Major Street Development Diagram

Plate Seven.

The first essential in preparing a systematic plan of major streets for Duluth is to visualize broadly the terrain over which these and other streets will be laid. Certain characteristics of the site of the city have already been referred to. The land may be classified briefly as:

- 1-Water front areas of relatively gentle slopes.
- 2—Hillside areas of steep, rocky slopes, cut by deep ravines.
- 3—Upland areas of occasional steep slope but generally rolling and favorable to city growth.

In any rational determination of a city-wide scheme of streets, these conditions must be recognized.

The existing street system of Duluth does in certain respects reflect the actual lay of the land, but there are notable departures from what would be considered a proper theoretical arrangement of traffic-ways. It may be pertinent here to outline the steps which would now be followed if Duluth were merely an embryonic settlement and a wholly new scheme of major and minor streets were being devised.

The water front area obviously would lend itself to a system of generally uninterrupted, straight streets. The main direction of these streets would be parallel to the hill and water front. Cross streets would be relatively infrequent and would occur at places suitable for an easy ascent of the hill or an approach to water front industrial areas. Parallel to the shore, at a reasonable distance therefrom, would be a broad industrial artery at least 100 feet wide serving all interests located on the harbor. A similar intercepting street would have been opened along the base of the hill. These streets would be continuous. No jogs or dead ends would be permitted to reduce their efficiency.

Streets in the hillside area require more sympathetic

handling. This portion of the terrain is of such character as would have compelled the abandonment of a pattern or regular, symmetrical arrangement of streets. Easy gradient is a primary objective here and would have been secured if necessary at the expense of straight lines and rectangles. Between the main arteries, which would follow ravines and other natural grade lines, there would have developed a system of minor streets lying generally parallel to the contour and having few cross streets against the grade. Many acres of steep hillside terrain which could not economically be used for residential purposes would have constituted a public reservation or park area. Along the upper edge of the public reservations would be a wide pleasure drive tying these areas together. This latter Duluth now has.

In the upland territory the street system would still have to be adjusted to the ground. The difficulty of making these adjustments would be lessened, however, because of gentler natural slopes, and the main radiating thoroughfares, providing access to the lower levels, would tend to straighten and become a rectangular system. Beyond the hill would be a series of circumferential, belt line thoroughfares making possible a complete circuit of the city. Interwoven with all streets of this section would be a connected system of pleasure drives linking the hillside park areas and skyline drive with outlying parks and reservation.

Plate seven shows the several steps in the formation of this ideal street plan. To some it may seem futile to introduce pictures of this sort since the city of Duluth has already gone past the point of ever realizing such a scheme, but, as will be shown later, the opportunities before the city are not altogether lost. Under suitable guidance, with proper official support and authority, the basic elements of the system outlined above can be achieved. It is certain that Duluth cannot be made one of the great cities of the country without shaping basic plans and improvements to some such comprehensive view of its possibilities.

Areas Available for New Planning

Plate Eight.

The primary effect of the city plan, if its functions are properly exercised, will be to bring order and system into new city growth. Opinions may differ as to the economic necessity of correcting certain faults in existing streets, but there can be no disagreement over the need of preventing further errors. Studies show that as far as existing streets are concerned, Duluth has few serious corrective needs. Its greatest opportunity lies in the vast area awaiting development.

The corporate territory of the city may be classified for street planning purposes under three heads.

- 1. Areas already laid out and beyond the possibility of further improvement of street facilities except by expensive changes. These areas comprise approximately 29.0% of the total.
- 2. Areas laid out but which for one reason or another have not yet come into general use. Many subdivisions have been laid out with so little regard for natural grades that lots in them are practically worthless. The replanning of certain portions of this territory is a possibility. Such areas comprise 19.5% of the total.
- 3. Areas as yet not laid out for town purposes. A large proportion of Duluth is within this classification The percentage is 46.4.

The normal rate of growth for Duluth is expected to be near 25 per cent each Federal census period. This is equivalent to an average increase of approximately 600 families per year. Experience elsewhere has shown that a municipality growing at this rate may expect about two city lots of normal size to be platted for each new family added yearly to the population. In Duluth this would be equivalent to the subdivision of roughly 250 acres annually. This figure would change with economic conditions and with fluctuations in population increase, but the computation, however rough, is useful here.

One may see at once the opportunities before the city in the matter of securing an appropriate street plan for each new area platted. There are equal opportunities, moreover, for the reservation of school sites, the placement of parks and recreation areas, the design of commercial centers, the planning of continuous pleasure drives and other features of a well appointed city.

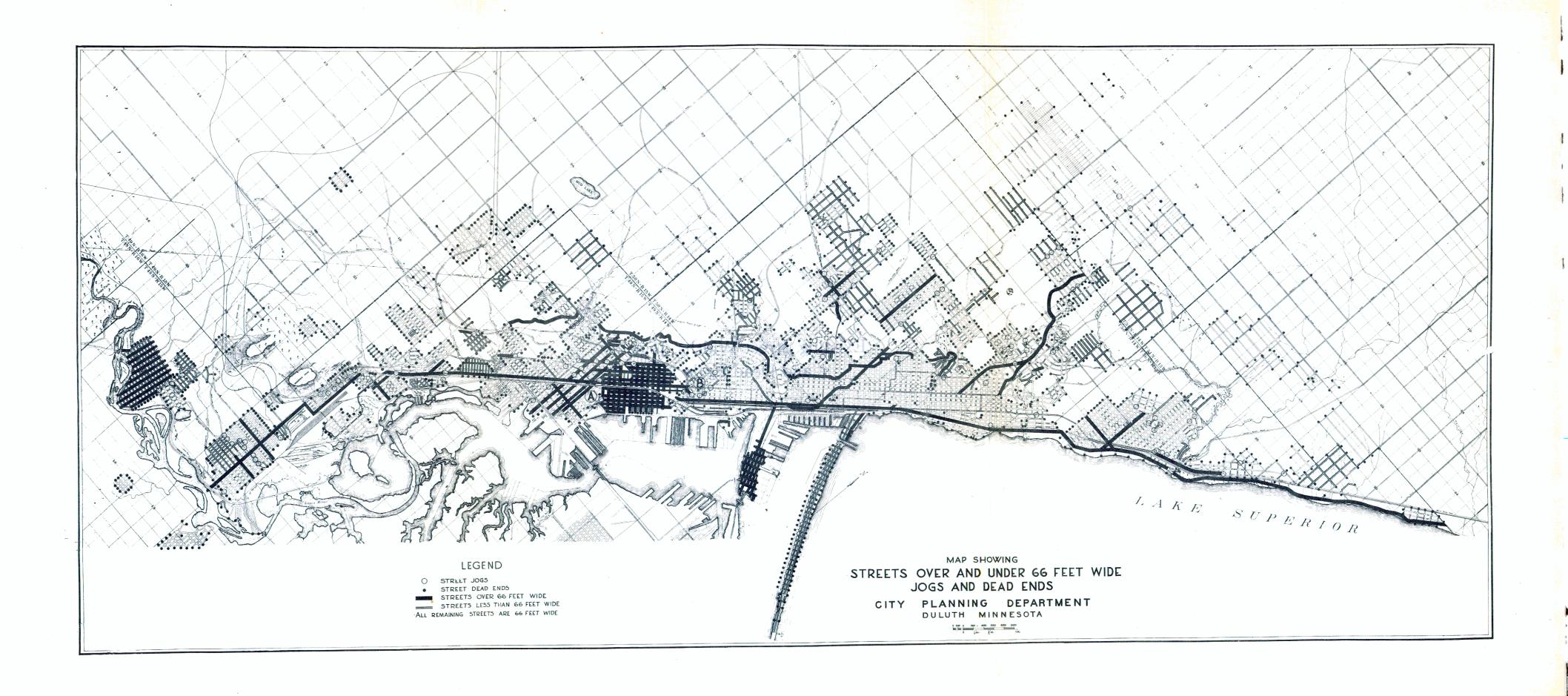
Areas Available for New Planning

AREAS AVAILABLE FOR



Existing Street Widths, Jogs and Dead Ends

STREETS OVER AND



Existing Street Widths Jogs and Dead Ends

Plate Nine.

The general character of the street system is revealed in this map. Here is shown the effect of building a city without a comprehensive plan or policy. This plate should be studied in comparison with plate seven, which shows the fabrication of a street system definitely related to peculiar topographic conditions found in Duluth.

The lack of system is clearly shown in the determination of street widths. The 66-foot street has become, through precedent, a standard in Duluth. Minor variations occur in certain sections, such as the system of 80-foot streets in West Duluth and Rice's Point and the narrower widths in Oneota, Fond du Lac and outlying subdivisions. As may be seen, narrow streets often appear where wider ones are needed, as in the case of Michigan Street and other busy traffic ways serving the waterfront. Many residential streets are wide when they could well be narrow, since the cost of opening and grading a street under such conditions increases as the square of the width and traffic loads in such districts will probably never be heavy. Standardized widths for streets of various kinds are here recommended (See Page 33).

Topography has been responsible for many of the jogs and dead ends that appear in the street plan. Duluth has fewer street faults of this type than many cities. In the central section continuity has been preserved over a large area, although often at the expense of reasonable grades. A map showing existing grades and the relative usability of streets would reveal obstacles and hindrances to traffic movement more serious than appear on this map.

The tendency of subdividers to change the general direction of platting has further complicated the circulation problem. Too often, as at points A and B of the opposite plate, unsuitable connections have been made with existing streets. Unnecessary jogs, dead ends and sharp angles appear. Here the influence of section lines and property surveys is in conflict with the requirements of topography. It will be a special duty of the City Planning Commission to prevent this conflict from working further to the disadvantage of the community where new thoroughfares are being laid out. Invisible and arbitrary lines must not be allowed to prevail over the needs of circulation.

Topography and Civic Development

Plate Ten.

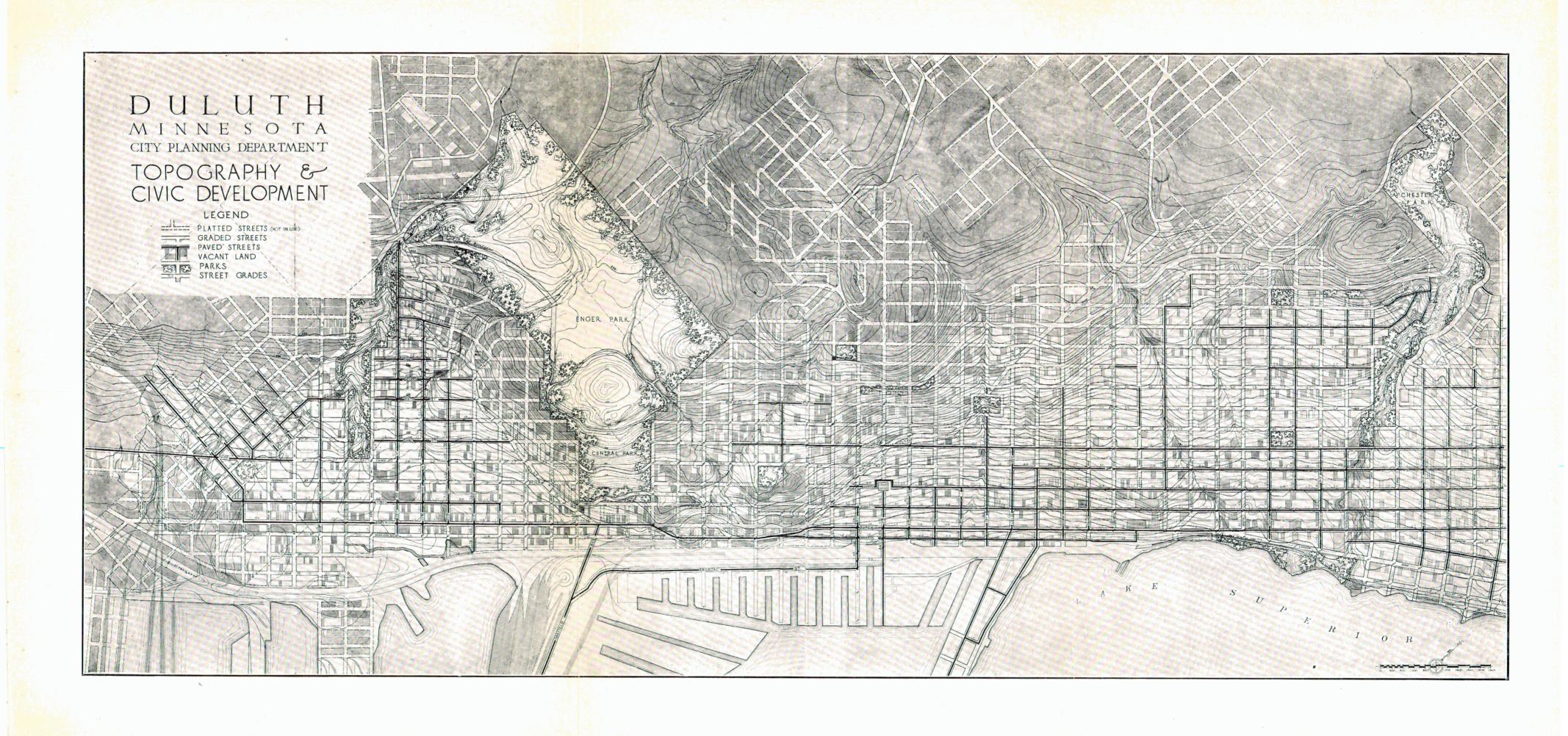
This is a detailed study of a section of central Duluth for which accurate topographic information has been secured. Here is shown in part the resultant effect of attempts to impose a rigid rectangular street pattern upon extremely rugged terrain. The lack of ingenuity in meeting abnormal conditions is noteworthy.

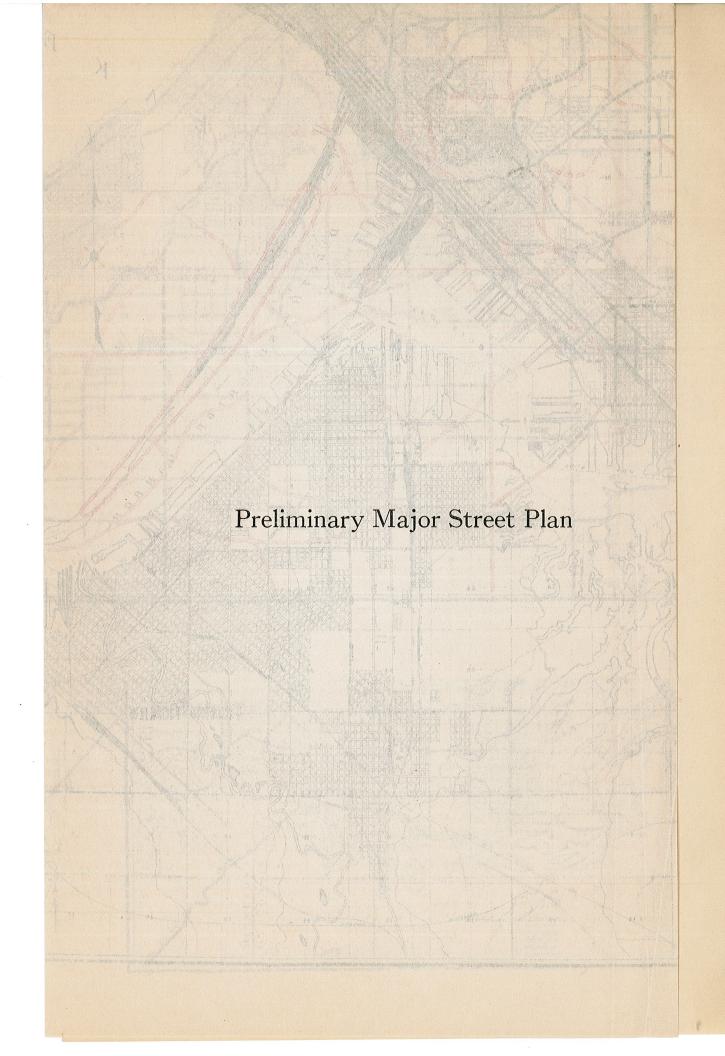
The total area embraced is approximately 5370 acres, of which 560 acres are in park lands. Of the private property 45% or 2160 acres are vacant or unimproved. Most of this unused territory is on upper levels and remains idle because of the difficulty of getting to it. The whole district is within easy reach of the business center.

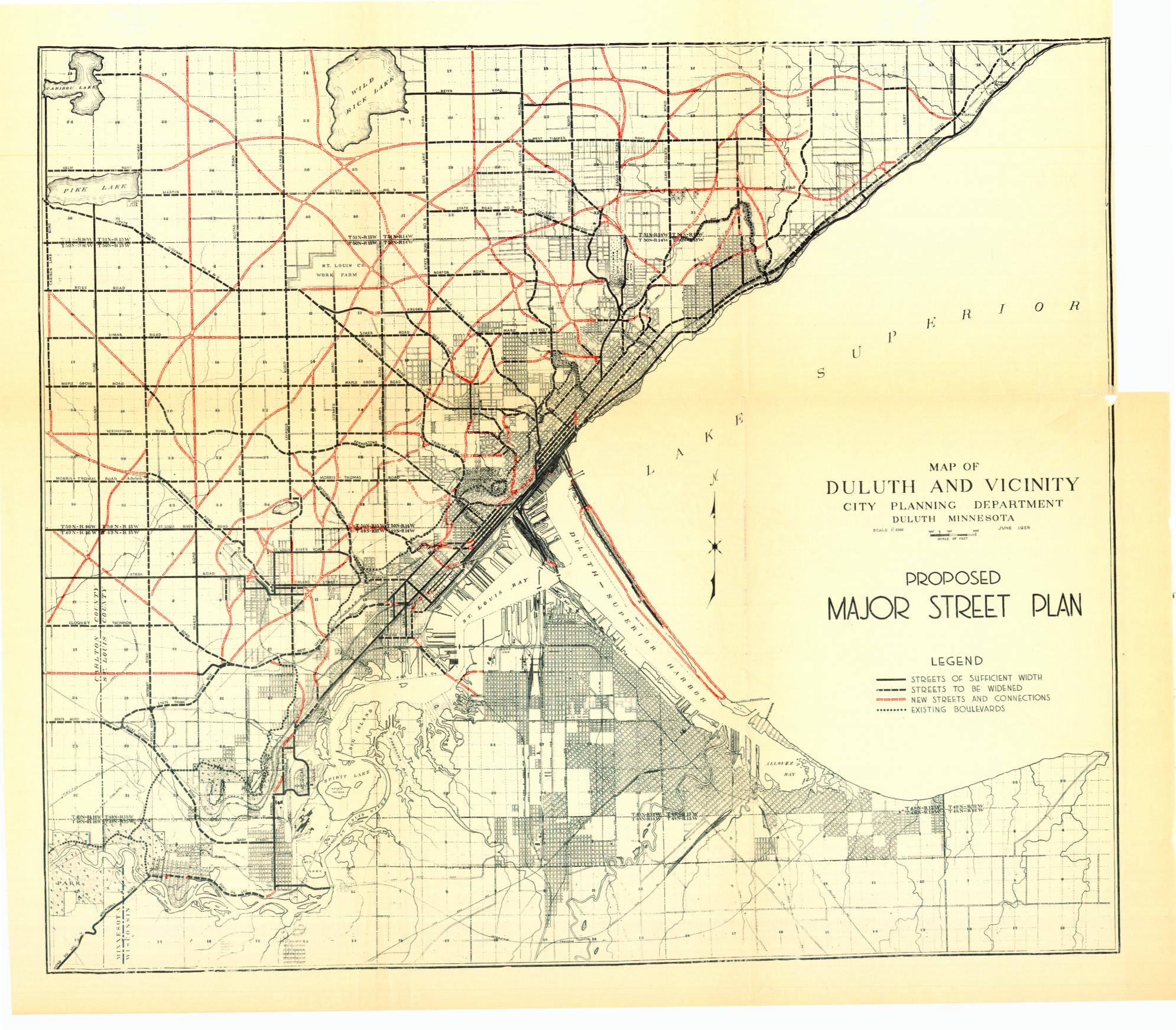
As to street conditions a more convincing statement may be made. The total length of platted streets shown is 130 miles, 75 miles or 56% being laid out generally parallel to the contours and 57 miles or 44% against the grade. Of the former only 13 miles or 17.8% show grades in excess of 5%, while 43.5 miles or 76.3% of the uphill streets exceed 5%. The effect of this disregard of topography is shown in the extent of pavement laid and the length of streets which have been neither graded nor paved but exist in large part merely as paper streets. The use and relative value of property clearly depends upon the usefulness of streets, a convincing demonstration of the fact that proper street planning is an essential preventive of economic waste in the city building process.

One notes, also, the slight influence of topography upon the park development shown on this plate. Park boundaries are the straight and meaningless lines of property surveys. Private property adjacent the park gets little benefit from this relationship because of the difficulty of building homes to face the park. As a consequence the city loses considerable taxable value in residential property near such parks.

Some parks of Duluth could well be redesigned with the idea of establishing new boundaries more closely related to the natural ground. The Major Street plan will be found useful in all such future studies. Topography and Civic Development







Preliminary Major Street Plan

Plate Eleven.

The proposed major street system is an approximation to the theoretical scheme discussed under Plate Seven. Present conditions, especially those of the well established sections of the city, have affected the plan to some extent. Nevertheless, in its broader aspects the plan meets the special requirements of the site.

The scope of this preliminary report will not permit a thorough discussion of all routes. The plan itself will have to be depended upon largely to tell its own story. A supplementary list of major streets, giving all essential data is found in the appendix. Discussions of proposed street widths and various details deserving immediate attention will follow.

It is well here merely to outline the principal characteristics of the plan. Take, for instance, the scheme of streets designed to serve the waterfront area. There should be two or three broad continuous arteries running through this section parallel to the hill from one end of the city to the other. Especially needed is a commodious water front street. What is found? There is virtually only one east-west thoroughfare, the Superior-Third-Grand-Commonwealth route, and it, despite the attention lavished on it, falls considerably short of being a first class major traffic way. There is also Michigan Street, an industrial way of great potential usefulness, now in spots overloaded but too well hardened in its present state to admit economical improvement. Under the circumstances, not a great deal can be done to revise this scheme of streets.

The Major Street plan, however, is a sort of repository for all sound and practical suggestions for the correction of faults in the existing street plan. Stated briefly, the chief objective should be to put as many streets into use as possible. In districts of probable future congestion, and there is no real traffic congestion in Duluth now, the principal arteries should fan out or expand into a series of parallel routes, all equally inviting to vehicular flow. This street improvement program calls for connections, often relatively inexpensive, rather than costly widenings.

Widenings should be a second, more anticipatory step, in the major street development program. Clearly, greater width will be needed eventually on certain streets but that day will be deferred if present efforts are devoted to bringing all streets up to their maximum usefulness and value in the circulation system. Such projects as the connection of 1st, 2nd and 3rd with Grand Ave. in West Duluth, the extension of this whole parallel system over the Point of Rocks and the projection of Washington Ave. up the hill from 1st to 4th St., are of immediate importance. Timely action in such instances is economy.

Such widenings can be accomplished with considerable economy by establishment of building lines, a process which already has the sanction of usage in Duluth. In the whole major street system there are very few streets that seem to need immediate widening. 2nd St. is the only one worth noting. The street arrangement in downtown Duluth

favors a general distribution of traffic rather than concentration, providing more streets are given westerly outlets, and this would be achieved through the openings and connections referred to in the above paragraph.

Beyond the waterfront area are the hillside traffic ways, the arteries which conduct the vehicular flow of the community between upper and lower levels. Woodland Ave. 4th and Washington will serve as one such route. The central entrance of the Miller Trunk Highway is another of this type, likewise the West Gate approach to the city, Trinity Road, Hermantown Road and Piedmont Ave. and Rice Lake Road and Mesaba Ave. Other radial arteries of equal value are shown on the map.

New extensions and connections are needed in many instances to bring these streets into full service as thorough-fares. There may be mentioned connections from State Trunk Highway No. 1 to Riverside and between the latter and Proctor. Several improved routes into the hill district are suggested for West Duluth and one is proposed leading into Morgan Park and Commonwealth Ave. In the eastern section of the city a number of new approaches are suggested. These new streets with few exceptions are eventual needs and do not require immediate expenditures. The fact that they appear on the Major Street plan will generally be sufficient to remind property owners that the settlement of outlying districts will require that these roads be laid out.

Beyond the hillside area the major street system lies almost wholly in open country. Many new streets are proposed, some apparently duplicating existing streets. In general the structure of thoroughfares here should take the form of an irregular pattern, the cross-town streets occurring at approximately half-mile intervals. This arrangement may become quite regular as the topography permits section lines to be followed.

The lack of accurate topographic maps of outlying Duluth area has been a serious handicap in preparing these plans. It has been extremely difficult to maintain the continuity of thoroughfares and to cover the area systematically with streets approximately half a mile apart. The radial arteries being of primary importance in promoting the settlement of this upland region have received the greatest attention. Additional new streets as part of the secondary thoroughfare system will have to be made a continuing study. Modification of the alignments shown on this plan, should be made as more complete surveys are available. It must be kept in mind that the principal purpose of this preliminary Major Street plan is to emphasize the necessity of differentiating certain streets from others and working these special trafficways into a carefully fabricated system. No changes in the plan should be permitted which destroy its integrity or introduce elements which major street planning aims to prevent, such as, jogs, dead ends, abrupt turns, unusable grades and improper widths.

Existing and Proposed Traffic Capacities of Major Streets

Plate Twelve.

The traffic capacity of streets was scarcely considered thirty years ago. It was generally sufficient if they were wide enough to permit two carriages to pass. The remainder of the street space on either side of the roadway was needed for turf and trees and to protect pedestrians.

Present day traffic volume has reached such proportions that street capacities can not be ignored. Under automobile usage, the carrying ability of a street tends to express itself in the number of lines of vehicles which can move at one time upon the roadway. If a four-line roadway is the widest that can be built on a given street without unduly sacrificing sidewalk space, that street may be classified as having a four-line capacity. If the present roadway is narrow but can be increased to six lines without detriment to property, the potential street capacity is six lines.

Streets constituting the Duluth Major Street plan have been analyzed upon this basis. The results are set forth in section A of Plate Twelve. The predominance of four-line streets may be noted. This is the accepted traffic capacity of the conventional 66-foot street. A few of the major traffic ways are six-line capacity and several are wide enough to bear an eight-line roadway if necessary. However, these greater capacities rarely are continuous. The Boulevard is the one notable exception, although London Road has two long stretches of the eight-line width. Streets of inadequate capacity are also to be noted. Superior St. east of 44th becomes a three-line street. Michigan and Commerce Streets, both busy traffic ways, have maximum capacities of three lines.

Existing building lines, really established to improve the residential character of streets, happily are now of valuable assistance in needed street widening. However, they have not been laid down systematically. Along Superior St., for example, the map shows building lines in twelve disconnected sections of the street, some being on one side only. The depth of the building lines vary from 10 to 30 feet. Similar conditions appear on a dozen or more streets.

The only rational way of meeting the need for a wider street is to widen it at once, or, if legal authority can be found, as in Duluth, to establish a continuous, uniform, scientifically-determined building line for future widening.

Section B of Plate Twelve represents the structure of the major street system with street capacities distributed somewhat in accordance with anticipated traffic needs. It is not possible to be always thoroughly scientific in computing the probable traffic needs of a large city area, especially an area as difficult to analyze and make prediction for as that surrounding Duluth. There are factors involved in such a problem which cannot be evaluated in advance of their appearance. Changes in the form of vehicles, in their operating cost, in economic conditions, in living habits, in industrial policies, all have a bearing upon the volume of

traffic likely to originate in a given area in future years.

It seems most reasonable, therefore, to classify the streets of the major street system under general heads, based chiefly upon their relationship to the system as a whole.

There would be-

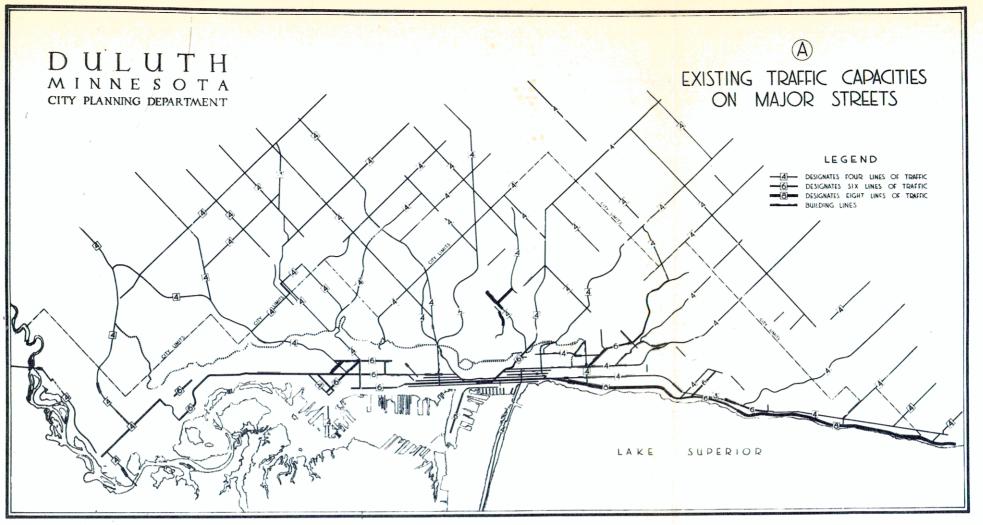
- (1) Radial arteries, requiring six and eight line capacity.
- (2) Through east-west crosstown routes in the water front area, requiring not less than six-line capacity.
- (3) Crosstown routes north and south, alternating six and four-line capacities, the former only being shown on this preliminary plan, the latter being streets midway between but not indicated because of insufficient topographic data.

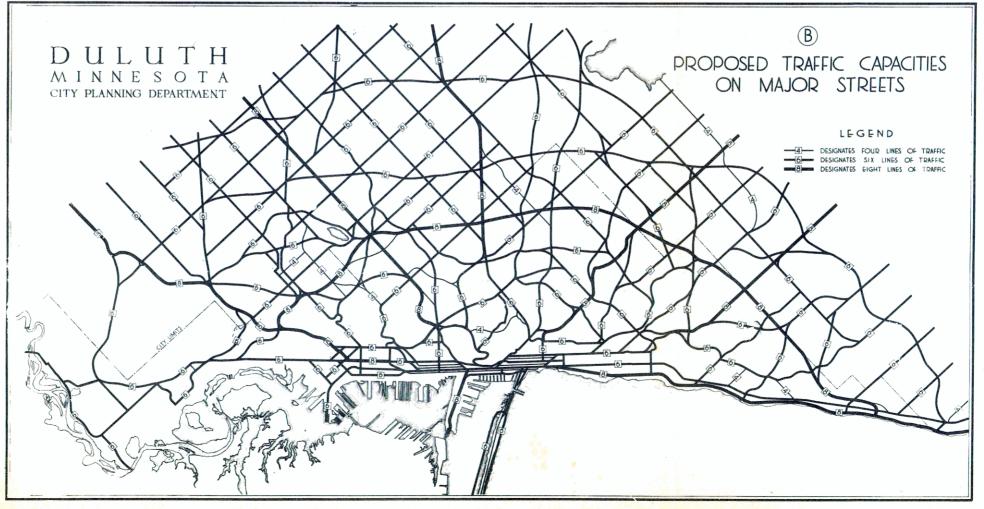
The widths of existing streets and the proposed width, together with other recommendations are all covered in Appendix A. Space here will permit mention of only those few streets which require immediate attention because of insufficient traffic capacity.

Michigan St. is the only one in the city on which conditions are serious enough at present to demand improvement, yet there is no street where widening would be so difficult. Superior St. is the next parallel thoroughfare and it already carries a considerable portion of the traffic flow that normally belongs to Michigan. There is no opportunity to open a new street parallel to Michigan on the south.

The relief of Michigan St. is to be accomplished either by improvements in the street itself or by supplementary improvements on 1st, 2nd and 3rd streets which will make it unnecessary for traffic to use Michigan that can be accommodated on other routes. The latter measures have merit aside from that deriving from Michigan St. and will be discussed in detail later. There is an increasing volume of traffic, which is compelled to use Michigan Street and some means should be found to enable the street to carry this growing burden.

The traffic capacity of Michigan St. now, as determined by the present roadway, is between 3 and 4 lines of vehicles. The roadway is 33 feet wide. The street itself is virtually a wide alley, since only one tier of lots exists between it and Superior St. Stores facing the latter have rear entries at a lower level on Michigan. The Michigan St. frontage is little used for display. Windows are not featured and most entrances are used for loading and unloading merchandise. The interests located upon this street are attended by an abnormal amount of trucking. The street





itself is only 50 feet wide and is practically built up from the Point of Rocks to 4th Ave. E.

An outright widening of this street would be too costly. The establishment of a building line would not provide relief for many years even if such a measure were advisable. The most feasible devices for enlarging the capacity of the street seem to be—

1—Reduction of sidewalk width. The roadway here has a much greater community value than sidewalks. A roadway of 38 feet would permit free movement of two lines of vehicles, parallel parking along each curb, and a six-foot walk on each side. Where end loading is necessary for any industry, that industry should provide loading space on its own premises.

2—When the capacity of the street under the above conditions is reached a second level of sidewalk becomes the next step. This would overhang the street, and permit full use of the lower level for vehicular movement. A complete covering of the street by an elevated roadway has been suggested but this involves serious problems which Duluth would have difficulty in solving. The expense of the operation would be prohibitive. Viewed from an economic standpoint little can be done to Michigan St. except a widening of the roadway, even presuming an abnormal increase in the population of Duluth.

The roadway of Superior St. between 44th Ave. E. and 53rd. Ave. E. is now of only 3-line capacity, the street width being 40 feet and the roadway width 33 feet. This can and should be made the equivalent of a 6-line street by provision of a 48-foot roadway. No sidewalk or parking space is needed on the lower side because the street here adjoins railroad right-of-way. The necessary strip for this widening can probably be secured from the railroad company.

Many other streets should have building lines established upon them and some will need wider roadways in the near future. Attention is again called to the complete list of major streets and recommended widths in the appendix.

Street Improvements Proposed in Central Duluth

Plate Thirteen.

The district shown in Plate Thirteen is virtually the heart of the city. It embraces the area of highest property values, the busiest streets and the most intensively used waterfront. There is also included, paradoxical as it may seem, the second largest park area and the main east-west traffic barrier, the Point of Rocks.

The plan offers a solution of the circulation problems of this district. As has been stated, facts fail to show a serious need of many street widening operations in Duluth. The real and pressing need is for street openings and extensions. The street pattern in the section of the city under observation, as shown in Plate Ten is incomplete in certain places and faulty in others. These defects are due to poor adaptation of the terrain, lack of consideration of city-wide needs and lack of future planning.

The effect of these shortcomings is to create a concentration of traffic on certain streets while adjacent, parallel streets, every bit as good as carriers, remain practically unused. The regular systematic arrangement of streets, which should function perfectly in the conduct of traffic through this section, as a consequence operates little better than it would if many streets were left out. The plan, therefore, suggests certain connections between streets to tie the system together more effectively. These connections may be listed briefly as follows:

Michigan St. at its western terminus, needs to be connected with Oneota. This involves the extension of Michigan St. approximately 500 feet beyond the D. M. & N. R. R. to an intersection with Superior St. where the latter goes under the Northern Pacific Railway, thus avoiding a grade crossing on Michigan St.

Superior St. at some future date should also be extended from Jenswold St. parallel to the Northern Pacific, to a connection with Grand Aye.

Gilbert St. is platted from Grand Ave. to 1st but is not opened. This street should be brought into use as a direct connection between Grand Ave., 1st and Superior. This improvement will tend to eliminate the awkward traffic movements now required in passage through this section and avert traffic dangers from the Bryant School.

Second St. in the West End should be given an opportunity to carry a proper share of the east-west traffic flow. It now runs into Harrison Playground and is there diverted into a narrow street not much better than an alley. Should this playground become less important through change in adjoining area from residential to industrial use, 2nd St. should be extended through a corner of this playground, directly to Vernon St. thus making easy connection with Grand Ave.

Vernon St. now runs to a point beyond Anson. Here it should be extended to connect with a proposed east and west hillside extension of West 10th St. at approximately 26th or 27th Ave. W. This brings Vernon into Haines Road, north of the D. M. & N. Ry.

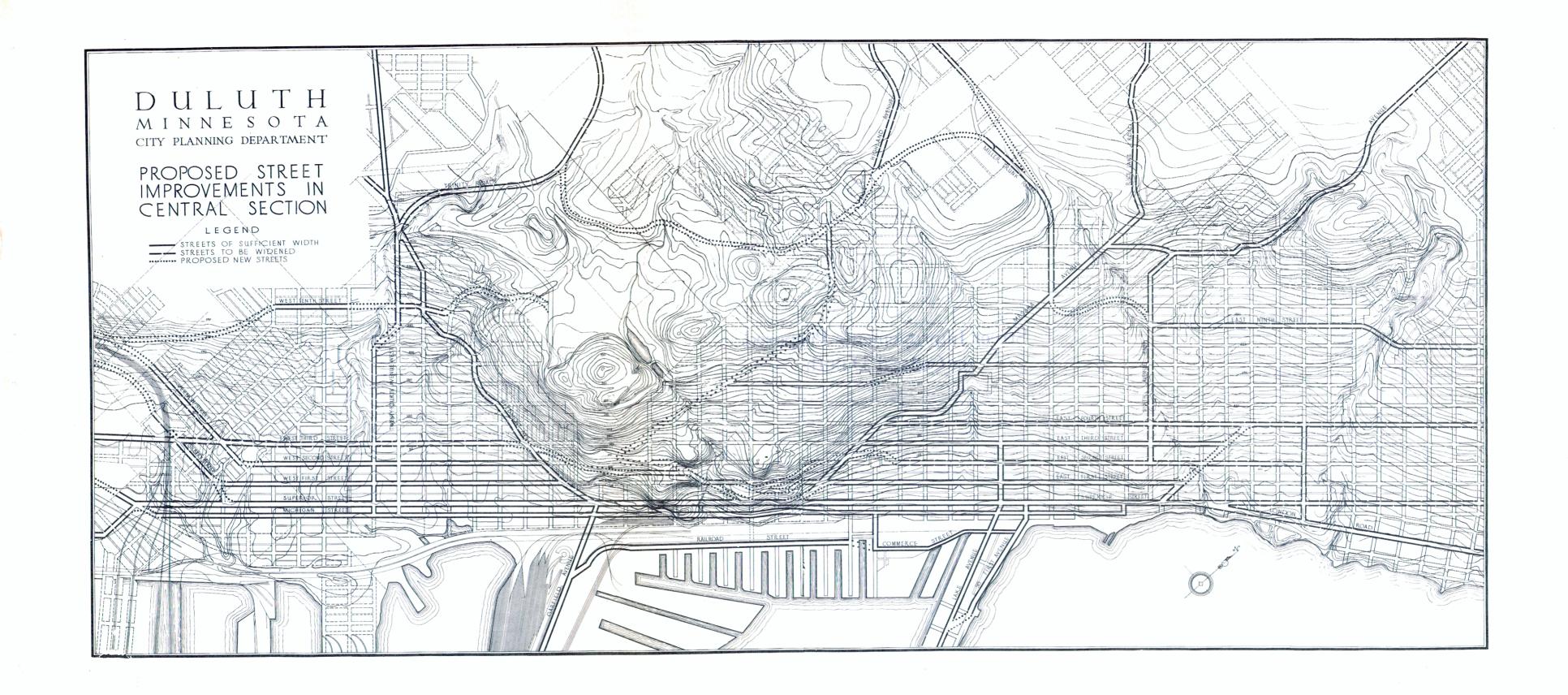
Tenth St. should be extended from the new Lincoln Bridge westerly to the Haines Road and to 8th St. This will enable traffic entering the city over Haines Road to avoid a grade crossing on 40th Ave. It would also provide a high-line artery opening up considerable hillside territory in this section. 10th St. at Piedmont should also be extended eastward to connect with the Boulevard.

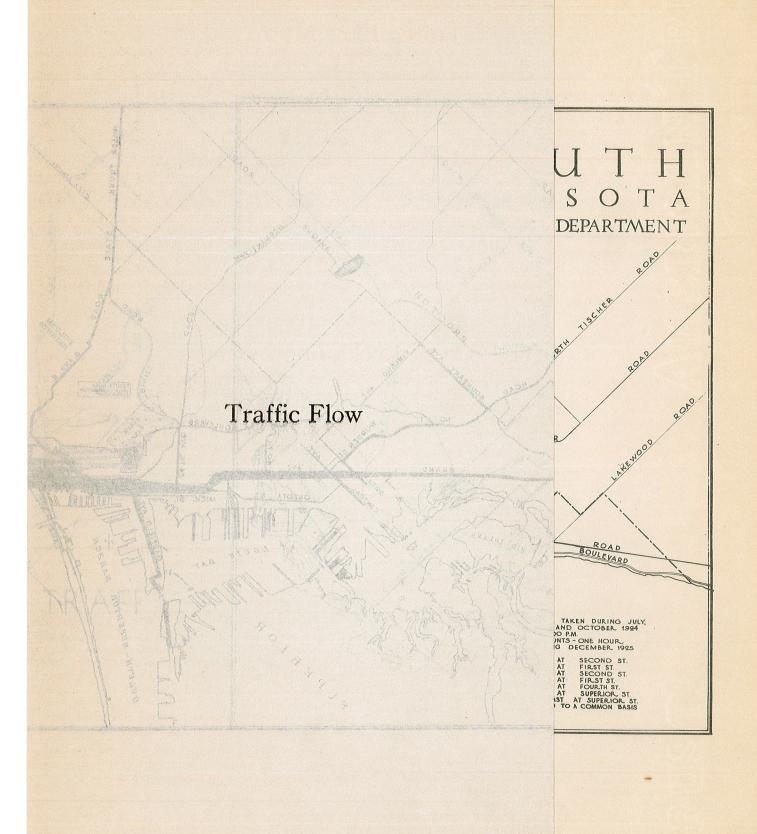
Third St. is a principal artery of the West End. It has a light grade up to 20th Ave. At this point it is recommended that a new street be extended eastward over the hill to a connection with 1st St. at about 14th Ave. W. Piedmont Ave. could be crossed at grade. This whole project forms part of a general plan for building a system of usable traffic ways over the central bluff. The details of this plan are better described by map than text. The next plate will be devoted to a further consideration of this general plan.

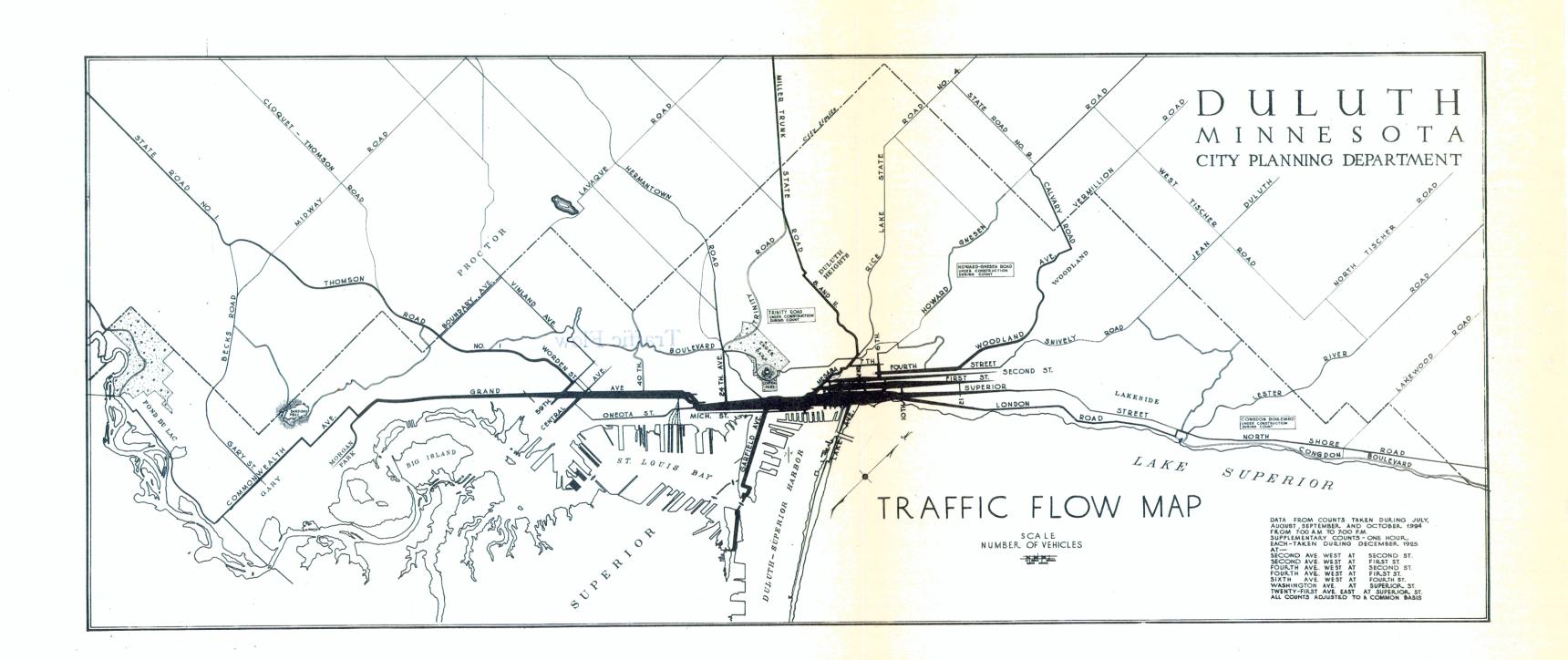
Washington Ave. should be extended from 1st St. to 4th St. meeting the latter at a point near 10th Ave. E. This extension is an important feature of the traffic distribution system of the eastern section of the city.

The entire scheme of street improvements outlined above constitutes a major operation. It will take many years to carry out such a program but every step should be toward the ultimate objective, the fabrication of a system of streets over the central bluff.

Street Improvements Proposed in Central Duluth







Traffic Flow Map

Plate Fourteen.

This is a convincing statement of what Duluth does and does not need, to improve its circulation system. The manner in which the present street system accommodates the normal traffic movement of the community is clearly shown. There is no serious congestion upon any street, not even Superior. It may be of interest to state that Superior St., as far as the roadway is concerned is comparable to Broadway or Madison Ave. in New York City between 42nd and 69th streets. These have practically the same roadway conditions as Superior and actual traffic counts have shown as many as 2400 and 1900 vehicles per hour respectively passing on them. The maximum hourly count on Superior St. to date is 1360 vehicles. The maximum capacity of this street would be approximately 2500 vehicles per hour.

The streets parallel to Superior are even farther from the point of congestion. The upper streets carry relatively light traffic loads. At the present rate of growth in both population and automobile ownership it will be many years before conditions demand a widening of these downtown streets. An anticipation of this day is entirely justifiable, however, and recommendations have been made for the establishment of building lines on certain basic routes.

The fundamental need of Duluth is not so much wider streets as continuous ones through the central section. The effect of the so-called Point of Rocks upon circulation is graphically shown in the diagram opposite. This effect is not so much a reduction of volume as an interference with the normal direction of movement, a forced diversion to one channel. The Point of Rocks blocks a scheme of streets, not one alone. This barrier should be attacked primarily because of the structural weaknesses which it has introduced into the circulation system of the central portion of the city.

The Point of Rocks Improvement

The proper approach to the so-called Point of Rocks question is from the standpoint of the city plan. The conquest or removal of this obstacle is peculiarly a community problem requiring the utmost breadth of vision for its solution. The first essential, obviously, is to determine the basic public need.

The Point of Rocks is not so much a point as a colossal bulge in the hills. The picturesque rock background of Duluth is a fairly uniform line except for this massive protuberance. Its swelling sides comprise an area of over six hundred acres, approximately a square mile of extremely rugged, uncompromising terrain.

This area was not to be brought into urban use by such an inflexible scheme of streets as the founders of Duluth laid out on the more gentle slopes on either side. Where a rigid street pattern enters into conflict with steep slopes the result is inevitable, as may be seen frequently in Duluth, the street system breaks down. East and west streets from 1st St. up the hill, all practically disappear as usable traffic ways in the rock. The avenues from 8th to 21st exist only as fragmentary stub ends. Around the rock only one thoroughfare has been successfully laid. Over it, except at the very top, is not a single first-class street. Yet it is safe to say that in the early days a sympathetic and rational scheme of streets could have been adjusted to this forbidding area.

The problem now has become one of compromise. To some it appears chiefly as a single street matter, the extension of Superior St. There is a tip of rock that seems to stand in the way and partly for psychological reasons has been attacked with vigor as the real Point of Rocks problem. There are ledges that have become a menace to the safety of those using the one serviceable route around the rock

and it is agreed that these dangerous features should be removed. Finally, there is a belief that the rock is needed for other municipal purposes. Its removal in quantity is urged as a measure of double public benefit. But in most of these schemes there is lacking the broader point of view of this as a problem of essential city planning, a belated but much needed effort to close the gap in the street system of the future business district.

Any logical ultimate plan must have as its objective the opening of adequate traffic channels over the entire area. The rock itself must be made usable if possible. First, 2nd and 3rd Streets, perhaps 4th, on the east side must be connected with related streets west of the point. These thoroughfares are the ones that really suffer now from the obstruction. Business values are low on them because each street has been forced to an untimely end in the rock. Such conditions prevent the development of a business "district" and tend to make Duluth a one-street town.

A well considered city plan will always have as one of of its major aims the creation of a first class business district rather than the perpetuation of one-street monopolies. The Point of Rocks plan likely to have the widest and most favorable influence upon municipal development, is one which embraces more than a single thoroughfare and contemplates greater benefits than will follow the mere removal of the tip of the rock.

Third St. should be made a continuous, easy gradient thoroughfare, the grade not to exceed 6%, from approximately 20th Ave. W. along upper levels to join—

Superior St. at 10th. 1st St. at 8th. 2nd St. behind the Court House. 3rd St. at Mesaba.