



75

YEARS ON
THE MOVE!



Iowa Department
of Transportation

1913

1988

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FORWARD

This book is being published to add to the celebration of the department's 75th anniversary. It is meant to chronicle and highlight some significant events and achievements and preserve a proud tradition. It is not intended to be a complete history of the agency. This work is dedicated to the thousands of people who have, through the years, built this organization into one of the most respected and envied transportation departments in the nation and around the world.

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AN ORGANIZATION IS BORN

Iowa's 30th General Assembly, in 1904, passed legislation which said that "Iowa State College, at Ames, shall act as a highway commission." However, the powers of that commission were simply advisory; they could give advice and assistance only at the request of a local board or official. Iowa State's Board of Trustees assigned the highway commission responsibilities to Dean of Engineering Anson Marston and Dean of Agriculture C.F. Curtis. Thomas H. MacDonald served as the Highway Engineer.

In 1913 Iowa's 35th General Assembly passed a bill which took the highway commission duties out of the hands of Iowa State and created a separate entity with its own governing body. Effective with publication of the legislation on April 9, 1913, the State Highway Commission was officially born.

According to the legislation, the governing body of the State Highway Commission was to be made up of three people—the dean of engineering at Iowa State and two other members from opposite political parties appointed by the Governor.

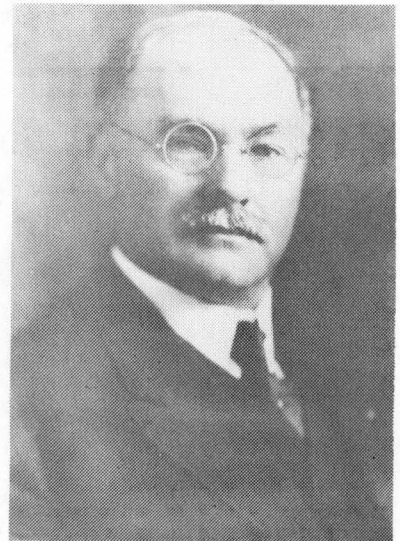
Following publication of the statute, Governor George W. Clark appointed J.W. Holden of Scranton and H.C. Beard of Mt. Ayr to the Commission. Anson Marston, who was still dean of engineering at Iowa State was the other member. Mr. Holden, who had been a Greene County supervisor, was appointed to a four-year term. Mr. Beard, a lawyer, was appointed to a two-year term.



J.W. Holden



H.C. Beard



Anson Marston

This group was given general supervision and control of county and township road officials, and was directed to prepare standard plans and specifications for all phases of highway and bridge work.

On April 16, 1913, the Commission met in Ames to organize. At that meeting Mr. Marston was elected chair. The Commission also hired its first staff, made up of people who had been involved with highway work through Iowa State.



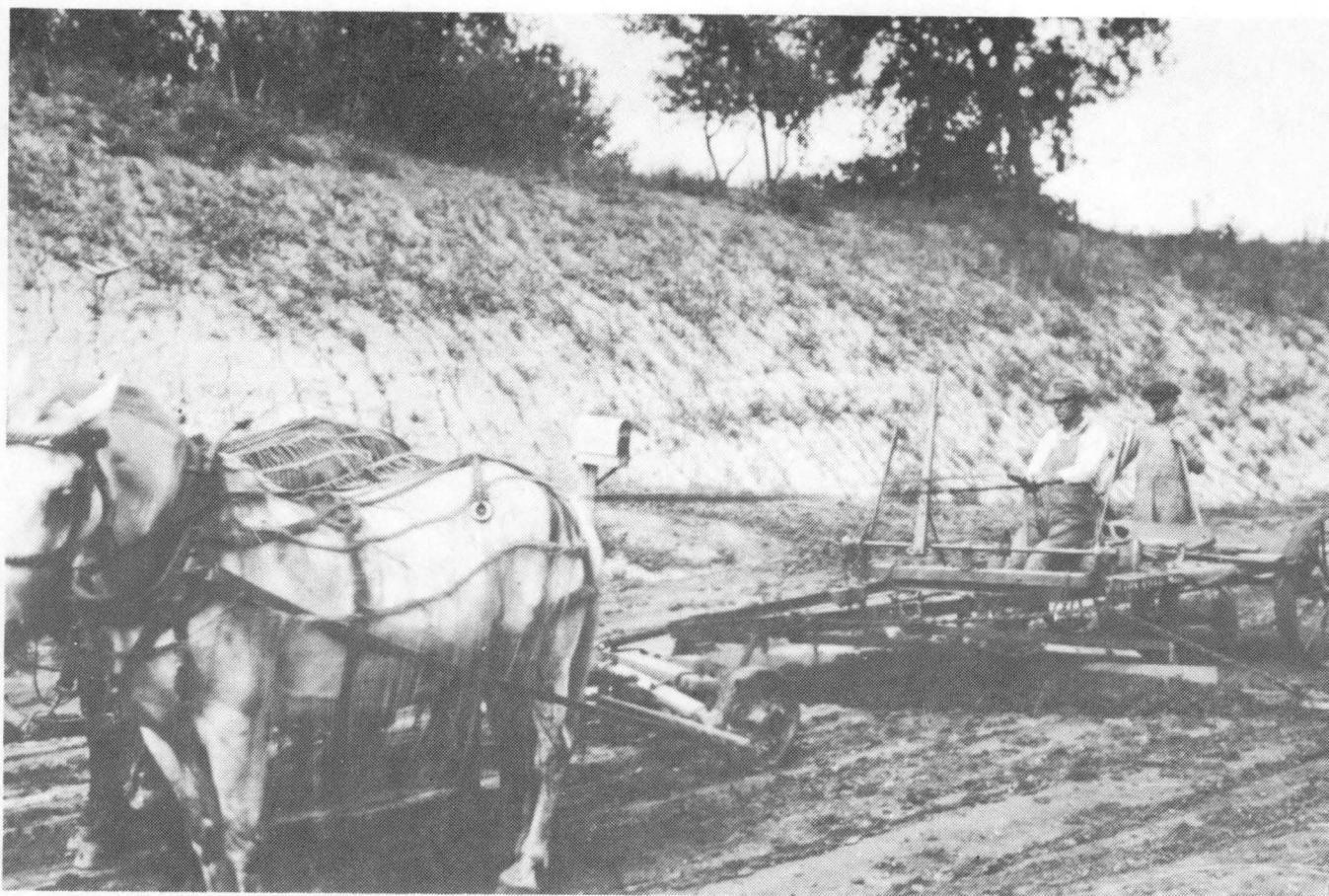
T.H. MacDonald

That staff consisted of:

Thomas H. MacDonald, Highway Engineer
J.E. Kirkman, Consulting Bridge Engineer
C.B. McCullough, Assistant Engineer
F.R. White, Assistant Engineer
J.H. Ames, Assistant Engineer
Annie Laurie Bowen, Stenographer
Merle Crabtree, Stenographer
J.A. Paulson, Draftsman

Commissioners served in an interim capacity until their duties began officially on July 1, 1913. During that time they also added to the staff five district engineers, an accountant and several other employees.

Everything was in place for this fledgling organization to begin moving Iowa forward—even a pay plan. Commissioners were to be paid \$10 per day, but no



more than \$1,000 per year. Approximate salaries of the rest of that first staff were:

A grading operation - 1914.

Chief Engineer	\$326/mo.
Designer	124/mo.
Design Engineer	163/mo.
Chief Draftsman	130/mo.
Draftsman	68/mo.
District Engineer	108/mo.
Clerk	30/mo.
File Clerk	30/mo.
Stenographer	50/mo.
Field Man	32/mo.
Electrician	.87/hr.
Laborer	.70/hr.
Man and Team	.70/hr.

This may not seem like much money, but consider this: a pound of steak cost 17 cents and the interest rate on a home selling for \$2,525 was 6 percent. Henry Ford's invention sold for \$830 and the fuel to power it was 15.3 cents per gallon. Entertainment didn't cost much either. For just \$1.60 per person you could see a live "stage show."

THE EARLY YEARS (1913-1930)

- Right from the beginning the State Highway Commission set the tone for future generations. Their original organization was considered unique for the time and is generally believed to be the agency's first national "first."



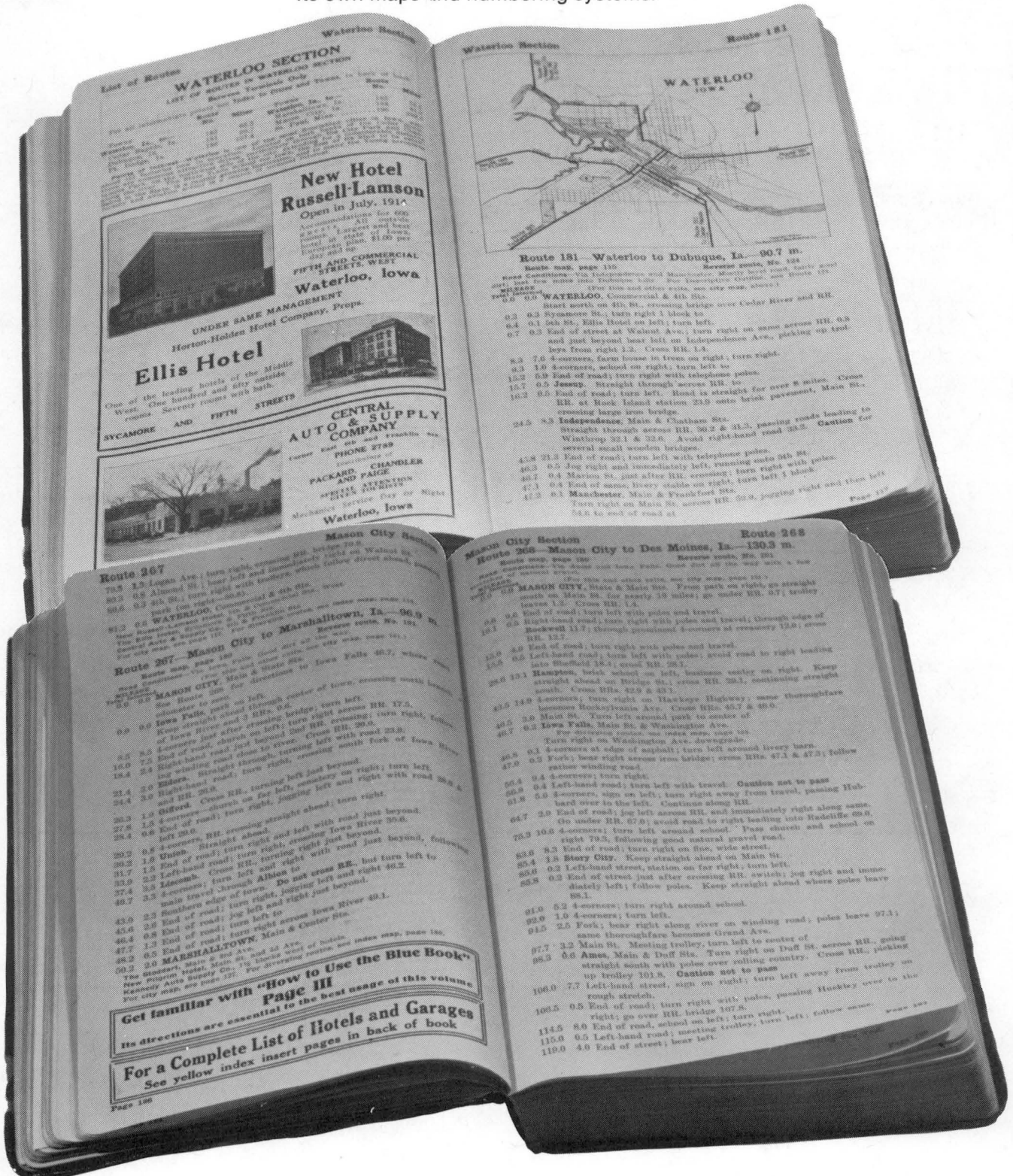
Also in 1913, the office of county engineer was established, county and township roads were authorized, and official mapping of county roads was required.

***Highway Construction 1930's
style at Guthrie Center.***

- In 1917 the Legislature instructed the Highway Commission to meet the necessary requirements to qualify for federal aid to highways. Iowa's first federal aid totaled \$146,000. The Highway Commission then designated between 2,000 and 6,000 miles to become part of the federal aid system.

1914 edition of the Automobile Blue Book.

- Iowa's first road map was completed in 1918. It showed what was called the inter-county federal aid system. Prior to this time motorists had to rely on guides like the one below which was published by a private concern, using its own maps and numbering systems.





Which way to Omaha? Early tourist signing.

- T.H. MacDonald left the Highway Commission in 1919 to become the nation's first Chief Engineer of the Bureau of Public Roads. F.R. White was named as the Commission's new Chief Engineer.



F.R. White

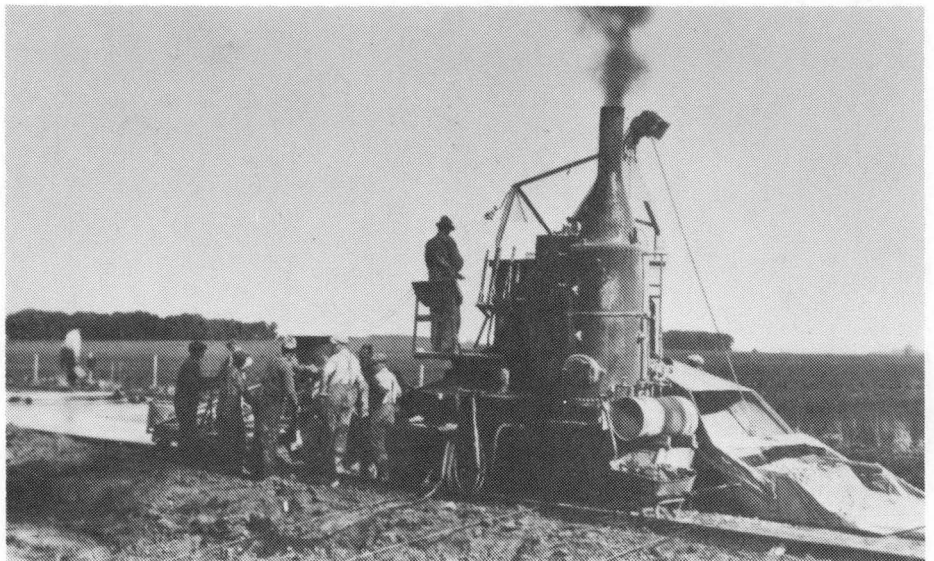
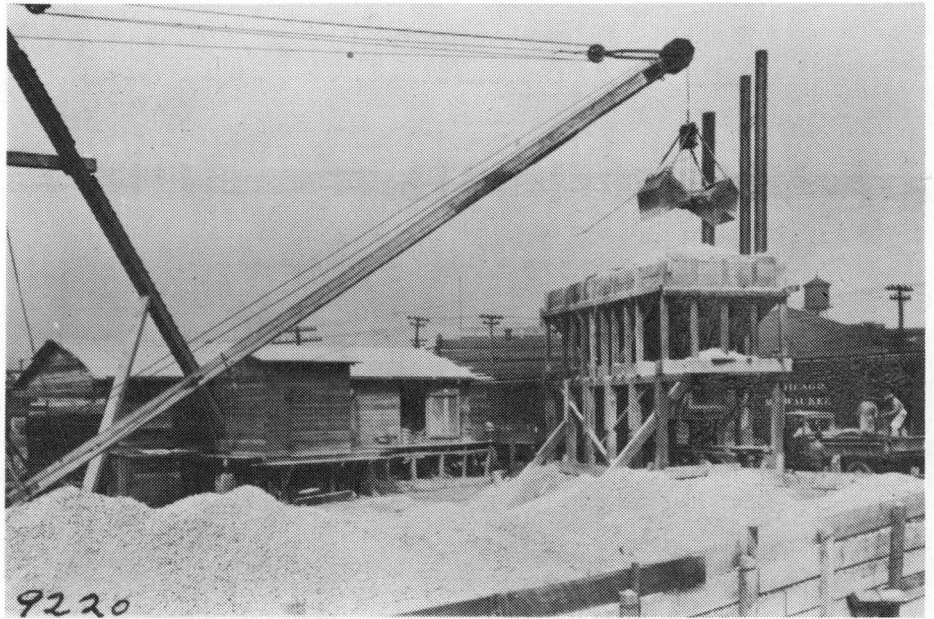
Another first was attained in 1919 when the Highway Commission persuaded two paving contractors to proportion materials by weight. By 1922 this method had become a specification and has been used universally.

A primary road system of 6,400 miles was established.

In the same year, Black Hawk County became the first to use a new law which allowed counties to vote on primary road bonds for improvements to the county primary road systems. This was the start of the drive to "get Iowa out of the mud."

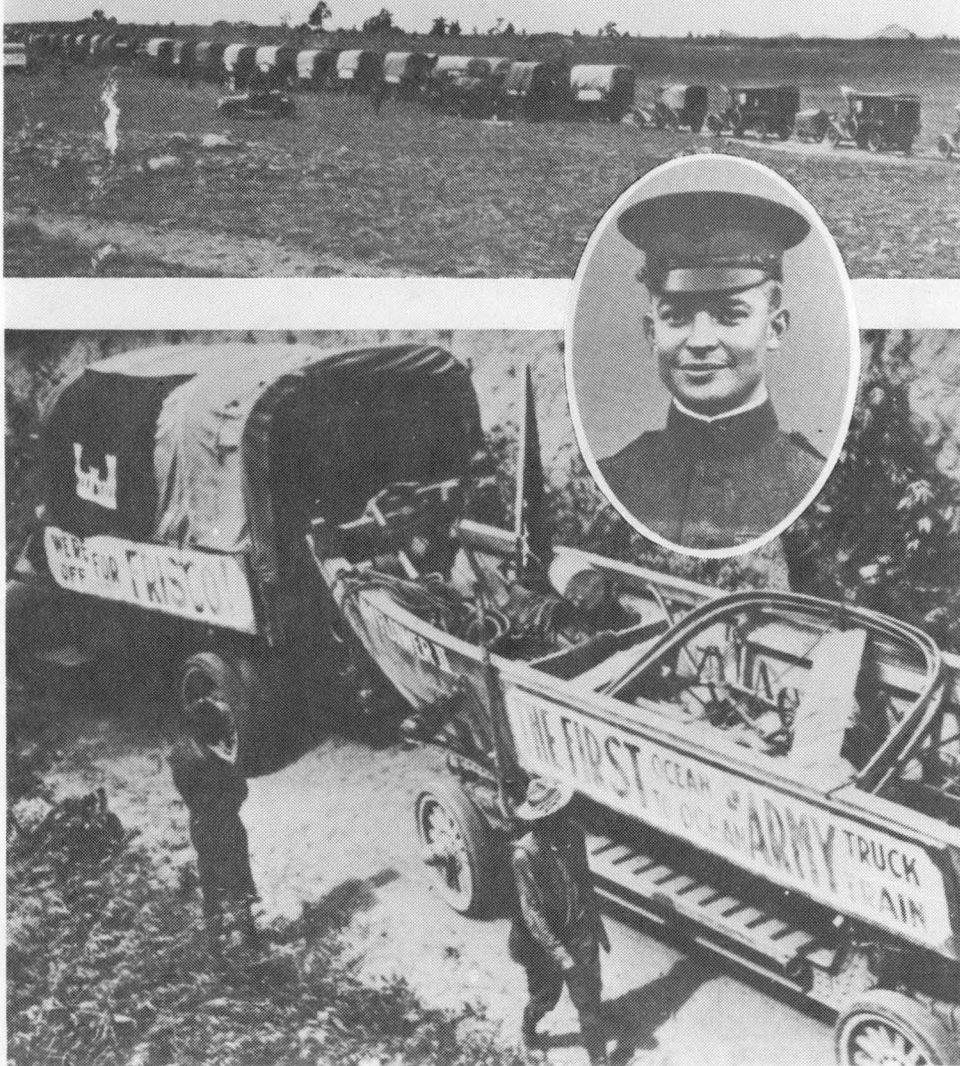
Motor vehicle registration fees were doubled by the General Assembly in order to provide more road construction funds. (In 1904 it was \$1; in 1907 it was \$5.)

**(Right) Getting materials ready—
about 1920. (Below) A 1920 pav-
ing job.**



CONSTRUCTOR

AUGUST 1973



Photos courtesy of Constructor magazine

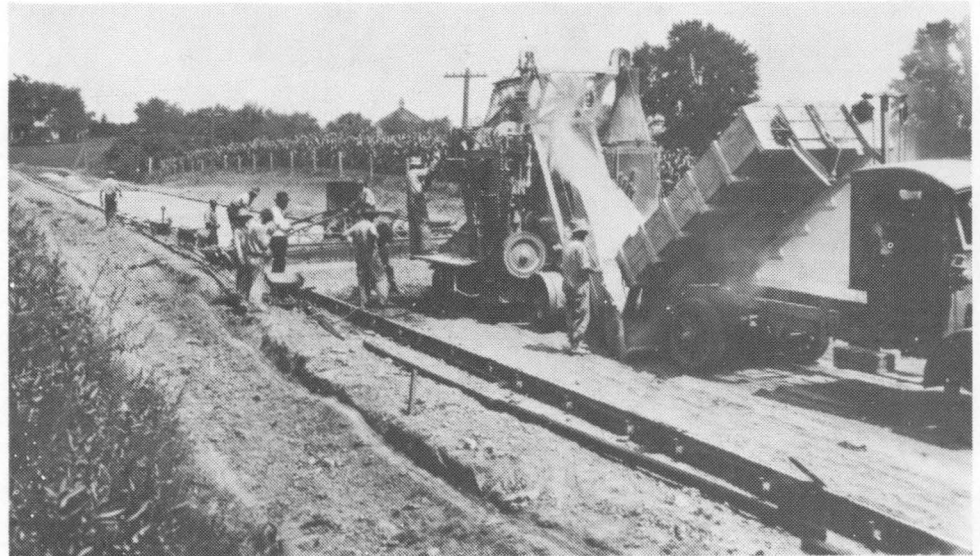
Another event of 1919 was somewhat insignificant at the time, but contributed to an important decision which shaped this nation's highway system. A young Army lieutenant was part of a contingent traveling from Washington, D.C., to San Francisco over the Lincoln Highway. The trip of more than 3,000 miles took 62 days. The dust, mud, curves, grades and hardship of that journey made a lasting impression on the young soldier about the advantages of, and need for, good highways. He recalled that trip years later when, as President Dwight D. Eisenhower, he signed the law creating today's Interstate System.

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- During the 1920-1930 period the Highway Commission's greatest accomplishment took place. This is when more than 1,000 miles of portland cement concrete pavement was constructed on a primary road system that had grown to 6,813 miles.

In 1920 the Highway Commission chalked up two more national firsts. Those were the use of impervious film (originally "tar paper") under concrete slabs to retain moisture during the curing process, and the use of paper to cover the concrete.

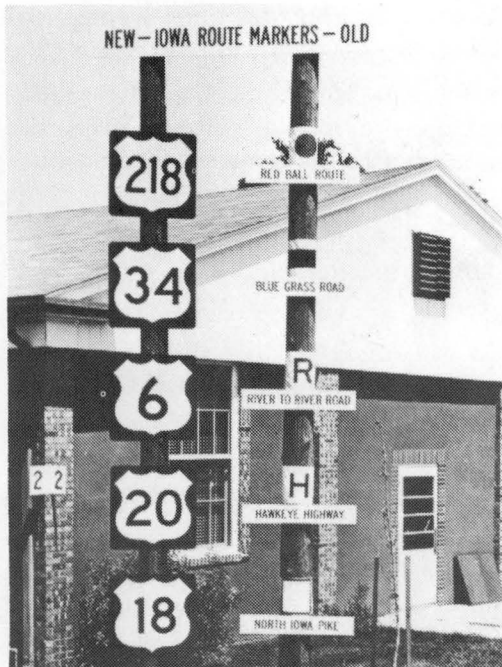
It was also in 1920 that the Highway Commission began numbering highways. This system replaced the numerous registered route markings and names.

- A giant step to increase funds for highway construction was taken in 1925 when the legislature passed the first gas tax. The tax was two cents a gallon; with the state, counties and townships getting one-third each.



(Right and below) More 1920's style paving operations.





Highway Identification changes.

The pay schedule of 1925 looked like this:

Chief Engineer	\$625/mo.
Secretary	140/mo.
Auditor	316/mo.
Bookkeeper	100/mo.
Clerk	45/mo.
Chemist	176/mo.
Design Engineer	291/mo.
Designer	190/mo.
District Engineer	292/mo.
Draftswoman	85/mo.
Chief Draftsman	212/mo.
Foreman	234/mo.
Inspector	120/mo.
Instrumentman	90/mo.
Lab Chief	209/mo.
Lab Assistant	150/mo.
Resident Engineer	225/mo.
Rodman	75/mo.
Steno-Clerk	75/mo.
Watchman	100/mo.
Laborer	20/mo.
Superintendent	250/mo.
Dynamite Man	.50/hr.
Man and Team	.65/hr.

A new house cost \$4,825, with an interest rate of 5.10 percent. A new Cadillac sold for \$1,500, and gas was 21.9 cents per gallon. At the grocery store steak was 38 cents a pound and a ticket to a Broadway show was just \$2.25.

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- Another penny was added to the gas tax in 1927, and that money went to the Primary Road Fund.

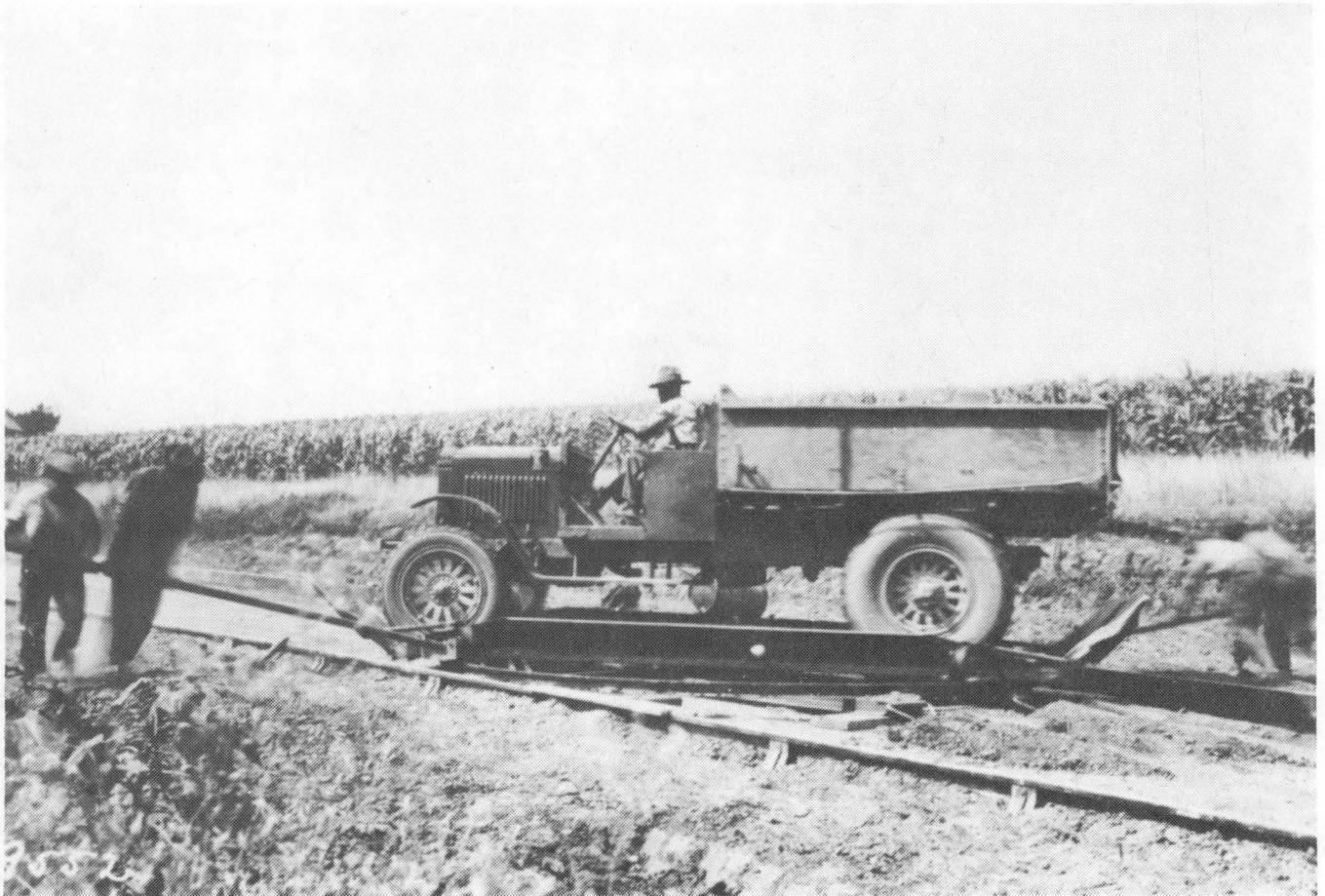
Newly-passed legislation called for the Commission to be increased to five members. Also, the Commission was given complete authority over the primary road system, and the responsibility for its construction, maintenance and administration.

The state was also authorized by the General Assembly to purchase or condemn right of way for primary road improvements.

- Iowa's first paving job using asphalt was done in 1928. The contractor required a "royalty" fee be paid on the project. F.R. White, Chief Engineer, said that would never happen again. It wasn't until the 1950s that asphalt was considered for primary road construction—through the regular lettings.
- In 1929 the secondary road act was passed by the General Assembly. This legislation, among other things, transferred authority over township roads to county boards of supervisors.

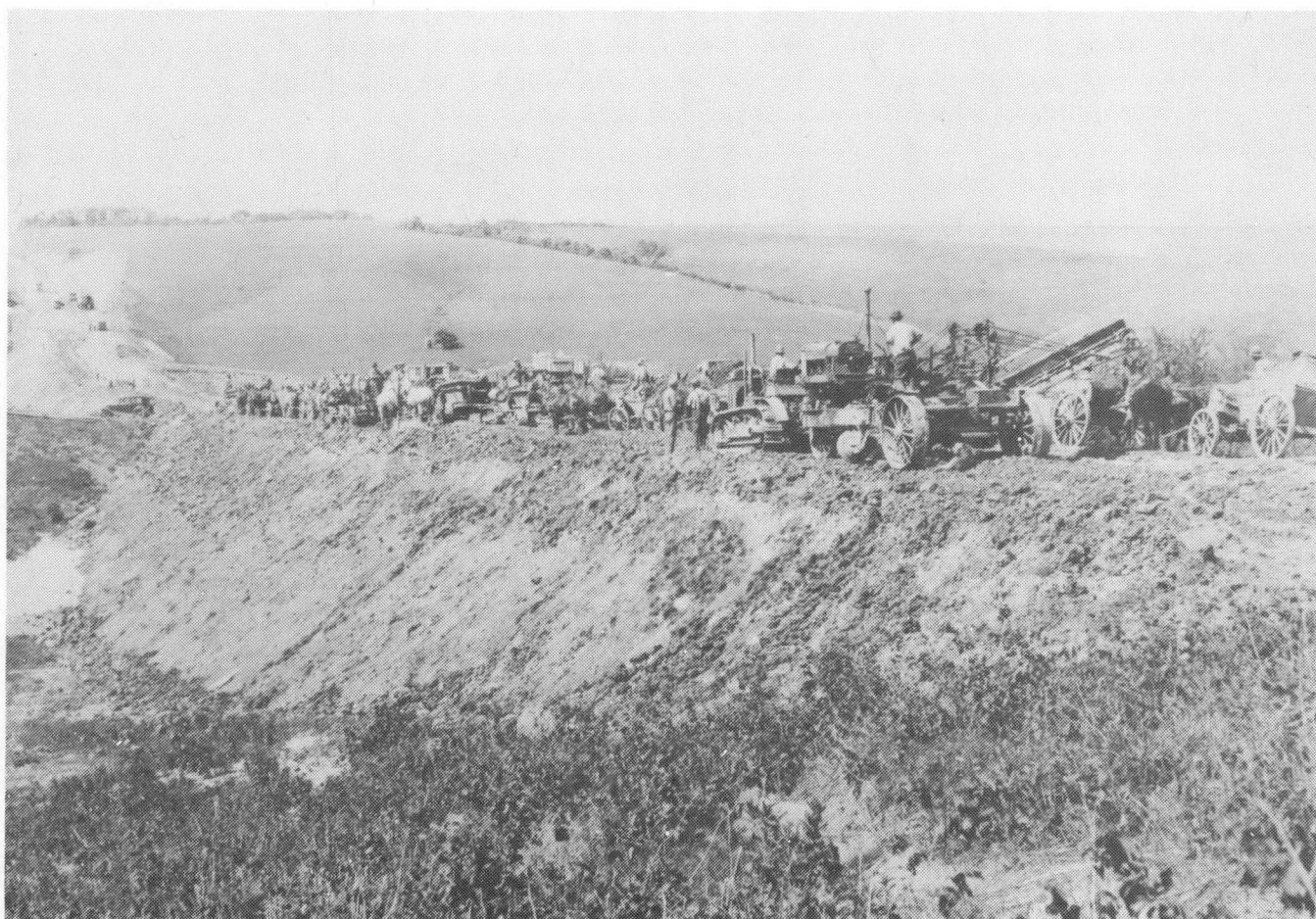
(Were these really the "good old days?" During this period employees worked six days a week and there was no such thing as a coffee break, sick leave or paid vacation.)

1920's - Preparing for the pavers to move in.





**(Left) Early seal coating. (Below)
Another view of highway construction at Guthrie Center.**



STILL GROWING (1930-1950)

- In 1930 another national first came from Iowa. The mud jack, or mud pump, was developed by John Poulter a Highway Commission employee in Mt. Pleasant. The pump, which raises depressed pavement, was first used in the Burlington area.
- Use of 24-hour traffic counts for classifying traffic was developed and first practiced in Iowa in 1934.
- Iowa was the first, in 1935, to use two-point loading of test beams for testing tensile strength of portland concrete cement beams. This test became widely used around the country.
- Although pay cuts of eight percent or more were instituted during the depression years (1932-1934), they were not reflected in the pay schedule of 1935.

Accountant	\$180/mo.
Bookkeeper Engineer	166/mo.
Draftsman	175/mo.
Draftswoman	60/mo.
Foreman	135/mo.
Maintenance Man	90/mo.
Rodman	85/mo.
Secretary	80/mo.
Supervisor	165/mo.
Typist	65/mo.
Resident Engineer	216/mo.
Carpenter	.70/hr.
Laborer	.40/hr.
Man and 3 yard truck	1.25/hr.
Team only	.20/hr.

A new house cost \$3,075 and the interest rate was 4 percent. A new Cadillac cost \$1,625 and gasoline was 17.8 cents per gallon. Steak was selling for 25 cents a pound and a ticket to a Broadway show was \$3.75.

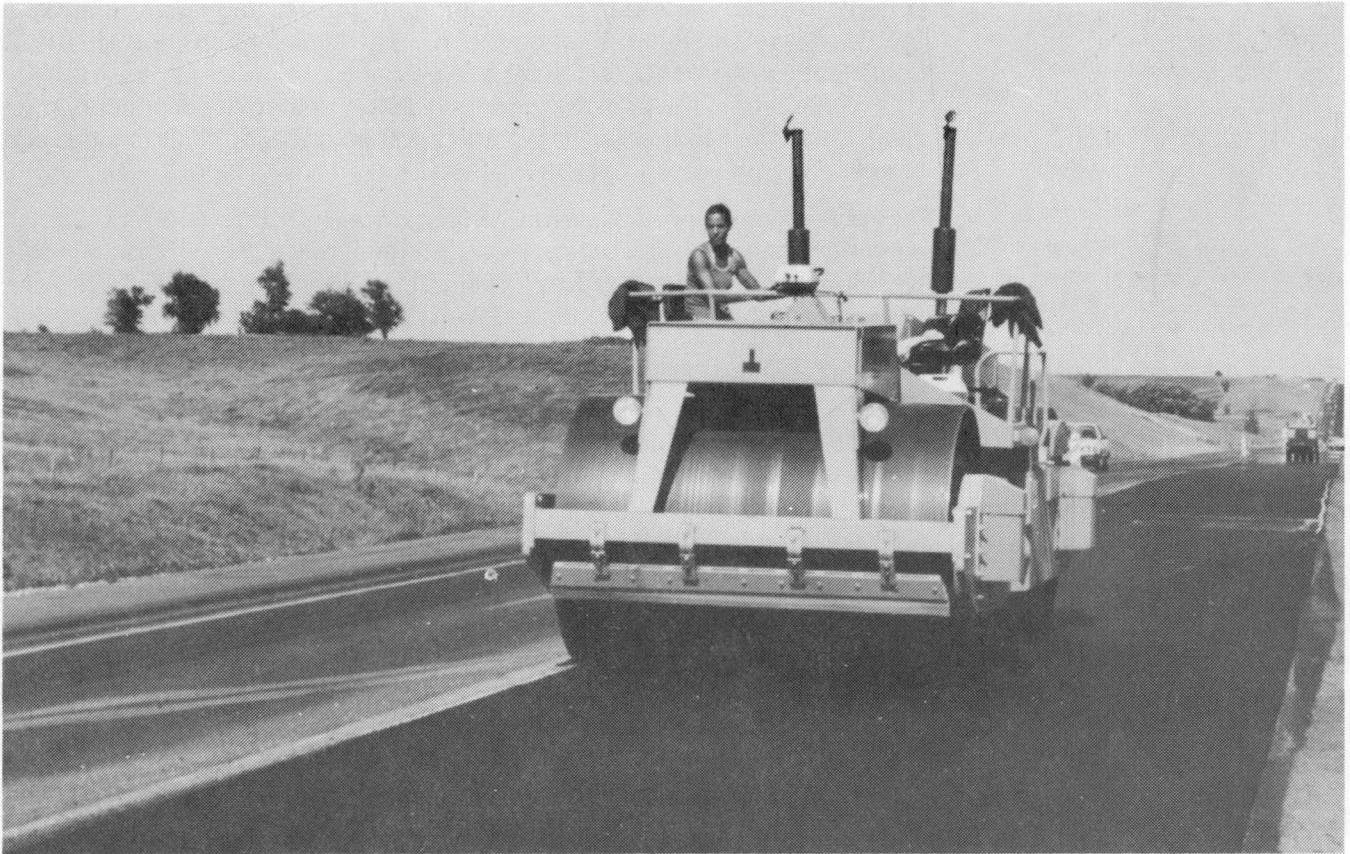
- In 1937 the water/alcohol test was developed in Iowa. This is a severe freeze/thaw test for highway construction material.
- A Farm-to-Market bill was passed in 1939 by the General Assembly. The need for this law came about because Congress had recently passed a new Federal Aid Road Act under which Iowa would be allocated \$660,000 per year for secondary roads. A state match was required.

Starting in 1939, the Legislature placed a ceiling of \$16 million on the Primary Road Fund. All funds above that amount were to be transferred to the Farm-to-Market fund. (In 1941 the Legislature increased the ceiling to \$17 million, which remained in effect until 1949 when it was repealed.)

- The pay schedule in 1945 looked like this:

Chief Engineer	\$708/mo.
Secretary	202/mo.
Design Engineer	447/mo.
Clerk	115/mo.
Blue Print Clerk	161/mo.
Attorney	366/mo.
Auditor	373/mo.
Chief Accountant	255/mo.
Chemist	245/mo.
Custodian	125/mo.
District Engineer	355/mo.
Draftsman	300/mo.
Draftswoman	205/mo.
Inspector	135/mo.
Instrumentman	126/mo.
Laborer	85/mo.
Lab Chief	215/mo.
Mechanic	275/mo.
Office Assistant	229/mo.
Party Chief	181/mo.
Designer	300/mo.
Resident Engineer	245/mo.
Rodman	125/mo.
Storeroom Clerk	145/mo.
Stenographer	148/mo.
Typist	100/mo.
Traffic Weight Officer	152/mo.
Computer Operator	300/mo.
Laborer and Team	.65/hr.

A new Cadillac cost \$2,492 and gas was 20.7 cents a gallon. New homes sold for \$5,600 and the interest rate was 3.10 percent. Steak was selling for 52 cents a pound and a ticket to a Broadway show cost \$3.75.



Asphalt paving job.

- In 1947 the General Assembly passed another Farm-to-Market road bill. This bill did two things:
 - 1) it authorized the designation and establishment of a Farm-to-Market system to include not more than 35,000 miles of secondary roads. The Highway Commission was to equitably divide the mileage among all the counties.
 - 2) it provided that a portion of the Farm-to-Market road fund "shall be allotted by the State Highway Commission among the counties in such a manner as to equalize construction of Farm-to-Market roads in all sections of the state."

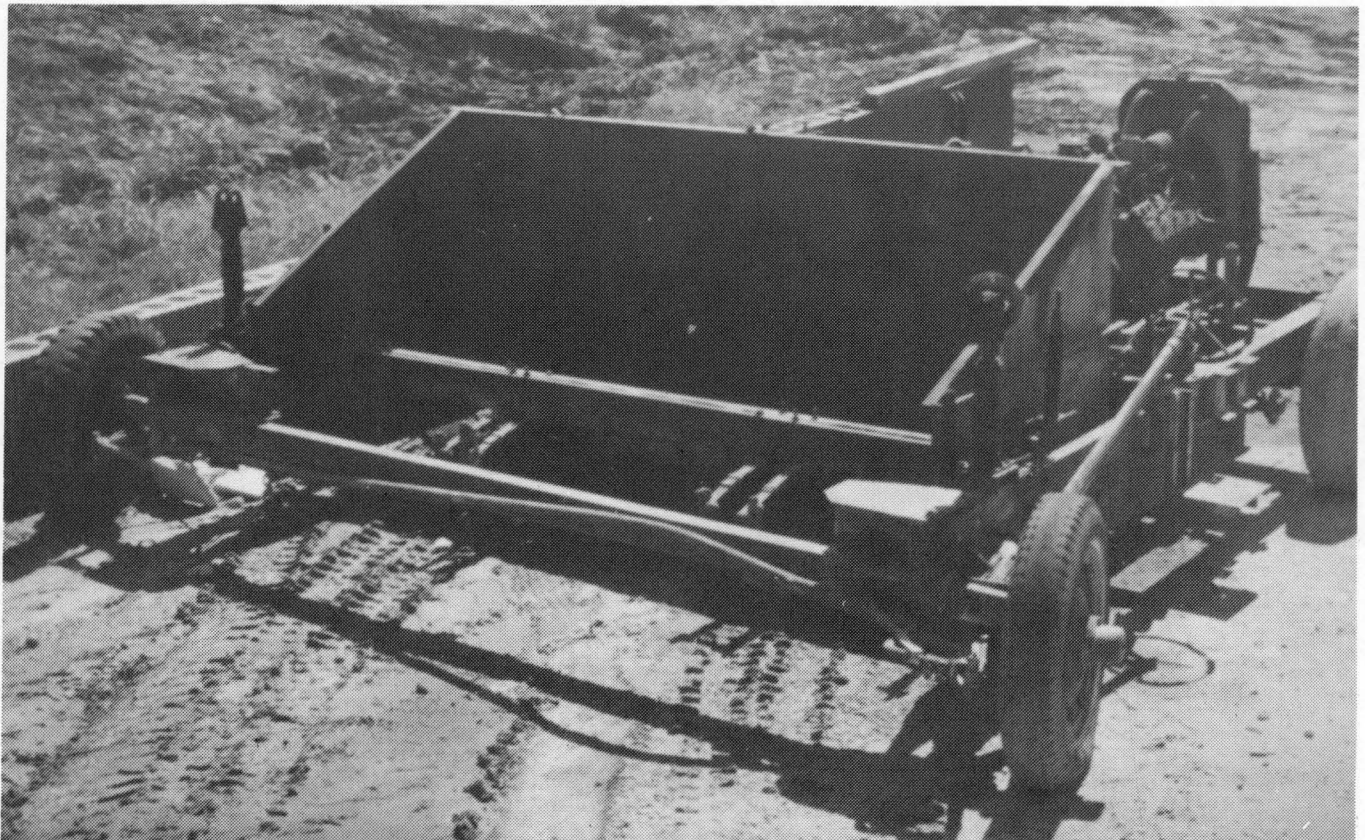
Also in 1947, the Legislature created an interim committee to study highway problems and laws. They were to report their findings to the Governor by the end of November 1948.

- On November 15, 1948, the Investigation Committee gave its report to the Governor. It said in part, "In general, the committee has found much to commend and relatively little to criticize with the highway program in Iowa. The division of responsibility between state highway officials and county highway officials is proper. The spirit of friendly cooperation between state and county officials is highly commendable. The highway program in Iowa has been kept remarkably free from graft and scandals." It also encouraged some changes in distribution of highway funds.

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- In 1949 the General Assembly, acting on those 1948 suggestions, created the Road Use Tax Fund. The fund included vehicle registration fees, four cents fuel tax, motor carrier fees and 10 percent of the sales tax. Distribution was 42 percent to the primary road fund, 35 percent to the secondary road fund, 15 percent to the Farm-to-Market system and 8 percent to cities and towns.

One of the most important events in this agency's history came in 1949 when a revolutionary device was introduced to the highway construction industry. Highway Commission Lab Chief James Johnson developed the slip form paver which placed concrete slabs without the use of side forms or supports. This process allowed pavers to place and finish over one mile of concrete highway per day. This creation became the national standard and was widely used in foreign countries for highway construction. This boon to the construction industry came just in time for the tremendous boom in highway construction just ahead.

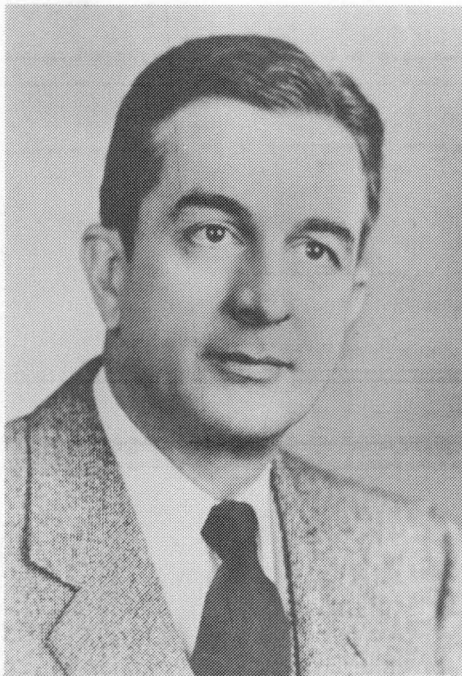
1949 - The world's first slip form paver.



BOOM TIMES (1950-1974)

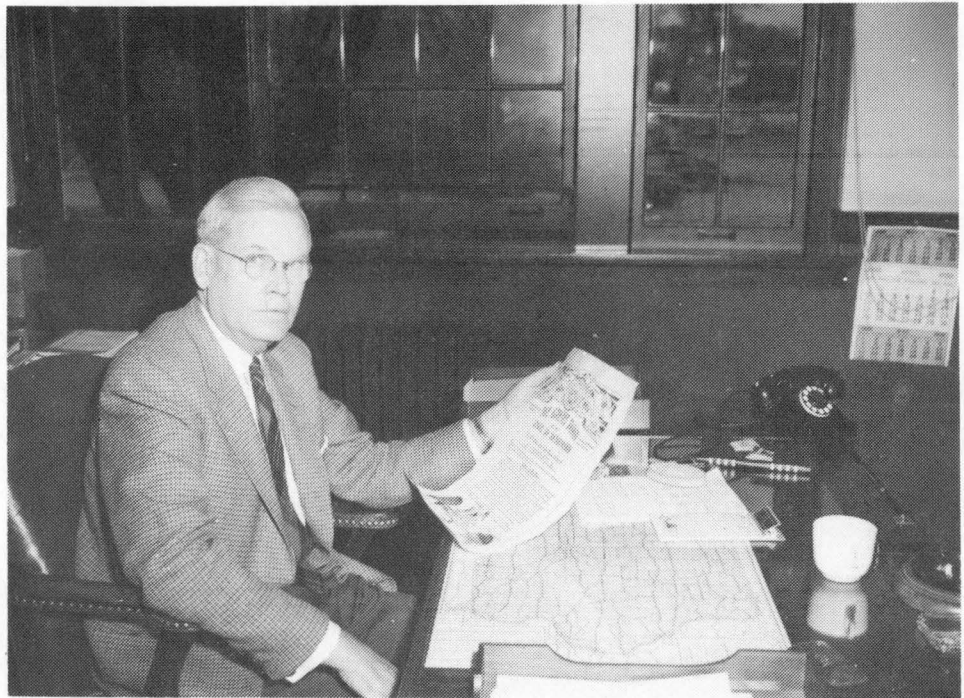
- This era started out with another possible first for Iowa. In 1952 the Highway Commission introduced the use of tapered or flared end culvert inlets to increase flow capacity.

Also in 1952, Fred R. White retired as Chief Engineer and was replaced by E.F. Koch.



E.F. Koch

- In 1953 the Highway Commission came through with two more firsts. Iowa was first to require calibration of cold feeds on asphalt hot mix plants. This led to elimination of the gradation unit used to separate dried aggregate by size, also a first.
- Because many eastern states were constructing toll roads, the Commission in 1954 reported to the Governor that a toll road could be built in Iowa. This recommendation was based on research done by nationally-recognized consulting firms. The road was projected to run from Davenport, through Des Moines, to Council Bluffs.



(Right) John G. Butter (Below)
Some of Iowa's narrow bridges and pavements "before" the widening program began.

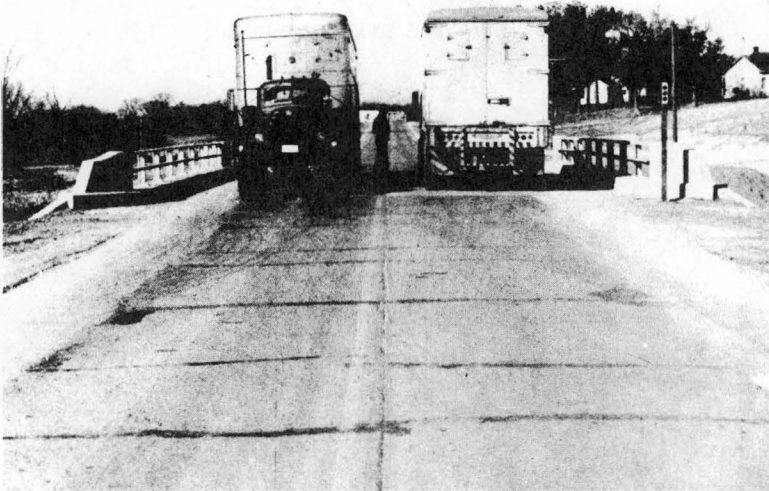
John G. Butter replaced E.F. Koch in 1954 as Chief Engineer.

- In 1955, based on the Commission's recommendation, the Legislature created the Iowa Toll Road Authority, which was entirely separate from the Highway Commission. The Toll Road Authority went to work quickly and began negotiating with consultants to design a road that would be built with private funds. About the same time, however, it became apparent the federal government was going to establish a nation-wide highway system known as the Interstate System. It also became known that one portion of Iowa's Interstate System was to run along the same basic route as the one proposed for the toll road.

Also in 1955 came passage of a law allowing for control of access and an extensive program to widen narrow bridges and 18-foot highways was begun.



"After" the widening program.



The pay schedule in 1955 looked about like this:

Chief Engineer	\$1,100/mo.
Blue Printer	200/mo.
Clerk	160/mo.
Account Clerk 2	160/mo.
Bookkeeper	190/mo.
Attorney	583/mo.
District Engineer	630/mo.
District Materials Engineer	460/mo.
Draftsman	280/mo.
Draftswoman	160/mo.
Engineer 1	360/mo.
Engineer Aid 1	175/mo.
Engineer Aid 3	200/mo.
Engineer Aid 6	300/mo.
Designer	275/mo.
Inspector	200/mo.
Office Helper	150/mo.
Key Punch Operator	160/mo.
Geologist	300/mo.
Materials Tester	200/mo.
Stenographer	175/mo.
Department Head	575/mo.
Resident Engineer	490/mo.
Traffic Weight Officer	271/mo.

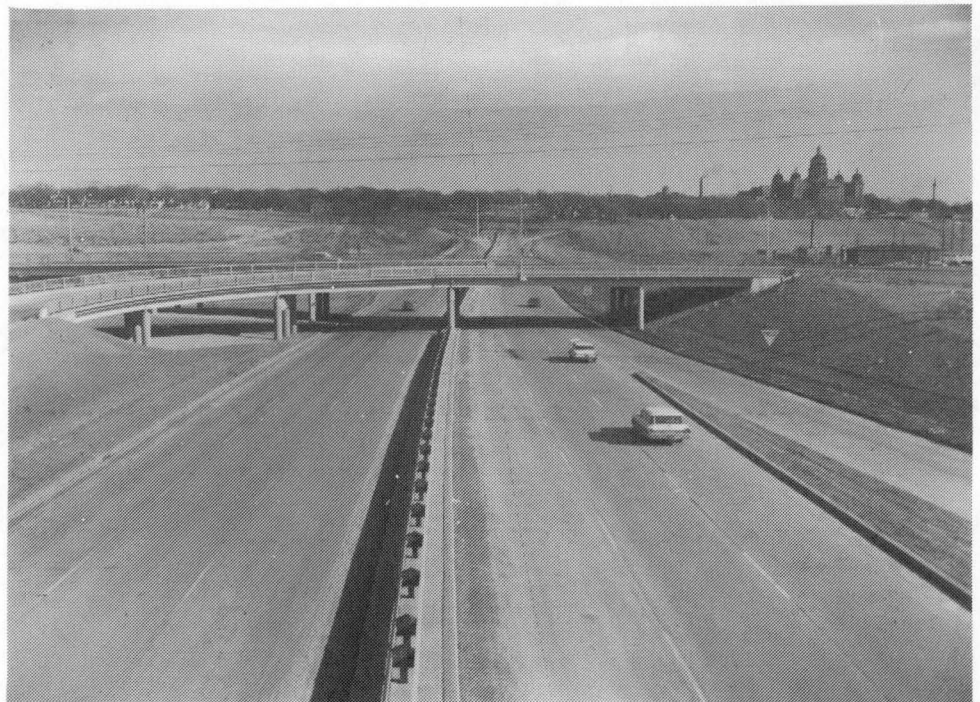
A new Chevy cost \$2,148 and gasoline for "cruisin'" cost 29.9 cents per gallon. A new house cost \$11,725, and a ticket to the movie was \$1. Record albums had really become popular and sold for \$3.15.

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- In 1956 Congress passed, and President Eisenhower signed, the law creating the Interstate Highway System. This set off the biggest highway building boom in the nation's and Iowa's history.
 - In 1957 the Iowa Toll Road Authority was abolished.

Funds for the new Interstate System were made available and Iowa took advantage of them. During 1957 the Highway Commission let contracts worth \$13 million for Interstate construction.



(Right) Work begins on the Interstate system. (Below) A portion of the finished product.



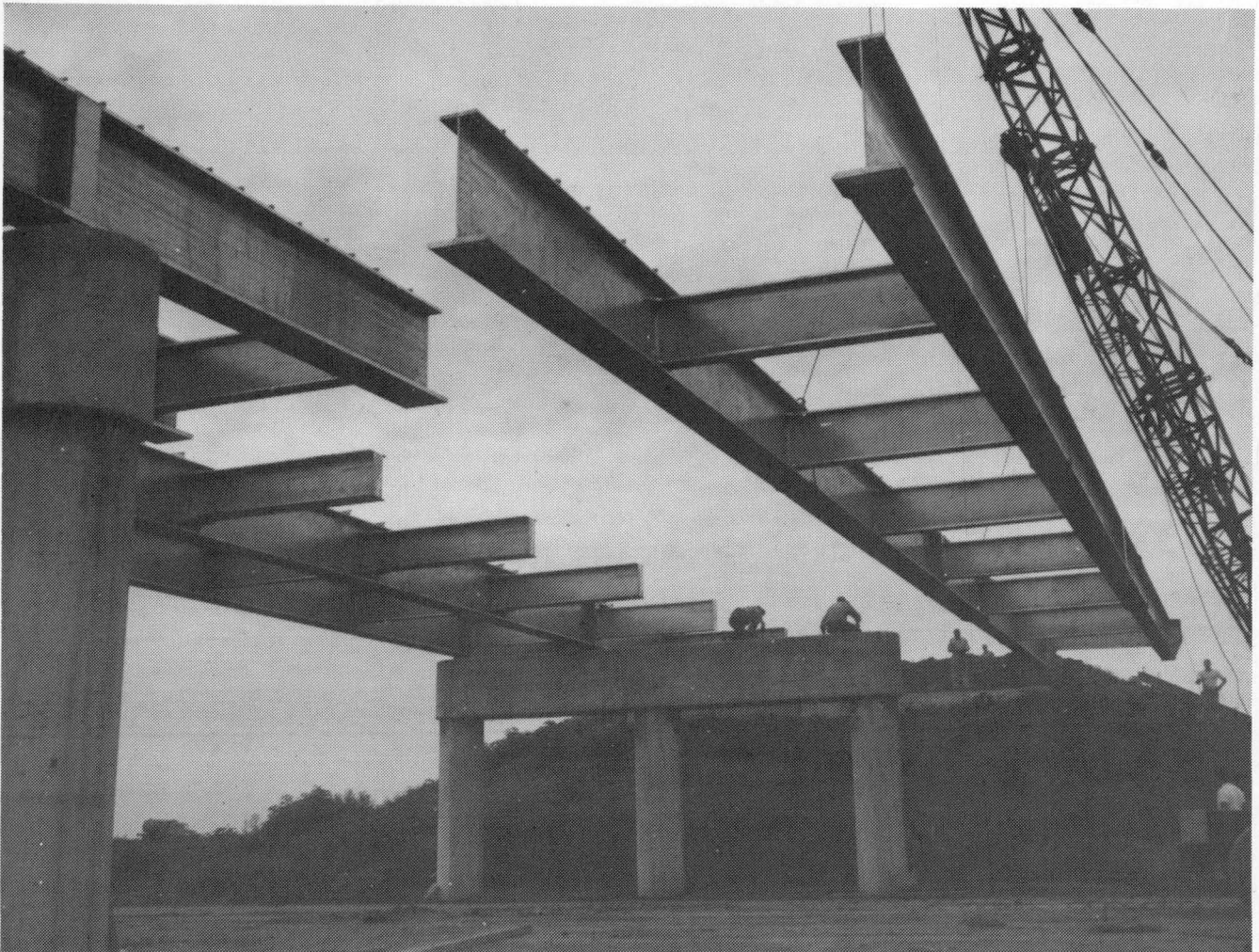
Another Iowa first came in this same year with the use of horizontal cylinder molds for concrete compression tests. James Johnson, who developed the slip form paver, designed this procedure.

Also in 1957, the Highway Commission cooperated with the federal government and adjoining states in investigating development of what is now known as the Great River Road.

- Iowa's first segment of Interstate was opened in 1958. It was I-35/I-80 at the southwest edge of Des Moines.

Also in 1958, Iowa built the worlds first aluminum girder highway bridge. Aluminum was used because of a delay in steel delivery. The bridge was built over I-80/I-35 north of Des Moines.

***Construction of the worlds first
aluminum girder bridge.***



Because of the additional work caused by Interstate construction, new methods were required to keep pace. In 1958 photogrammetric field surveys were introduced, along with a computing center equipped with the most modern electronic equipment available.

***(Right) Enter the computer age.
(Below) Another Iowa first—the
no passing pennant.***



- What must be considered another highly significant first introduced to the world by Iowa occurred in 1959. This is when the “no passing” pennant was first put on highways. This device is now used nationally.

Also in 1959, the Legislature created a Road Study Committee to look into highway problems and needs.

To comply with a new law, the Highway Commission published its first five-year construction program. The plan was based on sufficiency ratings and was instantly popular because communities could anticipate and plan for highway improvements in their area.

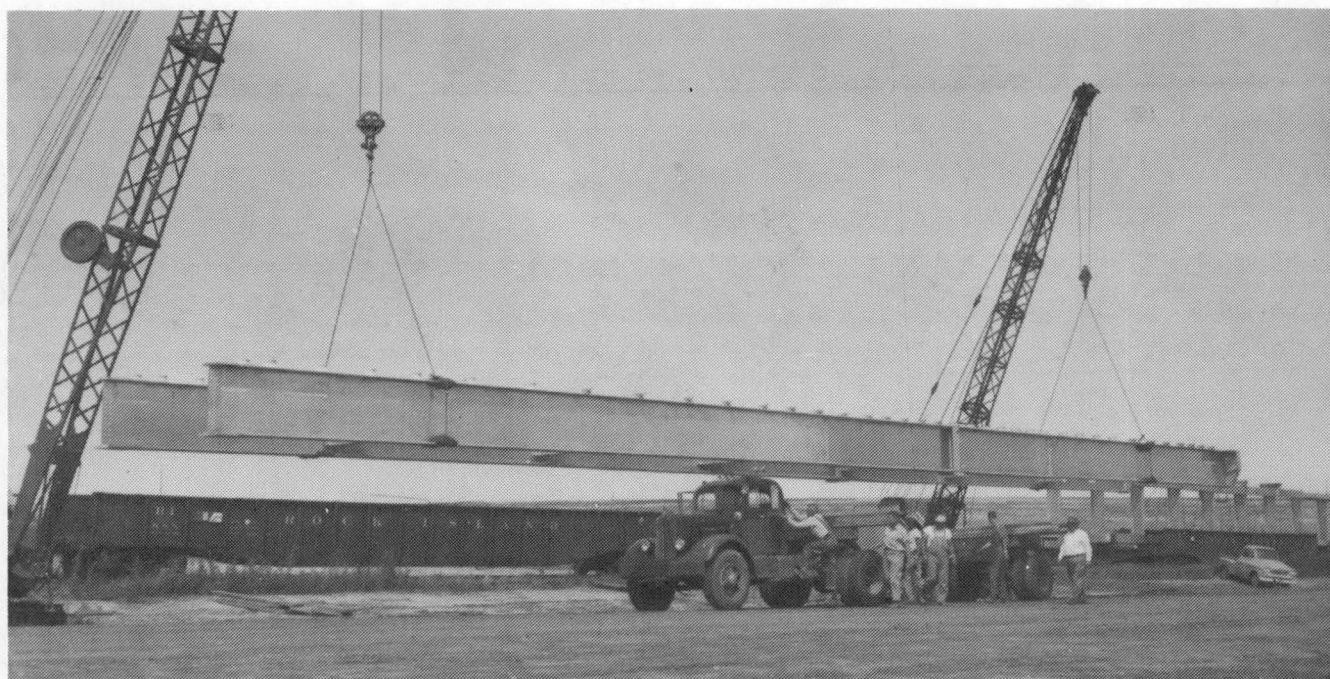


Also in this year the Commission took the first step in building a state-wide radio network so field forces could stay in contact with their home offices.

- L.M. Clauson became Chief Engineer in 1960, replacing John G. Butter.
- In 1961 Iowa attained yet another first with construction of a bridge using prestressed steel I-beams.



**(Left) L.M. Clauson (Below)
Bridge construction**



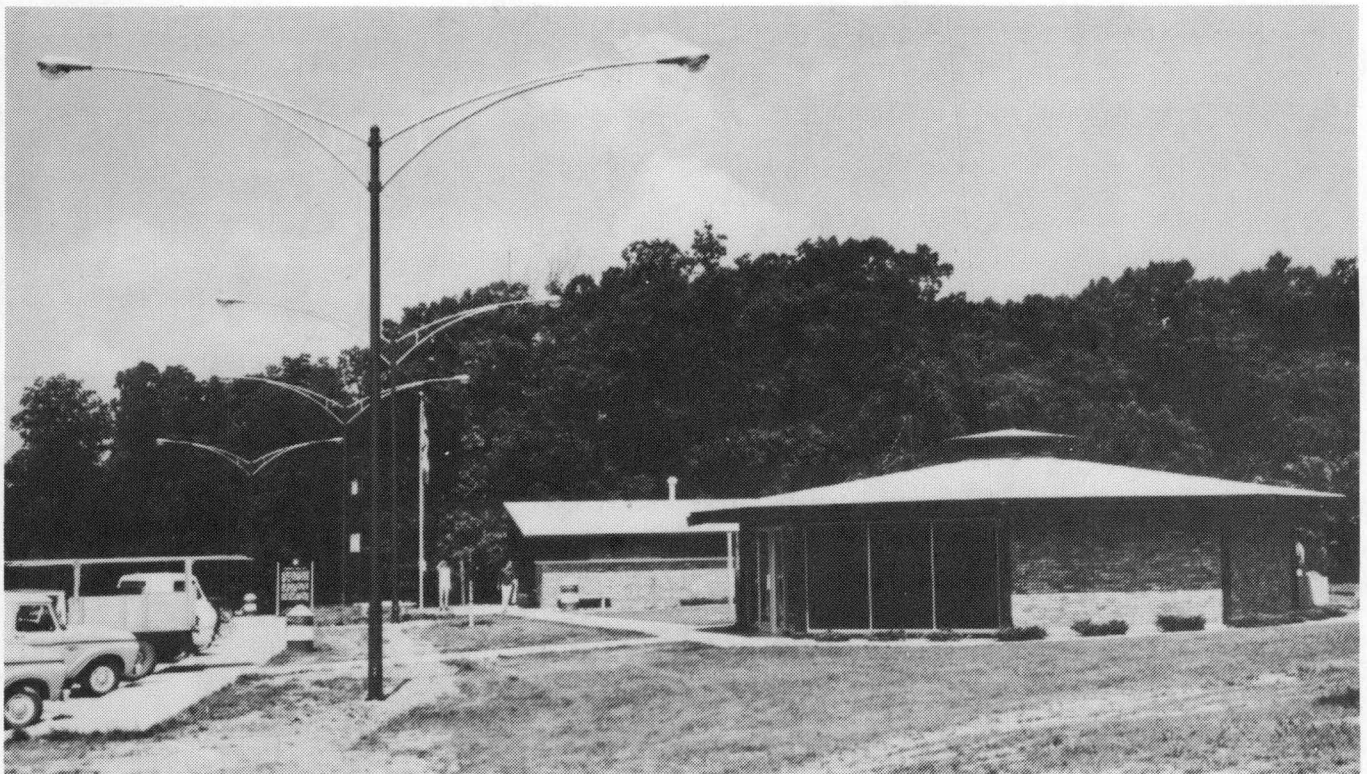
The legislative Road Study Committee, created in 1959, issued its report. The report disclosed that Iowa's highway needs for the next 20 years would require over \$5.5 billion. It also recommended the distribution of the Road Use Tax Fund be adjusted. They also called for a two-cent increase in the gas tax, with that money going to the primary fund. The Legislature agreed and came up with a new funding distribution plan. After "off the top" allocations, 47 percent went to the state, 30 percent to the secondary system 10 percent to the Farm-to-Market system and 13 percent to cities and towns.

- The Highway Commission in 1962 became the first to use the photo-file technique to inventory highways.
- In 1963 Iowa began experimental work on what is now known as the "Iowa Method" of bridge deck repair. A low water-cement ratio dense concrete was developed which could be used for patching small areas, or as a complete deck overlay.
- Iowa introduced another pair of firsts in 1964. They were the use of polyurethane joints for pavement and the use of hot mix asphaltic concrete as full depth Interstate pavement which required no sub-base.
- The Highway Commission bought its first airplane, a Piper Aztec, in 1965.

A new federal law for control of outdoor advertising signs was implemented in this year. The law did not allow advertising signs within 660 feet of the right of way line on Interstate and primary highways.

Interstate rest area and information center.

The first Interstate rest area building was opened on I-80 in Johnson County.



The approximate salary schedule in 1965 was:

Accountant	\$380/mo.
Air Pilot	750/mo.
Appraiser	550/mo.
Blueprinter	360/mo.
Bookkeeper	330/mo.
Carpenter	360/mo.
Clerk	220/mo.
Computer Operator	380/mo.
Division Director	750/mo.
Engineer	575/mo.
Engineer in Training	650/mo.
Engineer Aid	345/mo.
Foreman	440/mo.
Geologist	525/mo.
Key Punch Operator	252/mo.
Lab Technician	315/mo.
Laborer	288/mo.
Maintenance Man	330/mo.
Mechanic	360/mo.
Department Head	600/mo.
Programmer	500/mo.
ROW Agent	550/mo.
Equipment Operator	345/mo.
Secretary	330/mo.
Shipping Clerk	288/mo.
Stenographer	276/mo.
Superintendent	440/mo.
Supervisor	360/mo.
Telephone Operator	264/mo.
Traffic Weight Officer	360/mo.
Typist	252/mo.

A new Chevy sold for \$2,731 and gas was up to 33.2 cents a gallon. A new house was \$14,450. A movie ticket was \$2.40 and a rock concert ticket was \$4. A record album sold for \$4.75.

- Still another Iowa first was introduced in 1966. This was the use of continuous reinforced steel in paving. The steel was placed by a newly developed machine and eliminated a substantial amount of hand labor.

On December 1, 1966, L.M. Clauson retired as Chief Engineer.

- In January 1967 Joseph R. Coupal Jr. became the agency's first Director of Highways and Howard E. Gunnerson became the Chief Engineer. Coupal was the first non-engineer to head the Highway Commission.
- Another first was accomplished in 1968 when Iowa published a study on "Optimum Enforcement Levels for Traffic Weight Operations."
- A new safety program was begun in 1969 with the lighting of rural primary highway intersections.

**(Right) J.R. Coupal (Far right)
H.E. Gunnerson (Below) Welgh
Station in operation.**



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- Starting in 1969, female employees were allowed to wear slacks or slack suits to work. Prior to this time they had been required to wear dresses or skirts and blouses.
 - On June 1, 1971, Iowa topped the nation in the number of miles of portland cement concrete paving on secondary roads with 2,750 miles.
 - A new administration building at the Ames complex was erected in 1972.
 - An international oil crisis in 1973 triggered a gasoline shortage and a national order to reduce highway speeds to 55 miles per hour.

The new administration building.



A NEW ORGANIZATION EVOLVES

In 1974, following a complete review of the state's various roles in transportation, the Legislature and Governor concluded the activities should be organized into a single department—the Iowa Department of Transportation. They also determined the Commission should be increased to seven members.

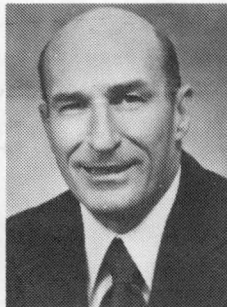
Consolidated into one department were the Aeronautics and Highway Commissions, the Motor Vehicle Division of the Department of Public Safety, the Transportation Regulation Division of the Iowa Commerce Commission, and the Iowa Reciprocity Board. New units were formed for public transit, railroads and river transportation.

This new department officially came into being on July 1, 1974. However, it was given until July 1, 1975, to become fully operational.

During the summer of 1974 the new Transportation Commission began organizing the new department. Members of that first DOT Commission were William McGrath of Melrose, Stanley Schoelerman of Spencer, Henry Reed of Winterset, Robert Rigler of New Hampton, Stephen Garst of Coon Rapids, Ann Pellegrino of Story City and Allan Thoms of Dubuque. Rigler Garst and Reed had been on the Highway Commission.



McGrath



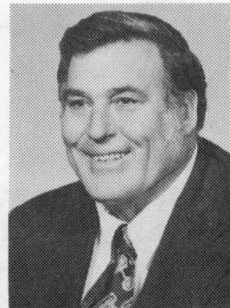
Schoelerman



Reed



Rigler



Garst



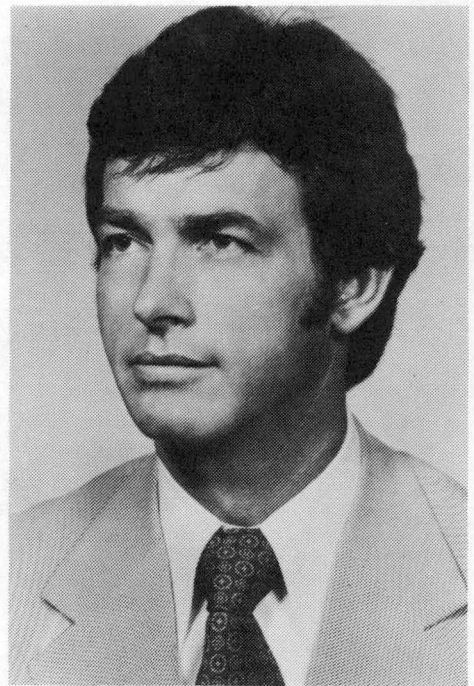
Pellegrino



Thoms

In July 1974 Joseph Coupal resigned as Highway Director. Howard Gunner-son was appointed acting director as well as Chief Engineer.

Late in 1974 the DOT Commission appointed Victor Preisser as the state's first Director of Transportation. However, he did not begin his duties until January 1975. The DOT was fully organized and operational before the July 1, 1975, deadline. In place were the Administration Division, Aeronautics Division, General Counsel Division, Highway Division, Motor Vehicle Division, Rail Division, River Division and Transportation Regulation Board.



Victor Preisser

In 1974 Iowa developed the first Rail Assistance Program to upgrade the state's branchlines. This unique program has been cited by the federal government as the way railroads, shippers and state government should unite to preserve vital rail lines.

Since its inception, the DOT has demonstrated that state government can identify and solve many transportation problems. It has also continued Iowa's national reputation as a leader in transportation innovations.

As the new department began, here is how the 1975 pay schedule looked:

Accountant	\$ 847/mo.
Account Clerk 1	520/mo.
Account Technician I	641/mo.
Attorney	1,344/mo.
Auto Mechanic	847/mo.
Binderyman	494/mo.
Supervisor	888/mo.
Chemist	847/mo.
Clerk	450/mo.
Clerk Steno	520/mo.
Clerk Typist	494/mo.
Computer Operator	643/mo.
Computer Programmer	720/mo.
Construction Technician	808/mo.
Construction Worker	494/mo.
Data Entry Operator	494/mo.
Design Technician	929/mo.
Draftsman	593/mo.
Engineer Aid	593/mo.
Geologist	847/mo.
Highway Division Director	1,948/mo.
Highway EIT	975/mo.
Highway Engineer 1	1,115/mo.
Maintenance Man	643/mo.
Maintenance Supervisor	975/mo.
Lab Technician	593/mo.
Maintenance Worker	544/mo.
Materials Inspector	593/mo.
Planning Aid 1	593/mo.
Purchasing Agent 1	771/mo.
ROW Agent 1	847/mo.
ROW Aid 1	593/mo.
Secretary	567/mo.
Survey Party Chief	888/mo.
Traffic Weight Officer	650/mo.
Transportation Planner 1	1,032/mo.

Highlights since 1975 include:

- In 1976 the Aeronautics Division began operating the state's first aircraft pool.

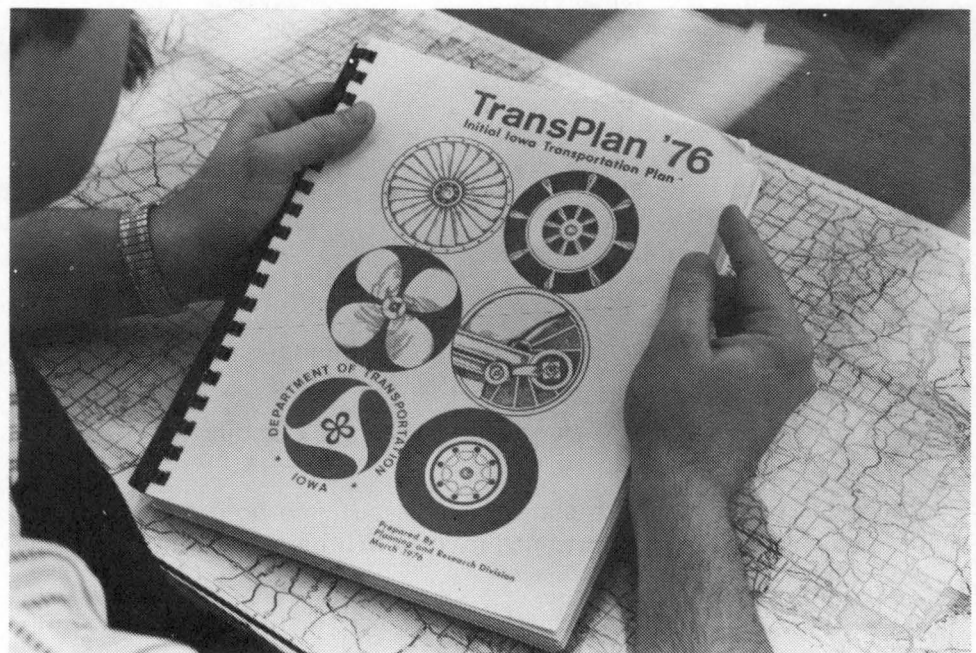
Iowa's first transportation plan was created by the Planning and Research Division.

In 1976 DOT established a state transit assistance program to provide financial assistance for transit activities in both urban and rural areas of the state.

Zero based budgeting was implemented to help managers better identify and evaluate budget requests.



(Above) Part of the state's aircraft pool. **(Right)** Iowa's first comprehensive Transportation Plan.





"Gold Book," a management control system, was introduced to monitor performance through fast comparative analysis.

The new materials testing laboratory.

DOT efforts to pave many of the previously turf runways in Iowa has resulted in a modern all-weather system of airports to serve the needs of aviation in Iowa.

The Highway Division started research leading to the nation's first recycled portland cement concrete pavements.

In 1976 the nation's first 24 hours seven-day-a-week truck permit center was established by the Motor Vehicle Division. This "one stop shopping" concept was an instant hit with the trucking industry.

A modern Materials Testing Lab was erected at the Ames complex.

- In 1977 the Highway Division let more than 600 contracts totaling a record \$177 million for highway construction.

The first rail track geometry car was introduced by the Rail Division. The vehicle was used to determine the quality and deficiencies of the rail lines in the state.

DOT established a motor vehicle information center. Iowan's could call the

(Right) DOT's first rail geometry car. (Below) Raymond L. Kassel



center on a toll free line to obtain answers to questions regarding motor vehicle laws.

A study of land use and transportation, a first in Iowa, was done in 1977.

In December 1977 Victor Preisser resigned as DOT Director.

- In 1978 the first inland waterway rail/water tariff was implemented through the cooperation of the DOT, railroads, shippers and barge operators.

Raymond L. Kassel became the DOT's second Director of Transportation on May 1, 1978.





(Left) Grain being loaded for shipment to ... (Below) a barge operation on the Mississippi.



In 1978 the Department was presented the Federal Highway Administration award for transfer of technology to other state and public agencies.

DOT established a runway marking program which has made it possible for all Iowa airports to have standardized runway markings at minimal cost.



A reminder of Iowa's curbs.

- In an effort to conserve electrical energy the DOT, in 1979, turned off 29 percent of the urban freeway lights. Remaining lights were converted to the more efficient high-pressure sodium lamps.

The National Council for the Disadvantaged gave its 1979 Audio-Visual Achievement Award to the Public Transit Division for its media campaign.

To conserve fuel, a downsizing of the DOT's cars and pickups was begun.

- A three-year program to eliminate the "infamous" curbs from Iowa's 18- and 20-foot pavements was completed in 1980. More than 1,300 miles of curb was removed.
- In 1981, because of a funding shortage, the DOT's emphasis changed from constructing new roads to preserving the existing highway system.

In late 1981 Director of Transportation Raymond L. Kassel announced his retirement from the DOT.



- In January 1982 Warren B. Dunham became Iowa's third Director of Transportation.
- A large-scale program to recycle asphalt pavements was begun in Iowa during 1983.
- In 1984 Iowa became the first state in the nation to develop and establish a method of sharing federal capital allocations between transit systems.



**(Above) Warren B. Dunham
(Left) Des Moines—an example
of public transit in Iowa.**



One of many rail crossings reviewed by the Iowa DOT for possible safety improvements.

In 1984 Iowa's staggered vehicle registration law went into effect and the vehicle inspection law was repealed.

- Iowa's Interstate System was completed in 1985 when I-380 between Cedar Rapids and Waterloo was finished. It took 27 years and over \$1 billion to complete this system.

In 1985 the Iowa DOT was one of the first state agencies in the country to develop a corridor review process to identify potential safety improvements at rail crossings.

Also in 1985 Iowa developed and constructed its first project using flowable mortar. This innovative technique allowed substitution of culverts for bridges while the bridge deck was left in place as part of the road. This was done by pumping the flowable mortar through a hole in the deck to fill voids under it to provide a solid foundation for deck.

DOT encouraged modernization of transit management by providing nearly all of the 35 urban and regional transit systems with computer systems.

The approximate pay schedule for 1985 was:

Accountant	\$1,655/mo.
Accounting Clerk 1	953/mo.
Accounting Technician 1	1,200/mo.
Attorney	2,218/mo.
Auto Mechanic	1,350/mo.
Chemist	1,452/mo.
Clerk Steno	910/mo.
Clerk	762/mo.
Computer Operator 1	1,100/mo.
Computer Programmer	1,468/mo.
Construction Technician	1,344/mo.
Custodial Worker	918/mo.
Data Entry Operator	910/mo.
Design Technician 1	1,006/mo.
Engineer Aid 1	1,022/mo.
Equipment Operator 1	1,060/mo.
Geologist	1,575/mo.
Highway Division Director	3,250/mo.
Highway EIT	1,637/mo.
Highway Engineer 1	1,860/mo.
Highway Materials Supervisor I	1,450/mo.
Maintenance Worker	988/mo.
Materials Technician 1	1,022/mo.
Motor Vehicle Enf. Officer	1,347/mo.
Planning Aid 1	1,022/mo.
Purchasing Agent 1	1,404/mo.
ROW Agent 1	1,469/mo.
ROW Aid 1	1,182/mo.
Secretary	995/mo.
Survey Party Chief	2,161/mo.
Systems Analyst	1,954/mo.
Transportation Planner 1	1,820/mo.
Word Processor 1	953/mo.

A burger and fries cost about \$1.18; a movie was up to \$5; a ticket to a rock concert was \$14.50 and a record album sold for \$9.50. A can of pop cost 50 cents.

- In 1986 Iowa required seat belts to be used by all drivers and front seat passengers.

Another outstanding first was introduced by the Department in 1986. This was a new paving concept called "Fast Track," which caught world-wide attention. A new type of concrete was developed, which because of its fast drying capability, allowed for traffic to be back on a road within 36 hours.

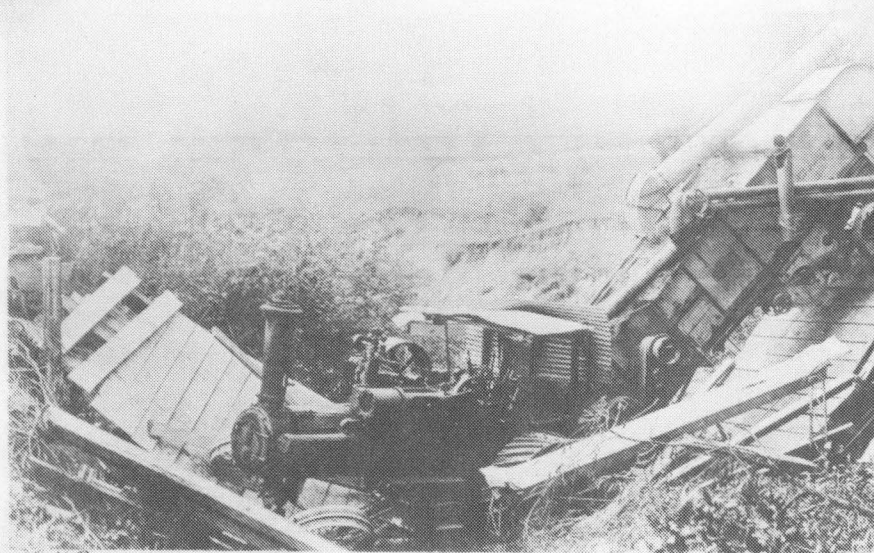
A new computer system was brought to the Department which helped increase productivity. The system was Computer Aided Drafting and Design (CADD).

- Warren B. Dunham resigned as DOT Director in January 1988. His six-year tenure was longer than any previous director.

A PHOTO ALBUM



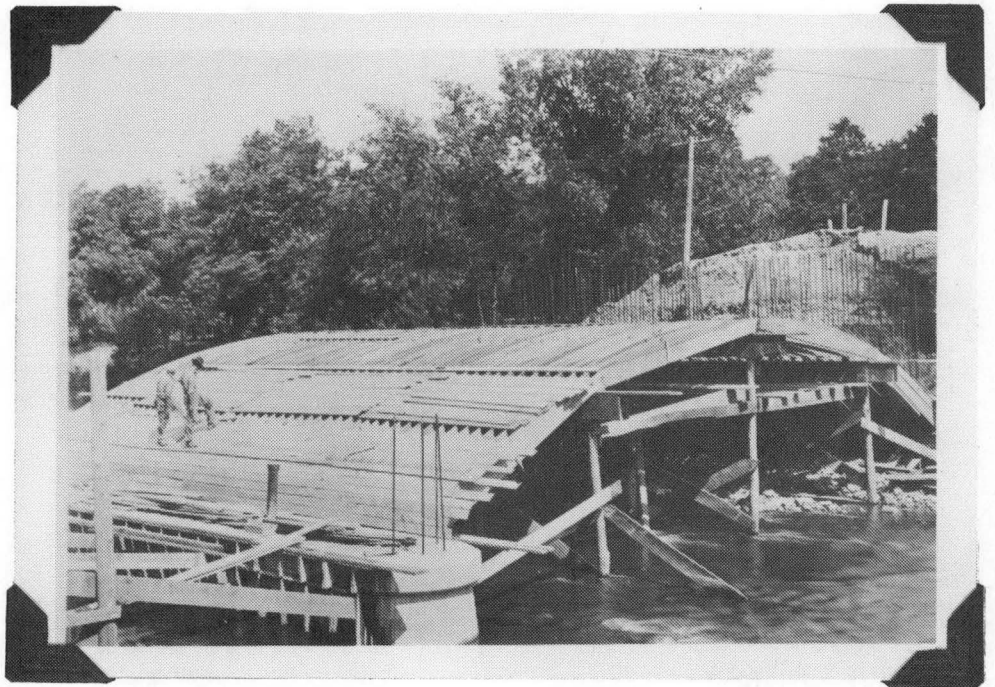
*Horse drawn road gang.
Camp Dodge - Palk Co.*



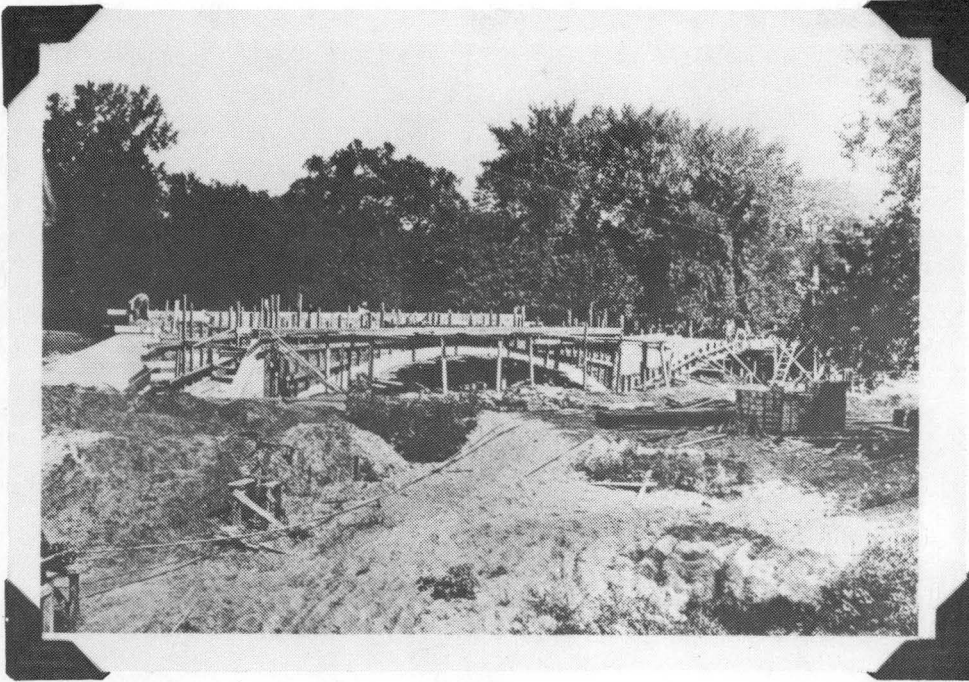
*The old wooden bridges
built for horses and wagons
could not take the weight
of tractors and threshers.*



*Building "Head" Memorial
Bridge on Lincoln
Hwy. in Greene Co. near
Jefferson, Iowa - 1914*



*Wood falsework for Head
Memorial Bridge - 1914*



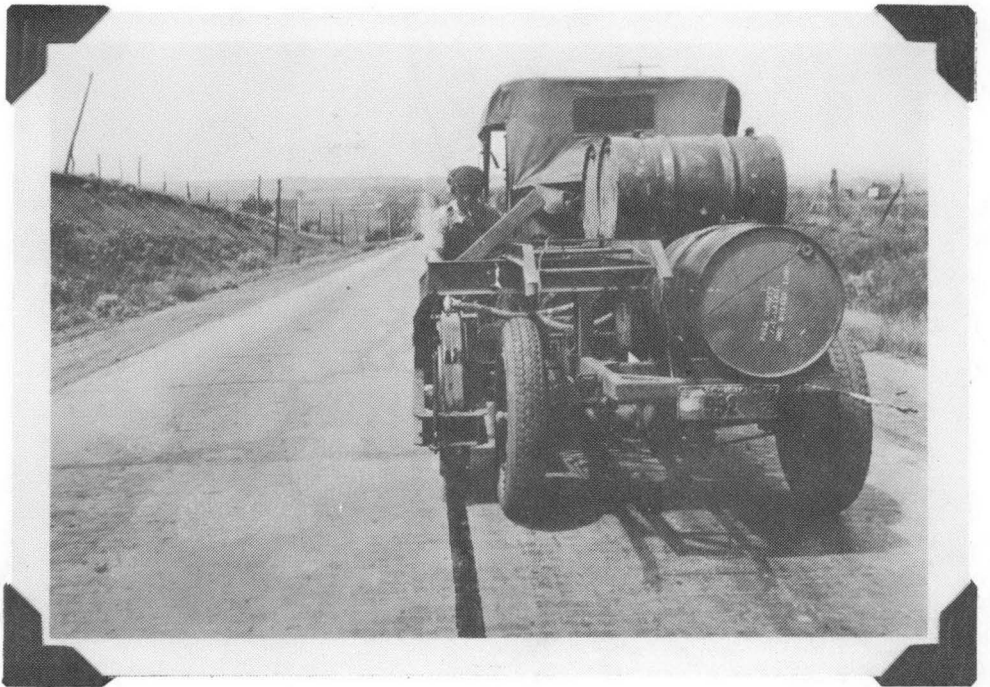
*Distance view of supports
and arches. Head Mem.
Bridge*



*Hand tied reinforcing bar.
Hand pushed board carried
bars and wet concrete to
floor of bridge on narrow
gauge tracks. (Head)*



*Finished Bridge. Total Cost:
\$6,186.85. Head Mem. Sr.*



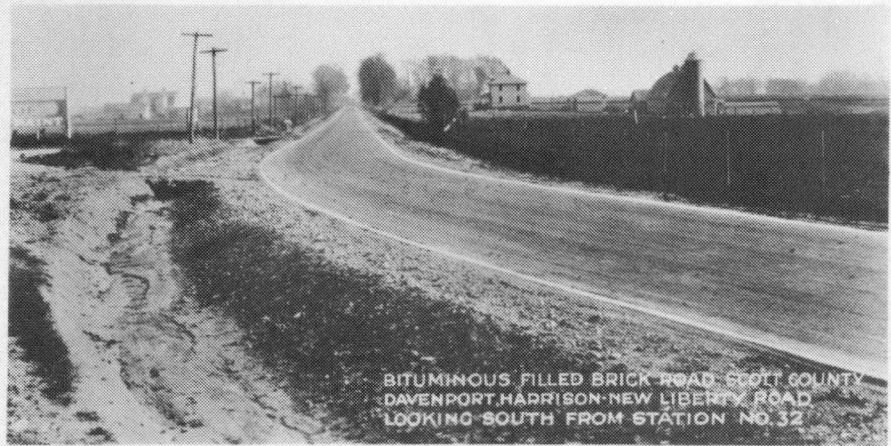
*Centerline paint truck
1920's.*



*Concrete base work on
 New Liberty Road in
 Davenport - 1921*



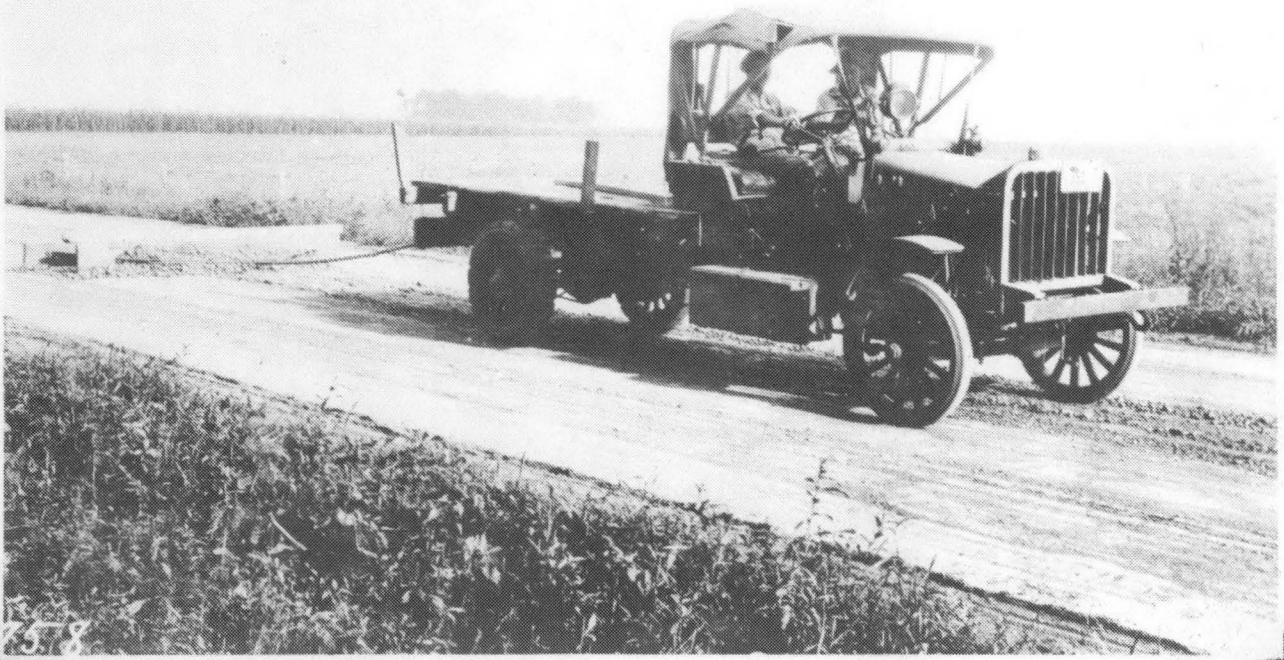
*Grinnell M&St. L. RR Viaduct
 Poweshiek Co.*



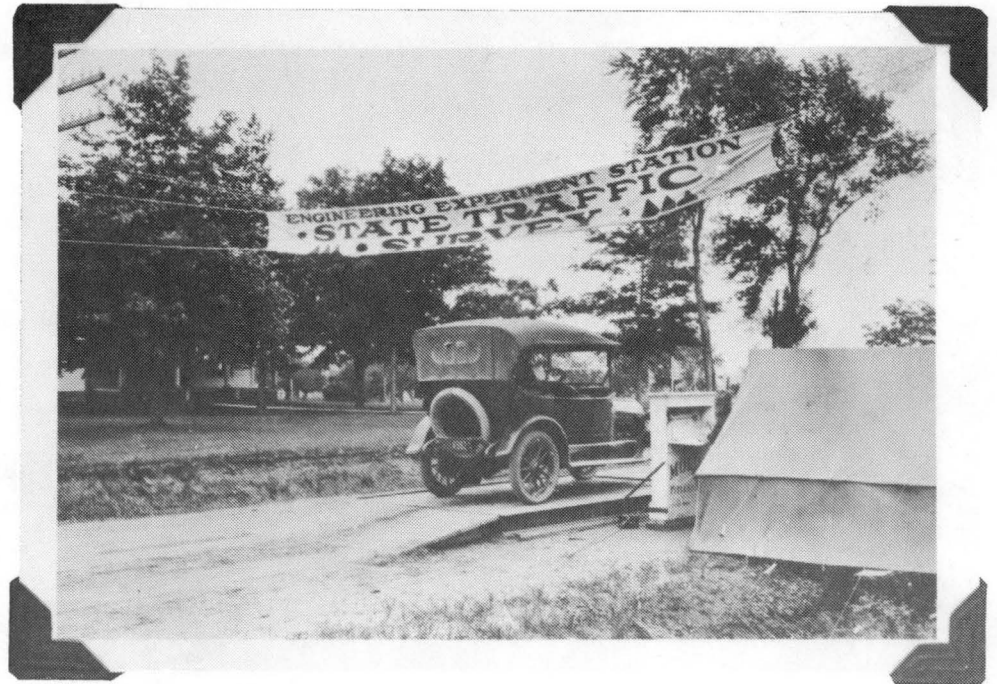
*Bituminous Filled
Brick on New Liberty
Road in Davenport.*



Culvert and car - Franklin Co.



Maintenance crew with a
road drag to smooth
the surface after a rain.
Union Co. - 1920



Early Weigh Station



*a farmer erected this
marker to guide travel
on the unmarked road.
Early 1900's - Boone Co.*



Pock Co. Detour Sign



*Old Camp Ground Sign
1920*



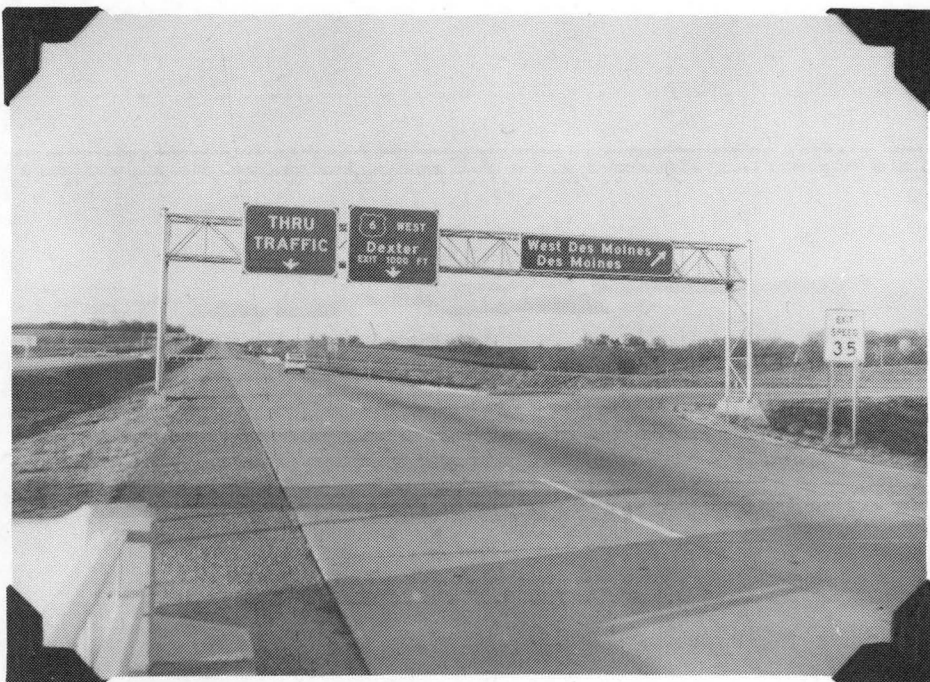
Old Entering Iowa sign



New Entering Iowa sign



A highway traveler in the early 1900's knew a gravel road would soon be upon them again.



Present Day Interstate Signing



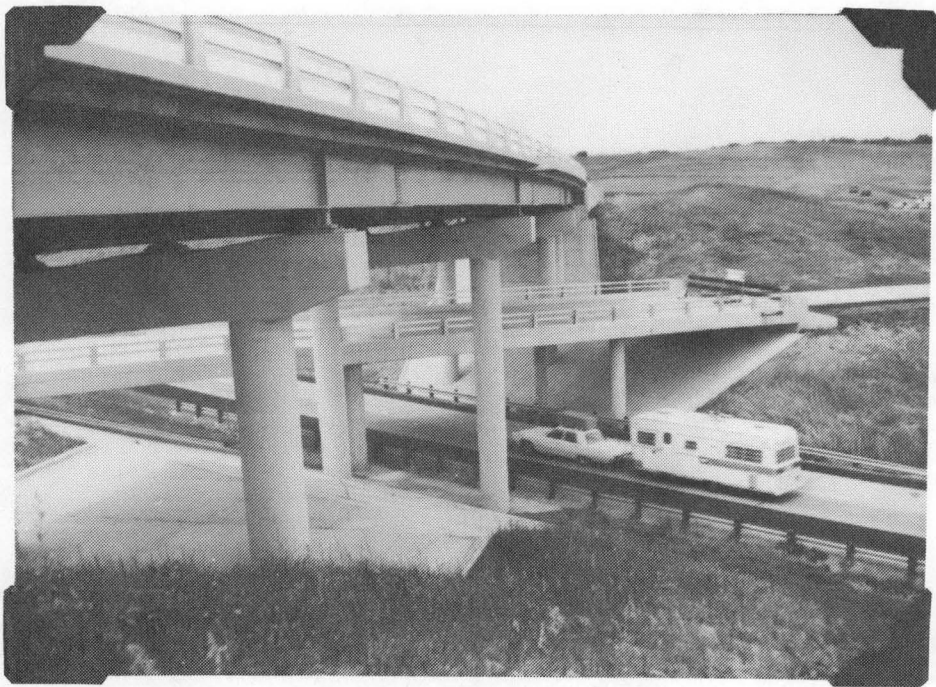
*a D.O.T. sign shop worker
fabricating a highway sign*



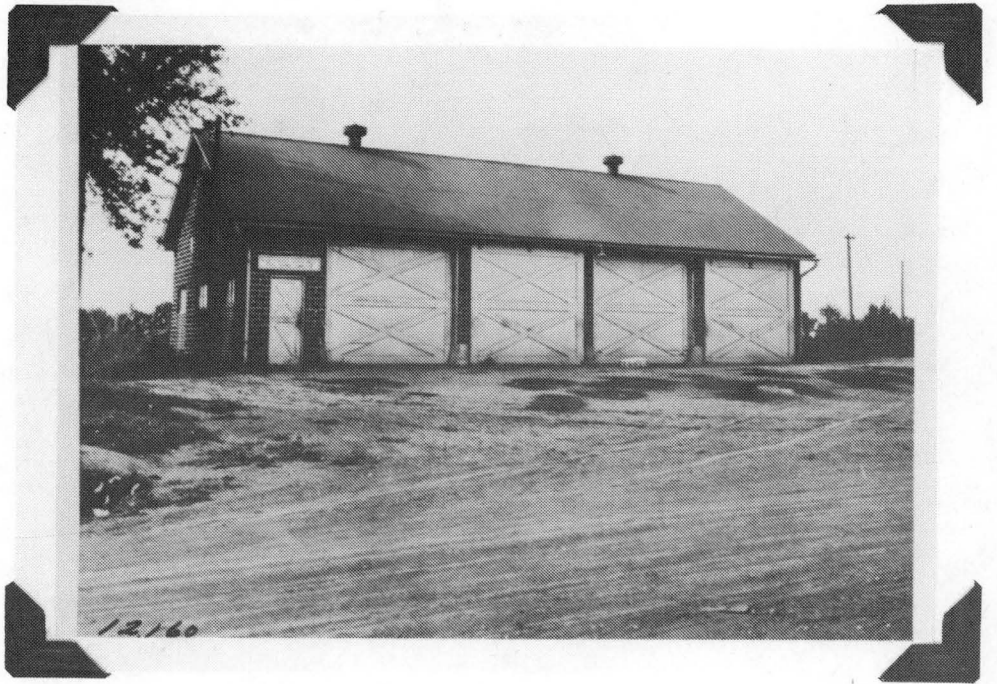
*D.O.T. maintenance workers
repairing a damaged
sign*



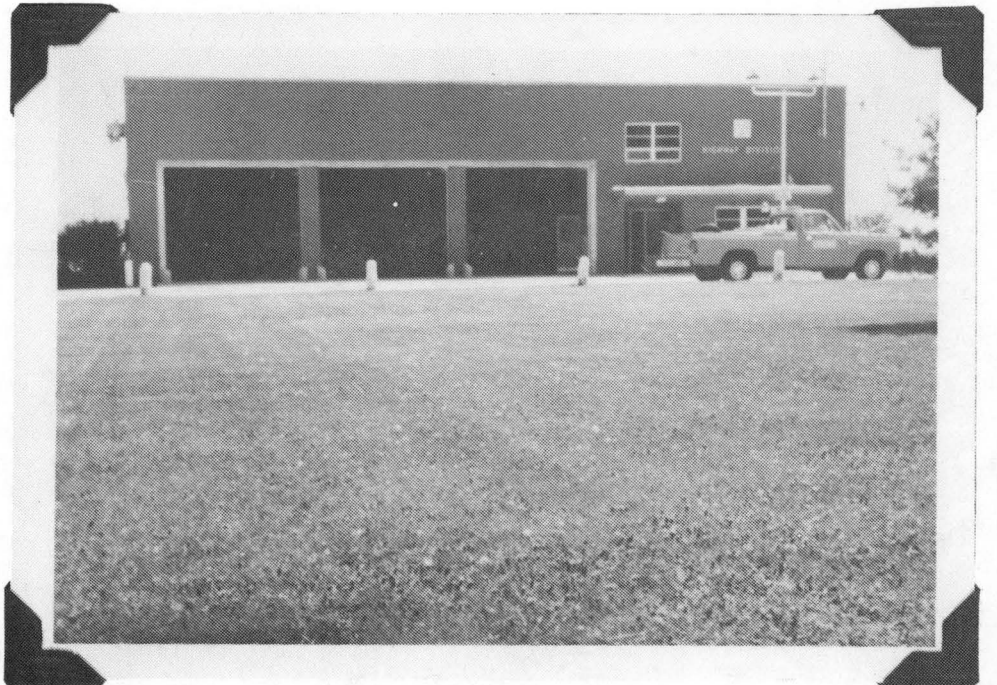
*Ames Underpass - U.S. 69
Story Co. - 1938*



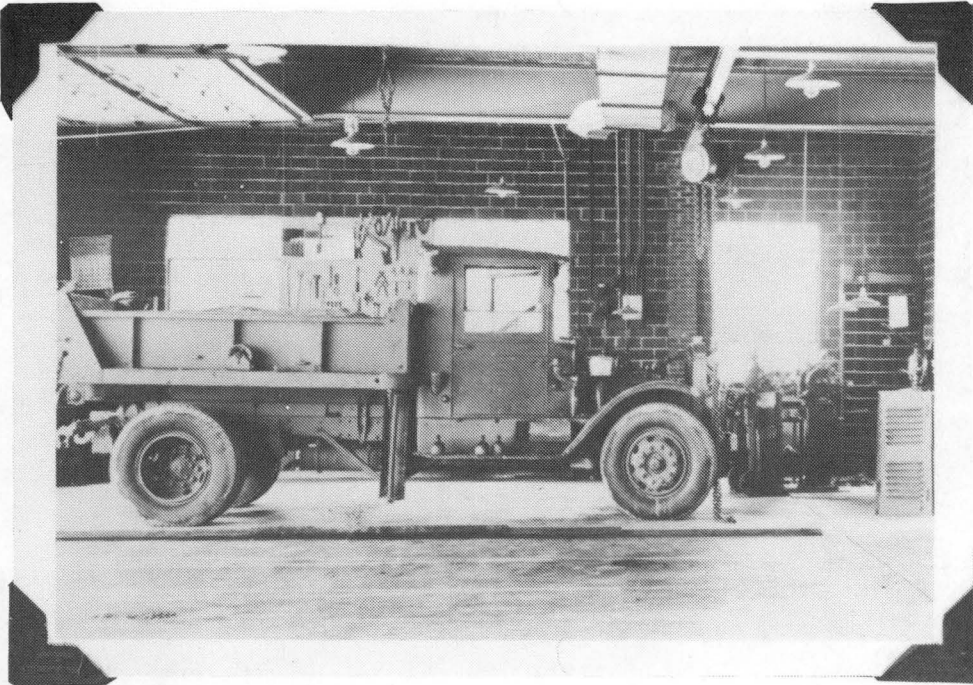
Today's Interstate Highway



Early Maintenance Garage



1980's Maintenance Garage



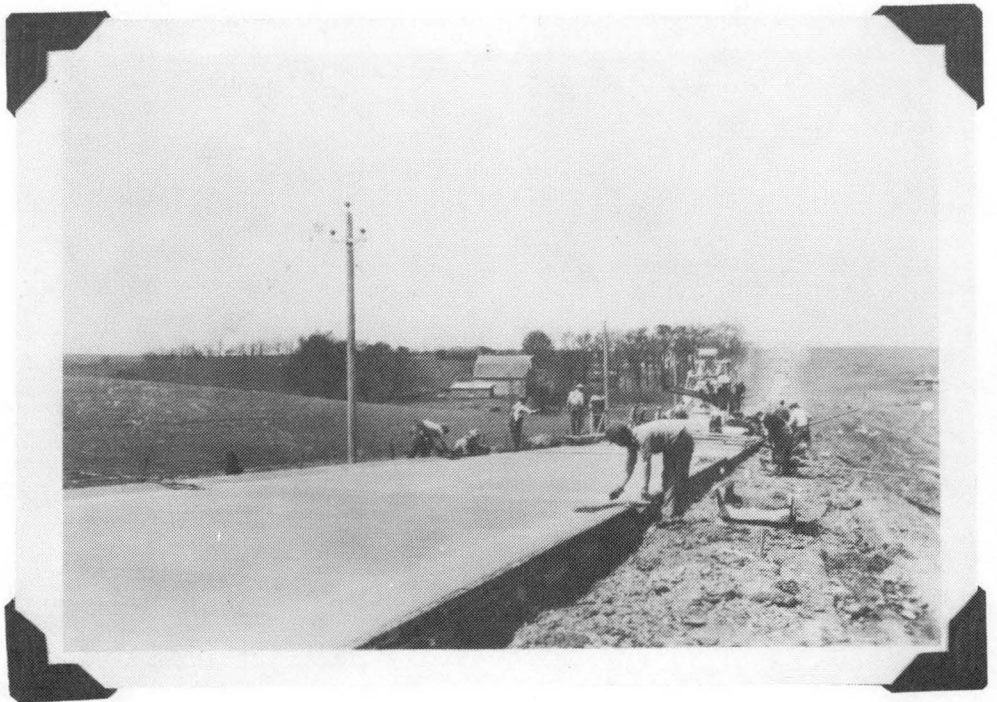
1917 Maintenance Truck



1980's Maintenance Truck



*Paving 1930's - Truck
backing up over subgrade
shaper to go back to paver.*



*Placing & finishing curb.
1930's.*



*Paving 1960's - Smoothing
wet concrete in front
of finishing machine.
Finished slab behind.*



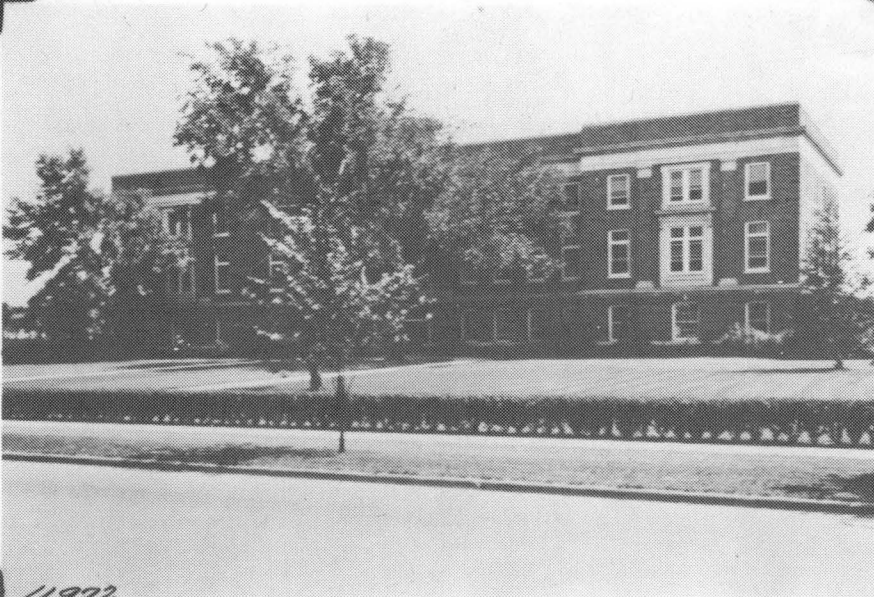
*Batch truck dumping
wet cement at site.
PC Pave - 1985*



1940's Snow Plow



1980's Snow Plow



11972

*Old Main Bldg. in
Ames, Iowa c. 1922*



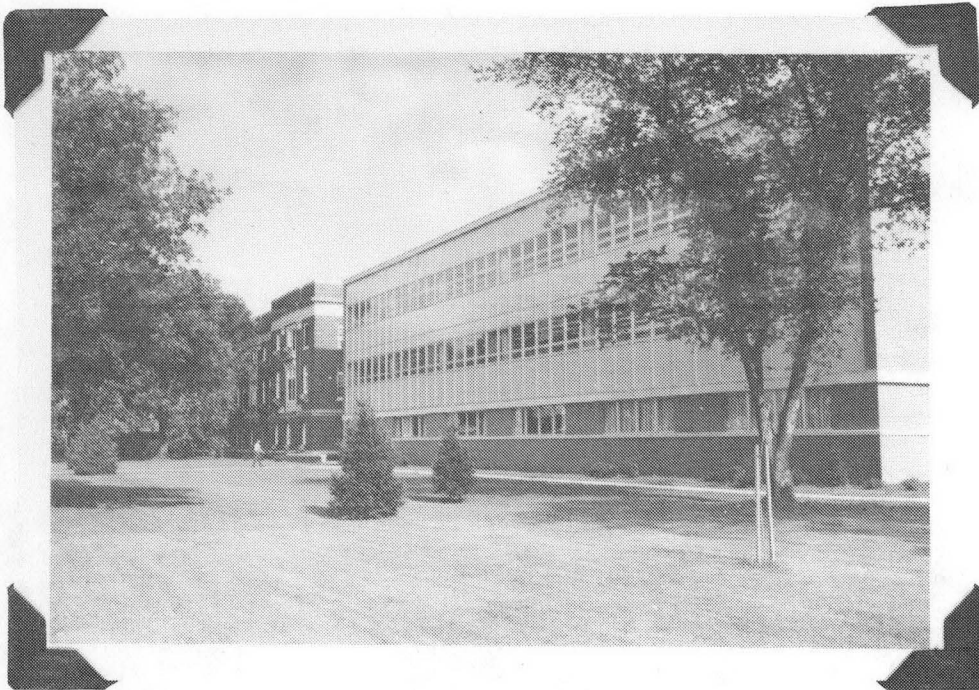
*Auxiliary buildings
at the D.O.T. Complex
in Ames, Iowa - 1950's.*



Old Main Bldg - 1924
and the New Nat Bldg.
behind it in 1950's.
Ames, Iowa



*Breaking ground in 1960
for the addition to the
D.O.T. Admin. Bldg. in
Ames, Iowa.*



*Administration Bldg. of
D.O.T. in Ames - 1962*



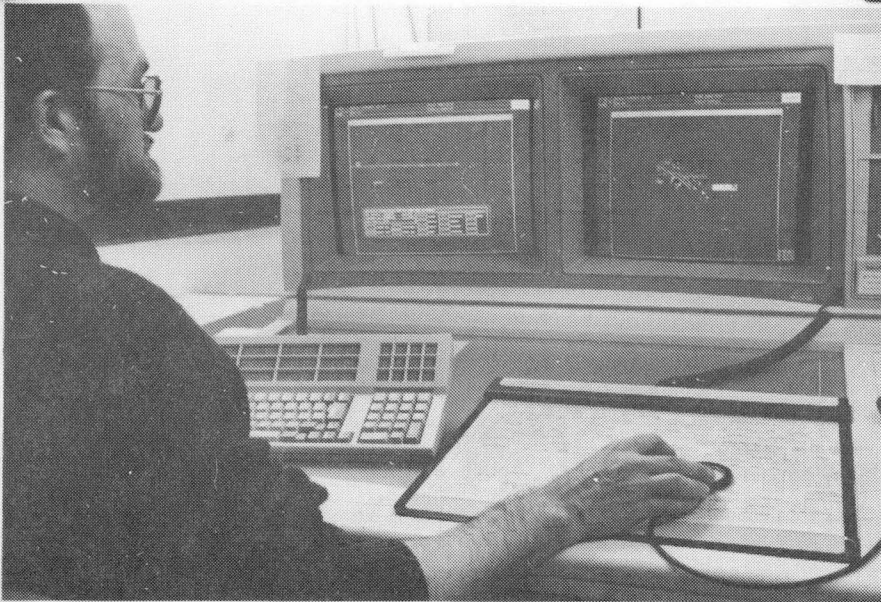
*Des Moines - 1959
21st and School St.
(Before)*



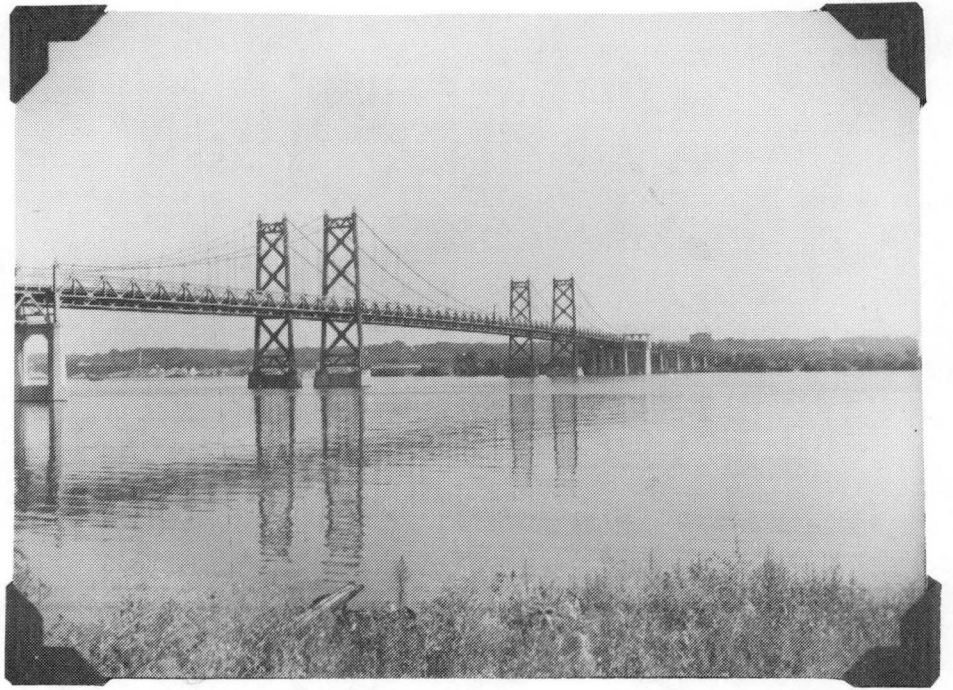
*Des Moines Freeway - 1961
21st and School St.
(After)*



*a slide rule was used
for computations prior
to calculators and
computer.*



*Computerized aid
for drafting and
design. The CADD
system - 1988.*



*Bridge over Mississippi
River at Bettendorf*



*Bridge over Mississippi
River at Ravenhill*



*Longest single span
arch in Iowa - Hardin Co.*



4608

*Lattice truss covered
bridge near Winthrop
Madison Co.*

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