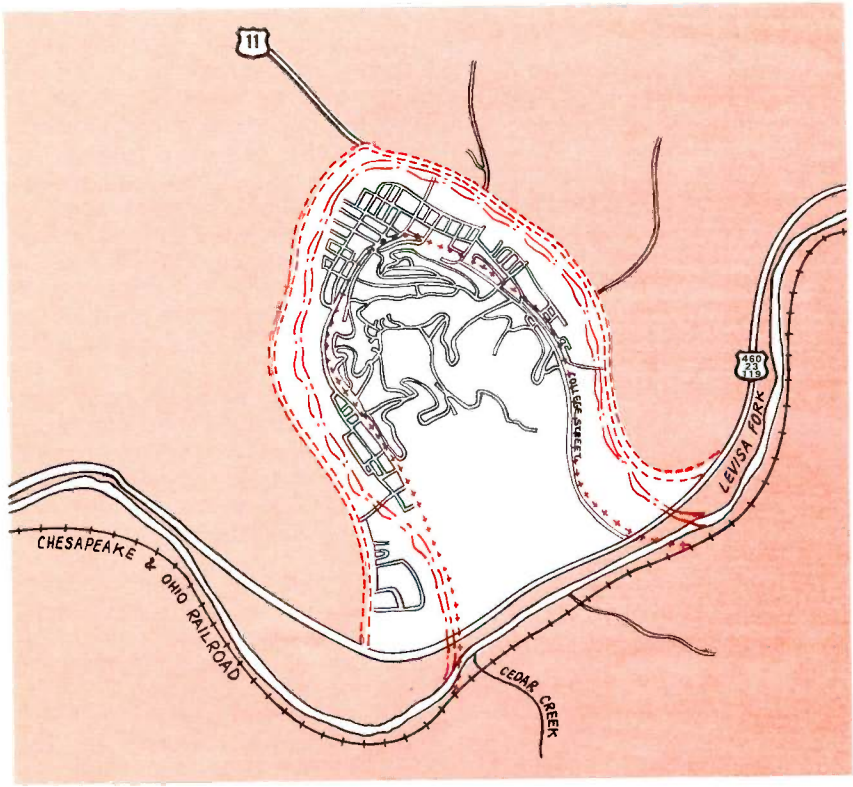
Dr. Hambley was born and reared in Pikeville and has spent many years of his life serving the citizens as a surgeon and pushing for years to get the open cut through the mountain realized.

Although the mountain pass project is the symbol of many things to come, the community has not been dying quietly the past decade.

In 1957 and again in 1963, Pikeville was ravaged by the Big Sandy. Each time the annual chance of such a colossal flood occurring had been calculated at only one to two per cent. Nevertheless the flooding occurred and did about $12 million in damage each time.

The first flood led to the formation of a local group to prevail upon the Federal Government for help, and in 1962 the

OUNTAINS



The drawing indicates the current layout and shows how relief for many of Pikeville's problems can be gained by the cut through the mountain. Broken lines in color show the routes of the railroad, river and highway through Pikeville. The solid black lines show the proposed changes resulting from the cut through the mountain. Mayor William C. Hambley, (above right) has been a prime mover on the mountainous project for years. City Manager Ayers Shortt (right) has been in Pikeville many years and seen the project go from a dream to a near-reality.

Corps of Engineers began Fishtrap Dam.

During this same period work was being done to improve conditions of the streets, the public library and to better the working conditions for city employees. These improvements did not go unnoticed and in 1966 Pikeville was named an All-American City.

By 1967 the city had sold $12 million in revenue bonds to build a modern 1,500,000-gallon-capacity water treatment plant and distribution system, plus make major improvements in the sewage treatment and collection system. The city's gas distribution system underwent expansion and renovation under the same program.

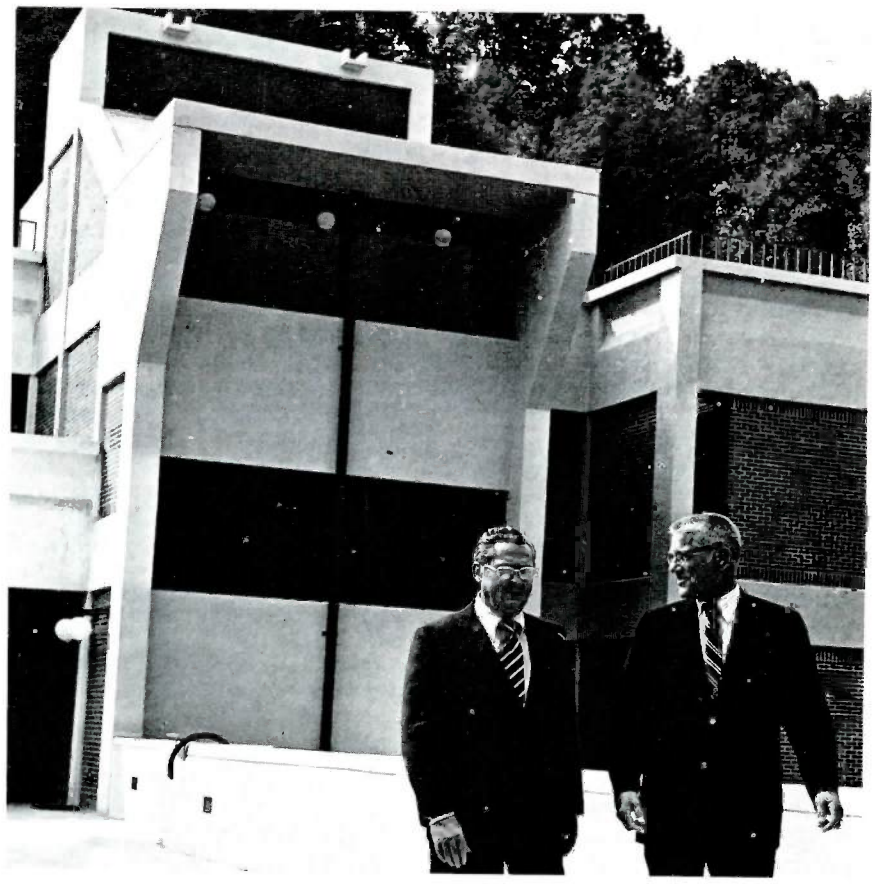
Late in 1967, Pikeville was chosen to participate in the Model Cities Program under the U.S. Department of Housing and Urban Development. Under this initial program, 63 cities received Federal funds to develop comprehensive plans to raise substantially the levels of housing, education, health and medical treatment, employment, job training and social services in the areas designated as a "model neighborhood."

When the Model City process started, the first deficiency noted was the lack of properly coordinated social programs.

This shortcoming was blamed on the lack of facilities, but improvements could not be made until there were building sites. An Urban Renewal study as early as 1963 concluded there was a need for developable sites for its program to succeed. This study also recommended rerouting the railroad around the city and taking the coal loading yards and their rumbling trucks outside of the congested areas.

Also under consideration during the 1960s was the State's plan to take U.S. Route 23 out of the strangled city, send it around the town, and expand it into a four-lane thoroughfare as part of the Appalacian Development Highway System. It was difficult to justify the mountain cut for any one of the programs, but considered together, the potential collective results made the cut feasible.

At least a dozen, state, federal



City Commissioner W. E. Butcher (left photo) works closely with utility operations in Pikeville. Robert S. Cope, president of Pikeville College, (left) chats with Robert J. Cope, Mueller Co.'s sales representative in Kentucky, as they walk along part of the school's campus.

and local governmental agencies, plus private enterprise, are working on something tied in with the open cut. Getting them to work in concert, keeping in mind the welfare of the total population, has been difficult—but is succeeding.

Land acquisition is underway for the Urban Renewal program and representatives are working with the railroad on the purchase of its property in town. Neighborhood improvement programs have been installed for the people. Official groundbreaking took place late in November and work was to begin immediately on the project that will take from eight to 10 years.

Robert S. Cope, president of Pikeville College, claims "a metamorphosis will literally take place." He said, "The project will allow new people, new ideas and new industries to vault the mountain and destroy the myth that this is an isolated territory."

People and ideas are the stock and trade of an institution like Pikeville College. New industry is a need of the area.

The mountains around Pikeville have served as barriers, but they have also been the key to the economy, containing an estimated three billion tons of coal in the county. Even though Pike County mined 23 million tons of coal in 1970, technological advances have cut the need for unskilled miners and the unemployment rate is high in the area. Mining regulations have forced many small operations to close down, adding to the unemployment.

Without land for building and development, there is little hope of attracting new employers and here is another reason why Pikeville needs the "open cut"—industrial development.

Literally the community needs new ground upon which to build. Acres for parks, homes, industry and living are necessary. For generations the miners in east Kentucky have been moving mountains piece-by-piece as they removed coal from the countryside. Now the folks in Pikeville are hoping the removal of part of a mountain will cut a new economic and cultural path for their part of Appalachia.

REFLECTIONS ON WATER

WATER IS STILL YOUR BEST BUY

It isn't easy to find a good buy today, but the Dallas Water Utilities points out a great bargain available to every customer. According to a Dallas mailing piece: "The average family of today would have paid an annual water bill over $135 in 1882 . . . and that was before folks had begun to consider waste water collection, sewerage and water quality control. Today, that family pays around $88 per year for 120,000 gallons of purified water and the collection and treatment of waste water." Water is a bargain around the country, but not enough utilities take the time to tell their users because they're too busy doing a good job.

MARBLE, GRANITE AND SEWER PIPE

Sewer pipe tombstones are serving as lasting tributes to the artists and artisans of nearly 150 years ago. In a Union Army Cemetery in Uhrichsville, Ohio, scores of sewer pipe tombstones resembling tree trunks with partially severed branches and peeled bark stand brazenly conspicuous among the traditional marble and granite monuments. According to the story in **The Antique Trader:** "This impudent, less than prestigious material, assuming a place among the noble monuments of this modern era seemed almost absurd."

In the 1830s, commercial tile making became an important business venture in the town. The molder working in the various sewer pipe plants in the area would bring handfuls of fire clay home at the end of their working day. After making patterns from wood blocks, then plaster of Paris molds, the men would mold the clay. Once molded, the whole family participated in this evening activity, the wife contributed by applying the detailed lines of expression on the various clay animals or the embellishments of vines and leaves that adorn the planters, markers, vases, etc. The children helped by smoothing the exterior of the clay and added their artistic talents. The next .day, the fathers would take the figures to the plant and have them fired and glazed along with the day's production of sewer pipe. Today some of this work stands as monuments to the craftsmen as well as to the dead.

THIS DOG IS BEST FRIEND TO PIPELINER

Dogs are often associated with hydrants, but a Chihuahua named Taco played an important role in the installation of 396 feet of 12-inch ductile iron pipe near Huntington, Indiana. About 145 feet of the pipe crossed the Wabash River and the experienced contractor decided to assemble the lengths of pipe on the river bank, string the pipe on a cable, pull the assembled sections across the river and then lower them into place. The eight pieces of pipe were assembled on the bank with no trouble, but when it came time to thread a cable through them it kept getting hung up. The job superintendent, however, anticipated a problem and had Taco standing by. A string was attached to the dog's harness and he was placed in one end of the pipe and his master stationed at the other end. He answered his master's call and trotted through the pipe with the string trailing the length of the assembly. The string was attached to a wire which was threaded through the pipeline. The wire was then used to pull the necessary cable through and the job was completed, according to the story in **Cast Iron Pipe News.** Taco returned to his dog's life.

YORBA LINDA WATER DISTRICT OFFERS BARGAINS

The Yorba Linda County Water District in California, invited users in the area to an open house and took the opportunity to talk about water bargains by including this ad (below) with the announcement.

WHAT'S NEW and NEWS FROM MUELLER

NEW REPRESENTATIVES NAMED IN TWO AREAS

Changes in representatives in two sales territories have been announced by Mueller Co., filling vacancies created by the retirement of two men with more than 20 years of service.

J. R. (Joe) Haines succeeded K. F. Tohill on Oct. 14 as the Mueller Representative in Nebraska, South Dakota and Western Iowa. Haines, a native of Des Moines, attended Grand View College in Des Moines and joined Mueller Co. in 1972 as a sales trainee. After almost a year in an intensive training program, he had been assigned to new territory to work with Tohill.

Dick Kahl

Joe Haines

Haines and his wife are making their home at 3404 North 105th Plaza, Apt. 1507, Omaha, Nebraska.

R. F. Kahl, now represents Mueller Co. in Michigan, following the Nov. 30 retirement of W. R. Augustine. Kahl joined Mueller Co. in 1962 and after completing his sales training program he has been assigned to the territory in the Pittsburgh area for the last 10 years. Kahl, his wife, and two children are now making their home at 29431 Gramercy Ct., Farmington Hills, Michigan.

EDUCATION AWARD TO MUELLER ENGINEER

The first Edwin F. Church Award for distinguished service to mechanical engineering education in activities other than teaching, research and administration in an educational institution has been awarded to W. R. Leopold, vice president-engineering at Mueller Co.

He received the award from the Council of the American Society of Mechanical Engineers (ASME) at the president's luncheon on Nov. 12 in Detroit at the society's annual winter meeting.

According to the citation, the award was given to Leopold for his guidance and work with college engineering departments in the development of their curricula and engineering facilities, plus individual work with students as an advisor and counselor in the area of engineering careers.

JANICE MANS THE HYDRANT AS A VOLUNTEER "FIREPERSON"

In Bluff Park, Alabama, near Birmingham, volunteer "firepersons" make up the area's fire fighting forces. It had been all "firemen" until 17-year-old Janice Clemons, a high school senior, joined the group and now participates in the weekly drills, running pumps, hooking up hydrants and climbing ladders. According to a story in the BIRMINGHAM NEWS, Janice had been tinkering with the idea of joining the department as a volunteer before she learned of the need for firefighters. "I thought it might be exciting," the auburn-haired teenager was quoted as saying. When she was first introduced to the other members of the force, everyone snickered and thought it was a put-on, but she has been accepted. Her biggest problem seems to be getting her helmet to stay on over her long hair.

MUELLER CO., DECATUR, ILLINOIS

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If it takes your men fifteen seconds to make leaktight connections to plastic pipe . . . THAT'S TOO LONG

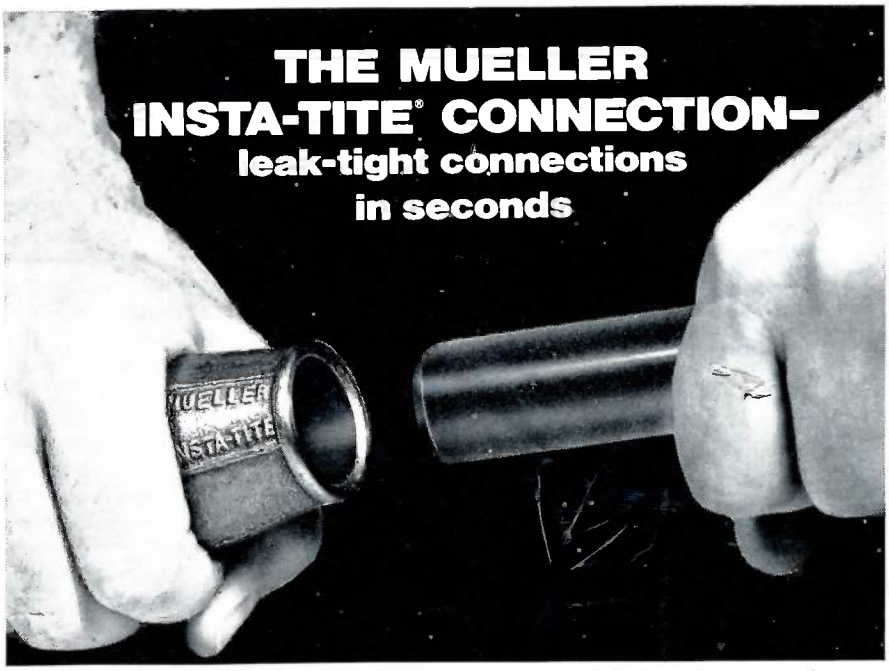
The Mueller Insta-Tite® Connection beats that time every time to give you service connections that are pressure-tight and highly resistant to pullout for ¾" and 1" polyethylene plastic pipe* and tubing**

With the Insta-Tite Connection all you need to do is bevel the end of the pipe and stab it into the connection. The design of this connection lets you stab in the plastic pipe easily. A high strength plastic grip ring then provides a solid "lock" on the pipe with extremely high resistance to pullout from line movement, back filling, fill settlement, line pressure, disturbance from ditchers, etc.

A resilient "O" ring makes a positive seal between the pipe and the inside of the Insta-Tite Connection. Any increase in line pressure tends to compress the "O" ring more tightly in position—the higher the pressure, the greater the sealing force.

The Mueller Insta-Tite Connection is available with a variety of end connections to fit most ¾" and 1" valves and stops. Get all the facts on these easy-to-use connections from your Mueller Representative . . . call him today, or write direct.

*ASTM D-2239 or NBS PS 11-69 (SDR 7) 160 PSI **ASTM D-2737-70 160 PSI



Simply bevel the end of the plastic pipe, and stab it fully into the connection. There's no flaring, no cementing, no threading, no nuts to tighten or liners required.

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