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The reports of research published in this magazine are necessarily qualified by the conditions of the tests from which the data are obtained. Whenever it is deemed possible to do so, generalizations are drawn from the results of the tests; and, unless this is done, the conclusions formulated must be considered as specifically pertinent only to described conditions.

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MARGINAL LAND ACQUISITION FOR HIGHWAYS

A DISCUSSION OF THE PROBLEMS INVOLVED IN THE ACQUISITION OF EXCESS LAND INCIDENTAL TO HIGHWAY DEVELOPMENT

BY THE DIVISION OF CONTROL, PUBLIC ROADS ADMINISTRATION

Reported by H. R. BRIGGS, Field Investigator and Statistician

INCREASING INTEREST has been directed in recent years to the problem of providing adequate rights-of-way for streets and highways. The construction of express highways and freeways to serve expeditiously large volumes of motor-vehicle traffic has become a serious problem in many of the more densely populated areas of the United States. The widening of existing routes as well as the adequate development of new routes is frequently delayed by the excessive costs of land acquisition, particularly in highly developed areas.

In early highway development the cost of rights-of-way was usually only a small percentage of the total expenditure and land acquisition was not a serious problem. This was particularly true in the development of the rural road system in some parts of the country where rights-of-way along section lines had been established by statute or acquired without cost through long uninterrupted public use. Today the development of main routes in rural areas frequently necessitates widened rights-of-way or the acquisition of broad, new rights-of-way. The improvement of highway connections in urban areas can frequently be accomplished only by widening existing streets or cutting new streets through highly improved areas. Since the right-of-way cost sometimes represents a high percentage of the total cost of the improvement, it becomes an increasingly important obstacle delaying modernization of streets and highways.

The modern highway is no longer merely a "strip of land bounded by approximately parallel boundaries for the purpose of direct travel" (1).¹ Heavily traveled main highways should have neutral strips separating the lanes for traffic in one direction from the lanes for traffic in the opposite direction. Supplementing these lanes for through traffic, one-way local-service roads may be provided on either side of the arterial lanes and separated from them by neutral strips. Within the right-of-way limits, provision may also be made for sidewalks and bicycle or bridle paths, in addition to public service facilities such as water mains, sewers, gas mains, and electric and telephone wires.

An important part of the right-of-way problem is the acquisition or control of land outside the immediate boundaries of a given improvement. Such acquisition is generally desirable from the standpoints of appearance, safety, economy, and the general public welfare. The taking of additional land may also facilitate the future development of a highway, particularly where widening may become necessary because of increased traffic. It has also been suggested that since increased property values often accompany a public improvement, measures should be taken to conserve this unearned increment to the public so as to defray in part the cost of the

improvement. The conservation of these increased values may be accomplished through acquisition of excess land at the time of the improvement with subsequent resale after its completion. The acquisition of these excess lands either for marginal control or recoupment is commonly referred to as "excess condemnation."

The individual elements of "excess condemnation," namely, the necessity of marginal land² acquisition for adequate highway development, the varying possibilities and inherent limitations of recoupment acquisition, the increment tax and special assessments, and the analysis of increment and its relation to recoupment, have been made the subject of the present study. This report, which summarizes experience to date with various land-taking procedures in the United States and elsewhere, and discusses the limitations and possibilities of these elements in regard to present highway development and to adequate provision for present and future traffic needs, has been prepared at Madison, Wis., under a cooperative agreement between the University of Wisconsin and the Public Roads Administration.³

MARGINAL LAND ACQUISITION IS BEST SOLUTION OF REMNANT PROBLEM

Although the term "excess condemnation" might be construed to indicate that unnecessary or surplus land was acquired, usually only such land is taken as is necessary to make the improvement effective, or in some instances to avoid payment of high consequential damages. In addition, control of the development of land outside the physical limits of the highway is often essential if the maximum usefulness of the improvement is to be realized. Therefore, all land acquired outside such limits is not necessarily "excess" land. Rather than "excess condemnation," which has been loosely applied to the acquisition of land outside the boundaries of a street or park development, two terms may be used which convey a more nearly correct meaning. These are "marginal acquisition" and "recoupment acquisition."

Marginal acquisition is defined as the acquisition of land outside the boundaries of an improvement not directly required for its physical location but having a definite utility in connection with such improvement.

Recoupment acquisition is defined as the acquisition of land outside the boundaries of an improvement acquired for the purpose of resale so that some of the increment in land value resulting from the improvement will be recovered to pay part of the cost of the development.

¹ In this report the term "marginal land" is used to denote land bordering on highway rights-of-way.

³ This work is under the direction of Dr. H. R. Trumbower, Senior Agricultural Transportation Economist. Acknowledgments of assistance in the preparation of this report are due David R. Levin and Ann R. McGinley.

¹ Italic figures in parentheses refer to bibliography, p. 117.

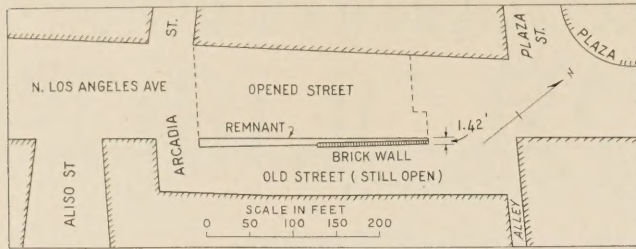


FIGURE 1.—LAND REMNANT LEFT WHEN N. LOS ANGELES AVENUE WAS OPENED, LOS ANGELES, CALIFORNIA.

Of the advantages that may be obtained by marginal land acquisition in connection with street and highway development, the more important ones discussed in this article are: (1) Solution of the remnant problem; (2) elimination or reduction of consequential damages; (3) reduction of damage costs and of land costs for future development; (4) protection of the highway appearance and conservation or development of adjacent property values; (5) removal of traffic hazards; and (6) conversion of main, through highways into freeways.

Marginal land acquisition appears to be the best solution to the remnant problem, created when the opening or widening of a street disorganizes the land pattern of city streets, lots, and blocks.

When a thoroughfare is widened or cut through a developed area, often only parts of some lots or tracts are required for the improvement, and remnants or gores are left. Frequently these remnants are small and of irregular shape. In many instances these pieces of land are too small to have any substantial economic value, and are often used for the erection of signboards, shanties, or some type of stand. Hence, they are often detrimental both to the improvement itself and to adjacent property values when the remnants cut off access to property which otherwise would have frontage on the improvement.

Sometimes these remnants can be combined with adjacent properties or with one another. Since such combinations usually require lengthy negotiations which are especially protracted in the event of joint or absentee ownership, concurrent acquisition by the public of both essential properties and remnants may simplify negotiations in subsequent sales or trades.

The remnant problem is intensified when an existing building is partially destroyed in connection with a street or highway improvement. A striking example occurred in Los Angeles, Calif., where a remnant several hundred feet long, about 8 feet wide at one end, and 2 feet at the other end, was left in the widening of North Los Angeles Avenue. Figure 1 shows the location of the building which was demolished, and a wall two stories high which remained on the north end of this remnant after the building was removed. The intrinsic value of the lot was destroyed by the street opening; there were heavy severance damages; and an unsightly use of the remnant resulted. However, because of legal limitations the city could not acquire this property for use in connection with the land it owned on either side (2). To prevent such occurrences in the future, the California Constitution was amended in 1928 to give to the public the power to acquire lands outside the boundaries of improvements by purchase or condemnation.

In 1915 the Committee of Taxation for the City of New York, in a letter transmitting a report on excess

condemnation (3), stated that New York furnished several horrible examples of remnants caused by cutting streets through built-up sections. One example cited was the Flatbush Avenue Extension. Three years after this improvement had been completed, despite its favorable location, development of the abutting property had not yet begun. At that time the street still looked "as if it had been devastated by an earthquake." (3). The State of New York adopted a constitutional amendment in 1913 permitting excess condemnation, and through legislative action in 1915 the power of excess condemnation was extended to the City of New York.

The effective use of this power was illustrated in the acquisition of land remnants in connection with the extension of Sixth Avenue. Five parcels in one block taken outside the right-of-way are shown in figure 2. Acquisition of this marginal property prevented the creation of irregular plots which might have been left occupied by partly demolished buildings. In one instance, there would have remained the remnant of a six-story building 95 feet long, 24 feet wide at one end, and running to a point at the other end.

LAWS SANCTIONING CONDEMNATION OF LAND REMNANTS HAVE GENERALLY BEEN DECLARED UNCONSTITUTIONAL

When Christie and Forsyth Streets in New York City were widened in 1929, land was taken from both sides of several blocks. Prior to the widening of the two streets the blocks between were 200 feet wide and fully developed. The combined takings necessary for the widening narrowed the intervening blocks to a width of 125 feet and demolished all existing buildings fronting on the east side of Christie Street and on the west side of Forsyth Street within the area of the improvement. Because of the property damage which resulted, it was thought to be in the best interests of the city to acquire the entire blocks between Canal and East Houston Streets. The plan of this widening is shown in figure 3. The excess land acquired was later landscaped and converted into playgrounds and small parks.

The remnant problem exists also in rural areas. A highway development may cut through a farm or decrease the size of an orchard or truck garden to such an extent as to leave the remainder unsuited for agricultural purposes. This is especially true if a highway so severs a farm that a small parcel is separated from the main property, and the situation is aggravated by the separation of a farm house from its outbuildings or by the total or partial destruction of these buildings.

Attempts have been made through legislation to sanction the acquisition of land remnants by condemnation, but the courts, in those cases which have come before them, have generally declared such laws unconstitutional. As early as 1812 in New York, and 1817 in South Carolina, State legislatures, with a view toward correcting the remnant situation, enacted laws permitting cities, when only a part of a lot was needed for highway purposes, to acquire the entire tract by condemnation. In 1824 in the case of *Dunn v. City of Charleston* (4), the court found the South Carolina act unconstitutional; and in 1834 in the *Matter of Albany Street* (5), the New York Supreme Court declared the New York law of 1812 void. One of the bases for the courts' decisions was that if the principle of taking the land outside the limits of a highway were approved, it would apply equally to the taking of either a small area or a large tract.

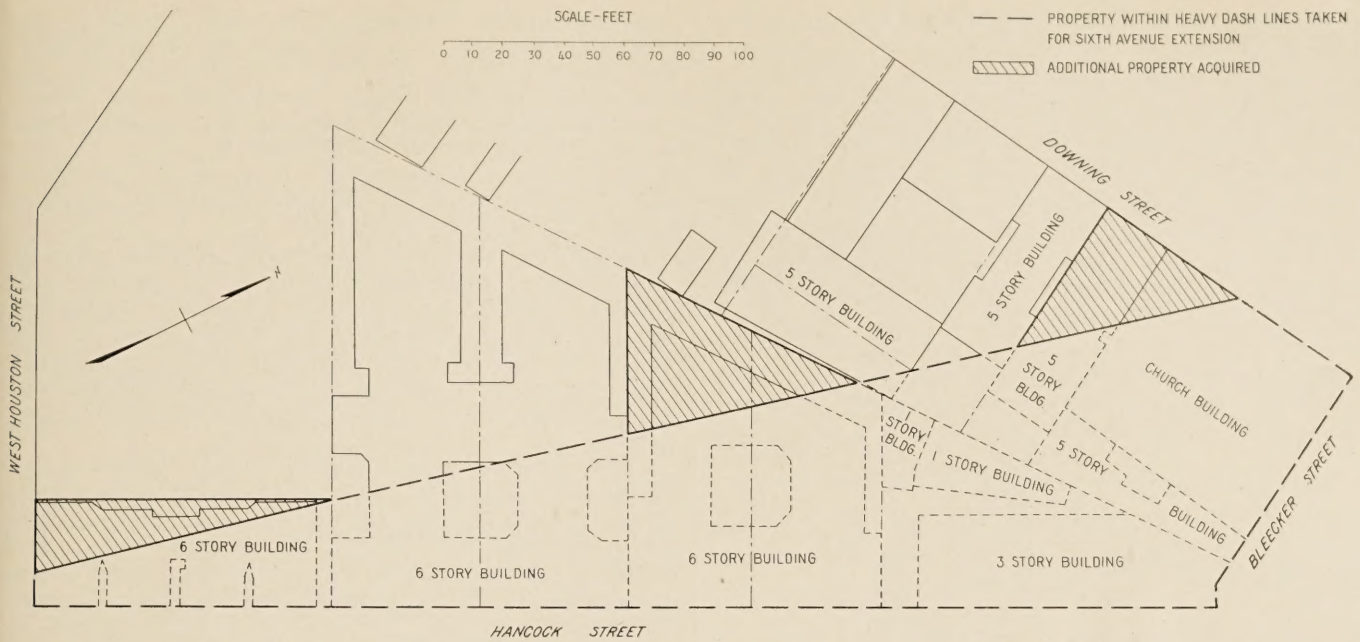


FIGURE 2.—ADDITIONAL PROPERTY ACQUIRED IN CONNECTION WITH SIXTH AVENUE EXTENSION, NEW YORK CITY.

In *Embury v. Conner* (6), the doctrine of the Albany Street case was reaffirmed. Again in New York in 1863, in the case of *Bennett v. Boyle* (7), the court stated that in the widening of an avenue in a city, the powers and jurisdiction of the commissioners are limited and restrained to the lines of the avenue as enlarged. Beyond and outside those lines they can exert no power or authority whatever.

A case directly involving this point was that of the *City of Richmond v. Carneal* (8). A new street which cut diagonally across streets and blocks of the city was opened. The court held that the taking of land must be confined to the 80-foot strip needed for the right-of-way, notwithstanding that there was a State statute authorizing the taking of real estate abutting a proposed street when such property would be injuriously affected unless it were taken also and lot-lines readjusted.

In the five cases just cited where attempts were made under statutory authority to acquire land remnants in connection with highway improvements, the courts sanctioned the taking of only such land as was within the limits of the highway. However, remnant acquisition was approved in a Massachusetts case. In *Opinion of the Justices*, (9), the Massachusetts Supreme Court indicated that if there were a land remnant so small that a suitable building could not be erected upon it, then it would sustain the taking of such a parcel under the power of eminent domain. A Massachusetts law authorizing the taking of remnants was passed in 1904, but no case arose requiring a specific decision interpreting this authority. The *Opinion of the Justices* was given in 1910 in answer to a hypothetical question submitted by the legislature.

SEVERAL STATES HAVE ADOPTED CONSTITUTIONAL AMENDMENTS EXTENDING THE POWER OF EMINENT DOMAIN

Constitutional amendments extending the power of eminent domain have been adopted in a number of States. Massachusetts in 1911 was the first State to extend the powers of eminent domain through constitutional amendment. Table 1 shows the dates of similar

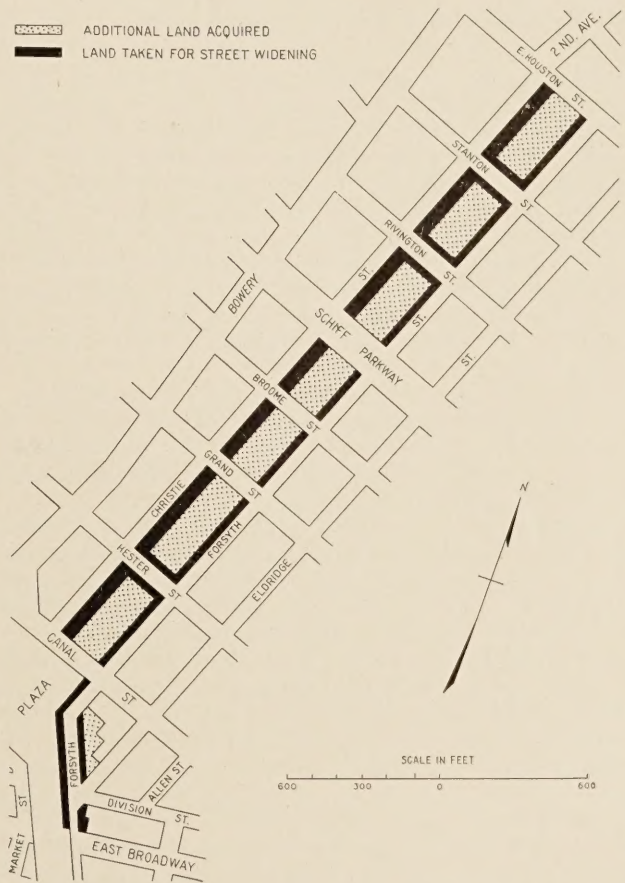


FIGURE 3.—LANDS TAKEN IN CHRISTIE-FORSYTH STREET WIDENING IN NEW YORK CITY, 1929.

enactments in other States. The Virginia amendment transferred the power of determining the concept of "public use" from the courts to the legislature. The extent of the power granted varies in the different States, as can be seen from the following summary.

California, by article I, section 14½, of its constitu-

tion, authorizes the State or any of its cities or counties to condemn land

in and about and along and leading to public works within 150 feet of a public work or improvement, provided that when parcels lie only partially within the 150 feet, such portions may be acquired which do not exceed 200 feet from the closest boundary.

Massachusetts, by amendment to article 10 of its constitution, permits more land to be taken by the Commonwealth, county, or city than is needed for the actual construction of the improvement, provided that no more land is to be taken than is needed for suitable building lots on both sides of the street.

TABLE 1.—Dates of adoption of amendments to State constitutions extending power of eminent domain

State	Date of adoption of constitutional amendment	Power extended to—
California	1928	State, counties, cities.
Massachusetts	1911	Do.
Michigan	1928	Municipalities.
New York	1913	Counties, cities.
Ohio	1912	Municipalities.
Pennsylvania	1933	Cities.
Rhode Island	1916	State, cities.
Virginia	1928	(1)
Wisconsin	1912	State, counties, cities.

¹ Allowed legislature to specify meaning of "public use."

Michigan, by article XIII, section 5 of its constitution, provides that municipalities may take land adjacent to an improvement that is appropriate for securing the greatest public advantage from the improvement. The surplus may be sold with or without restriction. Michigan is the only State with constitutional provision for recoupment condemnation.

New York, by article I, section 7 of its constitution, authorizes cities and counties to take more land than is needed for actual construction, provided that no more land shall be taken than is needed to form suitable building sites.

Ohio, by article XVIII, section 10 of its constitution, authorizes municipalities to take for public use property in excess of that actually occupied by the improvement. The surplus may be sold only with appropriate restrictions to protect the improvement.

Pennsylvania, by article XV, section 5 of its constitution, authorizes cities to take more land than is needed for actual construction but provides that the taking of land should "not be more than sufficient to form suitable building sites on such highways and streets." It further restricts use of this authority to streets connecting with bridges crossing streams or tunnels under streams which form State boundaries, to a point not more than 3 miles from such bridge or tunnel.

Rhode Island, by article XVII, section 1 of its constitution, authorizes the State, cities, and towns to acquire more land than is needed for public purposes, but confines the taking of lands to "no more than would be sufficient to form building sites abutting on such public highway, street, place, park, or parkway."

EXTENT OF AUTHORITY TO CONDEMN EXCESS LAND VARIES

Wisconsin, by article XI, section 3 of its constitution, authorizes the State or its cities to condemn lands in and about and along and leading to public works, and after the completion of the improvement, to sell the remainder with restrictions protecting the improvement.

In California, Michigan, Ohio, and Wisconsin, the authority is conferred directly upon the municipality to take the designated property under general laws. In Massachusetts, New York, Pennsylvania, and Rhode Island legislative action is required to authorize the use of the right to acquire additional property. Table 1 shows the units of government in the several States to which powers have been granted to acquire property outside the construction limits.

In addition to the several States granting through constitutional amendments the power to take land outside the construction limits of a highway, Delaware, Illinois, Indiana, Maryland, Nebraska, Oregon, and Virginia in 1938 had laws in effect broadening the scope of eminent domain powers. However, the constitutionality of some of these laws appears somewhat questionable.

In Delaware and Maryland, in specific instances, the courts have upheld the particular State laws, but have stated that it must be determined in each case whether the acquisition was actually for a public use. The following is a summary of the laws of the various States broadening the scope of the power of eminent domain.

The Delaware law (10), provides that a boulevard corporation may take as much more land as may be needed for the proper construction and security of the boulevard. The case of *Clendaniel v. Conrad* (11) approved the taking of a boulevard strip 200 feet wide, although but 30 feet were needed for the vehicular road.

The Illinois law (12) grants Chicago the right to take more land than is needed for an improvement when the court under which the condemnation proceedings are being held finds that such land is required to protect or aid the improvement and is of a reasonable quantity.

The Indiana Code (13) grants cities the right to take title to entire parcels when the damages are equal to the value of the entire tract.

A Maryland law (14) authorized the City of Baltimore to open, construct, and establish, a public highway over, along, and near Jones' Falls and to acquire property in and adjacent to the highway and incident to and for its construction. After completion of the highway, unneeded lands were to be sold and the proceeds placed in a Commission on City Plan Fund. The general principles of this law were upheld in *Duke Bond v. Baltimore* (15). The question as to whether there was an actual need for the taking of certain properties did not arise. Another Maryland law (16) granted special powers to the City of Pocomoke to take property adjoining markets, parks, squares, or other public places.

Metropolitan cities in Nebraska have the power (17) to take land in and about and along and leading to a street, park or similar enterprise, and to sell any surplus after the completion of the improvement. The law declares that such taking and conveyance constitutes a public use.

The Oregon law (18) gives municipal corporations the right to acquire property of a certain area immediately adjoining highways and not more than 100 feet distant.

The Virginia Code (19) empowers any city or town to acquire property adjacent to a street where the topography impairs the use of the thoroughfare. The power was also granted where a street opening or widening takes a part of a block or square, and, unless lot lines are readjusted, injuriously affects abutting property. Though this law was held unconstitutional in 1921 in *City of Richmond v. Carneal*, (8) a constitutional amendment in 1928 gave the general assembly

the power to define "public uses." This appears to validate excess land acquisition in Virginia under the statutory authority.

CITY PRACTICES IN CONDEMNING EXCESS LAND DETERMINED BY QUESTIONNAIRES

To ascertain the extent to which marginal condemnation is used in cities, questionnaires were sent in 1938 to 155 cities having populations of more than 25,000 in those States which had adopted constitutional amendments extending the power of eminent domain. The following summary is an indication of the practices generally followed in the 81 cities from which replies were received.

1. Marginal land condemned for public improvements:

- a. Seventy-four cities ordinarily take only the land that is actually and directly needed for the contemplated improvement.
- b. Forty-seven cities never take land in excess of the amount actually and directly needed for a contemplated improvement.
- c. Only 1 city (in Pennsylvania) reported frequent use of excess condemnation; 50 reported infrequent use; and 30 did not reply.

2. Land taken in excess of that actually and directly needed for a contemplated improvement.

- a. Thirty cities take excess land to reduce suits and claims for severance damages.
- b. Twenty-eight cities take excess land to prevent creation of small remnants of land.
- c. Nineteen cities take excess land to remove present unsightly buildings so as to provide for landscaping future civic developments, etc.
- d. Only seven cities take excess land to control the use of adjacent property through sale or lease to desirable tenants.
- e. Only four cities take excess land with the objective of making a profit for the municipality through the sale of excess land which may become more valuable because of the improvement.
- f. Twelve cities reported that excess land was taken to enable the city to defray part of the expenses of improvement by later selling the excess land, which will have acquired increased value because of the improvement.

3. Legal authorization.

- a. Fifty cities reported that their legal authority permits possession and use of condemned property immediately upon payment of an agreed price or deposit of appraisal value and damages.
- b. Twenty-three cities stated that possession and use of such property must await final determination by the courts.

4. Condemnation procedure.

- a. Thirty cities reported that the condemnation procedure is easy and rapid.
- b. Thirty-seven cities reported it slow and cumbersome.

The Committee on Right-of-way of the American Association of State Highway Officials in 1937 sent a

general inquiry on right-of-way procedure to every State highway department in the United States. Replies to the inquiry were received from 39 States. One question concerned the disposition of excess land, and of the 39 responses received, 16 were inadequate or indicated that the respective States could not legally acquire property in fee. Some of the remaining 23 States reported their procedures, and others gave illustrations of their functioning under the legal authority they possess regarding excess land acquisition.

The 23 States which reported the procedure followed regarding acquisition and disposal of excess land are: Arizona, California, Colorado, Florida, Idaho, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, New Hampshire, North Dakota, Oregon, South Dakota, Utah, Vermont, Virginia, and Washington.

Although several of the States reported substantial financial benefits from the disposal of excess lands, not one reported the taking of surplus property with recoupment as an objective. The following paragraphs summarize the practices reported by the 23 States.

STATE PRACTICES REGARDING ACQUISITION OF EXCESS LANDS SUMMARIZED

Arizona considers it economical to acquire an entire piece of property when the highway traverses the major portion of it. Apparently the State retains these residual portions.

California sells or leases small pieces of land lying outside the main right-of-way when they are owned in fee and when such disposition is to the advantage of the highway commission. No excess real estate is acquired unless such acquisition will be to the financial benefit of the State.

Colorado, through its counties, purchases entire tracts when an owner is unwilling to sell a portion of a tract. Title to the land outside the right-of-way is vested in the county, and the county commissioners sell or lease it with restrictions as to its use.

Florida does not sell or lease extra-wide right-of-way. On minor relocations the unused portions are left to be reoccupied by the adjacent owners or may be quitclaimed by the county to the original owners.

Idaho sometimes obtains extra right-of-way in fee. Unused portions may be leased for agricultural purposes, but ordinarily revert to the adjacent owners when no longer needed for highway purposes. Occasionally some such land is quitclaimed to other parties.

Indiana sometimes obtains by grant land not specifically needed for highways. This is usually abandoned to adjoining owners, but where unneeded acreage is obtained by warranty deed, it occasionally is sold with the permission of the Governor. Additional right-of-way is sometimes retained for roadside development purposes.

Iowa through its executive council is permitted to sell, with certain restrictions and provisions, unused right-of-way upon recommendation of the highway commission. This has been definitely advantageous in facilitating settlements through exchanges or other transfers of right-of-way.

Kansas through its highway commission has authority by law to sell or exchange right-of-way. Occasionally a tract for which the State has no use is quitclaimed to the original owner, but none is conveyed to a third party.

Louisiana through its highway commission may ac-

quire extra right-of-way in fee but not through process of eminent domain. When property is acquired by gift or purchase the highway commission may dispose of it at public auction or otherwise. A small profit has usually been realized on parcels that have been sold.

Maine purchases extra land through a warranty deed when it is necessary to do so to obtain the needed right-of-way economically, and this may be sold by the Governor and council upon recommendation of the highway commission. Land and buildings are sometimes rented until they can be sold.

Maryland sells the unused portions of any properties which have been purchased in the interests of economical land acquisition after public advertisement of such portions for sale. Dwellings upon such extra land are rented until sold.

In Massachusetts a special act of the legislature is required to sell or lease extra right-of-way.

Michigan sells excess property by deed or leases it by land contracts at prices determined by the State highway commissioner.

Mississippi occasionally acquires more land than is actually needed, but the highway department does not have authority to sell this extra property, authorization by the legislature being necessary.

Montana as a matter of expediency sometimes obtains more land than is actually necessary for right-of-way. Such excess land may be sold or, where it may be required for future development, a license to use may be issued. No land is leased or licensed for use for commercial purposes.

New Hampshire may purchase excess land by mutual agreement in acquiring right-of-way, and this may be sold by the Governor and council if recommended by the highway commissioner.

North Dakota permits reversion of extra or abandoned right-of-way which has been obtained through purchase or condemnation to the original owner or his heirs.

Oregon places control over all land acquired, including excess lands, in the engineering department, and all sales or leases must be recommended by the department engineers and approved by the State highway commission.

South Dakota has not sold and does not contemplate selling any extra right-of-way acquired.

Utah through the State road commission can sell or lease extra right-of-way under special circumstances.

Vermont permits the State highway board, with the consent of the auditor of accounts, to dispose of any land or buildings which are no longer of any use for highway purposes.

Virginia does not authorize the highway department to convey any real estate except by special act of the legislature. However, when it is to the advantage of the department, very often entire parcels are purchased under an agreement that the grantor simultaneously with the conveyance to the Commonwealth deeds the residue to parties designated by the highway department. This facilitates transactions and often enables the department to make adjustments with owners of adjoining land or to realize some return on an expensive piece of property.

Washington sells or otherwise disposes of any extra-wide sections or unused stock pile or pit sites when they are no longer necessary for highway purposes.

The acquisition of marginal or adjacent lands can also be of value in assisting adequate highway develop-

ment by facilitating the sale or trading of property and by decreasing or eliminating consequential damages. When land remnants unsuited for a normal economic use are created, or when the utility of a residual tract of land is impaired by street or highway improvement, considerable amounts must often be paid for consequential damages. The public must pay not only for the land actually taken but also for damage to the remainder. However, the mere payment of these damages does not result in a right or interest in the property damaged, even though the total amount paid may approach or equal the actual value of the entire tract. If the acquisition of marginal land is possible, the public may obtain the entire tract, and although the total cost is not decreased or may even exceed the cost of the essential portion plus damages to the remainder, the public still has an advantage in that it acquires title to the entire property. It is then possible to combine and sell portions outside the right-of-way and thus recover some of the original cost; the excess portions may be traded to consummate transactions that might otherwise involve considerably more expense; or the remnants may be developed as small parks or planted areas.

MARGINAL LAND ACQUISITION USEFUL IN REDUCING CONSEQUENTIAL DAMAGES

In connection with the recent Kilbourn Avenue development in Milwaukee, Wis., it was necessary to acquire a lot occupied by a filling station. During other land acquisition on the same street the city was able to obtain at a favorable price an additional quantity of land which, after the new boulevard was developed, was a suitable site for a filling station. The city was able to trade this new location to the oil company as part of the consideration for its former site. The transaction resulted in a substantial decrease in the net cost of the improvement to the public.

An example in Elmhurst, Ill. may also be cited. For highway improvement in that vicinity a portion of a tract of land held by the city for potential park purposes was required and also another area essential for the city's sewage disposal plant. In connection with highway right-of-way acquisition, Du Page County was able to obtain a large tract of suitable land in the same general location. It then traded this single large tract to the city in exchange for the park and sewage plant properties which were needed for the highway.

A policy of marginal land acquisition intelligently applied to a highway development program may also make it possible to reduce excessive damage costs and eliminate land costs in future development of streets or highways. This is particularly true where reasonable forecasts indicate the need of future provision for increased traffic volume even though the present traffic volume or available funds may not warrant the full development immediately.

When a road is originally laid out, it may be located through relatively undeveloped areas where land costs are low. After it is established, development of contiguous areas may be encouraged and, if the road carries a large volume of traffic, ribbon development may set in. Business and residential sites become intermingled and commercial enterprises seek locations as close to the travel lanes as possible.

Subsequently, increased traffic may require a wider road. Adjacent property may have become more valuable and therefore large damage costs may be

incurred because of development which the highway improvement itself originally encouraged. If, at the time of the original land acquisition, a sufficient quantity of land had been taken to provide for future development, these costs could have been largely avoided.

MARGINAL LAND ACQUISITION MAY PROTECT ADJACENT PROPERTY VALUES

A further advantage of a policy of marginal land acquisition is the opportunity it affords for protecting or improving the appearance of the roadway and thereby conserving values of adjacent property against unwarranted or unnecessary declines in value. This may be accomplished through public control which may be exercised by acquiring a right-of-way, either in the form of an easement or fee title, wider than that essential for construction purposes. Billboards and unsightly structures can thus be eliminated and the extra space used for roadside planting or development. Such planted strips are not only pleasing to the traveler but also screen dwellings from the road.

Acquisition of extra land along the highway provides adequate space for screening purposes and at the same time moves the building line a greater distance from the highway so that the disadvantages of residential locations along heavily traveled roads are minimized. These screens in semirural and rural areas also may serve as snow fences and thus reduce snow-removal costs.

Some courts apparently consider that in condemning property for public purposes it may be proper to consider the esthetic element and to take land outside of the physical limits of the improvement for that purpose.

In 1907, Pennsylvania passed a law permitting condemnation of land within 200 feet of a parkway with the express objective of protecting the improvement. The land so acquired could later be sold with such restrictions as would fully protect the parkways, "their environs, the preservation of the view, appearance, light, air, health, and usefulness thereof." An attempt was made in 1913 to apply the power given in the law in connection with the construction of Fairmount Parkway. The Pennsylvania Supreme Court in the case of the *Pennsylvania Mutual Life Insurance Company v. City of Philadelphia* (20), in a strong opinion refused to sanction the taking of land when the question of resale to persons other than the original owner was involved. It may be, however, that the fact that the city before acquiring the land and a building on it had already completed negotiations for its resale to a third party caused the court to consider that fact primarily rather than the preservation of the appearance of the avenue.

Although the courts looked with disfavor upon this particular acquisition of land outside the boundaries of a street development, there are instances where the interpretation of what constitutes a street limit has been liberal. In *Clendaniel v. Conrad*, (11), the court decided that boulevard corporations had the authority to condemn a strip of land 200 feet wide, although the vehicular road was only 30 feet wide. In *Valmont Development Co. v. Rosser* (21), it was held that land could be taken for an ornamental approach to a bridge and for future expansion. In *Duke Bond v. Baltimore*, (15), it was held that the city could take land on both sides of the development incident to and for the purposes of construction of the highway.

In Missouri, in the case of *St. Louis v. Breuer* (22), the court drew a distinction between a "road or street" and "parkway or boulevard." It said the word "avenue" does not have a general meaning which applies to both street and boulevard, but is synonymous with "street" and not with "boulevard." In the case of *Newbold v. Brotzge*, (23), the court defined a "parkway or boulevard" as a street of special width, given a park-like appearance by reserving spaces for trees, flowers, etc., and not used for heavy teaming; or one especially designed for pleasure walking or driving. Similar instances of this distinction may be found in the cases of *Bouis v. City of Baltimore* (24), and *Chaplin v. Kansas City* (25). Since one of the objectives in creating a parkway or boulevard is to create a thoroughfare having a pleasing and park-like appearance, it appears that the acquisition of land needed to accomplish such purposes might be sanctioned.

MARGINAL LAND ACQUISITION ENABLES ELIMINATION OF CERTAIN TRAFFIC HAZARDS

Since a main highway is a magnet for business enterprises catering to the motoring public, certain traffic hazards may be avoided or eliminated through acquisition of marginal lands. Such acquisition would permit control of the particular types of enterprise whose numbers generally increase with traffic volume, namely taverns, filling stations, and various types of roadside stands. Not only are hazards created by frequent interruptions of traffic flow, but these enterprises seek locations favorable to them but which often create confusion, particularly at night, at corners and curves because of advertising devices. If the public controls land along the highway, such hazards can be eliminated. To some extent, the same results can be accomplished through zoning; but since this method of control can be used only to prevent a potential objectionable use, outright public ownership is required to remove existing hazards.

Marginal land acquisition may also be especially useful in the development of freeways, or thoroughfares to which access is provided only at rather long intervals. One of the basic rights of property is that of access, which in most States is construed to apply to both old established ways and to newly laid out roads and streets. On freeways abutting properties are denied the right of access. By acquiring land outside the main traveled road local-service roads can be constructed, thus providing accessibility commensurate with that provided by the original highway.

Two constitutional cases which arose in Ohio, one of which was eventually carried to the United States Supreme Court, are of particular interest in connection with the possible uses of marginal land condemnation to facilitate desirable street and road development. These were the cases of *East Cleveland v. Nau* (26) and *Cincinnati v. Vester* (27). In both, the condemnation of excess lands by the city was held improper on the ground that the municipalities must define specifically the purpose for appropriating such lands, and must prove that the excess is reasonably needed in connection with the development. The court found that in neither case had the condemnation procedure followed been in conformity with that required by the authority given under the constitutional amendment passed in Ohio in 1912.

In the *Nau* case the city of East Cleveland passed legislation extending a street and provided that such extension should be 100 feet in width. The legislation

also provided for taking an excess of land beyond that needed for the street, setting forth that the excess was needed for slope grading. Because of the peculiar topography, the city claimed that cuts would have to be made in defendants' lands and hence grading would be necessary. Pursuant to the legislation, the city filed applications to assess compensation to be paid for the taking of the 100-foot strip and also the excess.

The defendants in the case meanwhile filed petitions to enjoin the city from appropriating the excess land not actually needed for the improvement. They alleged that the property sought was in excess of that actually needed; that the appropriation was not for a public use but was for the purpose of reselling to private persons at a profit for the city; that the reason for taking the excess property was not properly defined in the city's legislation; and that for the above reasons, the proceedings by the city were void and contravened the provisions of the State and Federal constitutions, especially article XVIII, section 10 of the State constitution which provides that a municipality appropriating property for public use might "in furtherance of such public use appropriate or acquire an excess over that actually to be occupied by the improvement."

The Supreme Court of Ohio held that the city was required to define specifically in its legislation the purposes of its appropriation, and that it was incumbent upon the city to sustain such requirement by proof of its necessity since the power to condemn excess property is granted to the city only when the excess property is reasonably needed. It was also held that the larger part of the excess lands was not necessary for lateral support of the improvement and was not needed in furtherance of a public use, and that the grade so established by the city (which grade would have taken the whole of the defendants' properties) was wholly unreasonable and unnecessary for the maintenance of the street. The court held that it would not disturb a reasonable discretion exercised by city authorities, but that it could not sanction an arbitrary and unnecessary appropriation of excess land when the weight of evidence and testimony did not show that such excess land was needed.

The issues involved are succinctly stated by the Supreme Court of Ohio in its decision in the following language:

The principal issue presented in these cases is this: Were all of such excess lands needed in the furtherance of this improvement or was their attempted appropriation arbitrary and needless? Upon that issue, both of the lower courts found that the appropriation of the larger portion of the excess lands was not necessary for lateral support for the improvement, and was not in furtherance of the public use. The lots of the several defendants in error, facing the improvement, were 130 feet in depth and incumbered by buildings. All of this property was sought to be taken for a proposed grade extending from the sidewalk, to be "graded on a slope which rises three-eighths of 1 inch per foot of horizontal distance from the grade of said sidewalk," etc. The grade so established by the city, taking substantially the whole of the properties of the several defendants in error, was wholly unreasonable and unnecessary for the maintenance of the street, or for its lateral support. The arbitrary fixing of a three-eighths of an inch grade therefore was unreasonable. This is evidenced by the testimony of one of the engineers introduced by the city, who in answer to the court's query, testified, in effect, that not more than 10 feet or 20 feet from the sidewalk would be necessary for grade maintenance.

In the Vester case⁴ excess condemnation of the properties in question was proposed by a resolution adopted by the Cincinnati City Council in accordance

with Ohio statutes,⁵ but the purpose of the appropriation was stated in the resolution only in general terms as being "in furtherance of the said widening of Fifth Street" and "necessary for the complete enjoyment and preservation of said public use."

U. S. SUPREME COURT REFUSED TO SANCTION TAKING OF EXCESS LAND IN AN OHIO CASE

The ordinance providing for the excess appropriation was not specific, declaring simply that it was "in furtherance of the public use," described as the widening of Fifth Street, and "for the more complete enjoyment and preservation of the benefits to accrue from said public use." In what way the excess condemnation of these properties was in furtherance of the widening of the street, and why it was necessary for the complete enjoyment and preservation of the public use of the widened street were not stated and were thus left to surmise.

The city argued that in resorting to excess condemnation legislative bodies generally have had in view the following three purposes: (1) The avoidance of remnant lots; (2) the preservation and amplification of the improvement; and (3) the recoupment of expense from increased values. Both the district court and the circuit court of appeals concluded that the theory of remnants, and of the protection and preservation of the improvement, were not applicable. Both courts believed the sole purpose of the city was the recoupment of a large part of the expense of the street widening by the resale of the properties in question and that the excess condemnation was in violation of the constitutional rights of the plaintiffs because the condemnation was not a taking for a public use "within the meaning of that term as it heretofore has been held to justify the taking of private property." The court of appeals added that the provision of the State constitution relating to excess condemnation, "would seem to mean in furtherance of the normal use to which the property that is occupied by the improvement is devoted—here the use and preservation of the street for the purposes of travel," and the court held that if the provision means that property may be taken "for the purpose of selling it at a profit and paying for the improvement it is clearly invalid."

In the United States Supreme Court, the city challenged the propriety of the assumption that the city was proceeding on the theory of the recoupment of expense by resale of the properties, and insisted that its purpose in the specific cases could not thus be delimited. The city urged that, when the improvement was completed, the city council would doubtless be in a position to determine what sized tracts and what kinds of restriction would be best suited for the harmonious development of the south side of the street. The city also insisted that it might never resell the excess; that it was not compelled to do so by the constitution; that the question was one to be determined in the future; that recoupment could come only from a sale; and that until by some act the city evidenced an intent to sell, it could not be said to be proceeding only on a theory of recoupment. After a further consideration of whether the purposes of the excess condemnation had been adequately stated or not, and a discussion of the judicial

⁴ For a digest of this case, see Toll Roads and Free Roads, 76th Congress, 1st session, House Document No. 272, pp. 126-128.

⁵ General Code of Ohio, sec. 3679: Resolution shall be passed. When it is deemed necessary to appropriate property, council shall pass a resolution, declaring such intent, defining the purpose of the appropriation, setting forth a pertinent description of the land, and the estate or interest therein desired to be appropriated. For waterworks purposes and for the purpose of creating reservoirs to provide for a supply of water, the council may appropriate such property as it may determine to be necessary.

or legislative sphere of deciding what was a proper public use, the court held that questions relating to the constitutional validity of an excess condemnation should not be determined upon conjecture as to the contemplated purpose. The court held that the object of the excess appropriation had not been set forth as required by the local law, and concluded that the proceedings for excess condemnation of the properties involved were not taken in conformity with the applicable law of the State.

In affirming the decrees made by the lower courts, the Supreme Court concluded that the proceedings for excess condemnation of the properties involved were not taken in conformity with the applicable law of the State but refrained from expressing an opinion upon the other questions that were argued.

EXCESS LAND SOMETIMES SOLD OR LEASED TO REDUCE COST OF IMPROVEMENT

Various phases of marginal land acquisition have already been discussed. All of these phases were directly concerned with the utility of the improvement. However, marginal land may sometimes be sold or leased for the purpose of decreasing the cost of the improvement, but such transactions are always incidental to the primary objectives of the acquisition. When real estate has been obtained for any given specific improvement, if the title to the property has been acquired rather than an easement for the public use, the public may sell the property when it becomes evident that the land is no longer needed for the purpose for which it was originally acquired.

A noteworthy instance of such sale of land occurred in Boston in the case of the Back Bay flats. These low lands adjacent to the Charles River were usually flooded at high tide, and were not only unusable and prevented proper development of the harbor, but were a decided menace to health because of their stagnant condition. About 60 years ago the area was condemned, drained, and filled, and after it was platted and sold, became the well-known Back Bay residential district.

The Massachusetts Supreme Court in the case of *Moore v. Sanford et al.* (28) sustained this sale on the grounds that it was incidental to the primary object of the acquisition which was to remedy a condition that was detrimental to the welfare of the city.⁶

In connection with the construction of the Center Street subway New York City acquired some extra land along Canal Street. The city sold the adjacent property acquired "subject to the easement and reserving the space needed for entrance, at a price so near the original purchase price that the easements and the space for station entrances involved almost a nominal expense" (29).

Unfortunately, in many highway improvements a barrier exists to the disposal of surplus land because the property interest acquired is an easement for highway purposes rather than the fee to the property. All rights, therefore, are contingent upon the public continuing to use the property for highway purposes. When title to land is vested in the public, it may sell or otherwise dispose of such property if the road or street is closed or abandoned; but if the public right is only an easement for highway purposes, such property may revert to the original owners when use of the property for highway

purposes ceases. As far as cost is concerned, normally there is little difference between the price commanded for full title and that paid for an easement. Under these conditions, it is in the public interest to acquire title rather than an easement when property is taken for highway purposes.

In contrast to the sale of incidentally acquired land, property may also be acquired specifically for the purpose of resale under a public land fund or authority so that the proceeds may be used to reduce the cost of the improvement. Ordinarily, a governmental organization may go into the market as any private individual and purchase land. Governmental participation in land enterprises for the public good is an old and well-established practice. For example, Glasgow, Scotland, has had a Common Good Fund for 350 years. This is defined as consisting "of such property and funds as are held by the magistrates and council on behalf of the community, unfettered by restriction as to its disposal, save conformity to the common law and the promotion of the public weal of the burgh." In 1927, this fund had assets of approximately \$50,000,000, and liabilities of approximately \$47,500,000. The street railroad system had been bought and paid for out of this fund (30).

The German cities of Ulm and Düsseldorf have also reported successful use of land funds. Düsseldorf had a special land department financed by a bond issue supported from a ¼-mill tax levy. The business of the department was to invest in land for the city and to anticipate future wants. When a city department needed a piece of land held by the land fund, the lot was transferred and its value paid over to the fund (31). Common examples of land funds in the United States are those used in many States for school purposes. In 1938 Pasadena, Calif. had a Land Sale and Purchase Fund which permitted the purchase of land without condemnation, and Toledo, Ohio, had a Permanent Improvement Fund which could be used for purchasing property needed for municipal purposes only.

VALUES CREATED BY PUBLIC IMPROVEMENTS RETAINED THROUGH RECOUPMENT CONDEMNATION

A third method by which the cost of public improvements may be reduced through the sale or lease of property favorably affected by the development involves the process of recoupment condemnation under the power of eminent domain. In some instances a public organization, in an effort to retain for the public the full increment created by a public improvement, may attempt to use its sovereign power of eminent domain to take benefited properties forcibly with the objective of selling the property so acquired at the enhanced value.

Recoupment condemnation has been used to some extent in Europe. Figures have been given by various writers showing the ostensible results of recoupment condemnation in European cities. The greatest single enterprise and the one most commonly cited is the Strand-Holborn or Kingsway development in London. Various figures have been given concerning this project, but an authentic statement of the financial results is to be found in a report to the London County Council by its Highway Committee, presented December 15, 1936 (32). This report, in part, states:

The council receives about \$695,910 annually in ground rents from the surplus land of the improvement, upon which buildings of the approximate cost of \$24,332,500 have been erected. In addition, a sum of \$4,701 a year is received in respect of better-

⁶ The taking of these lands and flats was authorized by the statutes of 1884, c. 290. Such legislative action was made necessary by the reluctance of certain owners to sell their property, or to join in the proposed improvement.

ment charges. A total sum of \$3,579,345 has been received from the sale of the sites, and other sites valued at \$1,096,379 were transferred in settlement of claims on reinstatement basis.

The total debt charges incurred to March 31, 1936 (\$25,352,338), plus the net debt outstanding at that date (\$15,614,686), amounted to \$40,967,024. Against this, the aggregate rents received, plus the value of the leased sites, amounted to \$29,247,329. The difference (\$11,719,695) may, therefore, be said to represent the net cost to the rate payer up to March 31, 1936.

The annual net charges on the rates (that is, the total debt charges less the rents and improvement charges), which in 1935-36 amounted to \$295,650, will be reduced as loan charges fall out. In the year 1955-56, it is anticipated that there will be a small surplus of \$9,733. This and ensuing surpluses will be a credit to rate account year by year. A large part of the debt will be retired in 1961-62, so that the total debt charges in that year will decrease by about \$555,642. For 1965-66 the surplus for the year is estimated at \$699,438, increasing later to \$710,509, the debt being finally paid off in 1987-88.⁷

Before general conclusions can be drawn, however, as to any results obtained through recoupment, five elements should be carefully investigated and considered: (1) Actual amounts used as costs and recoveries, (2) extent of the use of condemnation, (3) number of parcels involved, (4) types of property taken, and (5) nature of the improvements.

A study of these examples requires a careful analysis of the costs. When reference is made to an "excess condemnation" enterprise, a certain amount is usually reported as the original cost to the public, and another amount as the sum recovered. The cost reported may be only the amount paid to the property owners and may fail to include such items as real estate commissions and court costs, which are usually high in condemnation cases. The total outlay which should be offset against the total recoveries from the sales of property may be considerably more than the reported original amounts paid to property owners.

Another financial element which needs examination is the amount received for the property. Each enterprise should be studied to see how much property has actually been sold and how much still remains in the hands of the public. For example, it may be said, as a result of a certain condemnation transaction, that the city received \$100,000. A further investigation of this amount may disclose that the city has perhaps received only \$50,000 in cash and has on hand land which has been estimated at a value of \$50,000. The yield from a recoupment enterprise should not be considered as final until disposition has been made of all the property acquired.

IMPROVEMENTS MAY CREATE NEW VALUES OR CAUSE SHIFT OF VALUES

The extent to which condemnation is actually used should be determined in analyzing the results on various improvements. In the Fairmount Parkway Improvement in Philadelphia, it was necessary to acquire approximately 1,000 parcels of land. All but three of these were obtained through direct negotiation. Most of the land in many enterprises may thus have been acquired through normal acquisition, and condemnation resorted to only in obtaining a few remaining tracts. It is incorrect to credit the success of undertakings to excess condemnation in those cases which involve condemnation only incidentally. The financial success may be credited to the land obtained by purchase rather than to that taken by condemnation.

An analysis should also be made of the number of

parcels involved in condemnation undertakings. Since there are certain definite charges to be met in connection with each individual acquisition, such as title search, recording, and appraisal fees, the acquisition of a few large tracts requires less incidental expenditure than the acquisition of numerous small parcels. This is particularly true in condemnation cases, where court costs must be added to the other incidental expenditures.

An adequate analysis of the value of property acquired by condemnation before and after the improvement is also required. If the dominant utility of the land is materially increased by the development, a substantial increase in value may result. Examples are the Northumberland Avenue opening in London in 1876, and the Michigan Avenue widening in Chicago in 1920. In the Northumberland Avenue project, a new, short street connecting two business areas was created. The territory traversed was unimproved. All the land appears to have been bought from one owner. Land formerly vacant was turned into good business sites and a profit of approximately \$595,000 was made through the sale of excess land (3). In the case of Michigan Avenue, a narrow street lined by warehouses, loft buildings, and wholesale establishments, became a major artery suitable for a high class, retail business section. An intensive new development occurred with a temporary maximum appreciation of 2,500 percent over the former value (33).

Finally, a study of the nature of the improvement is also essential since the character of the improvement itself can affect the extent and value of the increment. The development may consist either of improving existing facilities or creating entirely new ones. For example, a highway project may consist of widening or improving an existing road or street, or it may consist of cutting a new highway through an area where normal development has been hampered through lack of transportation facilities. Where a new facility is created, an increase in land values may be expected.

The London experience demonstrates that a greater percentage of the cost of the improvement can be recovered when a new street is opened than when existing thoroughfares are widened. In street improvements made by the Metropolitan Board of Public Works of London, the recoupment obtained where existing thoroughfares were widened was 24 percent of the gross cost and 32 percent of the net cost of the undertakings, whereas in the construction of the new streets, 48 percent of the gross cost and 88 percent of the net cost was recovered. (3)

Of the three methods outlined above, the first (sale or lease of property acquired incidentally) and the second (sale or lease of property acquired under public land funds or authority specifically for the purpose of resale) do not involve the principle of recoupment condemnation. The use of this term should properly be limited to the third method. While most authorities on the subject carefully make this distinction, some writers have referred to recoveries made under incidental sales or through the operation of a public land fund as examples of the savings made through "excess condemnation." For example, in an analysis prepared for the Wisconsin Legislature, (34) the operation of the public land funds of Ulm and Düsseldorf are cited as demonstrations of what can be done under the scheme of excess condemnation.

Experience indicates that the difficulties inherent in condemnation are such as to render its use impractical when many properties are involved. Condemnation

⁷ The dollar values shown are based on the pound value at \$4.8665.

may be a lengthy and tedious process and litigation may last for years. In Milwaukee, land acquisition for the Kilbourn Avenue development was started in April 1932 under the Kline law. However, the legality of the proceeding was questioned, and it was not until December 1938, that the Wisconsin Supreme Court gave the decision sustaining the procedure.

Another limitation is the fact that apparently high, if not exorbitant, awards are frequently given by juries in condemnation cases. In certain improvements made in Paris between 1852 and 1869, where condemnation, or compulsory taking, was used, the city recovered only about one-fourth of the amount it originally paid for the land. This was attributed largely to the high awards allowed by the jury.

Experience with the London improvements indicates "that owners of property are tempted to make arrangements in the way of new lettings or improvements, as soon as it is known that an improvement is contemplated along their holdings, so as to fleece the city. In some instances, the money thus exacted has enormously increased the cost of the work." (3) A summary of the results in various recoupment acquisitions is given in table 2.

TABLE 2.—Summary of reported costs and recoveries in selected recoupment enterprises

Nature and location of improvement	Date	Total cost	Amount recovered	Net cost	Percentage recovered
Baron Hausmann Blvd., development of 56.25 miles of improved streets, Paris ¹	1852-69	\$259,400,000	\$66,200,000	\$193,200,000	25.5
26 streets widened by Metropolitan Board of Public Works, London ²	1855-99	26,375,820	6,409,290	19,966,530	24.3
16 new streets, London ²	1855-99	35,117,265	16,722,365	18,394,900	47.6
3 Thames embankments, London ²	1855-99	76,797,445	26,230,530	50,566,915	34.2
16 slum clearances, London ²	1876-84	8,349,995	1,755,030	6,594,965	21.0
43 highways, 1 slum clearance, London ²	1889-1913	44,246,125	23,511,740	20,734,385	53.1
St. Lawrence Blvd. extension, Cartier St. opening, George Etienne Cartier Sq. development, Montreal ¹	1912	872,728	927,325	-54,597	106.3
Devonshire Court opening, Rochester, N. Y. ³	1919	17,224	18,750	-1,526	108.9

¹ Robert E. Cushman, Excess Condemnation.

² (3).

³ A. L. Veddor, The Use of Excess Condemnation in the Opening, Widening, and Extension of Streets, Proceedings, American Society of Civil Engineers, Sept. 1925, p. 1420.

INCREMENT TAX MORE WIDELY USED IN EUROPE THAN IN THE UNITED STATES

One of the means of conserving for the public good some of the increased value created by public improvements is the increment tax. This tax upon the increase in land value may be imposed in two ways. It may be imposed periodically or at the time of transfer. When the tax is imposed periodically, valuations are made at stated intervals. Under the other plan a tax is levied at the time of a sale, lease, or inheritance. This method of taxation is quite common in Europe. It differs from a special assessment in that a special assessment is a charge made to defray the cost of a particular improvement. The increment tax is based on the theory that, either through a specific improvement or through general development, an unearned increment in value has been realized, and that this increase should inure to the public.

While income and inheritance taxes in the United State may be considered to a certain extent as increment taxes, there are basic differences in the European

and American plans of taxation that cause the increment tax on real estate to be more suitable for European countries than for the United States. The primary difference is that in this country the basis for general taxation is the value of property, while in Europe the basis is the income from property.

Extensive recovery of the cost of improvements in the United States is sometimes obtained by use of the special assessment principle, which is peculiarly an American doctrine. While the use of special assessments is subject to grave and legitimate criticism, it has proved a practical way of collecting from the property owner a part or all (and sometimes even more), of the increment in the value of the property resulting from the public improvements. A few examples will illustrate returns to the public obtained through special assessments.

For the fiscal year ending June 30, 1930, the city of Detroit received \$10,425,458 in benefit charges (35), of which \$6,925,500 (36) was for highways. In 1930, in Wayne County, Mich., 8.5 miles of the Schoolcraft 204-foot superhighway, known as Assessment District Road No. 11, and 9 miles of the 120-foot Inkster Road, known as Assessment District Road No. 14, were built and financed largely through benefit charges (36). Wayne County, in 1930, proposed a superhighway plan in which the right-of-way would cost \$100,000,000. Of this cost, \$20,000,000 would be defrayed by special assessments (37).

In Chicago, in the year 1930 alone, the city's net bills to property owners totalled \$34,504,100 for benefits resulting from previous street developments, and in addition a large part of its current highway costs of \$75,895,800 was defrayed through street improvement bonds (38). During the 10 years from December 31, 1922, to December 31, 1932, the total special assessments recorded in the city of Chicago amounted to \$268,908,825 (39). Herbert D. Simpson has estimated that in the 10 years preceding 1930 the people of the United States had spent approximately \$7,000,000,000 on public improvements in the form of streets, highways, parks, and reclamation and irrigation projects; that of this cost approximately \$2,500,000,000 was levied in the form of special assessment charges upon the land affected; and that the cities in the United States of 30,000 population or more had spent more than \$2,000,000,000 on highway improvements alone and more than half of this was financed in the form of special assessments on the land affected (33).

The park system of Kansas City, Mo., up to June 30, 1930, cost \$25,500,000. This park system was financed by special assessments (40).

The figures presented are taken from investigations of special assessments on improvements inaugurated during the period 1920 to 1930 which may well be considered the period of greatest use of this method of defraying public costs. However, a large portion of public costs is still being recovered through special assessments. For instance, New York City issued \$44,700,000 of assessment bonds for street improvements and street and park openings from December 31, 1938, to November 24, 1939 (41).

Michigan from January 1, 1935, through 1938 floated 24 new bond issues for inter-county Covert roads. Of the total amount issued, \$2,324,872 was still outstanding in 1938, a portion of which was a liability of special assessment districts. Though the liability of the assessment districts varies from 20 to 100 percent for each of the several bond issues, actually

allocations of State receipts from the automobile registration and gasoline taxes are used to pay debt interest and retirement, thus relieving practically all of the property owners in the special assessment districts of this burden (41). Likewise, on the Kilbourn Avenue development in Milwaukee, the total assessable cost was estimated to be between \$3,926,000 and \$4,024,000 as of December 1938 (42).

Although these examples show that special assessments are still being used quite generally and effectively to conserve to the public some of the value created through public enterprises, use of this method of recovery is not as general as it was about 1930. Local expenditures for public improvement have been substantially curtailed in the past decade, and a large amount of local expenditures has been replaced by FERA, PWA, and WPA funds.

PUBLIC IMPROVEMENTS DO NOT ALWAYS INCREASE ADJACENT PROPERTY VALUES

It is generally believed that public improvements tend to increase adjacent property values. For instance, along California State Highway 26 east of Los Angeles, a strip of lots was offered for sale in 1934 at \$200 to \$250 per lot. After improvement of this traffic artery, these same lots, less a 30-foot strip which was donated to the State, sold at \$500 to \$1,500 per lot (43).

In Chicago, the Blue Book of Land Values indicates that residential property on boulevards is worth twice as much per front foot as property only a short distance away. A spectacular increase in land values followed the widening of Michigan Avenue in Chicago. "While the initial Michigan Avenue improvement cost \$16,000,000 it added \$100,000,000 to property values" (33).

A memorandum of the City Club of New York of October 2, 1908, to the Board of Estimate and Public Service Commission stated that from 1900 to 1910 the land from One Hundred Thirty-fifth Street to Spuytin Duyvil increased \$49,200,000 in value due to the construction of the subway, while the entire cost of the subway was but \$43,000,000 (44).

Such examples have led to the erroneous assumption that all public improvements directly cause an increase in value of adjacent property. However, it is only when an improvement is well planned and when adjacent property has not been intensively developed that a public improvement may create or stabilize values in its vicinity. An apparent increase or decrease in values may upon analyses be found to consist of a shift of values from one locality to another.

Statements concerning the effect of public improvements on land values are found in the writings of various authorities. Ely and Morehouse have stated (45):

The effect of a city's expenditures for public improvements, such as streets and parks, is to strengthen a rising movement of land values established by other causes. Independently of other factors, public improvements ordinarily do not cause increased values, but when joined with other influences they have an effect in that direction.

A study of land values in New York City in relation to transit facilities was made in 1930 by Edwin H. Spengler. His study was prompted by the assumption of various commissions and public bodies that extension of rapid transit facilities directly and inevitably increases the value of urban land. After an exhaustive investigation, he came to the following conclusions (44):

1. The building of subways in New York has been accompanied by shifts in land values from one part of the city to another; values have been transferred rather than increased.

2. Certain influences upon land values have frequently caused decreases which have exceeded the increases resulting from the opening of new transit facilities.

3. Centers of population tend to form and grow, thus enhancing the value of such centers at the expense of other areas.

4. Land along transit routes changes in value depending upon the character of growth of the whole area through which the routes pass. These values rise substantially in regions that show rapid expansion, change little in somewhat "settled" areas, and drop in regions that undergo a general decline.

5. A development stimulating the demand for land in a certain locality will have the effect of increasing land values. This may take place during the construction of a transit line, directly after its opening, or many years after its construction. The increase may even occur in a territory not directly supplied with special transit facilities but accessible from regions so supplied.

6. Instead of being considered a cause of land value changes, a transit line should more properly be regarded as a facility which permits or fosters, under certain circumstances, an emergence of land values, the values being determined largely by other factors.

The same general conclusions were reached by Herbert D. Simpson (33). He has stated that increases in land supply through increased accessibility, availability, and usability because of transportation development, public improvements, and other factors most normally tend to decrease total land values; that is, these factors tend to abstract from existing values more than they add in the form of new land values, but that this effect has largely been concealed by a general appreciation of land values during the last two or three decades. He cites his investigation of the Michigan Avenue development and states that this improvement created an appreciation in value of \$104,290,000 on the west side of Michigan Avenue from Randolph Street northward to Pearson Street and was accompanied by a depreciation of \$609,198,420 on the west side of Michigan Avenue from Congress Street southward to 31st Street.

Examples previously cited show that normally there may be an increment of value in connection with a highway development. To a certain extent, the relative amount of this increment will vary inversely with the length of the improvement. That is, as the length of the development increases the percentage of value increment decreases.

A major highway development may open more territory than can be absorbed immediately and lead to premature and uneconomic subdivision. Although an increment of value may result from a public improvement, and although the public can conserve this increment for itself either through the acquisition of excess land, the operation of a public land fund, or the imposition of special assessments, it can do so only after careful planning and investigation.

SUMMARY

Increasing interest is being directed toward acquiring wider rights-of-way for highways. This is primarily

due to the fact that necessary improvements can frequently be accomplished only by cutting through highly developed areas. Considerable thought should be given to the various methods of acquiring land so that maximum usefulness and utility, together with provision for future needs, may be obtained from any given improvement. This article has attempted to show, by distinguishing between marginal and recoupment acquisition, the effect of various procedures which may be followed in land acquisition and their advantages and limitations, as well as to show means by which the public may conserve for itself any increment in property values resulting from the improvement.

A consistent policy of marginal land acquisition may be effective: (1) In solving the economic and general community problem of handling land remnants created as a result of street or highway improvement; (2) in eliminating or reducing consequential damages; (3) in preventing excessive damage costs in present and future development; (4) in conserving property values and protecting public improvements; (5) in avoiding traffic hazards; and (6) in facilitating the conversion of main through routes into freeways.

Recoupment may be realized through the sale or lease of incidentally acquired property or the sale or lease of property specifically acquired under public land funds or authority. While recoupment acquisition when used in connection with the power of eminent domain may actually result in lowered costs for the improvement, such acquisitions should not be used indiscriminately since the success of the method depends upon the extent of the condemnation, the number of parcels involved, and the nature of the improvement.

Although several States have constitutional authority which permits them to acquire excess lands under the power of eminent domain, and a number of States have statutory authority, investigations show that this power is being used only to a limited extent.

Up to this time the courts have dealt with the constitutionality of marginal land condemnations under limited conditions presented by specific cases rather than on the basis of the broad principles involved.

The increment tax and special assessments are other methods by which governmental agencies may recover part of the increased values resulting from a street or road improvement. The former has not been used extensively in the United States. Although special assessments are not employed as extensively now as they were 10 years ago, they are still being used in financing many street improvements.

REGISTRATION OF ALIENS BEING MADE

As part of the National Defense program, a Nationwide registration of aliens is being conducted from August 27 through December 26, 1940, by the Immigration and Naturalization Service of the Department of Justice. Registration will take place in the post offices of the nation.

Registration is made compulsory by a specific act of Congress, the Alien Registration Act of 1940, which requires all noncitizens to register during the 4-month official registration period. The law requires that all

aliens 14 years or older are to be registered and fingerprinted. Alien children under 14 years of age will be registered by their parents or guardians. When alien children reach their fourteenth birthday, they will be required to register in person and be fingerprinted.

A fine of \$1,000 and imprisonment of 6 months is prescribed by the Alien Registration Act for failure to register, for refusal to be fingerprinted, or for making registration statements known to be false.

As part of its educational program to acquaint non-citizens with the registration requirements, the Alien Registration Division has distributed more than 5 million specimen forms listing the questions asked of aliens at registration time. Besides the usual questions for establishing identification, the questionnaire asks the alien to tell how and when he entered the country, the method of transportation he used to get here, the name of the vessel on which he arrived.

To make their registration easier, aliens are being asked to fill out sample forms and take them to post offices where they will be registered and fingerprinted. Every registered alien will receive by mail a receipt card which serves as evidence of his registration. Following registration, the act requires all aliens, as well as parents or guardians of alien children, to report changes of residence address within five days of the change.

The Alien Registration Act was passed so that the United States Government may determine exactly how many aliens there are, who they are, and where they are. The act provides that all records be kept secret and confidential. They will be available only to persons approved by the Attorney General of the United States.

Fingerprinting of aliens carries no stigma whatsoever. Members of the United States Army and Navy are all fingerprinted, as are many Government workers. Because fingerprinting is the only infallible method of accurate identification, the United States Government has adopted it as part of its registration program.

The Immigration and Naturalization Service asks for the cooperation of all citizens in carrying out the Alien Registration program in a friendly manner so that our large foreign population is not antagonized. It is suggested that citizens may be of great help to their non-citizen neighbors or relatives by explaining to those who do not speak English well what the registration is, where aliens go to register, and what information they must give.

HIGHWAY RESEARCH BOARD WILL MEET IN DECEMBER

The Twentieth Annual Meeting of the Highway Research Board of the National Research Council will be held in Washington, D. C., Wednesday through Friday, December 4-6, 1940.

Reports on highway research investigations will be presented, and the formal meetings of the Board will be supplemented with open meetings for informal discussion.

Meetings of the various committees, many of which will be open to the public, will be held December 2 and 3. A program of reports will be announced by the Board about November 1.

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STATUS OF FEDERAL-AID HIGHWAY PROJECTS

AS OF JULY 31, 1940

STATE	COMPLETED DURING CURRENT FISCAL YEAR			UNDER CONSTRUCTION			APPROVED FOR CONSTRUCTION			BALANCE OF AVAILABLE FEDERAL FUNDS FOR PROGRESSIVE PROJECTS
	Estimated Total Cost	Federal Aid	Miles	Estimated Total Cost	Federal Aid	Miles	Estimated Total Cost	Federal Aid	Miles	
Alabama	\$ 645,709	\$ 320,567	29.7	\$ 5,225,276	\$ 2,598,023	171.1	\$ 1,400,750	\$ 697,620	43.4	\$ 2,650,005
Arizona				1,344,580	856,718	59.9	206,933	95,570	4.5	1,640,391
Arkansas				2,695,225	1,364,064	132.4	619,509	303,387	18.1	1,369,899
California	952,021	501,730	17.0	7,359,448	3,808,796	111.8	3,750,586	2,020,970	76.7	2,432,345
Colorado	524,219	295,450	16.6	2,191,348	1,215,514	96.2	694,258	391,283	101.5	2,456,023
Connecticut	15,000	7,500		2,327,350	1,139,385	20.4	344,063	164,823	1.4	1,133,805
Delaware	52,661	26,330	.9	1,224,994	612,114	10.4	900,394	423,082	21.3	1,043,125
Florida	152,500	76,250	1.1	3,811,684	1,895,565	115.8	786,995	393,498	17.1	2,340,569
Georgia	308,728	154,364	26.5	6,161,566	3,080,723	289.3	4,584,579	2,292,790	151.1	5,120,822
I Idaho	302,674	185,128	14.1	1,179,094	712,163	102.3	392,091	208,464	58.5	1,798,492
Illinois	386,000	193,000	7.2	8,699,498	4,349,584	205.1	1,881,200	939,870	25.2	3,771,293
Indiana	1,388,510	694,255	28.8	6,668,375	3,327,729	134.3	1,825,160	912,500	23.9	1,838,265
Iowa	568,768	214,690	4.0	4,731,594	2,163,912	164.1	3,174,266	1,772,760	120.9	633,771
Kansas	530,462	265,231	26.2	6,235,304	3,133,637	314.6	2,135,894	1,351,442	188.2	3,973,422
Kentucky	1,291	645		3,888,620	1,942,754	76.8	1,424,795	712,398	65.9	3,157,043
Louisiana	258,080	129,040	4.4	11,874,204	2,980,476	37.3	2,536,473	1,256,640	60.0	2,920,124
Maine	68,000	34,000	.9	1,201,397	600,698	30.3	420,231	210,115	10.5	694,737
Maryland				3,260,973	1,552,169	41.9	1,108,560	541,180	11.0	1,326,943
Massachusetts	225,870	112,854	1.2	1,928,380	960,388	19.4	2,293,058	1,140,914	15.4	2,803,104
Michigan	337,502	168,751	8.1	2,394,090	1,608,944	291.0	2,624,300	1,312,150	64.0	1,192,007
Minnesota	330,562	164,900	26.8	6,331,438	3,148,247	438.4	3,099,210	1,544,560	198.6	3,143,639
Mississippi	3,100			6,373,878	2,791,545	318.7	1,905,860	846,480	88.0	2,209,982
Missouri	1,151,071	575,536	49.4	5,744,808	2,859,986	200.5	3,754,172	1,410,657	88.0	4,670,548
Montana	802,893	455,365	48.6	3,596,776	2,034,753	241.2	606,783	332,190	31.6	4,024,385
Nebraska	338,938	169,469	36.3	6,059,689	2,926,296	704.9	1,774,555	887,278	221.3	2,823,665
Nevada	442,379	379,766	19.5	1,735,552	1,502,666	84.2	24,432	21,298	5.0	1,084,270
New Hampshire	84,632	41,167	1.2	1,503,338	740,727	38.2	275,114	132,008	5.3	877,657
New Jersey	1,089,800	544,670	8.9	4,416,148	2,208,074	32.9	130,840	65,420	2.1	2,167,494
New Mexico	29,397	17,720	9.8	1,814,003	1,119,004	109.0	507,069	305,661	23.4	1,651,760
New York	1,089,560	540,992	18.4	14,362,481	7,018,345	223.5	3,296,177	1,474,939	41.7	2,585,309
North Carolina	865,960	432,050	32.0	5,131,911	2,566,517	262.4	1,055,869	527,120	38.5	2,236,929
North Dakota	211,510	113,362	14.3	3,019,698	1,691,219	248.0	3,575,594	1,840,914	307.8	3,247,421
Ohio	177,860	88,930	1.5	11,820,175	5,885,738	120.6	4,372,960	2,189,480	32.6	3,249,449
Oklahoma	304,412	161,341	19.5	3,108,152	1,645,252	86.4	2,158,787	1,090,682	102.7	4,171,640
Oregon	339,590	204,920	15.2	3,630,392	2,173,985	142.3	419,674	245,900	11.4	1,342,647
Pennsylvania	359,582	177,451	3.9	11,211,266	5,555,494	187.5	3,346,276	1,653,902	24.6	3,559,276
Rhode Island	115,572	57,780	1.2	1,214,836	606,315	12.1	418,507	208,955	4.3	998,213
South Carolina	22,600	11,300	.1	2,511,504	1,210,143	156.5	1,520,780	440,475	114.8	2,396,782
South Dakota	479,320	264,740	62.0	4,028,360	2,356,230	510.3	1,520,780	875,760	290.8	3,145,532
Tennessee	83,630	41,815	4.6	3,669,120	1,834,560	101.4	1,341,514	670,757	61.2	4,018,539
Texas	788,300	393,460	71.9	8,323,649	4,113,302	425.5	2,530,291	1,248,452	104.5	7,636,052
Utah	194,920	141,845	15.0	1,175,850	871,753	71.7	263,010	146,540	5.8	1,082,121
Vermont	33,900	16,950	1.7	1,415,695	707,247	11.4	595,687	297,357	15.5	275,025
Virginia	277,742	145,094	2.6	3,316,645	1,597,849	79.5	412,903	174,852	13.7	2,268,502
Washington				4,062,519	2,139,435	86.2	520,407	275,200	11.2	1,067,931
West Virginia	199,250	98,445	7.6	3,177,150	1,582,286	93.1	1,259,990	629,145	33.0	1,703,221
Wisconsin	671,745	321,400	39.8	5,116,484	2,525,210	142.0	1,154,922	554,580	76.1	3,577,236
Wyoming	368,478	232,616	39.8	1,238,978	827,943	128.1	423,445	260,392	70.0	1,119,559
District of Columbia				456,324	192,050	4.1	189,200	94,600	1.4	424,696
Hawaii	29,184	11,010	2.8	217,910	112,602	2.8	682,741	370,516	11.6	1,486,733
Puerto Rico				1,389,245	688,970	25.6	228,708	113,420	1.8	770,080
TOTALS	17,603,942	9,185,459	734.1	222,636,974	110,135,677	7,755.1	77,067,274	38,040,752	3,123.4	121,694,878

STATUS OF FEDERAL-AID SECONDARY OR FEEDER ROAD PROJECTS

AS OF JULY 31, 1940

STATE	COMPLETED DURING CURRENT FISCAL YEAR			UNDER CONSTRUCTION			APPROVED FOR CONSTRUCTION			FINANCES OF STATE AVAILABLE FOR PROJECTS
	Estimated Total Cost	Federal Aid	Miles	Estimated Total Cost	Federal Aid	Miles	Estimated Total Cost	Federal Aid	Miles	
Alabama	\$ 96,617	\$ 48,100	1.3	\$ 1,038,097	\$ 517,420	56.4	\$ 111,900	\$ 45,000	0.3	\$ 490,992
Arizona	52,782	17,866	4.7	172,207	124,309	6.5	80,472	42,220	6.2	273,580
Arkansas	26,741	13,365	3.9	212,098	117,494	18.0	133,901	66,923	11.8	219,590
California	58,176	34,039	4.8	716,211	386,118	27.9	288,114	156,151	9.3	841,383
Colorado				152,679	63,187	1.2	54,731	30,846	2	196,189
Connecticut				367,226	178,009	4.6	33,907	16,890	0.7	189,178
Delaware				128,160	56,367	12.7	40,371	19,751	2.9	268,125
Florida				29,916	14,598	0.6	795,399	393,888	14.3	214,839
Georgia	25,161	12,581	4.6	593,299	264,649	53.1	421,337	210,683	32.2	1,117,569
Ideho				36,379	22,413	6.0	58,168	34,811	10.6	240,904
Illinois	230,000	115,000	16.0	1,812,985	889,318	62.6	413,400	206,700	20.4	317,965
Indiana	144,100	57,050	7.5	357,470	177,531	23.5	98,006	49,400	6.2	543,563
Indiana	497,225	236,275	85.9	1,152,202	548,566	216.8	948,751	448,289	251.5	307,368
Iowa	154,352	77,176	1.3	430,515	218,166	27.9	574,923	287,476	51.2	1,248,215
Kansas	46,276	20,000	2.1	714,930	354,405	58.5	354,405	96,800	19.1	351,272
Kentucky				297,930	148,910	29.7	145,320	70,560	7.5	455,182
Louisiana	17,600	8,011	1.2	166,184	79,783	9.1	46,000	23,000	2.7	10,017
Maine				131,996	65,998	5.5				427,378
Maryland										
Massachusetts	110,536	54,886	2.7	512,049	253,775	10.2	30,530	15,265	2	487,958
Michigan	9,360	9,780	2.4	1,313,219	699,999	105.6	453,250	226,630	35.2	560,988
Minnesota	6,827	3,414	1.4	659,812	329,190	77.9	321,036	160,513	53.5	1,104,901
Mississippi				657,362	323,181	22.6	304,900	149,915	18.2	573,008
Missouri	116,914	58,457	16.3	544,816	268,997	55.4	283,956	111,429	15.5	719,677
Montana	28,040	15,904	4.6	444,673	230,748	58.3	230,748	130,211	19.3	658,675
Nebraska	40,042	19,862	6.7	724,548	362,274	100.4	251,716	120,751	39.6	288,859
Nevada	44,434	38,217	9	110,220	95,265	32.7	105,924	89,156	9.0	104,172
New Hampshire	48,367	23,241	2.2	31,254	16,906	1.2	71,651	35,433	1.2	162,156
New Jersey	101,564	63,386	13.1	583,590	291,715	19.6	150,797	72,336	9	528,956
New Mexico	257,480	128,740	6.1	2,176,855	1,053,350	67.9	887,700	348,898	21.6	190,111
New York	43,370	21,685	6.3	1,003,503	502,718	86.5	47,000	23,300	4.9	330,897
North Carolina				184,584	100,532	1.4	27,520	11,750	2.4	1,014,688
North Dakota	56,294	28,081	3.2	2,517,762	1,265,656	89.9	724,661	300,960	14.5	831,375
Ohio	57,377	35,754	6.0	608,510	322,621	41.8	267,180	116,876	12.4	924,501
Oklahoma	35,193	21,240	4.2	304,745	160,260	49.5	255,698	108,650	21.7	256,964
Oregon	369,736	178,763	16.0	1,572,832	786,416	45.2	370,751	184,467	8.8	243,018
Pennsylvania				230,054	115,001	3.6				95,049
Rhode Island				651,540	250,827	61.0	184,650	74,650	56.4	228,284
South Carolina				3,624	3,624					1,280,913
South Dakota	43,036	21,518	3.1	101,256	50,628	7.7	220,990	95,030	24.2	1,007,123
Tennessee	483,976	236,950	60.6	912,635	440,413	122.7	210,427	128,600	22.3	1,062,153
Texas				6,700	5,000					163,707
Utah	98,200	30,800	4.1	372,691	108,755	13.5	42,925	12,500	1.8	22,500
Vermont	57,340	24,667	1.5	525,974	244,960	31.9	51,326	22,779	0.7	328,772
Virginia	90,379	47,400	2.8	297,603	156,539	21.9	280,829	149,600	9.5	240,072
Washington	39,400	19,700	1.6	267,219	133,084	15.4	79,808	39,904	4.4	448,189
West Virginia	130,102	64,750	4	510,901	255,370	16.2	287,506	143,300	13.0	653,467
Wisconsin	102,039	64,414	19.5	287,013	168,301	19.5	114,120	72,944	7.9	113,561
Wyoming				41,492	20,246	0.5	74,900	37,450	0.7	29,296
District of Columbia				278,748	139,878	8.7				158,778
Hawaii				302,224	147,640	14.0				80,408
Puerto Rico										
TOTALS	3,710,256	1,853,072	319.3	27,491,779	13,575,834	1,826.3	10,998,033	5,267,360	905.0	23,189,747

PUBLICATIONS of the PUBLIC ROADS ADMINISTRATION

Any of the following publications may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. As his office is not connected with the Agency and as the Agency does not sell publications, please send no remittance to the Federal Works Agency.

ANNUAL REPORTS

- Report of the Chief of the Bureau of Public Roads, 1931. 10 cents.
Report of the Chief of the Bureau of Public Roads, 1933. 5 cents.
Report of the Chief of the Bureau of Public Roads, 1934. 10 cents.
Report of the Chief of the Bureau of Public Roads, 1935. 5 cents.
Report of the Chief of the Bureau of Public Roads, 1936. 10 cents.
Report of the Chief of the Bureau of Public Roads, 1937. 10 cents.
Report of the Chief of the Bureau of Public Roads, 1938. 10 cents.
Report of the Chief of the Bureau of Public Roads, 1939. 10 cents.

HOUSE DOCUMENT NO. 462

- Part 1 . . . Nonuniformity of State Motor-Vehicle Traffic Laws. 15 cents.
Part 2 . . . Skilled Investigation at the Scene of the Accident Needed to Develop Causes. 10 cents.
Part 3 . . . Inadequacy of State Motor-Vehicle Accident Reporting. 10 cents.
Part 4 . . . Official Inspection of Vehicles. 10 cents.
Part 5 . . . Case Histories of Fatal Highway Accidents. 10 cents.
Part 6 . . . The Accident-Prone Driver. 10 cents.

MISCELLANEOUS PUBLICATIONS

- No. 76MP . . The Results of Physical Tests of Road-Building Rock. 25 cents.
No. 191MP . . Roadside Improvement. 10 cents.
No. 272MP . . Construction of Private Driveways. 10 cents.
No. 279MP . . Bibliography on Highway Lighting. 5 cents.
Highway Accidents. 10 cents.
The Taxation of Motor Vehicles in 1932. 35 cents.
Guides to Traffic Safety. 10 cents.
An Economic and Statistical Analysis of Highway-Construction Expenditures. 15 cents.
Highway Bond Calculations. 10 cents.
Transition Curves for Highways. 60 cents.
Highways of History. 25 cents.

DEPARTMENT BULLETINS

- No. 1279D . . Rural Highway Mileage, Income, and Expenditures, 1921 and 1922. 15 cents.
No. 1486D . . Highway Bridge Location. 15 cents.

TECHNICAL BULLETINS

- No. 55T . . . Highway Bridge Surveys. 20 cents.
No. 265T . . . Electrical Equipment on Movable Bridges. 35 cents.

Single copies of the following publications may be obtained from the Public Roads Administration upon request. They cannot be purchased from the Superintendent of Documents.

MISCELLANEOUS PUBLICATIONS

- No. 296MP . . Bibliography on Highway Safety.
House Document No. 272 . . . Toll Roads and Free Roads.
Indexes to PUBLIC ROADS, volumes 6-8 and 10-19, inclusive.

SEPARATE REPRINT FROM THE YEARBOOK

- No. 1036Y . . Road Work on Farm Outlets Needs Skill and Right Equipment.

TRANSPORTATION SURVEY REPORTS

- Report of a Survey of Transportation on the State Highway System of Ohio (1927).
Report of a Survey of Transportation on the State Highways of Vermont (1927).
Report of a Survey of Transportation on the State Highways of New Hampshire (1927).
Report of a Plan of Highway Improvement in the Regional Area of Cleveland, Ohio (1928).
Report of a Survey of Transportation on the State Highways of Pennsylvania (1928).
Report of a Survey of Traffic on the Federal-Aid Highway Systems of Eleven Western States (1930).

UNIFORM VEHICLE CODE

- Act I.—Uniform Motor Vehicle Administration, Registration, Certificate of Title, and Antitheft Act.
Act II.—Uniform Motor Vehicle Operators' and Chauffeurs' License Act.
Act III.—Uniform Motor Vehicle Civil Liability Act.
Act IV.—Uniform Motor Vehicle Safety Responsibility Act.
Act V.—Uniform Act Regulating Traffic on Highways.
Model Traffic Ordinances.

A complete list of the publications of the Public Roads Administration, classified according to subject and including the more important articles in PUBLIC ROADS, may be obtained upon request addressed to Public Roads Administration, Willard Bldg., Washington, D. C.

STATUS OF FEDERAL-AID GRADE CROSSING PROJECTS

AS OF JULY 31, 1940

STATE	COMPLETED DURING CURRENT FISCAL YEAR				UNDER CONSTRUCTION				APPROVED FOR CONSTRUCTION				BALANCE OF FEDERAL-AID AVAILABLE FOR PROGRAMMED PROJECTS
	Estimated Total Cost	Federal Aid	NUMBER		Estimated Total Cost	Federal Aid	NUMBER		Estimated Total Cost	Federal Aid	NUMBER		
			Grade Crossing by Separate Construction or Rehabilitation	Grade Crossing by Separate Construction or Rehabilitation			Grade Crossing by Separate Construction or Rehabilitation	Grade Crossing by Separate Construction or Rehabilitation			Grade Crossing by Separate Construction or Rehabilitation	Grade Crossing by Separate Construction or Rehabilitation	
Alabama	\$ 159,552	\$ 134,732	1		\$ 770,410	\$ 770,327	6	1	\$ 17,000	\$ 17,000	1	1	\$ 874,810
Arizona	10,230	10,230	4		201,045	198,841	3		2,362	2,362	3	1	264,581
Arkansas	4,090	4,090	1		1,154,833	1,150,686	8	1	188,872	188,655	4	9	434,866
California	153,792	148,343	1		1,031,831	879,350	5	1	18,434	18,434	9	1	1,687,509
Colorado					277,100	277,100	1		3,401	3,401	1		922,774
Connecticut					631,483	625,932	7						451,839
Delaware	111,728	107,229	1		146,647	146,647	1	11	38,943	38,943	1	6	479,112
Florida	63,610	63,610	1		91,620	91,620	1	4	164,314	164,314	2	16	1,201,952
Georgia					762,136	762,136	10	4	471,114	471,114	4	2	1,984,238
Idaho	109,232	107,622	1		207,740	204,310	5	2	79,646	79,646	3	31	430,468
Illinois	22,784	22,784	4		2,553,797	2,311,265	10	2	485,272	485,272	1	88	1,938,341
Indiana	57,614	55,950	16		810,699	810,699	5	2	272,614	272,614	1	36	1,109,568
Iowa	4,402	4,402	4		280,798	289,488	3	23	306,127	269,234	3	56	1,208,815
Kansas	112,479	112,479	2		879,093	878,615	12	1	254,202	254,202	2	11	1,115,081
Kentucky					1,046,551	1,046,551	11	1	46,932	46,932	2	6	574,789
Louisiana	69,077	69,077	1	2	440,618	387,123	3	3	627,884	570,153	11	1	789,393
Maine					81,388	81,388	1	1	153,940	153,940	1	3	250,472
Maryland					634,509	602,716	3	2	6,400	6,400	1	2	794,625
Massachusetts	15,710	15,710	1	5	356,591	356,168	1	3	281,816	281,816	1	15	973,791
Michigan	92,224	92,224	3	1	1,814,350	1,814,350	8	3	239,678	239,678	2	13	1,076,573
Minnesota	396,615	396,615	3	1	1,522,016	1,520,923	13	3	49,200	49,200	3	1	895,624
Mississippi					481,419	481,419	5	1	1,269,305	813,885	3	1	1,508,162
Missouri					1,183,905	1,183,905	6	4	171,535	171,535	3	3	436,252
Montana					271,074	201,433	6	2	107,678	107,678	3	3	664,916
Nebraska					734,112	734,112	6	7	112,146	112,146	1	25	393,572
New Hampshire					45,546	45,546	1	4					1,242,438
New Jersey					181,248	181,248	4	3	285,737	285,737	2	2	646,504
New Mexico	10,377	10,377	2	1	588,109	588,109	3	2	7,609	7,609	5	8	2,997,444
New York	307,110	306,000	2	3	232,961	232,961	10	14	820,772	701,336	1	16	898,855
North Carolina	92,275	92,275	1	3	3,210,539	3,150,247	12	2	125,520	125,520	1	12	771,928
North Dakota	306,540	306,540	4	1	916,458	916,458	3	6	41,110	41,110	7	7	3,086,369
Ohio					204,040	204,040	14	3	41,990	41,990	3	57	363,725
Oklahoma	47,751	47,625	1	1	2,784,713	2,713,761	9	1	478,881	473,495	1	6	4,388,344
Oregon					506,902	506,002	15	1	245,806	189,579	1	1	664,916
Pennsylvania	34,709	34,709	1	1	1,765,493	1,756,017	15	1	709,817	709,817	6	1	95,913
Rhode Island					194,789	194,789	3	2	80,943	80,943	7	14	1,070,279
South Carolina	56,842	56,842	2	1	379,543	379,543	3	3	286,830	270,880	1	1	1,022,387
South Dakota					172,312	172,312	2	2	124,741	124,741	7	1	1,756,339
Tennessee	133,099	132,800	1	2	244,396	244,396	13	4	787,820	662,130	7	6	2,134,382
Texas					1,503,148	1,430,273	13	13	19,287	19,287	7	7	328,820
Utah					504,171	504,171	2	2	15,144	15,144	5	5	245,989
Vermont	9,500	9,500	1	3	209,371	209,371	4	2	24,182	24,182	6	6	1,187,095
Virginia	70,354	70,354	1	2	287,968	286,302	4	1	81,575	81,575	1	2	513,498
Washington					285,753	284,253	1	4	11,201	11,201	1	3	1,136,132
West Virginia	199,073	198,812	3	2	1,074,731	1,030,870	6	4	122,400	122,400	1	2	1,373,756
Wisconsin					540,923	540,923	5	5	48,000	48,000	1	2	192,955
Wyoming					8,868	8,868	2	2	9,494	9,494	2	2	289,822
District of Columbia					194,036	194,036	11	11					414,857
Hawaii					584,007	579,336	266	61					52,916,911
Puerto Rico													
TOTALS	2,653,869	2,611,931	24	8	34,892,341	33,879,481	266	61	9,617,974	8,739,552	73	18	507

