

1929

City Plan of Jacksonville Florida

George W. Simons Jr.

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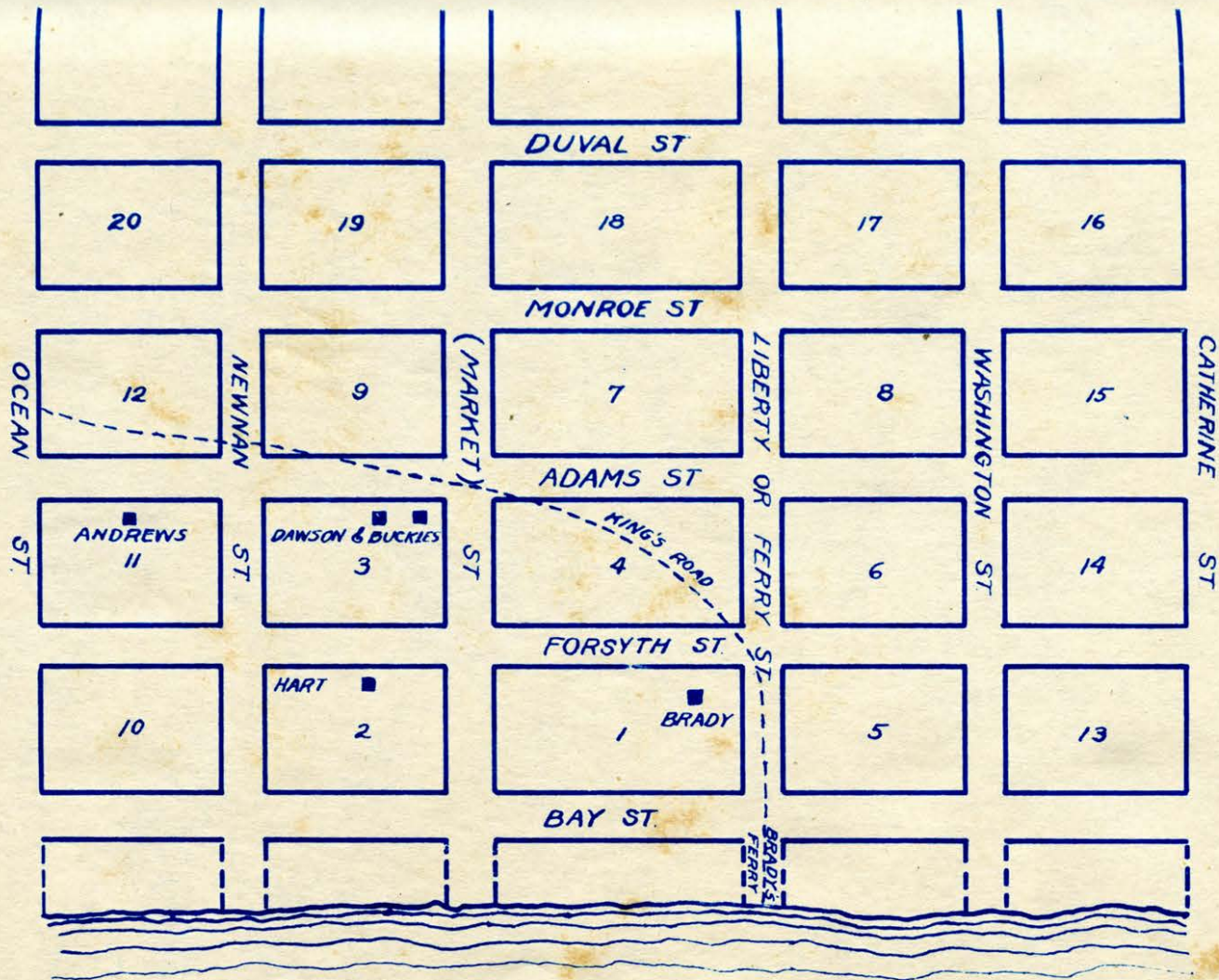
CITY PLAN
OF
JACKSONVILLE
FLORIDA

BY

George W. Simons, Jr., Mem. Am. Soc. C. E.

JACKSONVILLE, FLORIDA

1928 - 1929



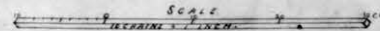
ST JOHNS RIVER

FROM DAVIS' HISTORY OF JACKSONVILLE

JACKSONVILLE AS ORIGINALLY SURVEYED IN 1822.

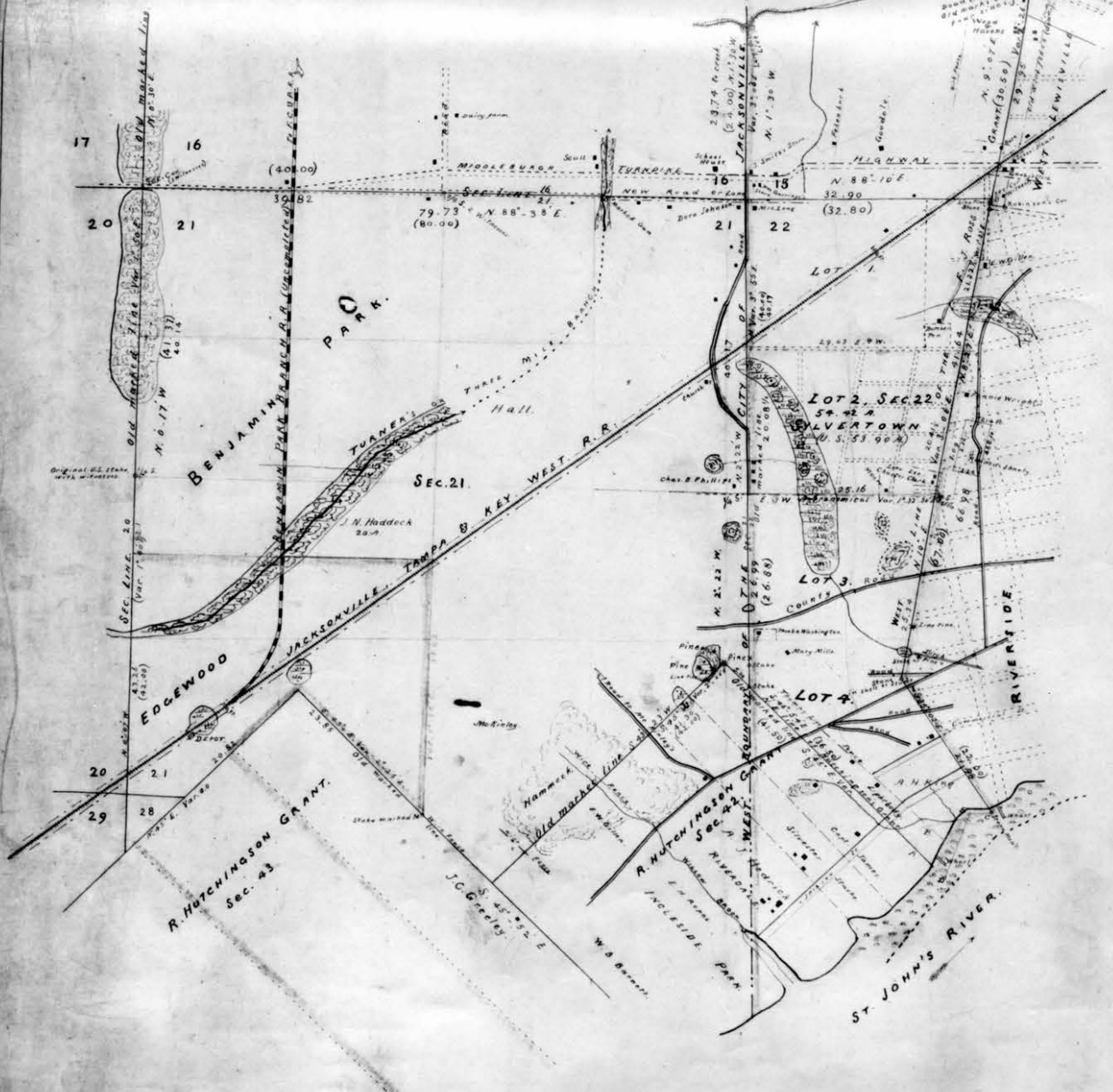
WEST LINE OF THE FRANCIS J. ROSS GRANT,
 being the western boundary of
RIVERSIDE & WEST LEWISVILLE,
 and its connections with the surveys of the
 U.S. Public Lands in T. 2 S., R. 26 E.,
 Duval County,
 FLA.

Surveyed according to the Official U.S. Field Notes of U.S. Deputy Surveyor, D. H. Burn; the Official Township Plat, the Instructions to U.S. Deputy Surveyors, and the Rules of the U.S. Land Office for the Restoration of Lost & Obliterated Corners; and according to legal decisions on boundaries, by
 J. Francis Le Baron
 Civil Engineer & Surveyor
 October, 1894.



Legend.

Original U.S. distances in parentheses.
 Fence lines shown thus
 South line of Lot 2, Sec. 22 determined by astronomical observations with a solar transit according to law and instructions of the U.S. Land Office.
 U.S. Statutes at Large, Vol. 2, p. 213.
 Revised Statutes, Sec. 2365.
 Land Office Rules for the Restoration of Lost and Obliterated Corners, 2d part, Vol. IX, Manual of Instructions to U.S. Deputy Surveyors, p. 16, par. VI, p. 40, par. 1 to 5.
 All courses are computed with the true magnetic variation as determined by solar observations of 1894. The mean variation between all old lines tested in this township is 2 1/2° E. By my means and using this, the course of the grant line as I now established it, agrees with the recorded course within practicable limits, as do the other lines.
 See the R.E. show the U.S. boundary line on the St. John's River, which does not close. By transferring the distance to the R.E. within a few links, the distance between the NE and NW corners of Sec. 15, as located by me, agrees within a few links, with the U.S. survey.





"The Spirit of Youth."

FOREWORD

To make our city a more convenient, efficient and happier place in which to dwell is a primary objective of the City Plan. The courage and ambition of the early settlers is commendable but even they could not foresee here on the banks of the river St. Johns the busy metropolis of today or perchance they would have exercised the same vision and wisdom respecting our present city as they did in defining streets seventy feet wide in the initial plat of Jacksonville as suggested by Mr. Hart. Those forefathers eagerly prepared for a busy important city but unfortunately they could not anticipate the feverish speedy electro-mechanical age of this generation.

City Planning is not new to Jacksonville. During 1921 the Jacksonville Chapter of the American Association of Engineers devoted itself to a study of City Planning for Jacksonville and at a meeting of the Civic Affairs Committee of the Chamber of Commerce in 1923 it was the Chapter's resolution accepted by the Chamber's Committee which requested Mayor John T. Alsop, Jr., to name a City Plan Committee and it is interesting to note in passing, that the Chairman of the Chamber's Civic Affairs Committee who waited on the Mayor in 1923 was Mr. George Hardee, until recently a member of the present City Planning Advisory Committee. It is also interesting to recall that two of the members of the Engineer's committee were Mr. George B. Hills, also a member of the present Advisory Board, and George W. Simons, Jr., City Plan Engineer.

The mayor accordingly on October 25, 1923 named the following as members of a City Planning Committee:- H. C. Avery, E. J. L'Engle, F. O. Miller, F. P. Dearing, Geo. W. Simons, Jr., C. Buckman, John C. Cooper, Jr., John Bond and J. L. Irwin which group subsequently organized with Frank P. Dearing, a member of the present Advisory Board, as Chairman and George W. Simons, Jr.,

present City Plan Engineer, as Secretary. Due to pressure of civic activities Mr. Dearing resigned during 1925 and was succeeded by Mr. Allen Albert, then a resident of Jacksonville. This City Planning Committee met regularly for more than a year but was unable to make much progress and with Mr. Albert's departure the committee disbanded.

During 1926 the Governing Board of the Federated Circles of Garden Clubs of Jacksonville became vitally interested in City Planning and Mrs. George W. Trout, President, now Chairman of the City Planning Advisory Board, appointed a committee to investigate its possibilities, with Mrs. Arthur Gerrish Cumber, also a member of the present City Planning Advisory Board, as chairman. The report of the Committee approving City Planning was accepted by the Governing Board and during June 1926 under the guidance of Mrs. Trout, City Planning as an objective was urged. The Garden Clubs of Jacksonville then assumed the task of stimulating an interest in Planning work, and this initial action can really be interpreted as the beginning of an active City Planning endeavor in Jacksonville---henceforth a City Planning consciousness was developed.

The Men's Advisory Board of the Governing Board of the Federated Circles of Garden Clubs was created about this time and during a luncheon meeting at the Mason Hotel during 1926 they were informed of the work under consideration and each was urged to cooperate in the program. Throughout Mrs. Trout's administration the positive fundamental work of City plan education progressed in a manner to bear fruit during the summer of 1927.

In 1927 Mrs. John T. Alsop, Jr., succeeded Mrs. Trout as President of the Federated Circles of Garden Clubs and she continued City Planning as the outstanding work of her administration, and her efforts were brought to a successful conclusion when the council inserted money in the budget for City Planning.

Accordingly, during January 1928, the City Commission, acting upon a suggestion of Hon. T. C. Imeson, then Chairman of the City Commission, created the City Planning Advisory Board---a group of twenty-two (22) citizens, each representing a major civic organization. This group, called together by Commissioner Imeson, organized with Mrs. Geo. W. Trout as Chairman and Mr. Mellen C. Greeley as Secretary and their first task was that of recommending a Planner to the City Commission. Subsequently they unanimously recommended George W. Simons, Jr., to the City Commission as City Planner.

About this time financial difficulties were encountered and not until May 7, 1928 did the Commission effect a contract with Mr. Simons to prepare a comprehensive plan.

The City Planning Advisory Board has met regularly every month to discuss and consider the many problems incident to the City Plan program presented to it by the City Commission of City Planner. This group of citizens has taken its work seriously and earnestly; they have been endowed with a desire and ambition to contribute a worthwhile, unselfish service to their city and their efforts cannot be commended too highly.

As conceived by the A. B. C. and C. P., City Planning does not constitute just the elaborate, impractical dreams of an idle dreamer, but instead the suggestions, visions and plans for a future city as dictated and revealed after prolonged, intensive and exhaustive field study and research into almost every phase of the city's life. City Planning interpreted by the City Planner seeks to develop the most practical, economical city based upon scientific study. While visions, predictions and dreams do perchance play a significant part in the City Planning, they appear as such only now---in a span of a few years these identical visions of today, these fanciful dreams of the visionary will become the rigid, cold realities of the present. To coordinate the physical factors of the city---its transportation, its facilities to work and its homes, etc.,---so that the city as a whole may function to its best advan-

tage and become as good a machine as possible is an objective of the City Plan; to increase prosperity, health and happiness.

The benefits of a City Plan do not end with the improvements of the physical city; they extend to the creation of an active, enlivened, impassioned civic pride which makes for ambition and serious effort, and this once crystallized and properly directed will impart to the city a character and dignity to make it outstanding and characteristic among cities.

It is difficult to focus one's faith and interest on a visionless, purposeless city drifting like a ship without a rudder, one whose citizens wear such blue glasses and are so short sighted that they can see only the petty small details of a present period. But what joy and happiness---what enriched spirit and enthusiasm accompanies that broadened prospective, that vision and determination to see beyond the present and achieve magnificent results for our city! And as George Kessler told the people of Dallas, Texas, in 1910:

"There is not a single thing in this city that you need that you can not do if you make up your minds that you need it and will have it; you will never establish a city under the feeling that you cannot do things. A way will come and if your present laws stand in the way, secure the best lawyers and get them busy devising laws that will meet the situation."

City Planning, as the Planner has endeavored to portray it, seeks to create a new vision, a widened horizon, an incentive to a grand united effort. It shuns partisanship, selfish motives and in its development aims to favor all sections and peoples alike. As MacDonnell has ably stated:

"This is the age of cities, and all the world is city building. In a dim sort of way many persons understand that the time has come when art and skill and foresight should control what so far has been left to chance, to work out; that there should be a more orderly conception of civic action; that there is a real art of city making; and that it behooves this generation to master and practice it."

SCOPE OF PLAN

Contrary to a popular prevailing misconception that it relates solely to beautification, city planning applies more particularly to the utilitarian and practical. To possess charm, to radiate beauty, to fascinate and impart a distinctive personality a structure must be symmetrical in form, well balanced and constructed around a framework possessing a strength and arrangement commensurate with its needs. To achieve practical and reasonable results extensive study and investigation should be supplemented by intensive research and field observation.

Throughout the studies incident to the plan the practical aspects of the problem have been predominant, an earnest effort has been made to avoid elaborate or impractical schemes too expensive or remote of realization. Whenever possible existing physical structures or frameworks are utilized, strengthening or expanding here and there as studies indicated advisable; for example, instead of advocating superhighways of enormous width entailing the purchases of extensive properties it has seemed advisable to stress and urge the use of existing and adjacent parallel streets and in suggesting a future street widening program for realization during the next thirty to fifty years a definite policy of now establishing setback or future street lines is recommended. In other words the utilitarian and practical have been sought rather than purely the idealistic or aesthetic, it being the planner's belief that the latter will automatically follow a consistent, honest effort to execute the suggestions submitted.

Naturally in the formulation of a comprehensive plan of wide

scope incorporating a great number of subjects, some recommendations of a seemingly elaborate character will result, elaborate only in popular conception because sufficient foresight and vision wasn't exercised years ago in providing for the same improvements. And further, recommendations of this character are not necessarily for the immediate time but rather for consideration when the demand is greater, minds clearer and the financial realization more promising. This brief explanation is made to offset any criticism or ridicule by those motivated and inspired largely by selfish ideas, who for the accomplishment of their own particular plans would sacrifice the entire plan and urge widespread scrapping and in lieu thereof a substitution of their own pet schemes.

A City Plan is never finished; the physical structure of the city is constantly changing and the plan to be a most serviceable instrument for the public good should be kept up to date. The fundamental conceptions and ideas of the planner are subject to change. To be a virile active force in the community the plan should be kept fresh and up to date.

The comprehensive city plan as studied, developed and presented considers the following subjects:- (a) Major Street Plan, with discussion of rectification of street system, street widenings, street pavement, etc., (b) Traffic movements, control and parking, with discussion of street uses, street signs, directional guides, (c) Parks and Parkways, with discussion of park administration and means of park land acquisition, (d) Recreational Facilities and Needs, with discussion of administration, (e) Zoning; review of present ordinance with suggested changes or modifications (f) Rules for controlling Subdivision and Plotting of lands, for future protection, (g) Public Buildings location with discussion of Civic Center, (h) Fire Protection--with discussion of present equipment and future needs, (i) Street Plantings, (j) Public Utilities, with discussions relating to Water Supply, Sewage disposal, drainage, refuse collection and disposal, (k) Air Ports,

(l) Transit via street cars and busses, (m) Port Development--relationship to major streets and transportation, (n) Viaducts and Bridges, (o) Street lighting and overhead poles and wires (p) Schools and School Locations.

And finally it is the sincere hope of the Planner that from the ideas submitted something inspiring and worth while may develop.

HISTORICAL

The Jacksonville region is vivid in historical lore little appreciated by her citizens and rarely capitalized. The St. Johns River and Kings Road from the colonies on the north to St. Augustine and New Smyrna were scenes of many stirring and notable occasions and at their intersection rose a pioneer settlement destined to grow into one of the most thriving, prosperous cities of the South. Those early settlers grasped the importance of strategy and around the same possibilities and potentialities existant today, built their town.

The early history of the region with its interesting associations cannot be ignored in developing a city plan for Jacksonville, and neither can the St. Johns River--that majestic stream which has endowed the Jacksonville region with a priceless, distinct heritage and charm. The Indian name for the St. Johns River was "Illaka" meaning, "distinct, unusual, different from any other"--a characteristic the physical city should convey to those within the gates today.

The history of Jacksonville is known to many, how it was used first by the Indians as a river crossing and later by the colonists who designated it "Cow Ford", how it was an important point on Kings Road which interrupted the river at a point near the foot of the present Liberty street.

The names of John H. McIntosh, Isaac Hendricks, Tachariah Hogans, Juan Maestie, John Bellamy, John Brady, Daniel Hogans, E. Hudnall, Philip Dell, Francis J. Ross, James Winter, Uriah Bowden, Miles Price, John M. Forbes E. M. Cheney, J. R. Hogans, John Middleton, R. Hutcheson, Geo. Atkinson, and last but not least, I. D. Hart are all closely identified and associated with the land grants, subdivisions, and early developments of Jacksonville.

The story of that period from 1790 to 1825 is fascinating, intensely interesting, one of land grants, agricultural development, lumber exportation, war, romance, early real estate development, sales and rising land values.

Isaiah D. Hart is known as the Father of Jacksonville, not because he was one of its earliest settlers (he came to Jacksonville about 1821) but because it was he who had the vision, initiative and inspiration to lay out a town site with streets, blocks and lots, and judging from historical accounts he was the active and able realtor of his time. History records that it was somewhat difficult for Hart to sell L. Z. Hogans and John Brady on the subdivision idea at first but later they consented to his plan and in June 1822 under the supervision of F. J. Ross, Benjamin Chaires and John Bellamy the town was laid out, the starting point of the survey being a "corner tree standing on the river bank at the foot of the present Market Street, which incidentally was the first street laid out, eighty feet wide, property owners on each side donating forty feet. This constituted Jacksonville's first city plan.

"It was decided by the founders that there should be six lots, each 105 feet square, in each block, two lots adjoining north and south, being 210 feet; and three lots east and west, 315 feet. The next street laid off was Bay Street, with a width of seventy feet. The first square designated and numbered was east of Market and north of Bay Street, and in compliment to Brady as the first settler present of the part now to be surveyed, it was designated as Square Number One."

Square number 2, 3, and 4 were then surveyed. During the course of the work it was found that Brady's building would lie within the street on the east of Square Number 1 with only three lots from west to east so to avoid this situation another tier of lots was added to the east side of Square Number 1 making this square eight instead of six lots long.

For several years there was little real estate activity and not until about 1828-30 did development look encouraging. In 1832 the "Town" of Jacksonville was first incorporated, the official area being described as follows:-

"Commencing at a point on the South bank of the river St. Johns opposite Hogan's Creek, on the north side, running north half a mile up said creek, thence west one mile and a half to McCoy's Creek, thence south to a point on the south side of the river St. Johns, opposite McCoy's Creek, thence east to the point of beginning."

Jacksonville was the ninth town in Florida to incorporate. William J. Mills was elected the first mayor of the city. By charter change in 1859 Jacksonville was changed from a "Town" to a "City."

Those early citizens of Jacksonville had a vision of a bustling trade center; they were an alert, ambitious, enthusiastic group eager and determined to see their prodigy develop and grow into a healthy, useful community—a quality which could profitable and properly be imitated and absorbed this day of 1929 by our own civic leaders. With less than 300 people in this baby settlement a plan was conceived to build a railroad, start a bank and a newspaper and through the boom and panic of 1837 the freeze of '35 and the seven years of Seminole War, 1835, to follow, they failed to lose their courage and with a commendable stamina they persistently headed forward.

It is estimated that Jacksonville had a population of about 350 in 1840. After the freeze, panic and war the town advanced steadily; its dwellings were pretty well scattered and most were one story wooden structures. It was then a good trade center and in those days much cotton was grown on nearby plantations. Steamers operated on weekly trips to Savannah, and a line was established to Lake Monroe. In 1851 sailings were made to Charleston and the Clyde Line entered Jacksonville in 1886 and the Merchants and Miners Transportation Company in 1909.

In the years that followed Jacksonville went forward despite many adverse discouraging occurrences, epidemics, freezes, and fires. In 1850 Dr. A. S. Baldwin inaugurated highway beautification work in Jacksonville by setting out lines of five oaks along the town streets most of which were destroyed by the fire of 1901. A plank road was constructed and stages op-

erated to Alligator now Lake City and Tallahassee. The first gas works was build in 1859 and telegraph came into the city in 1859.

As stated earlier, the citizens of Jacksonville, (about 1100 in number), were not the kind to be easily discouraged so in 1857 the town voted bonds to build a railroad--bonds for \$50,000.00 which were the first to be issued by the young town, with a total property valuation estimated at only \$450,000.00. The railroad was built from Jacksonville to Alligator; it was completed in March 1860. So now with a railroad line and steamer services, Jacksonville as a distribution center was established.

Much could be written about the railroad history of Jacksonville, but suffice to say that the first railroad for which the town bonded later became a part of the Seaboard Air Line System. Railroad organizations and ventures had varried experiences from 1860 to 1900, many short lines with ambitious programs adjusting themselves eventually into the several important systems now operating in and out of Jacksonville.

The need for development of Jacksonville's port was recognized early. As far back as 1852 a program of jetty construction at the mouth of the St. Johns River was advocated and in 1878 the community employed Captain Eads then working on the Mississippi jetties near New Orleans to investigate and survey. As a result a definite program was put through Congress and jetty improvement work started in 1880. Later in 1902 channel improvement work was carried on and in 1912 the City of Jacksonville bonded for \$1,500,000.00 to build the municipal docks.

From these brief historical statements one can readily comprehend that those pioneer days in Jacksonville were filled with sympathetic understanding, wholehearted cooperation, earnestness to succeed, active industry, deep devotion, abiding faith and a sense of civic loyalty intensified by adversity, discouragement, disaster, panic and epidemic. Those early

citizens sincerely believed in hitching their wagon to a star and holding on tenaciously. They have left their unerasable impression on our Jacksonville of today.

The first town layout of Hart has been described, how its streets were given certain widths its blocks and lots selected. From 1822 to the early '50's (about thirty years) development was confined largely to the Hart plat; there was very little development east of Washington Street, north of Monroe or west of Laura. The business district at this time was located along Bay Street between Ocean and Newnan. Main Street (then Pine Street) was low and wet being an outlet slough for a pond located at what is now Duval and Main Streets. There were bridges across Main Street at Forsyth and Bay Streets.

The period of 1868-70 was one of considerable building activity; in 1875 Jacksonville was known as a thriving city. By 1869 the city had a population of about 6,000 and in this year Riverside was plotted into lots. In this connection it is interesting to note that in his subdivision of Riverside Mr. Forbes provided for a park of 14 acres which today is Riverside Park. The city from that time forged ahead and at different times extended its corporate area.

The several land grants previously referred to have perceptibly influenced the land platting of Jacksonville as one will readily note from an examination of the accompanying map. The west line of the F. J. Ross grant for instance fixed the point at which the east and west bound streets in Riverside changed their alignment, and similarly the influence of the Hutcherson grants immediately to the west are shown. These same streets change their alignment at or near the east Hutcherson grant line. These two grants affect such thoroughfares as Riverside Avenue, Park Street, Post Street. The effects and influence of the Hendricks grants in LaVilla are also clearly discernable

and likewise the Hudnall grant in East Jacksonville. Springfield was carved practically as a whole from the R. Hegan Grant. Instances are also recorded in surveys of lands where street alignments failed to meet, resulting in many street jogs.

Few localities have any more interesting historical associations than Jacksonville and in its future upbuilding every conceivable effort should be exercised to perpetuate these associations which are of significance to the nation as well as to the citizens at home.

The possibilities of a city plan and its many problems are more advantageously studied and analyzed when the underlying factors of the area are better known. The town, and later the city, was given its initial form and its impetus to grow and succeed and unquestionably these have left an indelible impression on the physical city of today. And too, a brief review of Jacksonville's early history is inspiring, emphasizing the determination of its early citizenry to promote and encourage the best interests of their community in an unselfish way.

GROWTH

Altho no authentic records are available it is believed that Jacksonville had a population of about 1100-1500 when its citizens approved the first issuance of bonds in 1857. The first Federal census gave Jacksonville a population of 1045 in 1850 and since then its growth has been steady and consistent as one will readily note from the following table:

TABLE #1
POPULATION GROWTH - JACKSONVILLE

Year	Population	Increase	Percent Increase
1850	1045		
1860	2118	1073	103%
1870	6912	4794	226%
1880	7650	738	10.7%
1890	17201	9551	125%
1900	28429	11228	65%
1910	57699	29270	103%
1920	91558	33859	59%
1925	135886	44328	43.5% (5 years)

Average percentage increase per decade---98.85%; per annum--9.81%.

These figures show that since 1850 Jacksonville has had an average decade percentage population increase of about 99% or, including the 1925 census figure, and a yearly percentage increase of about 10%, which is most encouraging.

To show what this growth has been in the past and what may be anticipated in the future is graphically illustrated on Diagram #1; the future, expectant growth is compared with that of several other cities of similar characteristics, which had the present census of Jacksonville a number of years ago as indicated on the diagram. These cities were selected because they are railroad termini, distribution points, gateways and industrial centers.

It will be observed from Table #1 that Jacksonville has experienced a remarkable growth and naturally every citizen is hopeful that the records of the past will continue indefinitely, but population histories indicate that the rate of growth of cities begins to decrease at a given point and altho the decade population figures register appreciable increases nevertheless the rate of growth is decreasing. It is difficult to say that Jacksonville has reached its period of diminishing rate, but unless some concerted, whole hearted effort is made to develop industry, the port activities and agriculture the time of the diminishing rate is not remote.

While every citizen is exceedingly hopeful of Jacksonville's future growth and waxes enthusiastic when predicting populations it must be realized that there is no great reason to anticipate for Jacksonville a greater rate of growth than other cities of similar position and character have experienced in the past. And to justify this conclusion a comparison has been made with predictions of the Southern Bell Telephone Company. The future population estimates for Jacksonville can be taken from the curve, Diagram #1, which indicates that Jacksonville's 1960 population will approximate 350,000.

In studying Population increases, expansion of territorial area and the trends or tendencies of the population, considerable field study and the accumulation of much data was necessary from which Plates #1, #2 and #3 were prepared. Plate #1 shows the distribution of population--where the people live; each dot on this plate represents 50 people. Plate #2 discloses the trend of population, the areas coinciding with those used by the United States Census Bureau in 1920. From this plate one can note the movement of population from the older, settled areas into newer outlying sections. Plate #3 is a negative presentation of Plate #1, the population distribution; this plate shows the location of all vacant areas, plats, lots, etc., within the city. And finally Plate #4 shows the location of all new construction during the years 1927

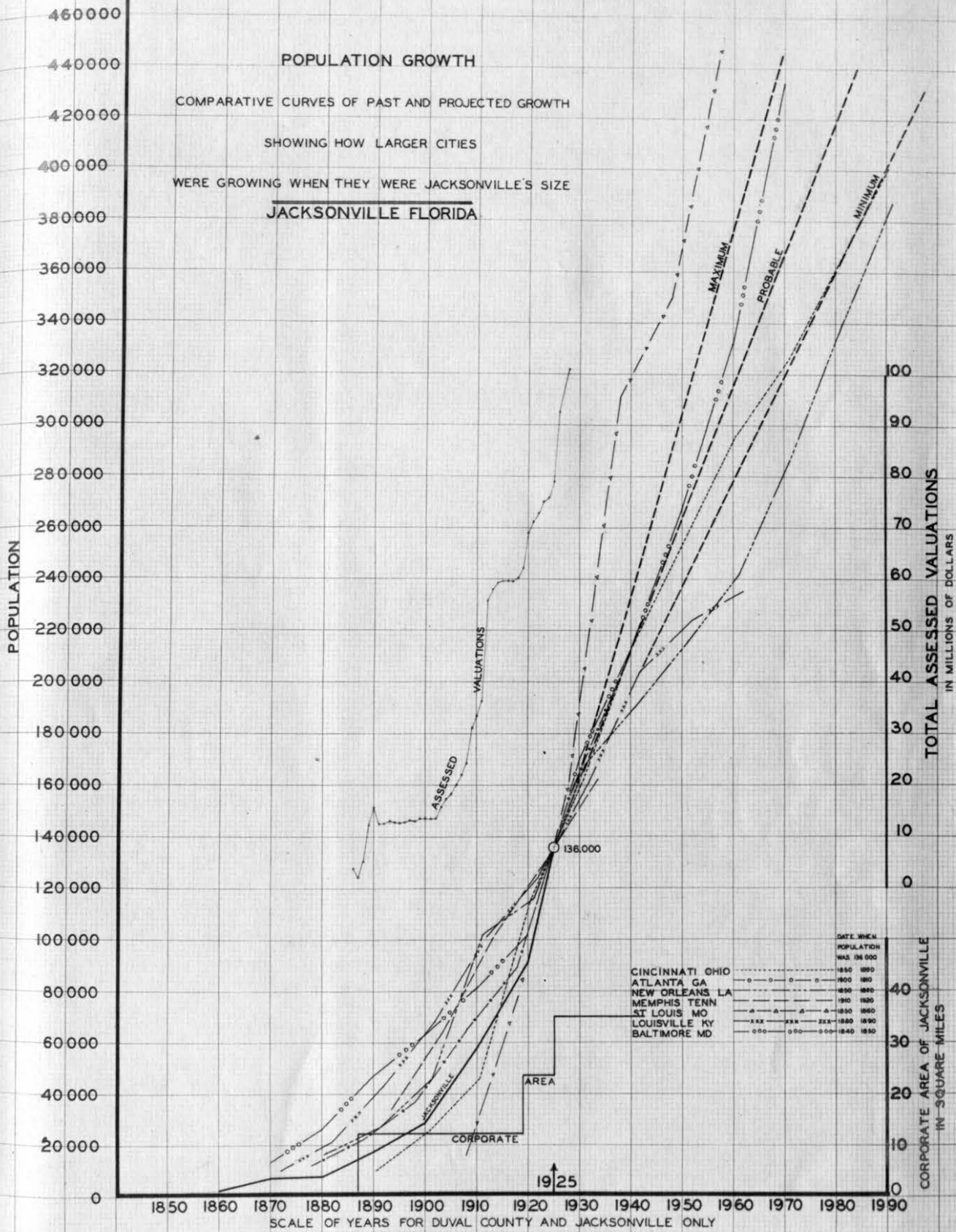


DIAGRAM I

and 1928.

Jacksonville today comprises a land and water area of 34.65 square miles; the land area is 26.4 square miles. On a basis of 145,000 population Jacksonville has a gross land area density of about 5500 people per square mile or 8.6 per acre (about two families per acre). The following table shows the population density figures for several other American cities:

TABLE #2

POPULATION DENSITIES - AMERICAN CITIES

New York City	29.3	per	acre	(1920)
Philadelphia	22.2	"	"	"
Buffalo	20.3	"	"	"
Baltimore	14.5	"	"	"
Washington, D. C.	11.4	"	"	"
Jacksonville, Fla.	8.6	"	"	"
DesMoines	3.6	"	"	"

Plate #5 shows the successive extensions of the corporate limits with their years of extension and area. Jacksonville has at present a St. Johns River water frontage approximating ten miles, seven of which are residential and about three miles devoted to industrial, wharfage and railroad uses.

The City area is divided into a number of distinct parts by railroad properties as shown on Diagram #2 an unnatural division which has had the tendency of directing settlement and growth, and blocking or restricting a complete utilization of land areas. Railroads have also had a tendency to stratify the city socially and racially. An examination of the Vacant Areas map (Plate #3) shows how development and growth has followed the principal highways; Main Street to the north and the several Riverside streets to the south.

As mentioned in a previous chapter the original town had its activities largely centered around the foot of Liberty Street, at Bay. Later the population center drifted to the westward and then northward; the business center drifted westward and thence northwesterly. As shown further on the Vacant Areas map the trend of population movement is south and west, north

and northeast with only a little development toward the northwest particularly in that area between Enterprise Avenue and Moncrief Road. The trend of residential construction has been general for a number of years but more recently the higher class of construction has followed the river southward and westward. An examination of the Building Permits Map (Plate #4) illustrates this point.

That Jacksonville has experienced a conservative and substantial construction program ever since the fire of 1901 can be evidenced from Diagram #3 showing the total building permit valuations from 1901-1928 (incl.).

History records how areas close to the business section first developed as residential districts--Riverside, Brooklyn, Fairfield and Springfield, and then, as years passed how centralized business gradually squeezed out residences and the suburbs began to develop, Brentwood, New Springfield, Ingleside Riverside Heights, Avondale, Murray Hill, etc. As late as 1910 these outer areas were still wooded fields. Then as population increased, the demands for business areas became acute, industrial activity was intensified, new modes of apartment living came into prominence and motor transportation came within grasp of the average citizen the areas more remote from the central districts were populated and the older residential sections were converted into business boarding house, and rental property and with each successive change depreciation and delapidation followed. Reference to Plate #2 shows how areas of the city have changed during the past eight years, most of the older, close in residential areas have given way completely to business and a general decline is to be noted within a radius of two miles from the City Hall. The outlying sections are budding up rapidly as one can ascertain from Plate #2 also from the Building Permits Map (Plate #4). That area north of Eighth Street and east of Main is also growing rapidly, due largely to industrial development.

The Jacksonville of the future is our primary consideration. In

TOTAL AMOUNTS IN MILLIONS OF DOLLARS

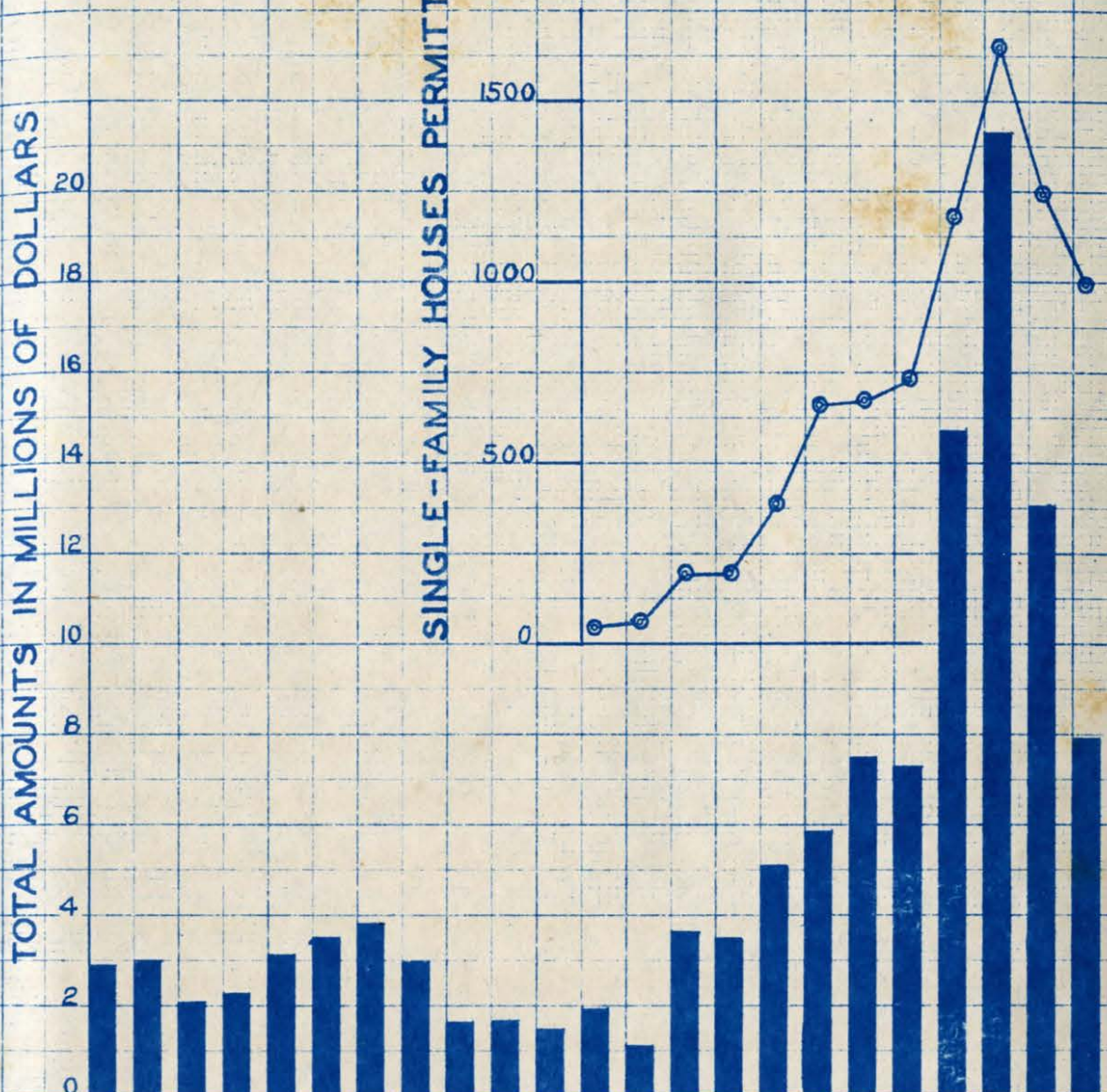
20
18
16
14
12
10
8
6
4
2
0

SINGLE-FAMILY HOUSES PERMITTED

1500
1000
500
0

1906 1910 1915 1920 1925 1928

DIAGRAM SHOWING
NUMBER SINGLE FAMILY HOUSE PERMITS
ISSUED ANNUALLY
ALSO
ANNUAL VALUE OF
BUILDING PERMITS
JACKSONVILLE



1960-70 when Jacksonville has a population approximating 350,000-400,000 when modes of living and social conditions are presumably different, when airplanes offer a common means of conveyance and motor vehicles become speedier, where will people live? This suggests a study of the Jacksonville Region, outside the present corporate area.

The Jacksonville Region incorporates that area influenced and dependent directly upon the future success and prosperity of the city itself. It includes practically all of Duval County and extends even into counties adjoining. On the other hand Jacksonville is greatly dependent upon the success and development of the regional area; as the area becomes more identified with agricultural pursuits and becomes more populated Jacksonville will naturally profit. It is therefore obvious that in the contemplation of any plan it should not in a general way at least terminate at the city limits.

An area one mile wide immediately adjacent to the city was included in the Jacksonville planning studies, an area intimately related to the city and its life. One of the principal objectives of the planning movement is to so regulate the development of the outer area that the mistakes of the older sections will not be repeated in the new. Much of the territory outside the present corporate limits is still undeveloped and certainly the city plan should be given consideration when these areas are subdivided. Orderly, conforming land development in accord with best practice is vital to the city's future, and because of this vital necessity the city should now be given supervisory control over land subdivision in those areas contiguous to the city, that degree of supervision necessary to assume development consistent with the plan, as outlined subsequently.

And with the advancing new age the remote areas will become increasingly popular and their exploitation intensified. Swift moving vehicles from outlying areas now undeveloped will require direct, continuous highways of

of adequacy, segregating traffic, fast motor boats from river and creek front estates miles from the city will require accessible and protected moorings, airplanes transporting the farmer, the doctor or lawyer will need conveniently located ports on land and water, the ever travelling through passenger will demand by pass routes to avoid the congestion of the metropolitan area and finally the population of the regional area will require parks, recreation fields and reservations for relief and respite from a fast, heartbreaking age. In those distant days political boundaries of the city will be disregarded and when the city and its problems are discussed that larger territory economically and socially already a part of the central city will be included. Diagram #4 shows Duval County with its principal highways, into Jacksonville, railroads and towns.

MAP OF
DUVAL COUNTY, FLORIDA
SHOWING
REGIONAL AREA AROUND

JACKSONVILLE

GEORGE W. SIMONS, JR.
JACKSONVILLE FLORIDA
1928

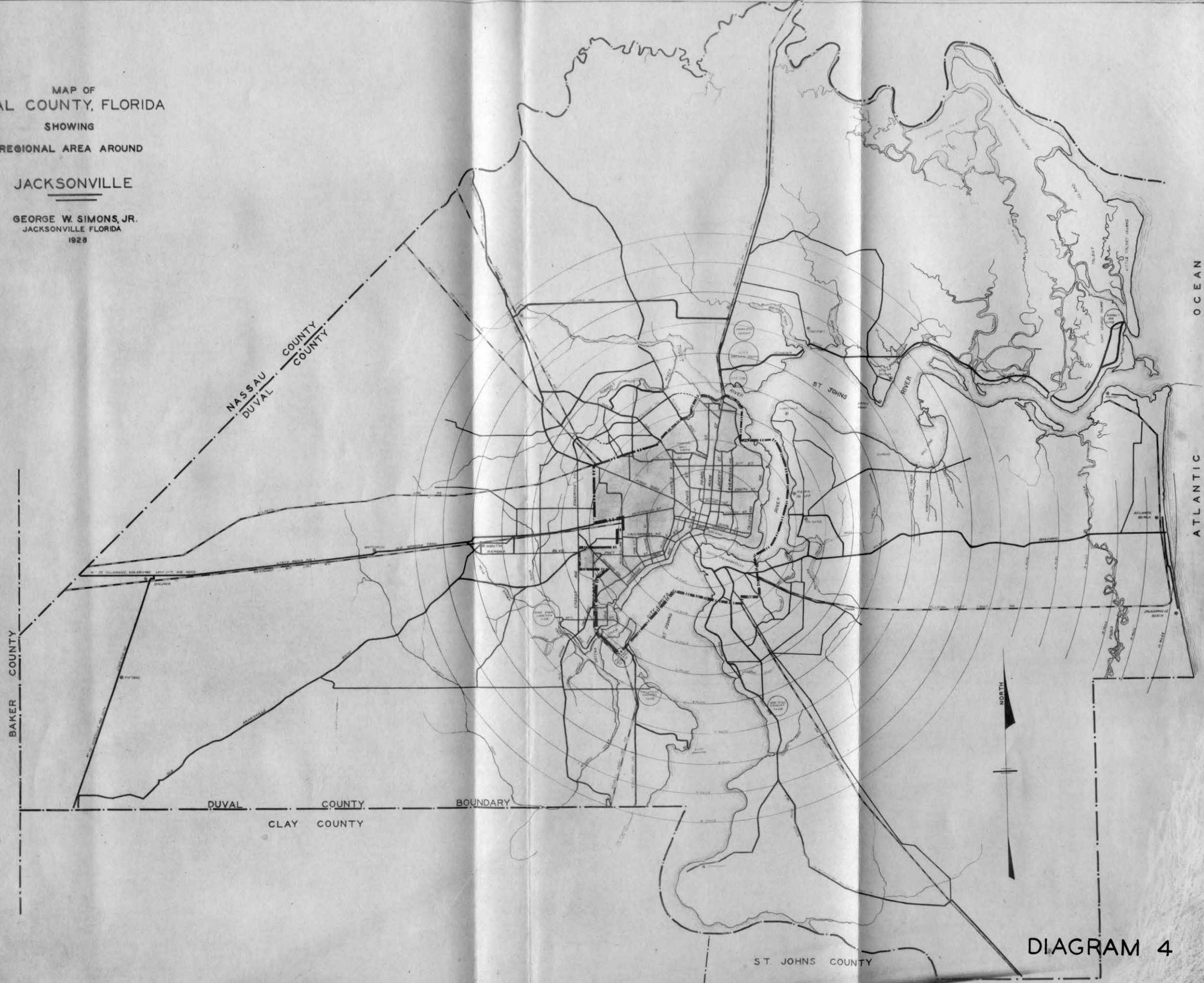


DIAGRAM 4

LAND SUBDIVISION

The ultimate success of any City Planning project depends to a great degree upon the type of control exercised over the subdivision of lands inside and outside the corporate area. As emphasized repeatedly throughout this report, had the early governments of Jacksonville been able to exercise control over the subdivisions of land grants and land developments many of the physical ills and defects of the present would not be confronting us now.

Control over land subdivisions has been recognized as vital to a proper wholesome city development and many cities throughout the country have already promulgated comprehensive rules affecting land subdivision. Realtors likewise have seen the wisdom of such official control and to that end have endorsed it nationally by resolution. So it can be stated that the control over land subdivision is no upstart or fad.

Platting regulations properly observed and enforced cannot but influence orderly development of lands and prevent the following ills:-

- (a) Lots too narrow for adequate side yards--inadequate for fire protection--privacy--sunlight--health.
- (b) Lots too shallow.
- (c) Streets too narrow for proper operation of fire apparatus.
- (d) Tree preservation.
- (e) Dead Ends and Dangerous Caps.
- (f) Inadequate provisions for set back lines.
- (g) Poor drainage and sanitation.

In 1925 the State of Florida took a great step forward when the present so-called "Plat" bill sponsored by the Florida Engineering Society was enacted into law.

Although this statute was not approved by the legislature until 1925 it exerted a tremendous effect for good during the boom days in standardizing and regulating procedure and form relative to the preparation and filing of plats for record. Prior to the enactment of that law (Chapter 10275, acts of 1925) there were no specific regulations governing the placement of monuments, tying in plats, or instructions available as to their preparation. The plat bill however does not exercise control over the several elements entering into municipal land subdivision, it relates primarily to boundaries, monuments, dedications, surveys, etc. To control these former features should be of concern to the city. The city should have an opportunity of specifying preferable minimum street widths, minimum lot widths and depths, alignment of streets, and other features which do not come within the scope of the present state plat bill, and at present there are no specific rules for control over plats in Jacksonville except in a general way. An owner desiring to subdivide a piece of property follows the provisions of the State Plat law and the rules of the Clerk of the Circuit Court of Duval County, as regards size of sheet, margins, dedicatory forms, affidavits, etc., and if the parcel of land lies within the city, he presents it to the City Commission for approval. This latter procedure is required by the Clerk of the Court before he will record a plat. The City Commission and City Engineer examine the plat, especially its streets, alleys, utilities, etc., but do not follow any particular schedule or procedure. Nor do they have available for prospective developers minimum rules for guidance.

Not only should the city exercise control over land subdivision within the city, it should likewise have supervision over land subdivision for at least one mile outside the corporate area, as previously stated, primarily to insure proper street alignment, utility installation and the observance of other features vital to the city. Such supervision could be conducted by the County, operating under city regulations, in a manner analogous to the operation

of the present County Plumbing inspector law.

Furthermore the city should have control over unplatted streets. According to the Major Street Plan a number of streets are extended through areas now unplatted and over these the city has no control.

The following rules are minimum in character, and are similar to those now used in many cities of the United States; in formulating these a comprehensive study of nearly one hundred sets was made and the features herein incorporated seem to fit appropriately our conditions.

Before preparing these rules in final form conferences were held with the City Engineer and Chief of City Surveys to ascertain their reactions and constructive criticism.

RULES AND REGULATIONS GOVERNING THE PLATTING OF LAND
SUBDIVISIONS AND REQUIREMENTS FOR THEIR APPROVAL.

1. Read the Florida Plat Law, Chapter 10275, Acts of 1925, controlling the filing of plats. Copies of this law can be secured from the Clerk of the Circuit Court at the Court House.
2. Secure information from Clerk of Circuit Court as to dimensions of plats for record, margins, declarations, statement, forms, etc.
3. Preliminary:- Application by the owner or his authorized agent for approval of plans, plats or descriptions showing the layout of highways or streets on private property or of building lots in connection with or in relation to such highways or streets or to existing streets shall be made in writing to the City Commission. Such application shall be accompanied by two copies of a preliminary sketch which shall first be approved by such Commission before submission of a final plan. Such a preliminary plan shall be drawn to a reasonable legible scale and shall show:-
 - (a) The location of property lines, buildings, water courses, railroads and other existing features.
 - (b) The location and widths of existing and proposed streets, alleys, casements, lots, building lines also similar facts regarding adjoining property within three hundred (300) feet, or as much as may be of assistance to enable the City Commission to intelligently pass upon same.
 - (c) The title and tract number under which the proposed subdivision is to be recorded, with the name or names, and address of the owner or allotter and engineer or surveyor.
 - (d) The name of all subdivisions immediately adjacent.
 - (e) The location of any existing sewers and water mains, culverts and drain pipes on the property to be subdivided.
 - (f) The zone in which the land to be subdivided falls, according to the zoning ordinance.
 - (g) All parcels of land proposed to be dedicated to the public use and the conditions of such dedication, if any.
 - (h) Date, north point and scale.
 - (i) Trees over ten inches in diameter.

The subdivider shall coincidentally with submitting the preliminary plan also furnish a statement signed by him to the Commission reciting:-

- (a) The nature and extent of street improvements he proposes to install;

Nature and extent of any recreational features, parks or playgrounds to be provided if any, and whether or not, and under what conditions, they are to be dedicated to the city; what plan will be followed for handling storm waters and sanitary sewerage.

(b) No preliminary plat shall be entitled to receive consideration of the Commission unless it be filed with the City Engineer not less than five (5) days prior to a Commission meeting, and further no preliminary plat will be presented to the commission by the City Engineer until all the foregoing provisions and requirements have been complied with.

4. Tentative Approval. The tentative approval of the preliminary plan by the Commission shall not constitute an acceptance of the plan of the subdivision, but shall be merely a general approval of the layout submitted. (It is to be understood that the City Engineer shall before final adoption of the plan or plat examine and report as to the grades of streets, type of improvements, and the sanitary and drainage conditions and shall have the power to modify any such details submitted by the subdivider wherever advisable for the protection of the city's interest). The approval of the final plan for record will be considered only when all such questions have been settled in accord with the rules and regulations.

5. General Requirements:-

(a) The arrangement of streets in a new subdivision shall in general provide for the continuation of the principal existing streets in the adjoining allotment on their proper projection when adjoining property is not subdivided. In general such streets shall be of a width at least as great as that of existing streets. No streets shall have widths less than fifty (50) feet. The widths of major or main traffic streets shall be determined by the Commission.

(b) Intersecting streets shall be laid out at such intervals that block lengths between street lines are not more than 300 feet except where existing conditions justify a variation from the requirement; and the widths of blocks shall be generally not less than 200 feet nor more than 300 feet.

(c) The size of lots shall be generally not less than fifty (50) feet in width and one hundred (100) feet in depth. Where irregular shaped lots are shown, the total area shall be in excess of 6200 square feet. Where provisions for business are made in the plat the Commission may decrease the minimum lot width dimension.

(d) Except where future continuation be impossible, dead end streets shall not be approved unless a turn around roadway with a minimum radius for the outside curb of thirty (30) feet is provided at the closed end.

(e) For primary streets the minimum radius of curvature shall be three hundred feet on center line, for secondary streets two hundred feet, for local streets fifty feet, excepting where conditions warrant a change from these dimensions.

(f) In subdividing property, due consideration shall be given to the laying out of suitable sites for parks and playgrounds.

(g) In general no allotment or subdivision shall be approved unless the same shall be provided with proper sanitary and drainage conditions.

(h) Roadway corners shall be rounded as far as practicable with a radius of not less than twenty (20) feet. Larger or smaller radius may be required by the Commission when in their opinion same is necessary.

(i) In all residential subdivisions of more than twenty-five acres it is suggested that the platting shall provide for small parks, playgrounds or other open spaces or grounds, in addition to streets or ways, the aggregate area of which open grounds or spaces shall not be less than $1/25$ of the area of the subdivision.

(j) The location of set back restriction lines of buildings shall be shown by dotted lines in conformity with zoning ordinance.

(k) All side lines of lots should be at right angles to straight street lines, or radical to curved street lines wherever practicable. All street intersections preferably shall be at right angles.

(l) No plan showing strips of land controlling the access to public ways, or strips of insufficient taxable value for assessable improvements, will be approved.

(m) Where permissible by the Commission, the minimum width of alleys shall be fifteen (15) feet, unless otherwise allowed for good and sufficient reasons.

(n) In allotments where alleys are not provided easements of not less than four (4) feet in width may be provided on each side of all rear lot lines and or side lines where necessary for utilities, at the discretion of the Commission.

6. Final Plan:- After the approval of the preliminary plan, the owner of the property or his authorized representative shall prepare a final or record subdivision plan which shall contain complete data regarding the facts required in the following:-

(a) All final plans shall be drawn upon tracing cloth in sheets eighteen inches wide by twenty-six inches long, drawn to a suitable, convenient, legible scale.

(b) The length of all straight lines, deflection angles, radii arcs and central angles of all curbs shall be given along the proper line of each street. All dimensions along the lines of each lot with the angles of intersection which they make with each other shall also be given. If more convenient, bearings may be used instead of angles. Where a street is not continued straight across an intersecting street into the next block, the connection across such street shall be given by the proper measurements. A connecting survey line, by courses and angles and distances showing the relation of the plot with existing streets, roads or other landmarks by which the plot can be related to the general map of Jacksonville or its environs.

(c) All dimensions, angles, bearings, etc. given on the map must be

referred to at least two permanent monuments (P. R. M.) located in accord with the State Plat law. All deminsions shall be shown in feet and decimals of a foot.

(d) The names of all subdivisions immediately adjacent, or if not a subdivision, the names of the property owners shall be given. Space shall be left for the County's Book and Page Number.

(e) All final plans shall bear a title which shall include the name of the subdivision. A north point shall be shown which may be magnetic or true north.

(f) The final plans shall also show the boundaries of the property ; the lines of all proposed streets and parks; also lines of all adjoining streets with their names.

(g) The final plans shall have thereon a statement of dedication of streets and public places by the owner, also be accompanied by a certificate from the engineer or surveyor making the plans to the effect that the plan is correct and made from an actual survey. The captions, dedications, forms, etc., shall also be examined and approved by the City Attorney.

(h) Monuments shall be placed at those places and in the manner prescribed in the State Plat law.

(i) Before approving the final plan, the Commission shall require a statement in writing from the City Engineer that all the technical requirements of the plat itself have been checked and found correct and in accordance with the laws and ordinances of the City and these regulations.

There are sections of Jacksonville that should be replatted and provided with streets of adequate width and proper alignment--sections now occupied principally by colored families. Hansontown, Greeleyville, Brooklyn, Oakland are sections which should be studied separately and for health and fire protection should be replatted and the existing defects be remedied.

MAJOR STREET PLAN

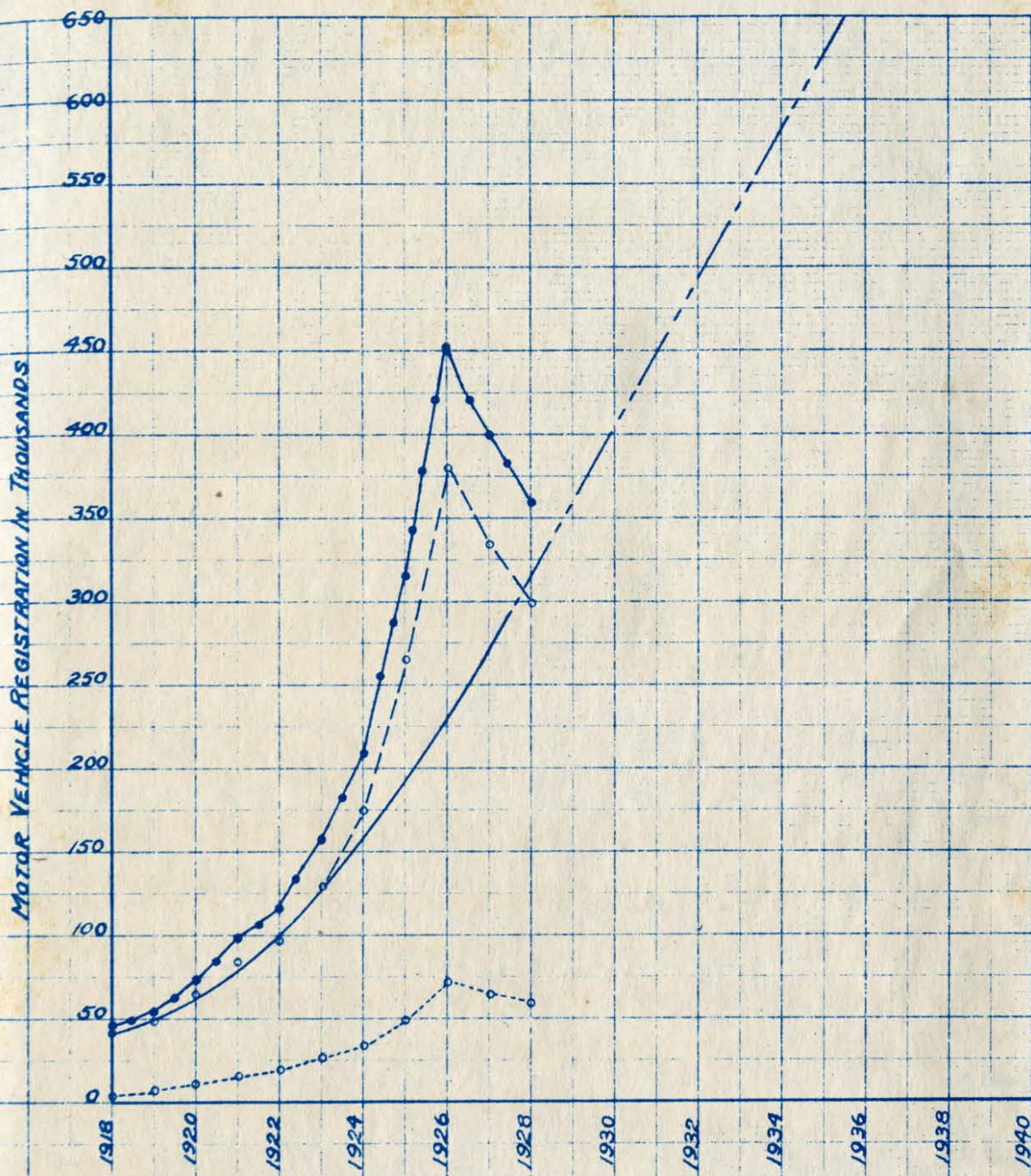
Need of a Traffic Way Program - Motor Age.

In 1908 the first Ford was put on the highways of America; in 1905 there was a total automotive registration of 78,000 and in 1928 this had mounted to 24,493,124 or in a period of twenty-three years had multiplied more than three hundred times! Recent statistics indicate that every individual in the United States could go riding simultaneously via automobile, which means that in 1928 there were for the United States as a whole 4.9 people per registered motor vehicle!

That Florida's automobile population has increased steadily and consistently is shown by Diagram #6; the 1918 passenger car registration of 41,001 increased to 298,509 in 1928, more than sevenfold in ten years. It will be noted that the "boom" years of 1925-26 are clearly reflected in the Florida automotive registration as shown in Diagram #6; since 1925 the annual registration has been decreasing. The Duval County Registration for 1927 was 30,619 passenger cars and for 1928 30,772, more than ten percent of the State's registration.

Diagram #7 shows that the number of people per registered car has steadily declined since 1918; it also indicates what the future holds in store. This diagram also shows that the future increase in automobile registration will probably not be as rapid as in the past, but the average of two people per car is being approached. Within twenty years other means of transportation will share the traffic burden with the automobile, but it is very questionable whether the automobile will ever be extinct.

We are living in an age of speed, invention and electro-mechanics that will continue to exert a revolutionary influence upon the structural and



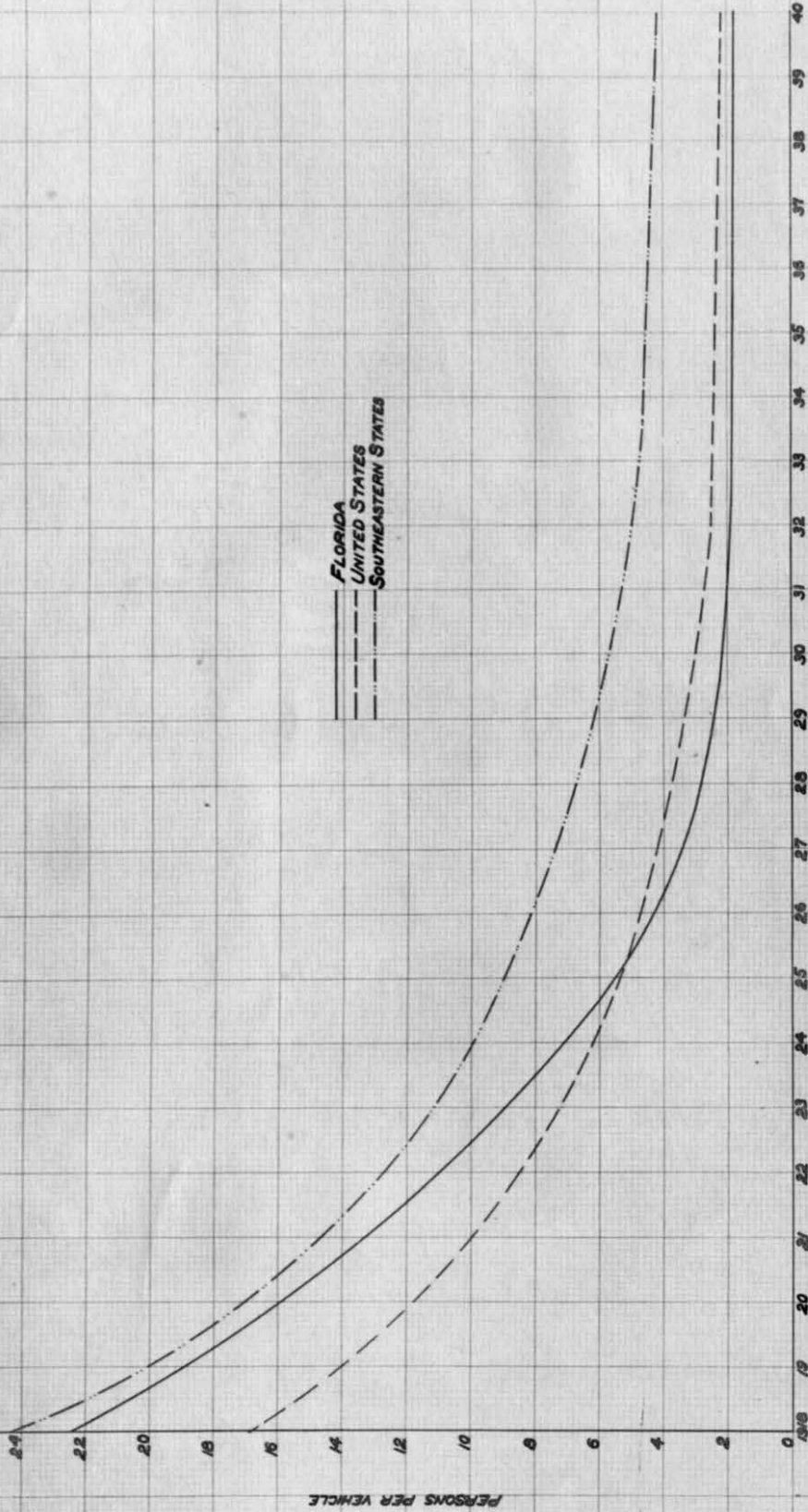
LEGEND
 ~~~~~~ PASSENGER VEHICLES  
 ..... TRUCKS  
 ———— TOTAL MOTOR VEHICLES  
 NOTE: 1924-26 "BOOM" YEAR IRREGULARITY

CURVES SHOWING  
 ACTUAL MOTOR VEHICLE REGISTRATION (1918-1928)  
 WITH ESTIMATED PASSENGER VEHICLE  
 REGISTRATION TO 1936  
 FOR THE  
 STATE OF FLORIDA



# PERSONS PER REGISTERED PASSENGER VEHICLE

FOR THE STATE OF  
**FLORIDA**  
1918-1940



GEORGE W. SIMONS, JR.  
CONSULTING MUNICIPAL ENGINEER  
JACKSONVILLE, FLORIDA

social fabric of our municipal units as well as upon our transportation systems. The increasing popularity of the automobile has encouraged the constitution of more mileage of better highways thereby widening the sphere of effective influence of our respective communities; instead of being the center of a small area within a short radius as formerly, today our cities preside over much broadened areas and many communities come within the range of the city's effective influence.

These general statistical data are introduced primarily to emphasize the magnitude and complexity of the present day traffic problem and to assist in better visualizing and contemplating the city's street planning problem. Were it not for our increasing population, our intensified development and the increased use of the motor vehicle there would be no serious street or traffic problems.

City streets, not only of Jacksonville, but of every city were defined at a time when the present mode of transportation was little dreamed of. Many of our eastern cities have street systems formed around cow trails and doubtless ox carts also played some part in defining other systems. Animal drawn vehicles the horse and buggy particularly, were significant factors in the design of existing streets, and as a result our cities are now confronted by a stupendous economic waste due to congestion and delays. Today less than one percent of our street traffic is animal drawn.

Jacksonville is growing rapidly; in thirty years 1960 there will be approximately 350,000 people residing within and contiguous to Jacksonville and those 350,000 people will be driving 175,000 automobiles! Today streets that are carrying a maximum one direction hourly traffic load of 1400 vehicles will be obliged to carry five times that flow in 1960! Therefore if the business of the city is to be economically transacted there must be arteries available for expediting movement speedily, safely and economically.



## Street System.

The streets of a city are channels for its traffic circulation, affording means of passage from district to district, from district to suburban territory and through the city. The street system of a city is analogous to the structural framework of a building; its members perform certain predetermined functions and their several sizes and strengths are proportional to the services and demands expected of them.

Neighborhood development and industrial expansion are dependent upon highway extension and improvement; much of the undeveloped vacant property in the city is traceable to its inaccessibility. A casual examination of Plate #3 illustrates how development has clung to principle highways. To insure accessibility to every section of the city based upon its anticipated service demand, to expedite traffic movements with safety, speed and economy are objectives of a major street study and to provide opportunities for better circulation is one of the principal responsibilities of a city.

### Studies Incident to Plan.

Numerous studies and observations of a diverse character are fundamental to a clear understanding and analysis of the existing street system and the varied uses to which it is subjected. It is paramount to know those areas served by paved or hard surfaced traffic ways and to what extent these paved areas influence the situation of travel routes customarily and habitually used as well as the physical conditions of such traffic ways. The peculiarities and uses of the several sections of the city; the population in each its distribution or density and the automobile ownership or usage of each are factors to be considered not alone for the present but for the next forty years. Then too, defects in the existing street system must be located and their effects upon traffic movement evaluated and remedies sought; such studies relate principally to injustifiable variations in street widths, jogs and dead ends, abrupt or acute curves and grade crossings. The quality and quantity of

moving traffic on the streets must be studied and checked, its period of maximum flow ascertained and the degree to which available traffic way surfaces are being used. Finally, impedance to expeditious, safe movement of traffic must be noted, especially as it relates to the appropriation of street surface for the conduct of private enterprise, parking and traffic regulation. Detailed studies of the foregoing character are very desirable to an intelligible comprehension of the existing street system and the formulation of a major street plan.

### Jacksonville Street Plan.

Generally speaking the Jacksonville street system adapts itself favorably to the present demands made upon it. In only a few places are traffic ways approaching their safe capacities and in these the time of ultimate capacity can be postponed by a judicious regulation of parking and traffic movements.

The system also lends itself readily to a development of parallel streets when necessary.

Jacksonville has approximately 165 miles of paved hard surface roadways divided as shown in Table #3.

Table #3.

#### JACKSONVILLE PAVEMENT TYPES.

| Description of Pavement        | No. of Miles  | Percent |
|--------------------------------|---------------|---------|
| Vitrified Brick on sand base   | 40.534        | 32.6    |
| " " " on lime rock base        | 8.082         | 6.5     |
| " " " on concrete base         | 4.287         |         |
| Asphalt Block on sand base     | 3.581         |         |
| " " " on concrete base         | 0.345         |         |
| Lime Rock with macadam surface | 20.271        | 16.4    |
| Asphalt on lime rock           | 5.748         | 4.6     |
| " " on concrete                | 20.641        | 16.7    |
| Concrete with bituminous mat   | 18.973        | 15.3    |
| Asphalt on old brick           | 1.511         |         |
| Hard Surfaced streets          | <u>41.000</u> |         |
| Total                          | 164.778       |         |



TABLE #4

Total Mileage of Pavement in  
Several Typical Cities--1925.

|               |         | Miles per 1000 persons | Miles of Paved Streets |
|---------------|---------|------------------------|------------------------|
| Jacksonville, | 145,000 | 1.13                   | 164.0                  |
| St. Louis     | 821,543 | 0.66                   | 542.35                 |
| Atlanta       | 225,000 | 2.34                   | 525.0                  |
| Memphis       | 175,000 | 1.29                   | 225.0                  |
| Birmingham    | 205,670 | 1.07                   | 221.64                 |

There are approximately 400 miles of unpaved streets. Plate #6 shows the locations of all hard surfaced traffic ways and those areas more than  $\frac{1}{4}$  mile distant therefrom. Included within the classification of hard surfaced traffic ways are all surface treated roads, i. e., shell or rock treated with asphaltic or oil compounds.

The original streets were laid out by Hart on the rectangular or so-called "gridiron" plan and as subdivisions were subsequently added the original rigid "gridiron" was perpetuated religiously, influenced only by the several grants. Fortunately many of the subdividers exercised rare judgement and foresight in determining their street widths. Hart and his associates gave a width of 70 feet to their streets, excepting Market Street which was made 80 feet; Forbes, in developing Riverside assigned a width of 80 feet to the streets of his development as did the Indian River Company which developed Riverside from the Forbes subdivision to the west line of the F. J. Ross grant. The developers of Springfield likewise were considerate in defining their streets giving them widths of 66 feet. Present day platting tendencies are toward minimum street widths of 50 and 60 feet. The following table indicates the amount of land devoted to streets in different sections of the city. See Plate #9.

TABLE #5

|                        | Block Area    | Percent Devoted to Streets | Prevailing Street Widths |
|------------------------|---------------|----------------------------|--------------------------|
| Down Town Jacksonville | 66150 Sq. Ft. | 38.5%                      | 70 Feet                  |
| Old Riverside          | 125000 " "    | 34.6%                      | 80 "                     |
| Avondale               | 222000 " "    | 22.3%                      | 60 "                     |
| St. Johns Park         | 144000 " "    | 28.3%                      | 60 "                     |
| Springfield            | 176000 " "    | 25.3%                      | 66 "                     |
| Brentwood              | 80000 " "     | 35.0%                      | 50 "                     |
| Murray Hill            | 167400 " "    | 14.5%                      | 50 "                     |
| Woodstock              | 150000 " "    | 26.6%                      | 60 "                     |

The percentage variations in this table are due to variations in street and block dimensions.

The following table shows the percent of roadway space in the business districts of different cities:-

TABLE #6

Percentage of Down Town Districts  
Devoted to Streets in Principal Cities.

|                     |       |
|---------------------|-------|
| Jacksonville        | 38.5% |
| Washington, D. C.   | 44.0% |
| Seattle, Washington | 37.5% |
| Pittsburgh          | 34.5% |
| Minneapolis         | 30.5% |
| Portland, Oregon    | 34.5% |
| Los Angeles, Cal.   | 21.5% |
| Denver              | 27.5% |

Jacksonville happily is served by several direct radial highways extending from the central business section into outlying residential districts and to points beyond. In pioneer days settlers residing or doing business in town travelled to and fro over the shortest available route thereby establishing trails recognized now as main traffic ways. Kings Road entered from the northwest establishing the first major radial; the Middleburg Pike entered from the west establishing the Old Gainesville Road and Lackawanna Avenue; the Old Orange Park Road entered from the south ultimately establishing Park Street; a trail to Panama and Trout Creek marked Main Street and the old Plank Road to Alligator finally resolved itself into Enterprise Avenue. Post Street into Murray Hill, St. Johns and Riverside Avenues to Ortega and Moncrief Road to the



northwest are supplementary radials.

The system of circumferential traffic ways is not as complete as the radials. Only two streets extend continuously from the St. Johns River on the south around the city to Lem Turner Road and Main Street near Trout River on the north. Edgewood Avenue on the west is located wholly with the exception of a short distance, within the County and has been extended and developed by the County. No point on this highway is more than six miles from the City Hall; it provides a connection with all radials excepting Main Street. Talleyrand Avenue extends from East Adams Street on the east along the riverfront to Phoenix Park (Corner Buffalo Avenue) and via Buffalo and Lawton Avenues through Panama to Main Street near Trout River. Through 63rd Street on the north one can travel from Buffalo Avenue in Panama to North Shore and thence to Norwood and Lem Turner Road completing the circuit.

Unfortunately as much cannot be said for cross town streets as for the radials; in this respect the street system is different, yet not to be severely criticised. The several railroad lines entering the city, from the west and northwest interrupt cross town continuity of such important streets as Stockton, King and McDuff. They are serviceable and effective as far as things go and will become increasingly more important in the future. The Broad Street extension, and the proposed Margaret-Church viaduct and the new Beaver Street viaduct will materially compensate for the present deficiency.

The early land grants as stated previously have exerted a pronounced effect upon Jacksonville street alignment. Had the town of yesterday been able to exercise any degree of control over land subdivision when the several grants were platted many of the present jogs, dead ends and curves of today would not have occurred. Apparently then, as now, the developer considered little the plans of his neighbor or the future of his community. (See Plate #11).

## Traffic Survey

An analysis of moving traffic and its tendencies is desirable and essential to the determination of a major street plan. A picture of present day traffic, a knowledge of present street capacity, reinforced by a prediction for the future based upon such detailed study is highly important.

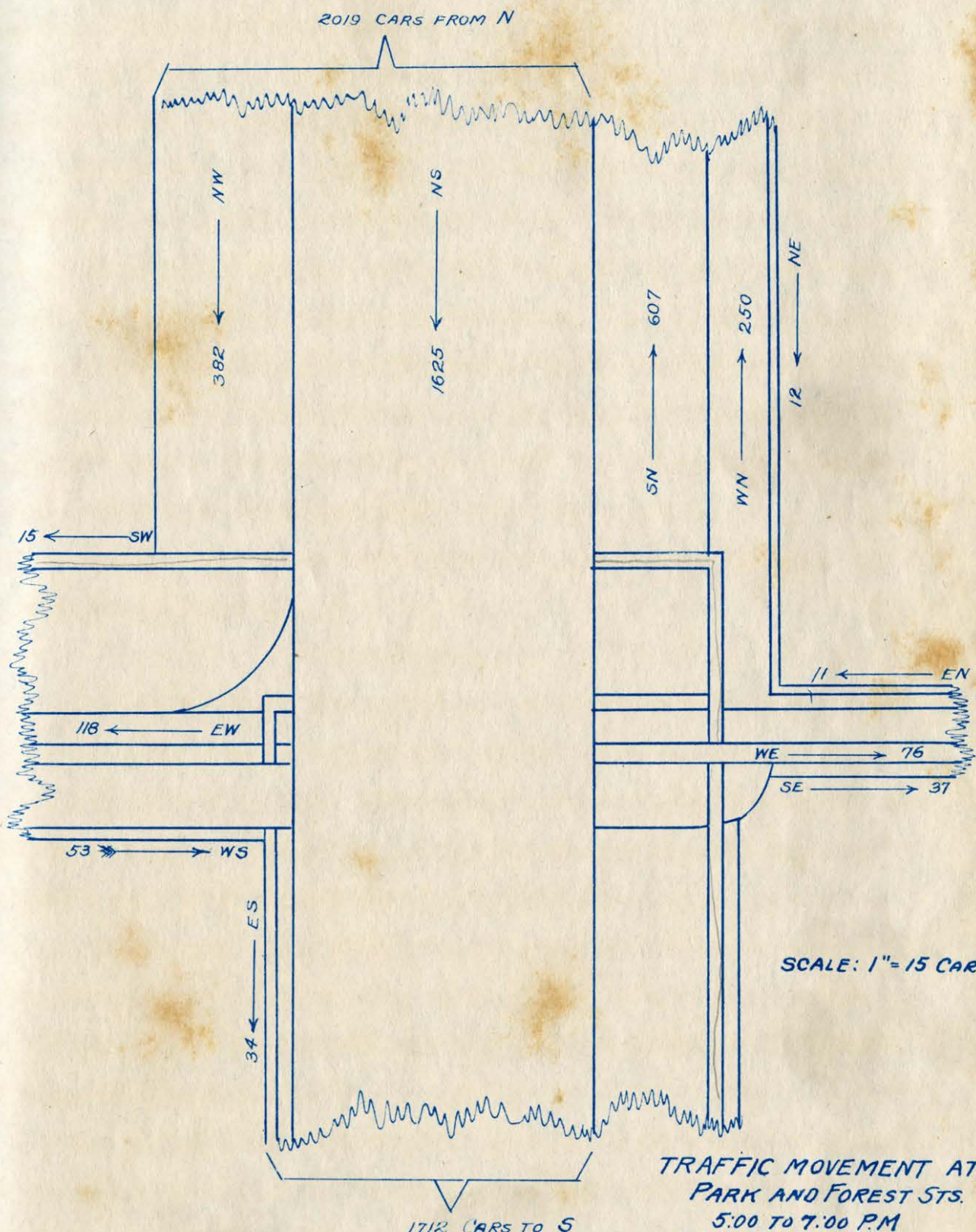
Fifty-two critical traffic stations (Plate #7) were selected and all traffic movement checked and its character noted. Traffic quality is of special significance in separating commercial, industrial and passenger traffic for use in contemplating roadway types and widths. Traffic was counted fall, winter and summer to observe seasonal variations, and also during all hours of the day to ascertain the hours of maximum flow. These traffic studies were augmented by observations pertaining to (a) use of existing street surface by drivers, (b) drivers habits concerning laws of the road and courtesy, (c) parking customs, (d) use of automobile by down town office workers and, (e) average speeds of travel.

### Traffic Flow.

The maximum hourly traffic flow in one direction is the most important; on it traffic way widths are dependent. The hundreds of observations collected at the fifty-two (52) critical intersections were tabulated, studied and from them the maximum hourly flow for each station was computed after which the movement about each intersection during the maximum hour was segregated into its directional flow. Plate #8 illustrates graphically how Jacksonville traffic moves, based upon the maximum hourly flow and Plate #7 shows the locations of the fifty-two traffic observation stations. Diagrams #8 and #9 show movement about two intersections.

An analysis of the "Traffic Flow" Diagram imparts a number of interesting facts, namely that (a) many highways considered as heavily travelled traffic ways are carrying small traffic loads, (b) a number of traffic ways

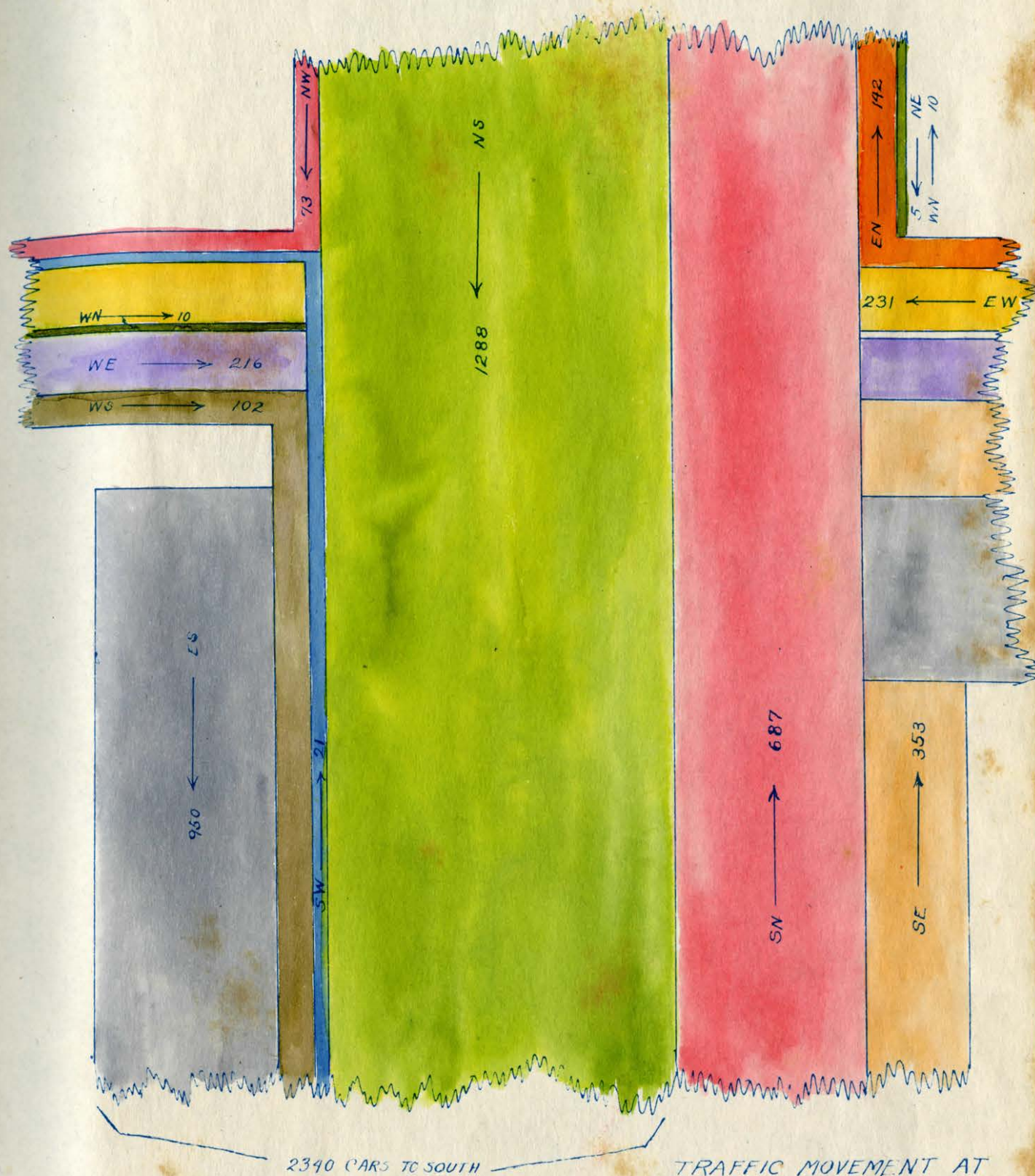




TRAFFIC MOVEMENT AT  
 PARK AND FOREST STS.  
 5:00 TO 7:00 P.M.  
 ON TYPICAL DAY  
 DIAGRAM 8



1366 CARS FROM NORTH



2340 CARS TO SOUTH

TRAFFIC MOVEMENT AT  
BAY AND LEE ST.  
5:00 PM TO 7:00 PM OF TYPICAL DAY

DIAGRAM 9



are at present unnecessarily wide, (c) southbound traffic into Riverside passes through the Bay-Broad; Bay-Lee and Bay-Myrtle bottle necks, (d) narrow traffic ways carry heavier loads than wider ways, (e) many traffic ways will not attain their capacity for many years. These points will be amplified further in the following explanation and discussion of the diagram.

Before discussing the "Traffic flow" diagram several incidental studies might advisedly be presented. Traffic counts indicated that the maximum two hours of traffic flow occurred between the hours of five and seven in the evening, that there existed a fairly consistent ratio between the maximum hour and the total twelve hour count of about 12.0%. This ratio curiously held good not only on counts in Jacksonville but likewise for a number of cities elsewhere in the country.

TABLE #7

| Location                                   | Total<br>12 Hours | Maximum<br>Hour | Percent Max.<br>Hr. of 12Hrs. |
|--------------------------------------------|-------------------|-----------------|-------------------------------|
| Jacksonville: Post & Park                  | 16072             | 2128            | 13.3                          |
| " First & Main                             | 10206             | 1127            | 11.5                          |
| Buffalo, N. Y: Delaware Avenue<br>at North | 20116             | 2313            | 11.5                          |
| " " Delaware Avenue<br>at Utica            | 17337             | 2270            | 13.6                          |
| Cincinnati: Reading Road at<br>Elsinore    | 7960              | 917             | 11.5                          |
| " Vine At McMillan                         | 4442              | 555             | 12.5                          |
| Columbus, Ohio: North High St.             | 14600             | 1540            | 10.5                          |
| Pittsburgh, Pa: Point Bridge               | 4571              | 577             | 12.6                          |

Diagrams #10 and #11 picture graphically the results of twelve hour counts at Park and Post Streets in Riverside and at First and Main Streets.

Counts made during winter months gave only a slight increase over those of the summer, but not appreciable.

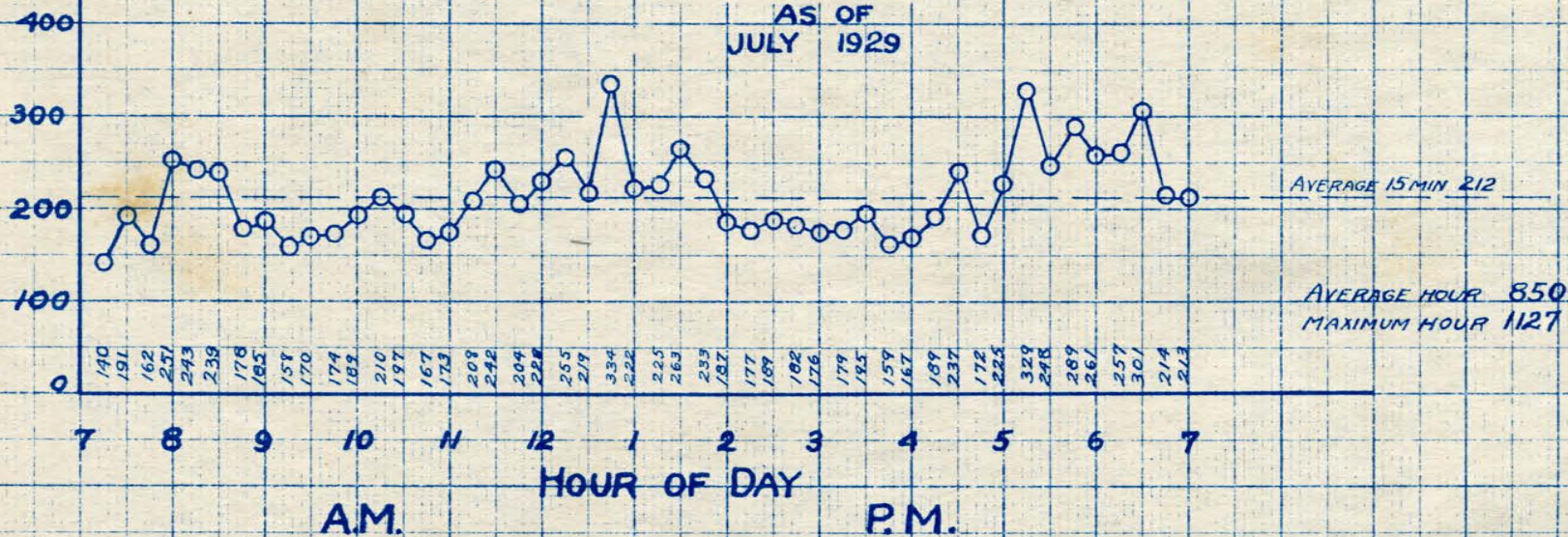
The Traffic Flow diagram shows that the Bay and Broad Streets and the Bay and Lee Streets are the most heavily travelled intersections in the city, the maximum hour (all directions) of the former being 2578 and of the latter 2377. The traffic stream going south at Bay and Broad is diminished



Number vehicles per 15 minute period

# DIAGRAM SHOWING RESULTS OF TRAFFIC COUNT AT FIRST AND MAIN

AS OF  
JULY 1929

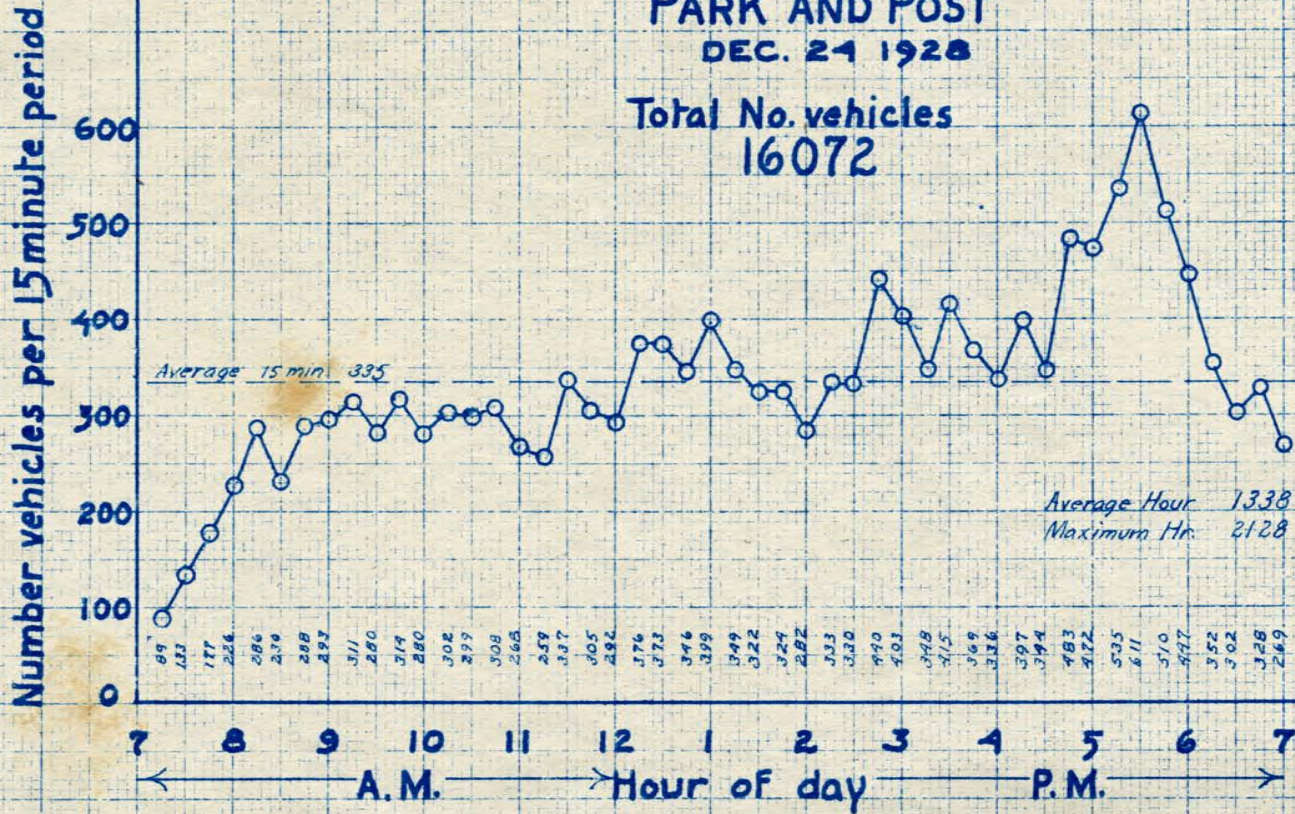


**TOTAL NUMBER VEHICLES**  
**10206**  
**DIAGRAM 10**



Diagram showing results of  
**TRAFFIC COUNT**  
 at  
**PARK AND POST**  
**DEC. 24 1928**

Total No. vehicles  
**16072**





perceptibly at the bridge, from which point to King and Riverside it maintains itself steadily, even acquiring a small increment from Park Street at Riverside and Margaret. At King and Riverside the traffic stream divides at most equally, that portion entering St. Johns Avenue continuing almost wholly into St. Johns Park and Ortega and that portion proceeding west on Riverside terminating in West Riverside, Avondale and Fishwier Park, with only a small amount going into St. Johns Avenue at Edgewood Avenue. This division of traffic at Riverside and King illustrates the need for the Oak Street extension as a safety and economy measure.

Next to Bay and Groad, the Lee and Bay intersection is most important; it carries traffic destined to Murray Hill, Lackawanna, Central and West Riverside, Avondale, Fishwier and Old Orange Park Road points, via Park Street, Lackawanna Avenue and Post Street. The outgoing peak load traffic of the evening hour is obliged to accommodate itself to a forty foot traffic way virtually cut in half by a yellow streak. At Forest and Park 18% of the traffic which a forty foot traffic way handled to this point turns west into Forest Street and the remaining 82% plus a slight contribution from the east and west at Forest suddenly finds itself on a traffic way fifty feet wide, a width unnecessary at this time. This traffic stream continues along the fifty foot traffic way to Post Street where 31% turns west destined for Murray Hill and Central Riverside Points. When Margaret Street is reached 18% continues south to join the Riverside Avenue stream, the remainder (more than seven hundred per hour) continuing west on Park Street now reduced to a width of 30 feet. At King Street and McDuff Avenue small amounts of traffic divert north and south but, generally speaking, the main stream goes into Avondale, Riverside Heights and St. Johns Park. As previously stated most of the Murray Hill traffic leaves Park Street at Post Street. The Lackawanna Avenue traffic is comparatively light, as is that entering Forest Street from



Myrtle Avenue and Bay Street. At Forest Street and College Street 43% (175 per hour) goes west into Lackawanna and the remaining 57% entering Margaret Street at College Street. Price Street between Riverside and Park accomodates little traffic, yet promises to develope into a vital cross thoroughfare.

One of the surprises of the traffic survey was the light use given to such important cross town arteries as Stockton Street, McDuff Avenue, and King Street. These streets are not being used to advantage as shown by a series of counts and their use should be encouraged. Also contrary to general impression, Exterprise Street is not being used greatly as a traffic way; which also holds true concerning such arteries as Kings Road, Moncrief Road, Eighth Street, Duval Street. None of these traffic ways are approaching their capacity.

Main Street (the Atlantic Coastal Highway) is the foremost artery to the north carrying the traffic of East Springfield, New Springfield, Panama and points north. Laura Street carries the traffic principally of Springfield while Pearl Street is the outlet to Brentwood, Norwood and North Shore. Liberty Street, east of Main carries traffic destined to Northeast and East Springfield.

The "Traffic Flow" diagram is a quantitative presentation of traffic movement during the maximum hour; how was it divided qualitatively? A twelve hour count on an average day at First and Main Street was divided as follows: 85.0% passenger cars, 11.0% trucks and the remainder, 4.0% divided between street cars and animal drawn, the latter being about 0.40 of one percent. Some intersections disclosed larger percentages of trucks than others while a few gave an increased percentage of animal drawn. Some of these follow:

TABLE #8

|                        | Percent Trucks | Percent Passenger |
|------------------------|----------------|-------------------|
| Edgewood and St. Johns | 10             | 90                |
| Park and King          | 4              | 96                |
| Forest and Park        | 9              | 91                |
| Myrtle and Kings Road  | 20             | 80                |
| Enterprise and Myrtle  | 20             | 80                |

Districts devoted primarily to wholesaling or industry gave a larger percentage of trucks and sections predominately colored gave an increased percentage of animal drawn.

A major street system is a plan for coordinating all future improvements in the circulation system--a general scheme of proposed highway development. It is customary in developing such a program to classify streets as, (1) principal radial streets, (2) Cross town streets and (3) circumferential or By pass streets. Street and traffic way widths are usually based upon their functions, the traffic load incident or tributary to them. Radial streets are those direct arteries extending from the business centers to and thru outlying residential areas and environs; they should be direct, as free as possible from curves, jogs and preferably radiate from the center as the spokes of a wheel. Directness, continuity and adequacy are essential to ease, convenience, speed and safety. Cross town streets are strategic interdistrict streets for cross town, interdistrict service; they are important connecting tributaries to R Radials and Circumferential streets. Minor streets are those traversing or having access to residential areas, while Parkways and Boulevards are service streets of importance; they are generally aesthetically placed, bordering streams, through parks and wooded areas, and are limited to passenger vehicles.

#### Major Street Plan.

In developing the major street plan the governing policy has been to utilize existing streets as far as practically possible, and urge the development of nearby parallel streets when they are necessary. This statement is





ADAMS STREET

westward from Julia Street, showing the amount of roadway available between moving cars. Thirty six feet is as good as forty.



inserted because of the tendency in many metropolitan areas toward so-called "super-highways." Detroit, Chicago, Milwaukee, Cleveland and other cities have been stricken with a fad of super highways of abnormal width which experience is proving are not altogether favorable. Therefore it is the belief and recommendation of this planner that the most economical course to pursue is to utilize what is available.

An examination of the Major Street Plan on Plate #10 with its numerous widening suggestions might frighten away the casual observer without some sort of explanation. In the first place widenings are not to be effected simultaneously, and secondly, most of the widening will not be necessary for twenty or more years. However, preparation for these widenings should be inaugurated now by the establishment of "set back" lines. Table #9 arranges streets alphabetically with present and future street and roadway widths.

The most practical method of changing street widths is by the intelligent use of set back lines. If proper restrictions are imposed early enough no great expense for street widening need ever be incurred. The United States Supreme Court under date of May 31, 1927, sustained as constitutional the set back ordinance of Roanoke, Virginia and the gist of their decision seems to have been that since the public under the police power has a right to compel a property owner to leave part of his land unoccupied in order to insure light air and comfort to the users of his and the surrounding buildings, this right having been sustained in many courts, it is further decided that the right to obtain to say where his vacant portion of the lot will best serve the public. The set back principle shall have a substantial bearing or relation to the public health, safety, morals or general welfare.

By establishing set back lines now by ordinance the widening program of the future can be cared for as necessary.

There are few communities financially able to widen streets by eminent domain, by condemnation and payment for damages to property. Therefore the





GOLFAIRE AND BOULEVARD.

showing the effective use of the BUILDING LINE  
in developing new stores. These stores are built  
to the residential line and to the future street  
line. Such development is commendable.

police power offers a possible solution--the establishment of new street lines or building set back lines, operative at once on vacant property and on occupied property upon the removal, remodeling or development of existing buildings. This method takes advantage of the passage of time to accomplish the widening without retarding the development along the street. The property owner is seldom damaged; he does not surrender title to his land until the street is actually widened and reconstructed at which time he is paid the "going" price for the part taken. The municipality can take advantage of time to accumulate funds to finance the project.

The "set back" line bears a substantial relation to the public health safety, morals and general welfare and before a court will declare it unconstitutional it must be shown that such provision is unreasonable or arbitrary.

Entrances to a city are most important, not alone as traffic ways for vast increasing amounts of motor travel but because of the first impressions they convey to those who enter the gates. The entrances to Jacksonville coincide with existing radial highways; each should be at least eight (80) feet and preferable one hundred (100) feet wide, be direct and continuous to the business center and be adorned, beautified or maintained in a manner fitting and appropriate to the city they enter. And furthermore, each entrance should be posted at conspicuous, critical points within visual range of the driver with directional guides of a standard, generally accepted design or type and all other so-called guides and signs be removed.

#### Traffic Way Widths

Traffic or roadway widths have in the past been arbitrarily selected; traffic or field studies have never dictated advisable widths, and, as a result of this procedure some Jacksonville roadways or traffic ways are unnecessarily wide and many need additional width. Many streets have been paved following the circulation of a petition among property owners, the city paying the cost of intersections. These petitions as a rule are initiated



and promoted by paving material promoters or contractors to whom square yardage of surface (quantity) has an appeal. There are many blocks of pavement in Jacksonville forty feet wide that traffic demands didn't or probably wouldn't justify for several years. On the other hand there are blocks that need greater roadway widths now.

Advisable traffic way widths are a mooted question. Some engineers insist that one width for a certain type street is sufficient while others hold to the contrary. This much is certain: if the motor driving public would utilize existing roadways efficiently and if traffic movement could be directed and supervised efficiently and impartially most of our traffic ways would accomodate much more traffic. The traveling public doesn't utilize roadway space considerably as will be shown subsequently .

TABLE #10

Recommended Traffic Way Widths  
For Streets in Various Cities.

Roadway Widths on Streets of Different Widths.

| City                 | 50' Street  | 60' Street    | 66' Street | 80' St.   | 100' Street. |
|----------------------|-------------|---------------|------------|-----------|--------------|
| Memphis              | 26'         |               | 26' & 34'  | 38' & 54' | 58' & 76'    |
| East St. Louis       | 26'         | 26' & 32'     |            | 36' & 52' | 52' & 68'    |
| Utica, N. Y.         |             |               | 36'        | 54'       | 72'          |
| Akron                | 24'         | 32'           |            | 52'       | 68'          |
| Knoxville            |             |               | 36'        | 36' & 54' |              |
| Flint, Michigan      | 24'         | 32'           |            | 82' & 52' |              |
| Des Moines           | 26' Res.... | 26' & 34'     | 36'        | 38' & 54' | 54' & 72'    |
| Lansing, Michigan    |             | 26' & 34'     |            | 36' & 52' | 57' & 75'    |
| Duluth, Minn.        | 24' Res.    |               | 36'        | 56' & 54' |              |
| Ponca City, Okla.    |             | Min. Res. 26' |            | 44' & 36' | 78'          |
| New Brunswick, N. J. | 24' Res.... | 34'           |            | Res.. 40' |              |
| Pittsburgh           |             | 36'           |            | 54'       | 72'          |
| Harrisburg, Pa.      | 34' Bus.... | 40'           |            | Bus.. 56' |              |

Table #10 enumerates several typical roadway cross sections used by many cities of the country. Jacksonville leans strongly toward a traffic way forty (40) feet wide, but it is very questionable from the standpoint of safety and economy whether there is any justification for such a width. Observations since the 1928 paving program has been completed made indicate conclusively that a 35 foot roadway would have served as efficiently as the 40 foot section is; the additional width merely encourages the driver to be more careless and speedier. A waste of four feet on a 40 foot roadway amounts to over 2300 yards in every mile, or property owners pay an amount approximating \$7000 at \$3.00 per yard for something the community does not need.

It is generally conceded by all traffic authorities that road or traffic ways should be defined in lanes of width instead of feet of width, allowing ten feet for each moving lane and eight feet for each parallel parking lane. According to this classification a 36 foot roadway would easily accomodate two moving and two parking lanes. A parked truck of the widest type doesn't consume eight feet of width and the average passenger car takes up much less than eight.

A reflection is interesting at this point. The most intense portion of the Park Street traffic is carried between the viaduct and Forest Street on a roadway forty feet wide. There are two parked lanes in this distance, leaving thereby two moving lanes. Traffic moves in the heaviest lane during the rush hour at about 1100 cars per hour. At Forest Street 10% of the load moves westward and the remainder enters a roadway suddenly expanded to fifty feet.

For the purposes of this report and its recommendations the roadway widths considered advisable and sufficient are shown on Diagram #12.





ARBITRARY NON-CONFORMING ROADWAY WIDTHS.

In the top view three widths of roadway are employed with as many blocks. Looking east from a point near Avondale along Riverside Avenue.

In the lower picture another example of nonconforming paving widths., also along Riverside Avenue.

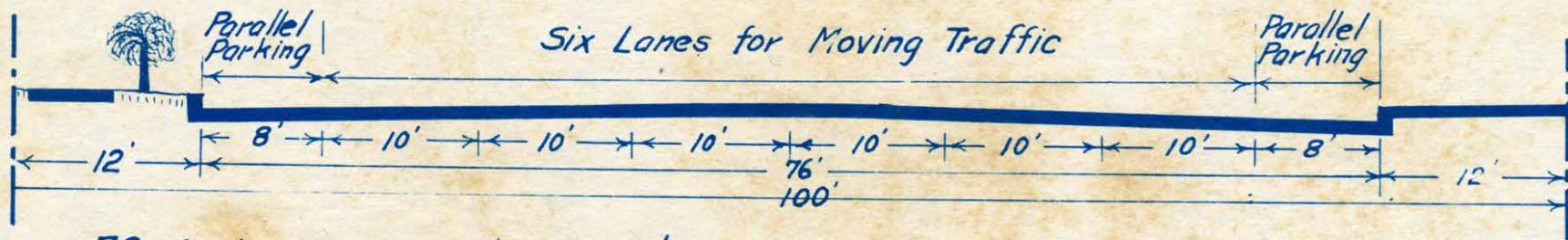


# MAJOR STREETS

100 FOOT RIGHT OF WAY

76 FOOT PAVEMENT

*For Business or other Streets carrying very dense Traffic and having parallel parking*



76 foot pavement provides:

1. 6 lanes for moving traffic, each 10 feet wide.
2. 2 lanes for parked cars, each 8 feet wide.

Where traffic is very dense this width is recommended for:

1. Business streets.
2. Streets connecting business centers.
3. Streets connecting with heavily traveled state or county highways
4. Double street car line streets  
( Outside width of two street cars is about 20 feet.)

Streets which need a 76 foot pavement and are not now 100 feet wide should be widened.

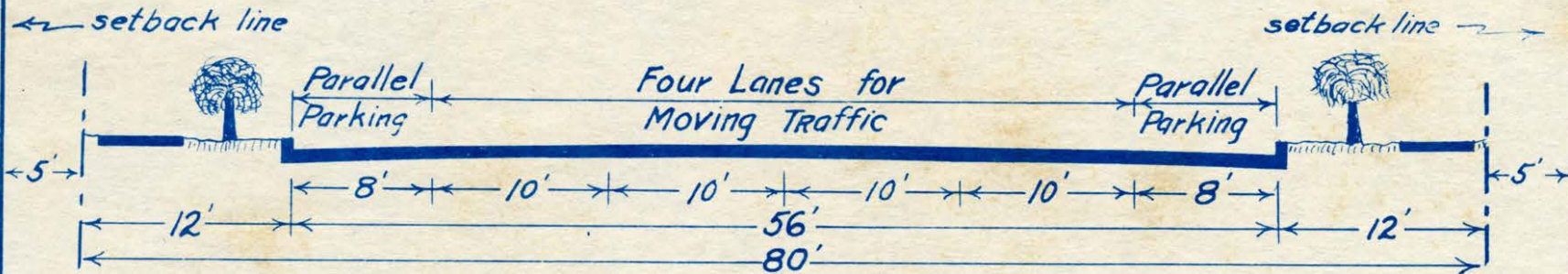


# MAJOR STREETS

80 FOOT RIGHT OF WAY

56 FOOT PAVEMENT

For Business or other Streets carrying dense Traffic and having parallel parking



56 foot pavement provides :

1. 4 lanes for moving traffic, each 10 feet wide.
2. 2 lanes for parked cars, each 8 feet wide.

This width is recommended as minimum for:

1. Business streets.
2. Streets connecting business centers.
3. Double street car line streets  
(OUTSIDE width of two street cars about 20 feet)

In business districts sidewalks can be made wider than usual by eliminating the parkways

Streets which need a 56 foot pavement and are not now 80 feet wide should be widened

DIAGRAM 12-C

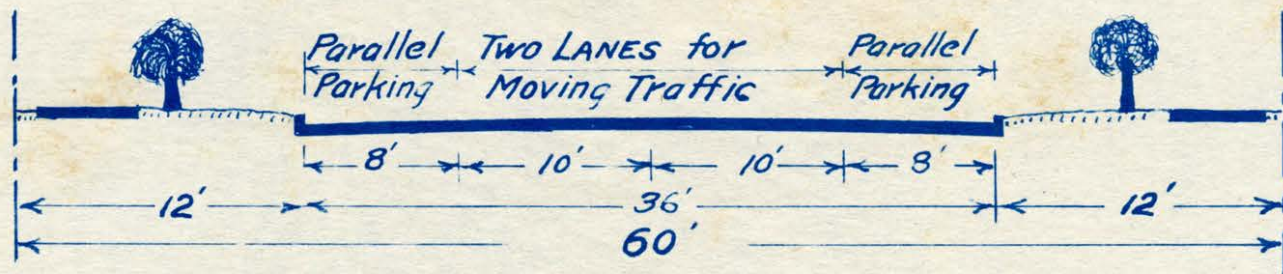


## MINOR STREETS

60 FOOT RIGHT OF WAY

36 FOOT PAVEMENT

*For apartment, residential, or other streets carrying only light local traffic and having parallel parking*



36 foot pavement provides:

1. 2 lanes for moving traffic, each 10 feet wide.
2. 2 lanes for parked cars, each 8 feet wide.

*This width is recommended as minimum for apartment and residential streets carrying light local traffic only.*

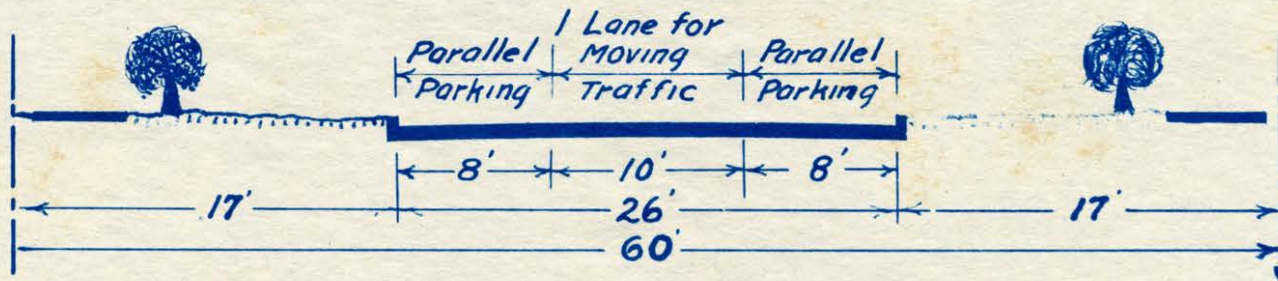
*For a local business street a 36 foot pavement may cause congestion with resulting inconvenience and dangers to shoppers. When business begins to locate on a 60 foot street a building setback line should provide for at least an 80 foot width so that a wider pavement may be built when traffic demands.*



## LOCAL STREETS

60 FOOT RIGHT OF WAY  
26' FOOT PAVEMENT

FOR single family residential streets carrying only light local traffic and having parallel parking



26 foot pavement provides:

1. 1 lane for moving traffic, 10 feet wide.
2. 2 lanes for parked cars, each 8 feet wide

This width is recommended as minimum for single family residential streets carrying very light local traffic only. Although 26 feet allows only one lane for moving traffic, ordinarily two cars can pass by one turning into an unoccupied section of a parking lane.

Fire departments often object to pavements this narrow but if corners are well rounded, curb radii not less than 20', they should experience no difficulty in moving their apparatus, provided, there is not too much parking



## SUGGESTIONS RELATIVE TO TRAFFIC WAY WIDTHS

### LANE WIDTHS:-

The recommended lane widths which when combined from the total widths, are as follows:-

- (a) Lane of moving traffic 10 feet
- (b) Lane for parking parallel to curb 8 feet
- (c) Lane for parking at angle to curb 18 feet

The above lane widths are recognized by authorities to be minimum for safety, also maximum because a wider lane invites crowding.

### DIAGONAL PARKING:-

Parking at an angle on primary arteries is not generally recommended except where pavement is wider than is necessary for moving traffic.

### ODD NUMBER OF LANES:-

Unless properly regulated an odd number of lanes for moving traffic on major streets is believed to be unsafe because the direction of travel in the center lane is too often in dispute and is therefore the cause of accidents.

### TOTAL PAVEMENT WIDTHS:-

Total roadway widths recommended are 26, 36, 56, and 76 feet.



Table #9 and Plate #10 illustrate the features of the Major Street plan, the former enumerating the streets alphabetically with recommended widenings and approximate dates, also listing roadway widths.

Main Street. This street is now one hundred feet wide and in process of improvement from First Street to Long Branch, so little need be said about this street, other than to urge the speedy acquisition of the remainder of the hundred foot right of way from Long Branch to Trout River and continue the construction work northward. From its interception with the Seaboard Air Line Main Street should be continued to a wide safe approach to the Trout River bridge as directly as possible. The present approach to Trout River bridge is dangerously constricted and possessed of a serious, objectionable curve. The traffic burden on Main Street from Trout River bridge to the Atlantic Coast Line tracks at Cemetery Road is comparatively light and not for twenty years will a six (6) lane traffic way (56 feet) be absolutely necessary. Until then a four (4) lane traffic way should be provided.

Kings Road. has widths varying from 30 feet near Grand Crossing to 60 feet. Ultimately this street should be widened to at least eighty (80) feet, preferably one hundred (100) feet and at present a set back should be established along its length to assume an economical widening later. Side walks should also be constructed along the entire length of this street where necessary for safety. Where the Atlantic Coast Line main line crosses Kings Road a subway, properly drained, should be constructed under all tracks. While an eighty or one hundred foot street should be acquired here ultimately, the roadway width need not be greatly widened for twenty or thirty years. Two moving lanes and two parking lanes (36 feet) will adequately handle the prospective traffic of this street to 1950 at least.

Enterprise Avenue should preferably be one hundred (100) feet wide, but at least eighty (80) feet ultimately. A set back line should be established along the entire length of this street now to enable its economical



TABLE #9

| Name of Street        | From           | To             | Street Width |        | Roadway Width |        | Approx. Date of Change |         | Notes |
|-----------------------|----------------|----------------|--------------|--------|---------------|--------|------------------------|---------|-------|
|                       |                |                | Present      | Future | Present       | Future | Street                 | Roadway |       |
| Acorn                 | Enterprise     | Third          | 40           | 60     | ---           | 36     | 1930-35                | 1930-35 | A     |
| "                     | Third          | Kings Road-    | ---          | 60     | ---           | 36     | 1930-40                | 1930-35 |       |
| Adams                 | Viaduct        | Florida Avenue | 50           | 70     | 40            | 56     | 1940-45                | 1940-50 |       |
|                       | Florida Avenue | Franklin       | 50           | 70     | 30            | 56     | 1940-45                | 1940-50 |       |
|                       | Franklin       | Haines         | 50           | 70     | ---           | 36     | 1940-45                | 1930-35 |       |
| Baker                 | Enterprise     | Broadway       | 50           | 60     | ---           | 36     | 1950-60                | 1930-40 | B     |
| "                     | Broadway       | Baldwin        | 66           | --     | ---           | 36     | 1950-60                | 1930-40 |       |
| "                     | Baldwin        | Placeda        | 50           | 60     | ---           | 36     | 1950-60                | 1930-40 |       |
| Beaver-Enterprise     | Cleveland      | Lee            | ---          | 70     | ---           | 48     | 1930-32                | 1930-32 |       |
| Boulevard             | 21st           | Woodbine       | 50           | 60     | ---           | 36     | 1930-40                | 1935-40 | C     |
| Sprg. Park Broad Ext. | 3rd            | 5th            | ---          | 60     | ---           | 36     | 1930-32                | 1930-35 |       |
| Buckman               | 13th           | Wigmore        | 50           | 60     | ---           | 20     | 1970                   | 1940    | D     |
| "                     | 8th            | 13th           | ---          | 60     | ---           | 20     | 1970                   | 1940    |       |
| Cemetery Road         | Main           | Buffalo        | 50           | 60     | 20            | 36     | 1930-32                | 1940    | E     |
| Commonwealth          | Canal          | Baker          | 50           | 60     | ---           | --     | 1935                   | 1935-40 |       |
| Davis                 | Golfair        | 21st           | 60           | 70     | 24            | 36     | 1950-60                | 1950-60 |       |
| "                     | 21st           | S. A. L.       | 40           | 70     | 24            | 36     | 1940-60                | 1940-45 |       |
| "                     | S. A. L.       | 8th            | 66           | 70     | 24            | 36     | 1940-60                | 1940-45 |       |
| "                     | 8th            | 6th            | 74           | 70     | 30            | 36     | 1940-60                | 1940-45 |       |
| "                     | 6th            | 3rd            | 87           | --     | 40            | 40     | -----                  | -----   |       |
| "                     | 3rd            | Kings Road     | 50           | 80     | 30            | 36     | 1940-                  | 1940-45 |       |
| DeMere                | Post           | Ingleside      | 60           | 80     | ---           | 36     | 1950-60                | 1950-60 |       |
| " Ext.                | Ingleside      | McGirts Blvd.  | --           | 80     | --            | 36     | 1950-60                | 1950-60 |       |
| " "                   | McGirts Blvd.  | 104th          | 80           | 100    | --            | 36     | 1950-60                | 1950-60 |       |
| Dennis                | Myrtle         | A. C. L.       | 45           | 60     | 40            | 40     | 1930-35                | -----   |       |
| " Ext.                | Stockton       | Strickland     | --           | 60     | --            | 36     | 1930-45                | 1940-50 |       |
| Duval (West)          | Myrtle         | Stewart        | 50           | 70     | 30            | 36     | 1935-40                | 1935-40 |       |
| "                     | Stewart        | Davis          | 60           | 70     | 24            | 36     | 1950-60                | 1935-40 |       |
| "                     | Davis          | Jefferson      | 60           | 70     | 40            | 40     | 1950-60                | -----   |       |
| " (East)              | Viaduct        | Haines Ave.    | 60           | 70     | 40            | 40     | 1930-45                | -----   |       |
| "                     | Haines         | Talleyrand     | 50           | 70     | 40            | 40     | 1930-45                | -----   |       |
| Edgewood              | St. Johns      | Cassat         | 100          | 100    | 18            | 36     | -----                  | 1932-35 |       |



| Name of Street  | From              | To               | Street Width |        | Roadway Width |        | Approx. Date of Change |         | Notes |
|-----------------|-------------------|------------------|--------------|--------|---------------|--------|------------------------|---------|-------|
|                 |                   |                  | Present      | Future | Present       | Future | Street                 | Roadway |       |
| Eighth Street   | Kings Road        | Tyler            | 50           | 80     | --            | 20     | 1950-60                | -----   | F     |
| " "             | Tyler             | Barnett          | 40           | 80     | --            | 20     | 1950-60                | -----   |       |
| " "             | Barnett           | Mt. Herman       | 60           | 80     | --            | 20     | 1950-60                | -----   |       |
| " "             | Mt. Herman        | Davis            | 50           | 80     | --            | 20     | 1950-60                | -----   |       |
| " "             | Davis             | Illinois         | 40           | 80     | 30            | 36     | 1950-60                | 1940-   |       |
| " "             | Illinois          | Jefferson        | 60           | 80     | 30            | 36     | 1950-60                | 1940    |       |
| " "             | Jefferson         | Main             | 66           | 80     | 30            | 36     | 1950-60                | 1940    |       |
| " "             | Main              | Phoenix          | 66           | 80     | 40            | 40     | 1950-60                | -----   |       |
| " "             | Phoenix           | Talleyrand       | 60           | 80     | 30            | 36     | 1950-60                | 1940    |       |
| Enterprise      | Edgewood          | A. C. L.         | 60           | 80     | 18            | 48     | 1930-33                | 1930-33 |       |
| "               | A. C. L.          | Myrtle           | 60           | 80     | 27            | 48     | 1930-33                | 1930-33 | G     |
| "               | Myrtle            | Cleveland        | 60           | 80     | 30            | 48     | 1930-33                | 1930-33 |       |
| Evergreen       | First             | 12th             | 50           | 60     | 24            | 36     | 1940                   | 1935-40 |       |
| "               | 12th              | Cemetery Road    | 50           | 60     | --            | 36     | 1940-                  | 1935-40 |       |
| Fair-Jean-Park  | Fishweir Creek    | Glendale         | --           | 60     | --            | 36     | 1935-40                | 1940    | H     |
| 53rd            | A. C. L.          | Fair (Ext.)      | --           | 60     | --            | 20     | 1930-                  | 1930-35 |       |
| Forest          | Riverside         | Margaret         | 50           | 60     | 24            | 36     | 1950                   | 1940    | I     |
| "               | Margaret          | Stockton         | 50           | 60     | --            | 36     | 1935-                  | 1940    |       |
| Franklin        | Forsyth           | Grant            | 60           | 80     | --            | 36     | 1960                   | 1940    |       |
| "               | Grant             | Phelps           | 70           | 80     | --            | 36     | 1960-70                | 1935-40 | J     |
| "               | Phelps            | First            | 60           | 80     | --            | 36     | 1960-70                | 1935-40 |       |
| "               | First             | 12th             | 50           | 80     | --            | 36     | 1960-70                | 1935-40 |       |
| "               | 12th              | St. J. R. T. Co. | 40           | 80     | --            | 36     | 1960-70                | 1935-40 | K     |
| " (Ext.)        | St. J. R. T. Co.  | Evergreen        | --           | 80     | --            | 36     | 1960-70                | 1935-40 |       |
| Glendale (Ext.) | Park              | DeMere           | --           | 60     | --            | 20     | 1933-35                | 1935    | L     |
| Golfair         | Springfield Blvd. | Pearl            | 50           | 70     | 20            | 36     | 1932-35                | 1932-35 |       |
| Grunthal        | 34th              | Kings Road       | 50           | 60     | --            | 20     | 1960                   | 1940    |       |
| " (Ext.)        | Kings Road        | 3rd              | --           | 60     | --            | 20     | 1960                   | 1940    | M     |
| Grunthal-Tyler  | 3rd               | Enterprise       | 50           | 60     | --            | 20     | 1960                   | 1940    |       |
| Haines          | Union             | 8th              | 95           | 95     | --            | 20     | -----                  | 1940-50 |       |
| Hamilton        | Plymouth          | Edgewood         | 50           | 60     | --            | 36     | 1950                   | 1935-40 |       |
| Harkeshimer     | Lackawanna        | 53rd             | 50           | 80     | --            | 36     | 1950                   | 1935-40 | N     |
| " (Ext.)        | 53rd              | 64th             | --           | 80     | --            | 20     | 1930                   | 1935-38 | O     |
| Huron           | Enterprise        | 12th             | 60           | 60     | --            | 36     | -----                  | 1960-65 | P     |
| Huron (Ext.)    | 12th              | Kings Road       | --           | 60     | --            | 20     | 1935-40                | 1935-42 |       |



| Name of Street   | From        | To             | Street Width   |     | Roadway Width   |    | Approx. Date of Change |         | Notes |
|------------------|-------------|----------------|----------------|-----|-----------------|----|------------------------|---------|-------|
|                  |             |                | Present-Future |     | Present--Future |    | Street----             | Roadway |       |
| King-Delmar      | Lackawanna  | McCoy Creek    | 50             | 60  | --              | 36 | 1930                   | 1932    | Q     |
| " "              | McCoy Creek | Enterprise     | 60             | 60  | --              | 36 | 1930-32                | 1932    |       |
| Kings Road       | City Limits | 8th            | 60             | 80  | 16              | 36 | 1935-36                | 1933-36 | R     |
| " "              | 8th         | Grunthal       | 60             | 80  | 18              | 36 | 1933-36                | 1933-36 |       |
| " "              | Grunthal    | Rushing        | 50             | 80  | 18              | 36 | 1933-36                | 1933-36 |       |
| " "              | Rushing     | Myrtle         | 60             | 80  | 18              | 36 | 1933-36                | 1933-36 |       |
| Lackawanna       | Essat       | McDuff         | 60             | 80  | 18              | 36 | 1940-45                | 1940-50 |       |
| "                | McDuff      | Delmar         | 70             | 80  | 18              | 36 | 1950-55                | 1940-50 |       |
| "                | Delmar      | Margaret       | 70             | 80  | 40              | 46 | 1950-55                | 1940-50 | \$    |
| "                | Margaret    | Park           | 70             | 70  | --              | 46 | -----                  | 1940-50 |       |
| "                | Park        | Riverside      | 70             | 70  | 40              | 46 | -----                  | 1940-50 |       |
| Lem Turner Road  | City Limits | Beachwood      | 60             | 80  | 16              | 36 | 1935-40                | 1935-40 | T     |
| " " "            | Beachwood   | Brentwood Ave. | 40             | 80  | 16              | 36 | 1935-40                | 1935-40 |       |
| Brentwood Avenue | Beachwood   | Golfair        | 60             | 80  | 18              | 36 | 1935-40                | 1935-40 |       |
| Liberty          | Hogan Creek | 21st           | 66             | 66  | 30              | 36 | -----                  | 1930-40 |       |
| "                | 21st        | Cemetery Road  | 66             | 66  | --              | 36 | -----                  | 1930-32 |       |
| Louisa           | Edgewood    | McDuff         | 60             | 60  | --              | 36 | -----                  | 1960    | U     |
| Margaret Street  | Riverside   | Myra           | 80             | 80  | 40              | 56 | -----                  | 1940    |       |
| "                | Myra        | Forest         | 80             | 100 | --              | 56 | 1940-50                | 1940-50 |       |
| "                | Forest      | Dennis         | 50             | 80  | --              | 56 | 1930                   | 1930-40 |       |
| Melson           | Enterprise  | Kings Road     | 60             | 60  | --              | 36 | -----                  | 1960    | V     |
| Moncrief         | City Limits | Davis          | 60             | 80  | 16              | 36 | 1960-70                | 1940-50 |       |
| Myrtle           | Moncrief    | 21st           | 60             | 60  | --              | 36 | -----                  | 1940-45 | W     |
| "                | 21st        | 13th           | 60             | 60  | 18              | 36 | -----                  | 1940-45 |       |
| "                | 13th        | Kings Road     | 80             | 80  | 18              | 36 | -----                  | 1940-45 |       |
| "                | Kings Road  | Bay            | 50             | 80  | 38              | 56 | 1950                   | 1950-55 | X     |
| "                | Bay         | Dennis         | Underpass      |     |                 | 80 |                        |         |       |
| "                | Dennis      | Forest         | 60             | 70  | 30              | 56 | 1950-60                | 1950-60 | Y     |
| McDuff           | St. Johns   | Louisa         | 60             | 60  | 16              | 36 | -----                  | 1930-40 |       |
| Oak              | Challen     | Boone Park     | 80             | 80  | --              | 36 | -----                  | 1930-32 |       |
| "                | Boone Park  | Fishweir       | 60             | 80  | --              | 36 | 1960                   | 1950-32 |       |
| Park             | Viaduct     | Forest         | 60             | 80  | 40              | 56 | 1935-40                | 1935-40 | Z     |
| "                | Forest      | Margaret       | 80             | 80  | 50              | 50 | -----                  | -----   |       |
| "                | Margaret    | McDuff         | 80             | 80  | 30              | 36 | -----                  | 1930-40 |       |
| "                | McDuff      | Hamilton       | 50             | 70  | --              | 36 | 1930-40                | 1930-34 | AA    |



| Name of Street   | From             | To               | Street Width   |     | Roadway Width   |    | Approx. Date of Change |         | Notes |
|------------------|------------------|------------------|----------------|-----|-----------------|----|------------------------|---------|-------|
|                  |                  |                  | Present-Future |     | Present--Future |    | Street----             | Roadway |       |
| Pearl            | River            | Hogan Creek      | 60             | 70  | 40              | -- | -----                  | -----   |       |
| "                | Hogan Creek      | S. A. L.         | 66             | 80  | 40              | 56 | 1950-60                | 1940-45 |       |
| "                | S. A. L.         | Woodbine         | 50             | 80  | 18              | 36 | 1950-60                | 1935-40 | BB    |
| "                | Woodbine         | 38th             | 80             | 80  | 40              | -- | -----                  | -----   |       |
| "                | 38th             | Trout River      | 100            | 100 | 16              | 36 | <del>1950-60</del>     | 1940-45 |       |
| Post             | McDuff           | Hamilton         | 60             | 80  | 18              | 36 | 1950-60                | 1935-40 | CC    |
| "                | Hamilton         | Cassat           | 50             | 60  | 18              | 36 | 1930-35                | 1930-33 |       |
| Price            | Riverside        | Myrtle           | 33             | 60  | 24              | 36 | 1940-45                | 1930-35 |       |
| Remington (Ext.) | Glendale (Ext.)  | Talbot           | --             | 60  | --              | 20 | 1950-60                | 1935-40 | DD    |
| "                | Talbot           | Belvedere        | 60             | 60  | 20              | 36 | 1950-60                | 1935-40 |       |
| "                | Belvedere        | Downing          | 50             | 60  | --              | 36 | 1940                   | 1940    |       |
| Downing          | McDuff-          | King             | 80             | 80  | --              | 36 | -----                  | 1935-40 |       |
| Riverside        | Edgewood         | Aberdeen         | 80             | 80  | 40              | -- | -----                  | -----   |       |
| "                | Aberdeen         | King             | 80             | 80  | 30              | -- | -----                  | -----   |       |
| "                | King             | Forest           | 80             | 80  | 40              | -- | -----                  | -----   |       |
| "                | Forest           | Viaduct          | 60             | 60  | 48              | -- | -----                  | -----   |       |
| Rosselle         | King             | Nelson           | 60             | 80  | --              | 36 | 1950-60                | 1935-40 | EE    |
| " (Ext.)         | Nelson           | Quincy           | --             | 80  | --              | 36 | 1950-60                | 1935-40 |       |
| " (Quincy)       | Gilmore          | Hamilton         | 60             | 80  | 18              | 36 | 1950-60                | 1935-40 |       |
| 64th             | Cassat           | Lake Shore Blvd. | 80             | 80  | --              | 20 | -----                  | 1930-32 | FF    |
| "                | Lake Shore Blvd. | McGirts Creek    | 100            | 100 | 16              | 20 | -----                  | 1930-33 |       |
| Stockton         | Riverside        | College          | 80             | 80  | 30              | 36 | -----                  | 1933-35 |       |
| "                | College          | A. C. L.         | 80             | 80  | --              | 36 | -----                  | 1930-35 |       |
| "                | A. C. L.         | Enterprise       | 60             | 70  | --              | 36 | 1950                   | 1930-35 |       |
| St. Johns Avenue | King             | Edgewood         | 80             | 80  | 40              | 40 | -----                  | -----   |       |
| " " "            | Edgewood         | Little Fishweir  | 60             | 60  | 40              | 40 | -----                  | -----   |       |
| " " "            | Little Fishweir  | Big Fishweir     | 60             | 60  | 24              | 24 | -----                  | -----   |       |
| " " "            | Big Fishweir     | Lamboll          | 80             | 80  | 16              | 20 | -----                  | 1930    | GG    |
| St. Johns Avenue | Lamboll          | Cedar River      | 70             | 70  | 16              | 20 | -----                  | 1935    |       |
| Talleyrand       | Duval            | Wigmore          | 60             | 70  | 20              | 36 | 1960-70                | 1935-45 |       |
| Third (Ext.)     | Kings Road       | Cleveland        | --             | 60  | --              | 36 | 1935-40                | 1940-45 | HH    |
| " "              | Cleveland        | Madison          | 40             | 60  | --              | 36 | 1940-50                | 1950-60 |       |
| " "              | Madison          | Hogans Creek     | 50             | 60  | --              | 36 | 1940-50                | 1950-60 |       |
| " "              | Hogans Creek     | Pearl            | --             | 60  | --              | 36 | 1940-50                | 1950-60 |       |
| " "              | Pearl            | S. A. L.         | 66             | 66  | 30              | 36 | 1940-45                | 1950-60 |       |



| Name of Street        | From              | To                | Street Width |        | Roadway Width |        | Approx. Date of Change |         | Notes |
|-----------------------|-------------------|-------------------|--------------|--------|---------------|--------|------------------------|---------|-------|
|                       |                   |                   | Present      | Future | Present       | Future | Street                 | Roadway |       |
| Third (Ext.)          | S. A. L.          | Florida Avenue    | 50           | 60     | 30            | 36     | 1940-50                | 1950-60 |       |
| " "                   | Florida           | Haines            | 50           | 60     | --            | 36     | 1940-50                | 1950-60 |       |
| Thirtieth             | Martha            | Alameda           | 60           | 60     | --            | 20     | 1960-70                | 1940    | II    |
| " (Ext.)              | Alameda           | Spires            | --           | 60     | --            | 20     | 1960-70                | 1940    | II    |
| Thirtieth             | Spires            | Old Brick Road    | 50           | 60     | --            | 20     | 1960-70                | 1940    | II    |
| " (Ext.)              | Old Brick Road    | Golfair           | --           | 60     | --            | 20     | 1960-70                | 1940    | II    |
| Fourteenth            | Evergreen         | Talleyrand        | 50           | 50     | --            | 36     | -----                  | 1950-60 | JJ    |
| Twenty-First          | Division          | Myrtle            | 50           | 80     | --            | 36     | 1930-40                | 1930-50 | KK    |
| " "                   | Myrtle            | Moncrief          | 25           | 80     | --            | 36     | 1930-40                | 1935-50 | KK    |
| " "                   | Moncrief          | Davis             | 55           | 80     | --            | 36     | 1930-40                | 1935-50 | KK    |
| " "                   | Davis             | Pearl             | 60           | 80     | --            | 36     | 1930-40                | 1935-50 | KK    |
| " "                   | Pearl             | Main              | 55           | 80     | --            | 36     | 1930-40                | 1935-40 |       |
| " "                   | Main              | Railroad          | 50           | 80     | --            | 36     | 1930-35                | 1930-35 |       |
| " "                   | Railroad          | Talleyrand        | 35           | 80     | --            | 36     | 1930-35                | 1930-35 |       |
| Union                 | Myrtle            | Lee               | 50           | 70     | --            | 36     | 1930-35                | 1930-35 |       |
| "                     | Lee Broad         | Broad             | 65           | 70     | --            | 36     | 1930-35                | 1940-50 |       |
| "                     | Broad             | Hogans Creek      | 70           | 70     | 40            | --     | -----                  | -----   |       |
| G.W.                  | Hogans Creek      | Palmetto          | 65           | 70     | 30            | 36     | 1950-60                | 1935-40 |       |
| "                     | Palmetto          | Haines            | 70           | 70     | 20-40         | 36     | -----                  | 1935-40 |       |
| Union (Ext.)          | Haines            | Talleyrand        | 40           | 70     | 20            | 36     | 1950-60                | 1935-40 |       |
| Weyland (Ext.)        | Kings Road        | 13th              | --           | 60     | --            | 20     | 1960-70                | 1945-50 |       |
| " "                   | "                 | 13th              | 50           | 60     | --            | 20     | 1960-70                | 1945-50 | LL    |
| " "                   | "                 | 21st              | --           | 60     | --            | 20     | 1960-70                | 1945-50 |       |
| Woodbine              | Brentwood         | Springfield Blvd. | 70           | 70     | 18            | 36     | 1930-35                | 1930-35 |       |
| "                     | Springfield Blvd. | Pearl             | 50           | 70     | 18            | 36     | 1950-60                | 1930-35 |       |
| "                     | Pearl             | Main              | 60           | 60     | 18            | 36     | -----                  | 1932-35 |       |
| Ortega Blvd.          | 104th             | McGirts Creek     | 100          | 100    | 16            | 20     | -----                  | 1930-35 | MM    |
| Lake Shore Blvd.      | 64th              | Fishweir Creek    | 100          | 100    | 20            | 36     | -----                  | 1930-35 |       |
| Baker-Kings Road Ext. | Baker             | Kings Road        | ---          | 70     | 36            | 36     | 1935-45                | 1935-40 | NN    |



NOTES TO TABLE #9

- A. Twenty foot roadway ample to 1940-45; to be replaced subsequently by thirty-six foot roadway. Should get right of way now.
- B. Twenty foot roadway will suffice until traffic demands change.
- C. Existing pavement to be widened to thirty-six feet and unpaved portions paved to 36' from Springfield Park to Twenty-first Street.
- D. Twenty Foot hard surface width sufficient until development warrants permanent pavement.
- E. City owns parkway on south side of this street now and can take extra right of way at its leisure. Improvements same as Huron Street.
- F. This pavement merely hard surfaced until about 1960 and permanent pavement can be placed.
- G. Pavement to McDuff to Edgewood to be 36' wide when community development demands same. Pavement of 48' width already planned for by city.
- H. Connecting rights of way should be acquired now 60' wide. Fair between Fishweir and 65th to be hard surfaced 20' wide; connection between 65th and Lake Shore Boulevard hardsurfaced twenty feet during two or three years. Connection between Park and Fishweir thru Jean to be made and hard surfaced to twenty feet prior to 1935. 53rd right of way to be acquired at present, hard surfaced 20' wide by 1940, from A. C. L. to Cassat and paved to 36' wide by 1950.
- I. From Margaret to Stockton a 20' roadway will serve until 1940-45.
- J. 36' roadway adequate here until set back provisions will enable a 56' roadway about 1970.
- K. 20' roadway will serve north extremity until 1945.
- L. 20' hard surfaced from Oak Street to DeMere extension at present and paved 36' wide by 1940-50.
- M. Hard surfaced 20' wide about 1940, and have right of way acquired by 1960 for permanent pavement.
- N. 36' pavement to be carried from Lackawanna to Kingsbury and hard surfaced 20' by 1935 from Kingsbury to 53rd Street.
- O. To be hard surfaced 20' wide.
- P. To be hard surfaced 20' wide at present and permanent 36' roadway by 1960.
- Q. 20' hard surface now.
- R. Kings Road is important radial and permanent pavement should be placed as early as possible.
- S. Double car track along this stretch.

- T. 20' roadway suffice here till 1940.
- U., V. Same as Huron Street.
- W. Hard surfaced 20' 1930-35.
- X. To be widened about 1950-60.
- Y. To be widened about 1960.
- Z. Present roadway should be fully utilized by the control of parking. The ultimate widening of this stretch of street should be accomplished by arcading
- AA. After 1950 a 56' roadway here.
- BB. Should be repaved now.
- CC. Widen Post Street from McDuff to Park Street, pavement to be 36' Between 1930-35.
- DD. 20' roadway adequate until 1945.
- EE. Pavement on present 80' right of way from King to Riverside should be 36' wide between 1935-40.
- FF. To be hard surfaced to 20' 1930-32; to be replaced with 36' pavement about 1940.
- GG. Widen to 20' at present time and pave to 36' in 1935-40.
- HH. 20' wide as soon as possible.
- II. 20' wide hard surfaced by 1940.
- JJ. 20' roadway 1940-50.
- KK. 20' roadway will suffice until 1940-45.
- LL. 20' hard surface to open up property.
- MM. In event of DeMere Street extension failure, repave 36' wide in 1940.
- NN. 20' roadway sufficient at first.





APPROACH TO TROUT RIVER BRIDGE (top)

At present this approach is an abomination. It should be DIRECT.

EAST UNION STREET

This method of constructing a narrow section of roadway for present uses is commendable; it lends itself to easy widening.



widening in years hence when necessary. Already a petition has been approved for a roadway along this street 48 feet wide, at least 12 feet of which will not be a necessity for ten years. Thirty six (36) feet of roadway along enterprise Avenue will be ample for at least ten to fifteen years, and possibly longer.

Rosselle Street. As stated elsewhere the major part of the present Murray Hill traffic travels via Park and Post Streets. Not only is this routing circuitous but it also contributes to the growing crowding on Post Street. Traffic studies indicate that Post Street will probably reach its capacity not later than 1940 and by that time will need relief. Rosselle Street has been designated as the relief street into Murray Hill, now having a right of way to Nelson Street. The street is now eighty (80) feet wide from Riverside Avenue to King Street, from which point to Edgewood Avenue it should be widened to eighty (80) feet, the latter part being through Quincy Street. In addition to the establishment of a set back line along Rosselle Street west of King Street, a connecting right of way between Nelson Street at Rosselle and Quincy Street should be acquired. When placed in operation this Street should be repaved with a thirty-six (36) foot roadway.

Post Street west from McDuff Avenue to Edgewood should be widened to eighty (80) feet ultimately and to accomplish this at a later day a set back ordinance defining such line should be enacted now. The jog at Nelson Street should be eliminated now by straightening the roadway. Post Street should ultimately be widened to at least seventy (70) feet from Edgewood Avenue to Corsatt Avenue. By 1940 Post Street between Edgewood Avenue and McDuff Avenue will have reached its capacity and by then the Rosselle Street relief should be provided. In this distance a four (4) lane pavement (36 feet) should be constructed before 1935. From McDuff Avenue to King Street a four lane (36 feet) roadway will be adequate to a period between 1940-45, providing





#### ROSSELLE STREET EXTENSION

Rosselle Street promises to develop into a new artery from Murray Hill into down-town Jacksonville. The above view is along Rosselle eastward from Stocton Street, while the lower view is toward Murray Hill from the present extremity of Rosselle Street at Nelson Street. An extension across hereas shown by the red line will tap into Quincey Street near Edgewood Avenue.



Rosselle Street is opened. Between 1945-50 a roadway fifty-six (56) feet should be provided, along Post Street between King and Margaret, and possibly to McDuff Avenue.

DeMere Street should ultimately be widened to eighty (80) feet from Post and McDuff along the Coast Line tracks through Avondale, and be extended along and parallel to the railroad track through St. Johns Park across McGirts Creek near the railroad bridge, through Ortega, Ortega Terrace and Venetia to State Road #3 at 104th Street. This entry would relieve the traffic flow on State Road #3 and eliminate several serious and dangerous curves. This DeMere extension will not be a necessity before 1950-60, however, provisions for widening by set back line through Avondale should be made now also the proposed right of way be acquired while same is available.

Oak Street should be extended through Boone Park as expeditiously as possible thereby giving additional relief to this region. A new and more direct bridge should be constructed across Big Fishweir. These improvements are necessary now.

Park Street should ultimately be widened to eighty (80) feet between McDuff and St. Johns Park and to accomplish this economically at the proper time a set back line should be established now. A roadway thirty-six (36) feet wide will be adequate within this distance until 1945-50 and about 1950 two additional moving lanes should be provided and by that time the street width should also be fully acquired. Park Street now has a fifty (50) foot roadway from Five Points to Forest Street and from there to Bay Street a forty (40) foot roadway. The thirty (30) foot section could be advantageously widened at least six (6) feet now. From King Street to Five Points the Park Street roadway should be widened to fifty-six (56) feet by 1940-1945. With parking regulations enforced between Five Points and Forest Streets the present fifty (50) foot section is adequate. The section between Forest Street and Bay Street has already reached its capacity without regulation of parking.





#### DE MERE STREET EXTENSION

The top view taken westward from Edgewood Avenue along the A.C.L. Rd., while the bottom view was taken from the Lake Shore Blvd southward toward the A.C.L. McGirts Creek bridge. A roadway paralleling this railroad from POST STREET to State Road Number 3 at 104 th street will provide a new and direct artery into Jacksonville from the south, and simultaneously relieve Ortega Blvd., St. Johns Avenue, Park Street, etc.





PARK STREET, NORTHWARD FROM FOREST STREET

This 40 ft. roadway has practically attained its capacity and at the point of this picture it widens to a 50 ft. roadway. At present all parking on this roadway should be prohibited absolutely during rush hours, and eventually the roadway should be widened and when that time arrives the ROADWAY SHOULD BE WIDENED TO THE FULL SIXTY FEET (60') AND THE BUILDINGS NOW EXTENDING TO THE STREET LINE BE ARCADED.





PARK-JEAN-FAIR-Extension.

This street from Park and Jean extended across Fishweir Creek into Fair St., thence via an extension connect with Lake Side Blvd near the Putnam Mill at McGirt's Creek and A.C.L.tracks. The above view shows right of way of Fair St., south from 64th St toward Lake Side. The lower view is along Fair St., looking north from Near St. Johns Avenue toward Fishweir creek. This extension can be made easily and will serve as a splendid relief highway from Lake Shore and St. Johns Park feeding into Park Street at Jean.



Parking regulations should be enforced on this section now as outlined in the following chapter.

Jean-Fair - Park Street. By 1940 the Jean-Fair Street extension should be opened providing thereby a timely relief for Riverside-St. Johns and Lakeside Avenues. This new road will enable many St. Johns Park Fishweir and Lake Shore residents a new outlet. The street widths are now adequate, but the extension right of ways should be acquired by 1935.

Remington-Downing Streets. At the time the Jean-Fair street extension is opened the Remington-Downing improvement should also be provided to enable much traffic now tributary to Park Street to utilize a new outlet through Remington-Downing-Post. The Remington extension west of Talbot to Glendale extension should be acquired before 1935.

Harkesheimer Avenue in Murray Hill now only fifty (50) feet wide should be widened ultimately to eighty (80) feet, to extend from Lackawanna Avenue south to 53rd Street and from there be extended to 64th Street in Lake Shore. Set backs should be established now on those portions within the City Limits. This street should be developed jointly by the City and County and be improved before 1935. The ultimate widening will probably not be necessary before 1960 and a twenty (20) foot roadway will be ample to 1940-45.

Lackawanna Avenue is destined to become one of the city's principal heavy duty thoroughfares and entrance arteries. With the completion of the "Old Gainesville Road" improvements by the County a short cut will be available between Jacksonville and south Florida points. Much of the heavy trucking traffic now travelling Road #1 between Jacksonville and Baldwin will be diverted to the new route. Therefore in anticipation of this improved routing it is advisable to establish eight (80) feet set backs on Lackawanna Avenue from Edgewood Avenue to Margaret Street. It is also advisable to extend Lackawanna eastward from McDuff Avenue to a point near King Street where a reverse can be introduced to meet the present roadway. Such a change would





POST STREET; westward from near NELSON ST.

The roadway should be widened in here and in so doing the jog shown should be eliminated.

GLENDALE EXTENSION

View showing location of this proposed extension from Park Street.



eliminate a dangerous intersection at McDuff and Lackawanna Avenues. The eighty (80) foot ultimate width recommended for Lackawanna Avenue should be fully acquired by 1950 so a six (6) lane traffic way (56 feet) can be installed between 1950-1960.

King Street should be opened and widened between Lackawanna Avenue and Enterprise to establish a new link in this important crosstown highway. A four lane roadway (36 feet) will be adequate for thirty (30) years.

Dennis Street should be widened to sixty (60) feet from Myrtle Avenue to the Atlantic Coast Linetracks, and a set back line be established in this area now. The roadway is adequate for many years service. A portion of the corner lot of the ice company should be acquired to not only enable an easy safe curve but to provide vision. To serve an area of potential industrial possibilities Dennis Street should be extended from Stockton Street westward to Strickland Street. This improvement is not urgent but should be cared for during the next thirty (30) years.

Forest Street is of sufficient width from Riverside to Copeland; from Copeland to Stockton it should be widened from fifty (50) feet to sixty (60) feet. A set back line should be established along this street now and the widening be effected during the next five to ten years. Before 1940 a hard surface should be installed between Margaret and Stockton.

Myrtle Avenue should be widened ultimately to seventy (70) feet and to subsequently accomplish in the distant future, set back lines should be established now. By 1940 Myrtle Avenue between Forest and Bay will have reached its capacity, but by that time the new Margaret-Palm viaduct will have been constructed and relief given Myrtle Avenue. Between Kings Road and Bay Street the street should ultimately be widened to eighty (80) feet and set back lines be established now. By 1950-55 the roadway width should be fifty-six (56) feet. It is unfortunate that Myrtle Avenue in the vicinity of Enterprise Street is now only fifty (50) feet wide; this section should be





#### DENNIS STREET

A building line should be established along Dennis Street from the A.C.L.Rd eastward to Myrtle Ave., as shown by the red line in the above.

A corner of the ice company property at Dennis and Myrtle should be acquired for traffic safety. This corner is extremely hazardous.





MYRTLE AVENUE SUBWAY (top)

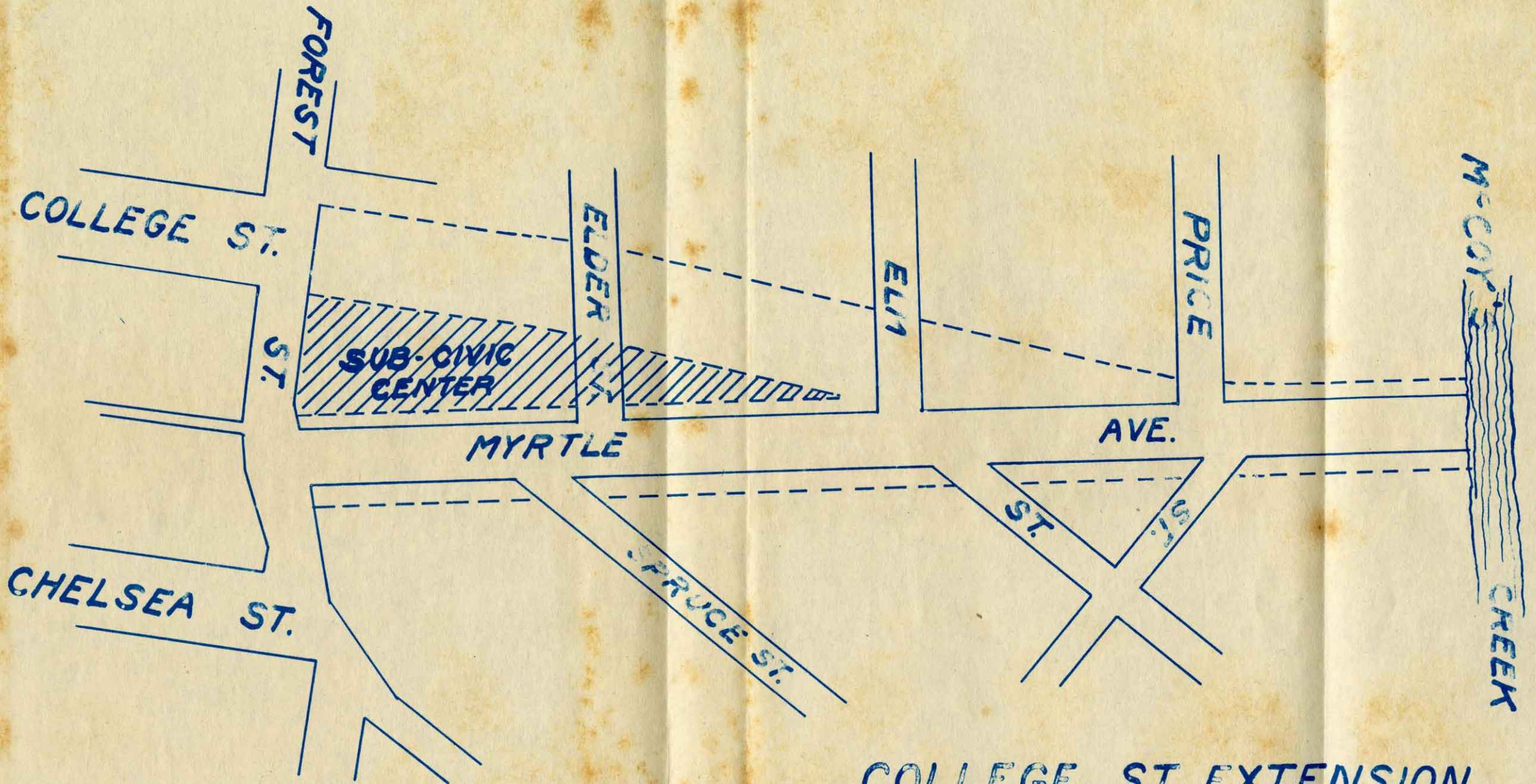
At some future time this subway must be widened to enable the passage of more traffic. At present it should be equipped with pumps adequate to keep it drained during periods of intense rainfall.

MARGARET STREET (bottom)

looking northward from intersection with Myra Street. This street will ultimately be widened to one hundred feet with a 56 ft. roadway to new viaduct approach at Dennis street.







COLLEGE ST. EXTENSION  
 AND LOCATION OF SUB-CIVIC CENTER  
 GEORGE W. SIMONS JR  
 CITY PLAN ENGINEER JACKSONVILLE

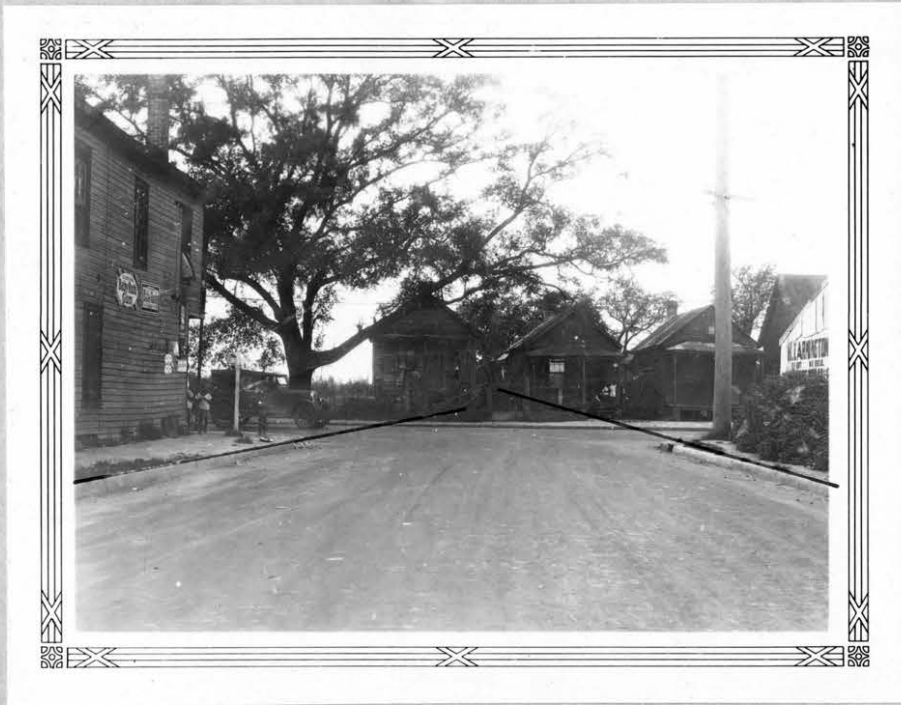


widened now. To provide a more direct safe and free movement of traffic from Riverside into Myrtle Avenue via College Street it is advised that the property on the northwest corner of Forest and Myrtle be acquired and College Street be bought direct into Myrtle and also that a subcivic center be created here. (See Diagram #12).

Margaret Street. This street according to the proposed major plan is analogous to a large collector or interceptor. Situated as it is, extending from the St. Johns River to Dennis Street (north from Forest Street unimproved but having a right of way) and crossed by all west bound arteries, it promises to become one of the outstanding traffic movement arteries in Jacksonville to collect and distribute all Riverside, Murray Hill, Ortega traffic to their respective streets after crossing a new viaduct proposed for construction from a point near Myrtle and Duval. The street is now eighty (80) feet wide and ultimately it should be one hundred (100) feet. To accomplish the latter set back lines should be established by ordinance now. The present street width is adequate for a number of years but with the viaduct installation the roadway should be made fifty-six (56) feet between Post Street and the viaduct.

The viaduct should be constructed by 1940 to relieve Park Street, Riverside and Myrtle Avenues. In selecting this site for a new viaduct the traffic movements of the present and tendencies of the future were studied carefully. Duval Street will be one of the principal cross-town streets from Myrtle to Talleyrand and traffic entering it will be distributed more evenly up town and the down town central congestion avoided. The Myrtle Avenue extremity of the proposed viaduct should terminate in a large semi-circular plaza, adequate in expanse to permit egress from the viaduct into either Adams, Duval or Church Streets. The proposed viaduct would pass over Dennis Street into Margaret Street..





#### DUVAL-CHURCH-MARGARET VIADUCT INTO RIVERSIDE

Within a comparatively short period an additional viaduct will be needed into RIVERSIDE to relieve the rapidly congested conditions of the Broad and Lee St., bottle necks. The above route has been selected. The above view is taken from the intersection of Myrtle Ave., and Duval st, the approximate east approach while the bottom view is taken across the railroad yards from the approximate south location at Margaret and Dennis . The parallel red lines indicate approximate approach at Duval-Church-Myrtle.



Liberty Street should be the principal through artery from Bay Street to the Cemetery Road between Main Street and the railroad. It is wide enough to accommodate a 36 foot roadway which will be ample to accommodate its tributary traffic for many years. At present Liberty Street has a thirty foot roadway. The northern connections should be made now, the street ultimately widened, set backs being established now, and a thirty-six (36) foot roadway to Cemetery Road prior to 1945.

Franklin Street. Between the railroad and Talleyrand Avenue Franklin Street is proposed as a major through street between Cemetery Road and East Adams Street. The street now has varying widths from forty to seventy feet, but it should ultimately be widened to a uniform width of eighty (80) feet. In addition, the several jogs in Franklin Street should be eliminated when the ultimate improvement is made. The proposed right of way from the northern extremity of Franklin Street to Cemetery Road crosses the property of the St. Johns River Terminal Company, and it should be acquired before 1935. A thirty-six (36) foot roadway will be adequate for many years and this improvement should be made before 1940. It will provide a new opening direct from Panama to the down town section via Adams Street.

Evergreen Avenue today provides communication between Cemetery Road, and down town via Florida Avenue or Eighth Street, But at First Street a severe jog to the east is necessary to enter Florida Avenue. Traffic conditions on Evergreen Avenue will approximate capacity about 1940 by which time the Franklin Street primary artery should be added. Evergreen Avenue is now only fifty (50) feet which should be increased to sixty (60) feet ultimately, and a set back line being established now to accomplish this. A thirty-six (36) foot roadway will be adequate on Evergreen Avenue, to replace the present surface as soon as it is abandoned.

Haines Avenue is now of adequate width and it should be encouraged as a connection between Union Street and Eighth. At present Haines Avenue





FRANKLIN STREET

(top) looking north from Adams Street showing a wide expanse of road way.

(bottom) looking northward toward Cemetery Road from the property of the St. Johns River Terminal Company, where Franklin Street proposed extension will go.





Franklin St. Near Walter Edwards Park (above).  
East Adams St. Near Franklin Street (below).







FRANKLIN STREET

The above shows jog at 21st Street to be ironed out, while the lower shows jog at First Street. Both of these jogs can be removed and the street be perfectly aligned.

THIS IS PROPOSED AS A PRINCIPAL  
EAST SIDE ARTERY.



in this particular location is not defined and for the present a twenty (20) foot roadway would be adequate--constructed in such a manner that additions can be made when necessary.

Brickman Street. The street will eventually afford an advantageous cross connection between Eighth Street and Talleyrand Avenue and to that end a right of way of sixty (60) feet should be acquired and extended from Eighth to Fourteenth Street, and from Fourteenth Street to Wigmore the present street should be widened to sixty (60) feet. The development of this connection is not urgent, yet plans for its widening and extension should be anticipated so when in 1945-50 it is necessary the work can be done economically. If opened prior to 1945 a twenty (20) foot surface treatment roadway will be ample.

Talleyrand Avenue is one of the principal circumferential streets of Jacksonville. It is the entrance to industrial and port development along the riverfront. At present this street is only sixty (60) feet wide; ultimately it should be seventy (70) and its roadway should be paved with a high class heavy duty pavement. A building line should be established along Talleyrand Avenue at this time, from Buffalo Avenue at Wigmore, along Wigmore to Talleyrand and along Talleyrand to Duval Street. A thirty-six (36) foot pavement will accommodate the traffic of Talleyrand to 1945-55. In making improvements on Talleyrand the short cut south of Eighth Street should be made as shown on the map.

Pearl Street is destined to become the principal north and south artery extending from the St. Johns River to points in the northern section of the city--Norwood, North Shore and Brentwood. It is now sixty-six (66) feet wide from Hogans Creek to the Seaboard Air Line railroad, and north therefrom varies in width to 33rd Street from which it is one hundred (100) feet wide to North Shore. Ultimately Pearl Street should be widened to eighty (80) feet between Hogans Creek and 33rd Street, the set back lines to





TALLEYRAND AVENUE (top)

This picture shows the proposed location of Talleyrand Avenue cut-off south of Eighth Street near the Armour plant. This cutoff will be a time saver as well as the elimination of a traffic hazard.

OAK STREET-RIVERSIDE EXT.

This connection should be made at an early date to provide a new opening into St. Johns Park and Ortega via RIVERSIDE AND OAK STREET.



be established now by ordinance. The roadway should have two lanes added between 1940-45 and before 1960 the Boulevard should be improved to relieve the Pearl Street load.

Broad Street in conjunction with the Boulevard will greatly relieve Pearl Street. The Boulevard must be widened to a uniform sixty (60) foot width and set back lines be defined now for this ultimate improvement. The pavement surface should be improved now and before 1960 a new thirty-six (36) foot pavement be laid into Brentwood and points beyond.

Acorn Street should be widened ultimately from forty (40) to sixty (60) feet and be extended from its present terminus at Third Street to an intersection with Kings Road at Wayland Street. The setback lines for Acorn Street should be established and the extension right of way acquired now. For the present a twenty (20) foot roadway would be ample, to be widened at a later time when necessary. This roadway will afford a direct, straight sub-radial connection between Myrtle Avenue and Kings Road. Wayland on the other hand provides an opening into a new undeveloped region north of Kings Road.

Adams Street should ultimately be widened to eighty <sup>seventy (50)</sup> (80) feet east of the viaduct to Victoria Street, and to accomplish this widening economically set back lines should be established along it now. Adams Street is a direct artery to the Stadium and will also provide access to the proposed east side artery Franklin Street. The pavement should be widened to fifty-six (56) feet between the viaduct and the stadium by 1940. This street with Duval constitute two of the principal cross town arteries between Myrtle Avenue and Talleyrand.

Baker Street. This street, like Baker Street, affords an opportunity to develop and penetrate undeveloped raw regions of potential industrial value; also supply an additional sub-radial between the central area and Grand Crossing. This street should be widened to seventy (70) feet as speedily as possible by 1935 at least and an additional right of way acquired along



and parallel to the Southern Railway tracks and about 250 feet distant therefrom the present terminus of Baker Street to Grand Crossing. Such a highway projected through this area would not only make vacant, undeveloped areas accessible but would also provide a new outlet to Kings Road at Grand Crossing. A twenty (20) foot roadway would be adequate at first to be replaced about 1960 with one wider.

Commonwealth - College - Twelfth - Louisa - Huron - Division - Golfair Melson - McDuff - Edgewood Avenue - 64th Street - and 53rd Street. These streets are secondary in character and all adequate in width now. Twenty (20) foot pavements with outside parking strips are adequate for the next few years excepting for Edgewood and McDuff, each of which should be provided with thirty-six (36) foot roadways before 1935 and by 1950-55 each should have fifty-six (56) foot roadways.

Davis Street; set back lines should be established now, to acquire a street at least seventy (70) feet wide from State Street north to Golfair. At present the street has varying widths. A thirty-six (36) foot pavement should be provided south of Eighth Street.

Duval Street promises to become one of the outstanding arteries of the future city and ultimately it should be widened to seventy (70) feet where now it is less, also the objectionable jog at Georgia Street should be made less severe.

Eighth Street - Twenty-first Street - Third Street and Thirtieth Street These streets are all proposed as vital cross town connections, offering communication between the east waterfront and Grand Crossing, Kings Road and Moncrief sections. Eighth Street should be extended and widened to Kings Road from Myrtle Avenue. East of Myrtle Avenue, Eighth Street should ultimately be widened to eighty (80) feet. Twenty-First Street is the only direct through street from Talleyrand to Grand Crossing; this street should ultimately be widened to eighty (80) feet, set back lines being established now. Already a



The top view was taken at the corner of POST STREET AND MARGARET ST., The acute corner should be acquired and cut off as indicated by the red line. As constituted at present this is a traffic hazard and the elimination of this corner would expedite traffic movements to and from the west. The lower picture is from MYRA ST AND MARGARET; this short connection should be made.







ST JOHNS AVE. ?from GREENWOOD (top)  
ERNEST STREET FROM MARGARET ST., (below)

Extensions such as pictured on this page will not only expedite the future movement of traffic and thereby save considerable money but will eliminate from the street system hazardous and dangerous curves and jogs.





#### THE FORSYTH STREET BOTTLE NECK

Without going into details this street should be widened between JEFFERSON STREET AND BROAD STREET. This narrow neck has greatly retarded the development of west Forsyth Street, and it should be eliminated.





HARKISHEIMER AVE. (top)

View looking northward from 64th street in Lake Shore where Harkisheimer Avenue extension will enter from Murray Hill to the north.

ADAMS STREET (bottom)

Adams Street in the vicinity of the STADIUM should be widened to form a TURNING BASIN of adequate size to handle hundreds of cars.





TWENTY FIRST STREET

ABOVE is west from a point near Pearl Street. This will develop in to a principal cross town artery from Taileyrand to Grand Crossing. Below is Pearl Street north from Nineteenth Street. A building line should be established here, sidewalks and widened roadway.







A.C.L.Rd., CROSSING NEAR GRAND CROSSING (top)

At some future time a subway should be developed under the main Coast Line tracks at this point

THIRTIETH STREET (below) This street will later develop into a significant cross town roadway.





(Above) View from a point near the Southern Rd tracks and North McDuff Avenue in line with proposed street along and parallel to tracks leading into BAKER STREET.

(Below) Location of HURON STREET across Southern tracks furnishing an outlet from Woodstock and Lackawanna to Grand Crossing and to points north.





part of Twenty-First has been widened. From Davis Street westward a roadway of twenty (20) feet is adequate to about 1945-50 when additional width should be provided. The Third Street opening at Kings Road will afford communication through an area now in need of resubdivision. The widths of these several streets, roadway widths and approximate dates are shown in the table and on the map.

Grunthal Street should be widened to sixty (60) feet, set back lines being established now and the additional widening accomplished between 1960-70. For the present a twenty (20) foot roadway will be adequate and should be installed before 1940. This street with Tyler Street will provide a new cross connection between Enterprise Avenue on the south and Moncrief Road on the north near the Municipal Golf Course.

Len Turner Road is another vital radial which should be widened to at least eighty (80) feet and also be extended northward by the county and state to afford a connection with State Road #4 near Dinsmore. Set back lines should be established along the entire length of this street from Colfair Avenue north to assume an economical widening when necessary. The traffic load from this direction is not yet burdensome and a twenty (20) foot roadway will probably be sufficient until 1935-40 when it should be widened to thirty-six (36) feet. The latter will be sufficient until 1960-70.

Moncrief Road is another radial that should ultimately be widened to eighty (80) feet. This street also connects direct with Road #4 south of Dinsmore. A twenty (20) foot roadway will be adequate until 1935-40 when it should be widened to thirty-six (36) feet from Eighth Street to the City Limits.

Price Street between Riverside Avenue and McCoy Creek Boulevard should be widened to sixty (60) feet with a thirty-six (36) foot roadway, the later being completed prior to 1935-40. This street will provide a cross street from Riverside into the Stockton-Dennis industrial sector.

Oak Street between Margaret and May Street should be widened to seventy (70) feet, paved and thereby affording a connection between these streets and simultaneously eliminate a serious traffic hazard.

Stockton Street between Lackawanna Avenue and Enterprise Avenue promises to convert this street into one of the most vital and significant cross town thoroughfares in Jacksonville, but to attain its maximum of usefulness steps should now be taken towards its widening to eighty (80) feet by establishing set back lines. The pavement surface is now very inferior and during the period 1930-32 it should be relaid with a heavy duty roadway of thirty-six (36) foot width. This roadway width will be adequate until about 1960.

Stockton Street should also be extended northward from Enterprise to intersect with Baker Street and its extension referred to previously--this to be done simultaneously with the Baker Street improvement.

Union Street is now fifty (50) and sixty-five (65) feet wide between Broad Street and Myrtle Avenue. This section should be widened to seventy (70) feet and be paved with a roadway thirty-six (36) feet wide westward to Myrtle Avenue, thence to Acorn Street. Union Street should also be widened to seventy (70) feet east of Liberty to Talleyrand Avenue. East of Florida Avenue a twenty (20) foot roadway will be adequate until the jog at Haines Avenue and Union has been eliminated and a smooth reverse curve constructed instead. This widening will not be necessary for ten (10) years but set back lines should be established now. Union Street is an important down town cross town street supplementing Duval Street to the south.

Woodbine Street should have set back lines established along its length from Pearl Street to Brentwood Avenue now, providing for a street eighty (80) feet wide. The pavement on this street should be widened prior to 1940.

Parkways and Boulevards. Parkways and Boulevards are primarily for pleasure driving, to be constructed as paving strips along both sides of natural streams acquired by the city, the land between the roadway and stream



BAKER STREET AND  
STOCKTON  
EXTENSION.



The top and left views respectively are along BAKER STREET north and south. This street promises with its extension along the Southern right of way to Grand Crossing to be a popular route of travel.

STOCKTON STREET near Enterprise. The red lines indicate how this street should be extended northward to intersect with BAKER STREET. Such connection will afford a new outlet for STOCKTON STREET





#### ROADWAY JOGS

are dangerous and should be avoided in construction. The above example is encountered at HAINES AND EAST UNION STS. A sufficient amount of right of way should be acquired from the A.C.L.Rd. to eliminate this hazardous jog and create a more direct route to Talleyrand Avenue.



bank to be terraced, parked and planted.

## TRAFFIC CONTROL, PARKING.

In the preceeding chapter, the traffic survey was described and the Traffic Flow diagram presented; reference was also made briefly to driving habits and the utilization of available highway surfaces by motorists. In this chapter the subject of Traffic Movements generally, the uses and abuses of street surfaces, the use of the automobile by down town workers and the parking problem will be discussed; and suggestions offered for improvement.

The future needs of the city predicated on the present are of primary significance; with the increasing number of motor vehicles obliged to use the streets annually, the question obviously is to what regulations or restrictions shall they be subjected to insure a greater degree of safety, ease and efficiency in traffic movements?

From the study of local traffic movements it can be stated conservatively that more than 150,000 motor vehicles enter, drive around, park in or pass through the central business district every twelve hours from seven to seven of the average day, and it is quite probable that this number is doubled on extraordinary days. What conditions will then result when twice or three times this number are every day circulating into or through the central business district? What should be done to avoid congestion and increase safety with speed of movement?

Congestion is an inevitable result of our city life, intensified and made more acute by the unprecedented use of motor vehicles because our streets were not built for their present uses. There is no generally accepted definition for traffic congestion. To the average individual congestion is a state encountered where he is unable to proceed at his desired rate of travel. Congestion slows down traffic movement, it is expensive and inconvenient. It



is stated that in St. Louis traffic congestion is costing \$125,000 per day. Investigations in several cities have disclosed that every minute of delay caused a passenger automobile costs at least 2.2 cents and a truck 2.3 - 2.5 cents. To relieve congestion is an objective sought by more effective traffic regulation.

Traffic regulation intimately affects many interests and naturally one finds it difficult to reconcile the divergent views of all who are directly or indirectly involved, because as Director of Public Safety Division of the National Safety Council says, "There are a hundred million traffic experts in the United States." Therefore it is advisable in contemplating any system of traffic regulation to consider those elements of relief in such a way as to minimize damage or injury to business or values built up after years of effort. Traffic must be adjusted to the streets which in conjunction with the proposed plan of progressive street widenings will ultimately ameliorate the situation.

From the studies of traffic made over a period of more than a year the character and intensity of movement was observed from different angles and from these accumulated data it was possible to predict the probable future time when the capacities of the present roadways will be attained. But, this time can be considerably deferred if improved and more efficient means of regulating traffic are promulgated.

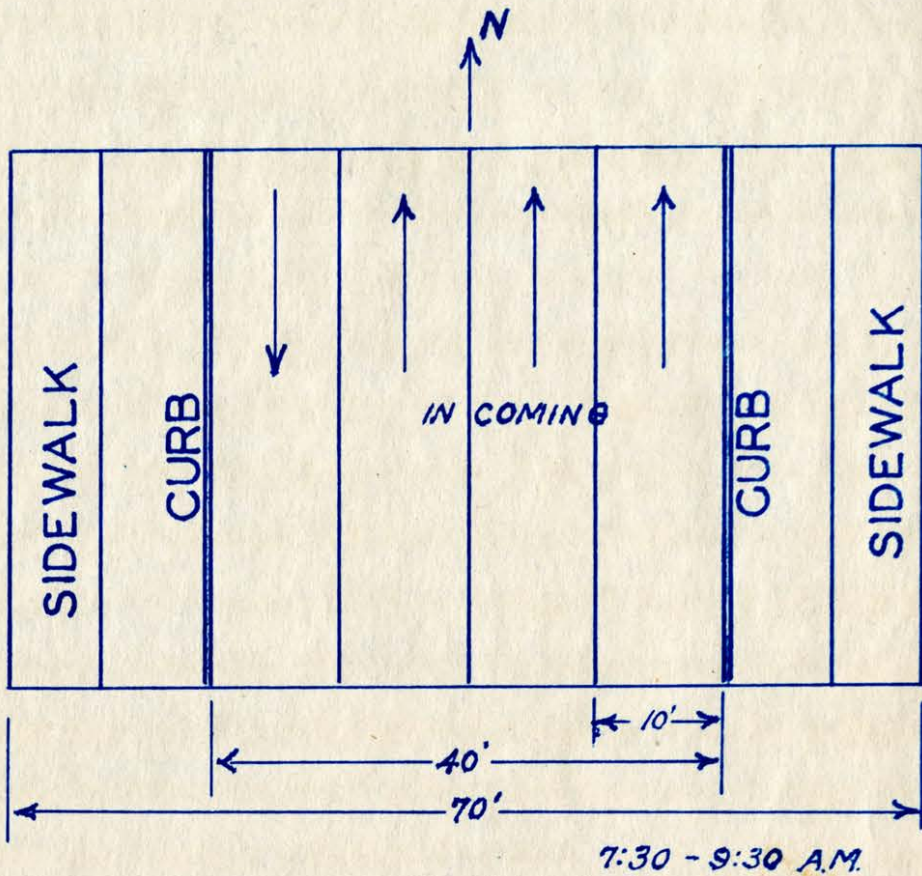
The driving public should be obliged to better observe the rules of the road---largely rules of courtesy. On principal arteries such as Main Street, Pearl Street, Myrtle Avenue, Post Street, Park and Riverside Avenue, slow moving vehicles fail to keep to the right, a cardinal rule of the road. The present roadway capacities can be greatly increased, travel made speedier and safety promoted by confining all travel strictly to lanes. A reference to Park Street between the viaduct and Forest Street will illustrate this point. Within this distance the roadway is forty (40) feet wide, ample room for four ten foot

lanes, which could be efficiently and economically defined by a machine. Between the hours of seven and nine-thirty A. M. and four-thirty to six-thirty P. M. the entire roadway from curb to curb should be available to moving traffic--all parking within those rush hours should be prohibited. During the morning hours (seven to nine-thirty) incoming travel should be strictly confined to the three right hand lanes and lane jumping be regulated, and the remaining or fourth lane devoted to the light outgoing traffic; during the evening hours the reverse would prevail. (See diagram #14). Such regulation would permit an average maximum hourly flow of nearly 3,000 vehicles, or twice the present flow! Today, as marked only one safe line of traffic can move safely in either direction. This identical illustration prevails elsewhere on other traffic ways of the city. Advance planning, unhindered, impartial and a non-political administration of traffic regulations will greatly relieve congestion, and save in money more than it costs!

In travelling via the lane method the motorist desiring to turn right at a nearby corner selects the right hand lane near the curb while the driver planning to turn left seeks the left hand lane placing him nearer his turn. Such movement of traffic causes no complications and permits the center through lane traveller to proceed safely and speedily unmolested. Tests and observations indicate that the lane method of travel breaks up the old notion that a driver had to consistently and everlastingly hug the center of the roadway.

Business frequently opposes this method of traffic regulation, basing their grievance on the parking restriction; but it is very questionable whether such opposition is well founded. Of more than 2,000 cars per hour passing out Park Street between the viaduct and Forest less than 10% park for business purposes! In other words the parking privilege for 200 cars should not inconvenience and discommode 1,800 cars. Then too, the parking restriction prevails for only the two hours of the rush periods. Streets were built primarily for travel and movement.





METHOD OF DEFINING LANES  
ALONG 40 FT ROADWAY

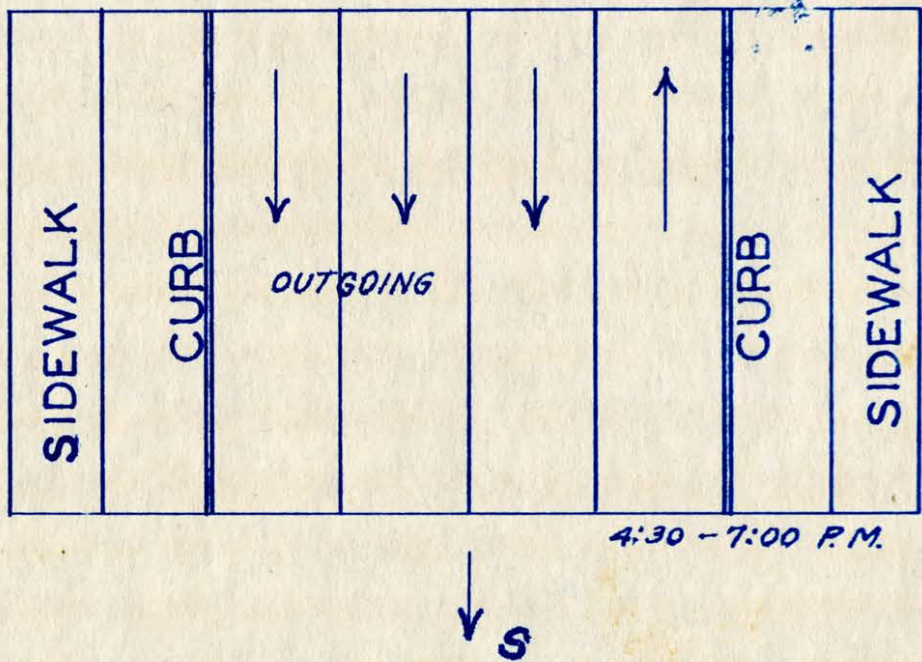


DIAGRAM 14

To what extent should animal drawn vehicles or heavy slow moving trucks be permitted the uses of primary arteries when adjacent parallel streets of directness are accessible and available? Observations indicate that these vehicles frequently select main thoroughfares, especially during hours of rush movement; one mile will cost motorists many dollars in delay.

Segregation of different types of traffic fall into two groups: First, trucks and all commercial vehicles, and Second, all animal drawn vehicles. The latter will eventually be excluded from all streets. Slow moving vehicles should be restricted to certain streets during rush hours of the morning and evening.

Much congestion and delay will be obviated when owners and operators of industries and trucking lines spend a little more time routing trucks from point of origin to destination; routing is a proper economical function of any business operating trucks. Time spent in routing and expediting truck movements would result in a reduction of economic waste. In considering the segregation of traffic one should remember that less than 1% of the total traffic is animal drawn.

Many cars passing from Springfield to Riverside or vice versa, or from Fairfield to Riverside always endeavor to pass through the heaviest down town traffic at a time when there should be the greatest possible freedom of movement instead of using available "by pass" streets. It is possible by a selection of streets to wholly avoid traffic in travelling inter-district and to encourage such a "by passing" and utilize existing streets it is suggested that a "vehicular loop" be defined extending as follows:- Lee - Duval - Newman. Duval Street is a wide well paved street giving access to East Jacksonville sections and permitting diversion to Springfield sections, it can also be entered from Riverside at Broad, Lee or Myrtle and also from the west. Encouraging traffic to follow the "vehicular loop" would relieve the central business district of much interdistrict traffic.

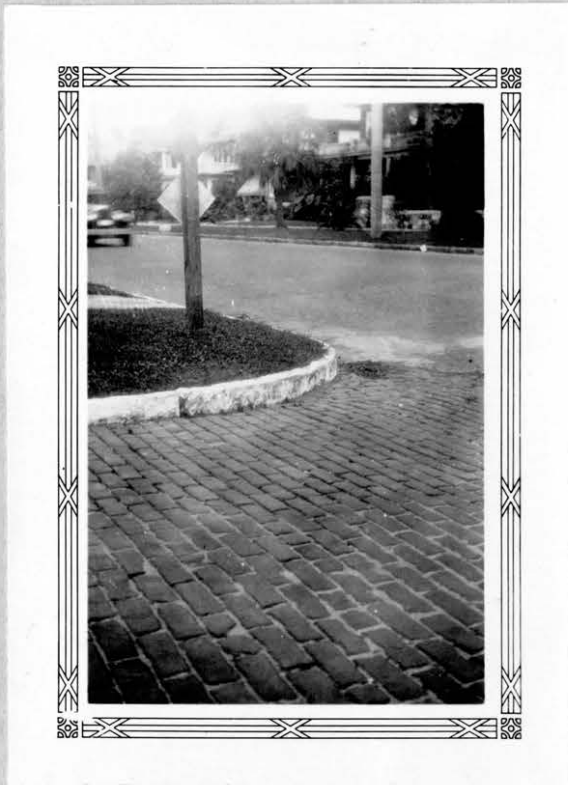


Traffic movement at intersections can be greatly expedited and assisted by rounding curb corners, continuing the plan already adopted by City Engineer Sheddan. Curb radii of preferably twenty feet would be very helpful to motorists. At some corners it is impossible to construct the larger rounded curbs but even in these rare cases radii greater length than the former three or four feet should be used. A program of steadily enlarging intersection curb radii on all proposed major streets should be adopted and followed until all intersections are ultimately cared for. The liberal rounding of curbs at intersections will enable a driver in the lane nearest the curb to travel around a corner without pulling into the center of the highway and jeopardizing oncoming traffic.

In many parts of the city a custom has prevailed of planting low camphors bamboos, other shrubs, hedges or trees at street intersections in such manner as to obstruct the vision of motorists. Such practice is severely condemned and it is recommended positively that the city remove all such shrubs, trees or hedges from the line of vision and thereby contribute to safety first.

With so much transient traffic to contend with the tendency among cities is to promulgate uniform laws and regulations. Therefore the City Council should as speedily as possible repeal the present traffic ordinance and in lieu thereof enact a new one patterned after the Model Municipal Traffic Ordinance prepared by a Committee of the National Conference on Street and Highway Safety working under the direction of President Hoover. This ordinance complete in every particular was prepared following a careful, searching study among cities of the entire country and already it has been used as a basis for ordinances by many American cities. San Francisco, Indianapolis and Cincinnati have ordinances patterned after the model.

Provisions should also be incorporated in the traffic ordinance to institute a Traffic Court for the disposition of traffic ordinance violators, as well as a provision for treatment of overparked cars. In some cities over-



Corner curb radii should be at least twenty feet, and not short as shown above. This is typical of many radii throughout the city of JACKSONVILLE

Short radii curbs are difficult to drive around and encourage drivers to drive into the center of the roadway on approach.



parked cars are towed to the pound and release of a car requires the payment of a towage and pound fee. In other places the police car picks up seat cushions, the redemption of which requires fixed payment covering collection of cushion and court costs. Such methods are worthy of consideration. The former method is preferable and is recommended.

Directional guides properly located, reduced to an allowable minimum along proposed major highways will facilitate, simplify and economize traffic movements. Today there is little system or order evidenced by the placement of directional guides--one is likely to find them anywhere. The Jacksonville Motor Club has its signs of the A. A. A. type, the Police Department has its typical red signs, the State Highway Department has its official yellow and black while lastly the Federal Road Department claims its white and black shield. The latter two are placed only on through routes. At present the responsibility of placing directional guides rests on no one in particular; The Motor Club does its part, the Police theirs, etc., with the result that a chaotic condition prevails. The Police Department seems to be following the most orderly, consistent plan of all the agencies.

In the first place all signs and markings should be simple, easily read and consistent. The placement of signs should be vested in one agency only. The system of markings suggested by the "Report of the Committee of the American Engineering Council on Street Traffic Signs, Signals and Markings " should be consulted and as far as possible universally **accepted** designations be employed. All superfluous, misplaced advertising arrows and directionals should be removed.

Signs should not only give directional information, i. e. name and distance to remote places, but likewise should inform the tourist or driver in advance of (a) dead end streets, intersections with arterial highways, (c) grade crossings, (d) restrictions of the traffic way, (e) schools and hospitals, (f) use of pavement lanes and, (g) by pass routes .



Roadside beautification near  
JACKSONVILLE



Directional guides  
State and Pearl Sts.



U.S. Directional  
guide

#### DIRECTIONAL GUIDES

The roadside should be cleared of its promiscuous collection of hodge podge signs. Note the above corner of Kings Road and Eighth Street. Directional guides should be uniform in size, color and symbol and should be placed at points easily within the driver's vision. All promiscuous signs should be eliminated. Misplaced guides are useless and waste of money.



All traffic signs and light, too, should be erected in the line of the drivers vision in the most conspicuous place. No signs or placards other than official should be permitted.

The Police Department it is urged, should keep a record of all accidents and fatalities noting same on a spot map at headquarters and keeping a card record of each case. Such record will be valuable as years pass in keeping the traffic plan up to date and also in indicating the advisability of additional traffic lights.

The necessity and advisability of industrial and haulage truck routings from points of origin to points of destination was briefly touched upon previously and what relates to trucks also pertains to buss traffic into and from the city.

At present eight companies operate eleven interurban buss lines into and out of Jacksonville; in the winter these busses are augmented by several other interstate companies. On the average day these companies operate sixty-two busses on the streets of Jacksonville, adding materially to the problem of local traffic movement. And judging from the interurban tendencies toward buss travel throughout the country this problem is still in its infancy. Therefore it is now consistent to study this subject and suggest reroutings of busses especially where such rerouting will materially relieve congestion.

1. Coastal Transport Company..Savannah, Brunswick, Jacksonville.
2. Georgia-Florida Lines..Valdosta, Atlanta.
3. Greyhound Lines..Atlanta, Cincinnati, Chicago, New York.
4. Blue Bus Lines..Tampa, St. Petersburg, Tallahassee.
5. Florida Motor Lines..Miami, Daytona, Palm Beach, Jacksonville Beach.
6. Clark Bus Line..Green Cove Springs, Palatka.
7. Fernandina Bus Line..Yulee, Fernandina.
8. Seaboard Transportation Company..Tallahassee.

At present the following are routings through the central business districts:

To South Florida (Florida Motor Lines). Bay and Hogan, north on Hogan to Church, east on Church to Laura, south on Laura to Bay, west on Bay to the buss station thence east on Bay to Main to Ferry.

To South and West Florida (Blue Bass and Seaboard). North on Hogan to Church, east on Church to Laura, south on Laura to Adams, west on Adams to Jefferson, south on Jefferson to Bay, west on Bay to depot, thence to Enterprise Avenue.

To North Florida and Georgia (Atlantic Coastal Highway Company). North on Hogan to Church, east on Church to Laura, north on Laura to First, east on First to Main, thence north on Main Street.

To Georgia (Georgia Florida Lines). From Hogan and Adams Streets, north on Hogan Street.

In addition to the major lines there are lesser lines operating to Fernandina Palatka, Riverview, starting from Hemming Park and proceeding direct.

As will be noted from the foregoing every buss passes up Hogan Street to Church, and down Laura Street to Adams and thence west, or to Main and thence to the Ferry. Naturally as years pass and buss traffic increases one can foresee the resulting congestion within the business center. It is suggested that for the present busses proceed north on Hogan to Church, east on Church to Laura, south on Laura to Duval and then west on Duval for west and south Florida busses of the Blue Bus and Seaboard Lines and east on Duval for the Florida Motor Lines, the latter proceeding south on Main to the ferry. Subsequently the buss station in the St. James Building should be discontinued; there is no logical reason for its existence.

#### Parking.

Parking is another perplexing problem of modern municipal growth incident to the increased use of the automobile, and as some one has said, "Aside from the weather no topic is more discussed than parking". And as one visualizes the future city with its increased number of automobiles, its perplexing traffic problems, one is obliged to coordinate the parked car into the scheme.



As traffic increases more vehicles will demand parking space at a curb which has not grown proportionately and on its rational regulation depends largely the future of centralized business.

Ten years ago with fewer motor cars in Jacksonville, the grocer and butcher had his stores down on Main Street in the central district and the suburbanite could find ample parking space for all day if necessary, but today the case is different. Decentralization is the keynote; neighborhood functions are supplementing those of the central district--yet the parking problem is still more acute than ever.

Parking is looked upon generally as a police problem and consequently police departments are usually severely criticized by disgruntled parkers. This attitude is a false one. Parking with its difficulties is essentially and fundamentally the problem of the business man--the merchant; he is the man who should take the initiative to control and regulate parking, because parking affects him more directly than any other phase of traffic control.

At present the average merchant has an overestimated idea of parking, traffic movements and its relief; he confidently believes that parking regulations too rigidly enforced, and the by passing of through traffic encouraged will be injurious. By passing "through traffic" around the congested central district is also frowned upon by merchants, yet few, if any, of these autoists are interested in stopping; by passing appeals to them and the provision of by passes will make a more favorable impression upon the tourist than bucking traffic thru down town sections. By passing thru interurban, interstate or interdistrict traffic will relieve down town streets, contribute to easier movement and encourage prospective customers, especially women to brave the traffic of down town. It is quite safe to say, from studies made, that curb parking has a negligible effect upon retail business.

It is not the purpose of this report to submit any new or startling solution of this problem, but merely give a few facts which pertain to its

status in Jacksonville and offer a few suggestions which may, if tried, alleviate the situation in the future city.

Before discussing the parking problem it is advisable to remind the reader that "streets are primarily provided for general use as lines of communications for pedestrians and for the transportation of persons and merchandise; and the rights of the different classes of traffic to unlimited use of the streets, including the right to park, are subject to the public and civic welfare". Such is the body of doctrine formulated by a noted group of traffic students and planners.

In the light of this definition and the many difficulties incident to traffic movement and parking it is predicted that the time of absolute parking prohibition in central business zones is not remote. In a recent report of the National Conference on Street and Highway Safety, meeting in Washington, stated: "Unlimited parking or dead storage of vehicles adjacent to curbs should not be allowed when this interferes with the use of such area by operators of vehicles stopping for loading or unloading. Also, parking or even stopping should be prohibited in certain areas where the mere presence of a standing vehicle occasions danger to users of the highway or causes unreasonable interference with traffic movement."

But granted that parking is still necessary in down town areas and should be provided for, the problem resolves itself into how best to meet the situation, enable an easy, free movement of traffic in streets and also provide parking space. Streets were not meant to be storage places for automobiles yet one would judge from his daily experiences that the primary objective of the 1926 pavement widening program was to provide more all day parking space.

There are in the area bounded by the west side of Newman Street, south side of Church Street, east side of Broad Street and south side, (incl) of Bay Street, 48747 feet (nearly ten miles) of curb space subdivided as follows:-  
4238 feet or 8.8% reserved for alley entrances, business entrances and fire



hydrants; 2697 feet or 5.5% reserved as loading zones; 721 feet or 1.5% reserved for taxi stands; 3542 feet of 7.3% reserved as safety zones and 600 feet or 1.2% restricted to busses. The remaining 36899 feet or 86% is available for parking! A year ago (1928) survey of this same area revealed approximately 3000 feet more reserved area but thru the efforts of the Police Department many requests for zones have been refused. This available footage of curb for parking should accomodate, per eight hour day, 17360 cars, about one half the cars in Jacksonville allowing each one a one hour parking privilege. The above figures also indicate, contrary to popular belief, that only a little more than 1.5% of the available space is restricted to taxi stands.

After an extensive study of parking methods and down town traffic the following few suggestions are made:

- (a) Encourage all interdistrict, interurban and interstate traffic to use designated "by pass" routes. Cooperation of merchants will achieve this at once. This will become increasingly essential with increased traffic density.
- (b) Stopping, standing, or parking should be prohibited at all times in the following places, except when necessary to avoid conflict with other traffic or in compliance with the directions of the traffic officer:-
  - (1) Within an intersection.
  - (2) On a cross walk.
  - (3) Between a safety zone and the adjacent curb and not within twelve feet of the end of a safety zone.
  - (4) Within ten feet of fire station entrances.
  - (5) Within ten feet of fire hydrants.
  - (6) In front of private driveways or alleys.
  - (7) Opposite fire station entrances.
  - (8) Alongside or opposite any street excavation or obstruction.
- (c) Rigidly enforce prohibition of double parking.
- (d) Prohibit all night parking.
- (e) Loading zones should only be considered following written application setting forth necessity of reserved space, and then



PARK STREET AT REAR OF WEST RIVERSIDE SCHOOL HOUSE

The top view indicates the traffic congestion in this locality, especially during dismissal time. The roadway is only 30 feet; a wide parkway prevails here, easily cut back to provide an additional parking lane and thereby eliminate a hazardous condition now existant. A cut-back of eight feet could be made as shown in the lower photograph, the curb line coming outside the tree line. THIS SHOULD BE DONE RIGHT NOW.





granted only after each application has been searchingly investigated.

- (f) When reserved space is approved, same should be leased to applicant on an annual basis provided for in ordinance being proposed herein (See Appendix #1). Street space is property of every citizen, not of one only and there is no reason why a portion of city property reserved for the conduct of an individual's business should not produce a revenue to the city. A plan of this character operated in Indianapolis where it not only returns a revenue to the city, but reduces the number of applicants to a minimum.
- (g) Prohibit tail end loading and unloading. Within two years time require all loading and unloading within the property lines.
- (h) Require all construction and contractors shelters to be erected within curb line and (thusly) preserve full street width. Observation in Jacksonville discloses that only in rare instances are shelters needed outside curb lines.
- (i) Prohibit the conduct of private business within street line, to give more freedom of pedestrian and motor travel.
- (j) In addition to reserved zones near fire hydrants, fire stations, alleys, private drive ways as enunciated in a previous section, minimum ten minute reserved zones should be provided at banks, office buildings, hotels, theatres, and public buildings.
- (k) For the present all parking in unrestricted zones between Broad and Newman, Bay and Church should be limited to thirty minutes.

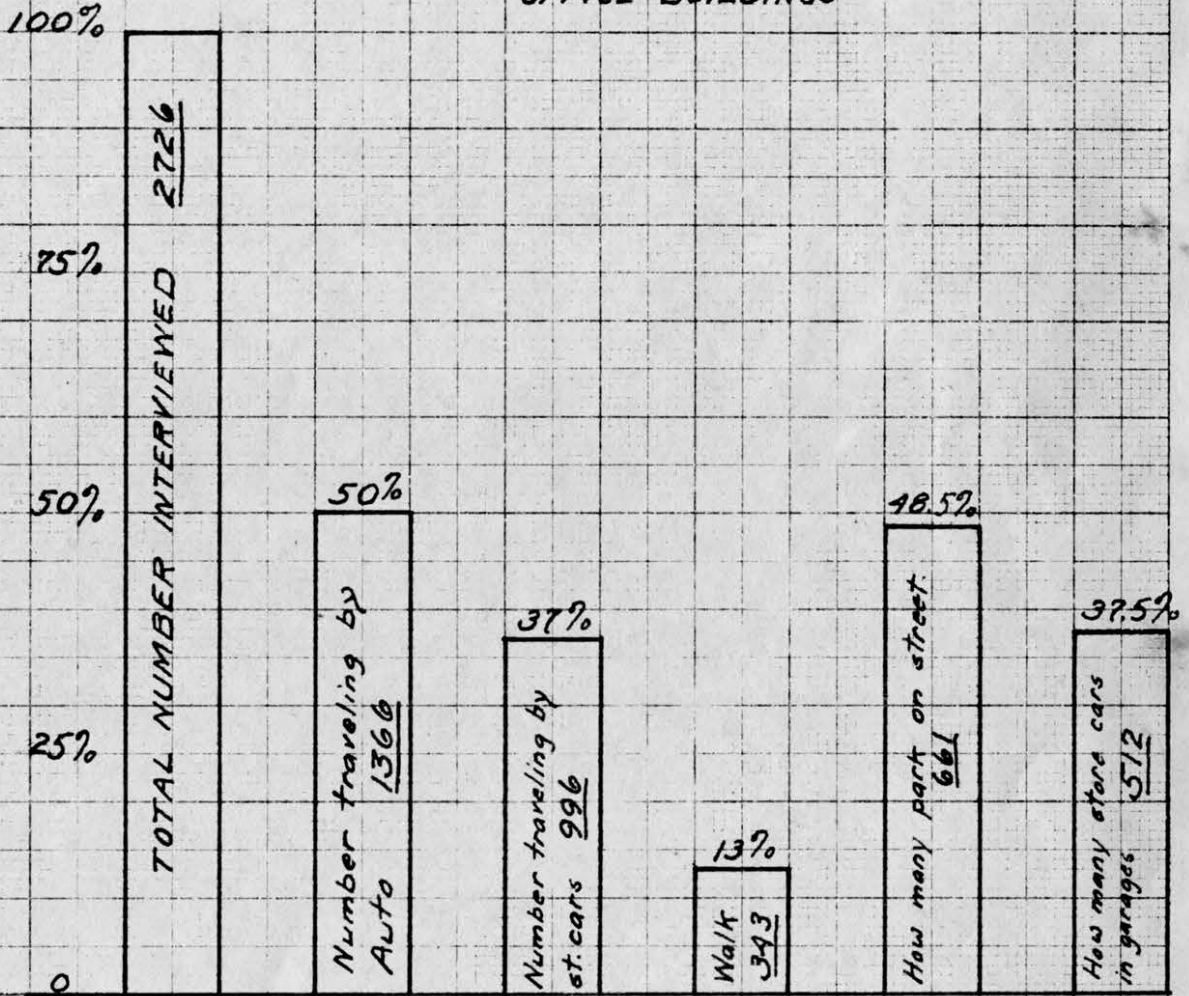
These few suggestions will materially assist the parking problem for the present; within two years modifications will be necessary and then the parking time limit will probably have to be lowered and parking be prohibited from some central zones.

Parking, restrictions, the use of the automobile by workers and their effects on business conduct are timely topics. 2726 office workers were interviewed and asked how they travelled to work, if by automobile how they disposed of their cars. 1366 travelled to work by automobile (50%) and 996 or 37% travelled by street cars and 343 or 13% walked. Of the 1366 who travelled by auto, 661, 24% of the whole, stored their cars on the street for all day, the remainder stored their cars in garages or sent them home. It was interesting to note that 37% of the workers used the street cars.

What time is required for shopping? The United States Department of

HOW DO WORKERS COME TO TOWN  
AND  
WHAT BECOMES OF CARS  
1928

RESULTS OF INTERVIEWS WITH  
2726 JACKSONVILLE  
OFFICE WORKERS  
LOCATED IN 25 DOWN-TOWN  
OFFICE BUILDINGS





Commerce during 1927 made inquiries from 1426 merchants in 841 cities from which it was learned that thirty minutes is ample time to transact the daily business ordinarily transacted in Dry goods, Hardware, Clothing and Shoe stores. This indicates that a thirty minute parking limit is ample for in town areas, while one hour zones can be extended beyond.

In a previous section reference was made to the treatment of parking violators. The use of the tow method is proving most satisfactory and preferable and its adoption here would soon cure the overparker.

## TRANSIT

In the days before the automobile the chief factor in the development of cities was the street railway. Car Lines were frequently installed by development concerns desirous of introducing new residents into remote sections; it is said that one of the first street car lines in Jacksonville was the Main Street line from downtown into Springfield and another with a line into old Riverside both owned and operated by different companies and each primarily to intensify development of their respective sections. It is also stated that the developers of Ortega installed their own street car line from Ortega to the city limits where it met another incoming line of different ownership originally. Such facilities permitted people to live farther from their business or occupation, away from the noise, dirt and heat of the city. But in the past twenty years the automobile has affected the influence of the street car, but notwithstanding, most cities are still dependent for local transportation upon street cars.

Being so important and so closely identified with the city's life and conduct, transit service must necessarily be considered in any plans for the future, and to contemplate an efficient transit service the needs of a future, larger city must be visualized. Many utility systems are today laboring under difficulties largely brought about by an inability to anticipate the future needs. And in planning the future of a transit system adequate to supply the demands of a larger population and area there should be an assurance that all improvements will be made for the best interests of all concerned.

It should be understood that no operating company can afford, or should be expected, to extend its service into territory wholly undeveloped or to some isolated factory park or residential district. Whenever extensions or modifications are proposed or undertaken they should be judged in the light of their relationship to the general city plan. It is generally agreed among



transit specialists that a population of at least 1250 people per square mile is necessary to make a car line pay, and further that unless there is enough clientele along a route to warrant an average of a ten or fifteen minute headway, auto busses are more economical than street cars.

With the influence of the automobile as a factor many buss lines have been inaugurated, some in competition to street car lines others supplementing their service. Competition buss lines is duplication of service and is conducive to congestion of highways, a condition encountered several years ago in Miami with numberless jitney lines. Today the tendency is toward the buss line operation by the street car or carrier company, supplementing its own service. "In 1920 only sixteen traction companies used motor busses; it is estimated that in 1928 this had increased to 361. In 1925 traction companies purchased 2660 busses, or twice as many as they purchased in 1924, and so far in 1929 have purchased 10733 or nearly five times as many as in 1925.

There has been considerable discussion as to the relative merits of the bus and street car. Without entering into any details it is believed that both still have a place to fill in the life of the city. When one realizes that the average passenger automobile carries 1.25 people and occupies 64 square feet or 67 square feet per passenger of paving surface, and the average street car carries twenty passengers and occupies only 250 square feet of pavement or 11 square feet per passenger then the relative values of the two can be valuated in a different light. Street cars will continue to accommodate local traffic--mass transportation which it is questionable can be handled efficiently and effectively by busses. The buss on the other hand has two primary functions, (1) as an express medium from outlying points into the central area, and, (2) as feeders to car lines. The latter holds forth much promise. With feeder buss lines to termini bringing in passengers quickly and efficiently, the time will come when the headway can be minimized.

To meet the future transit demands of Jacksonville, especially those

from outlying sections it would be practical and advisable for the Traction Company to install express buss service into town from such outlying areas as Norwood, Panama, Ortega and North Shore, operating these busses on local schedule to the fifteen-twenty minute zone (See Plate #15) and thence express into town, so selecting the down town termini of the several lines that "buss congestion" would not result. Such a transit system would enable the discontinuance of outlying tracks. An inspection of Plate #15 shows that the Ortega line for instance consumes twenty minutes in travelling from Fishwiler Creek to the Ortega Terminus; this distance could be much more efficiently handled by busses in half the time. Likewise, the Eighth Street line could be advantageously replaced with busses a line extending from Eighth Street and Evergreen Avenue to Talleyrand, thence north on Talleyrand to Phoenix Park, feeding the phoenix Park car at each end. According to this method the street cars would still continue to serve areas within the fifteen minute zone.

By eliminating lines into outlying areas, the loop congestion will also be lightened and as lines are gradually replaced with busses the loop's necessity and usefulness will disappear.

The traction or street car system of Jacksonville is operated by the Stone and Webster Company under a franchise from the City Council of Jacksonville. Under a permit granted the Company, the trolley service has been augmented with busses, one line (Murray Hill-Avondale) operating direct into town and the remainder of the lines feeding car termini.

An examination of the traction system, the areas tributary to it, its routing plan, its headways discloses room for improvement.

All car lines except the Eighth Street line enter and pass through or around one of the central down town loops which circumscribe Laura, Forsyth, Main and Bay, and Ocean, Forsyth, Bay and Main. While this practice may be satisfactory from the company's operating standpoint it is conducive to congestion in these two central areas. Left hand car turns are made at



Main and Forsyth, Main and Bay, and Bay and Laura which impede an expeditious safe traffic movement of motor cars at these intersections. In former days of lesser automotive traffic these loops may have served an excellent purpose but it is questionable whether today either loop is of great value. The removal of the Laura, Forsyth, Main and Bay loop would be beneficial to the free movement of traffic.

An examination of Plate #16 illustrates graphically the areas served by the traction company. A comparison of Plates #16 and #2 illustrates the relationship between population distribution and transit service. A quarter of mile zone on both sides of a line is the generally accepted standard by which the efficiency of transit service is measured. The time zone map, Plate #15, further shows how far, in certain districts people can live from the center of the city and still be nearer in point of time than other localities, much closer in but not having the benefits of transit service.

Since the preparation of Plate #16 terminal buss lines have been inaugurated to serve Norwood, North Shore and Panama Park sections which modifies slightly the complexion of this plate, yet in one respect it is not affected in its most significant aspect. Reference to Plate #2 illustrating trends or drift of population movement, Plate #14 showing the localities occupied by colored residents and Plate #16 indicates that areas of increasing density between Enterprise Avenue and Moncrief Road are still without service of any description. Plate #2 indicates that areas in Brooklyn, LaVilla, Myrtle Avenue and down town sections formerly occupied by colored residents are now in a transition period, passing gradually into commercial or light industrial zones and the former colored population is settling in the large triangular area shown in black on Plate #14. And in developing this area residents are getting more and more remote from the transit lines. And further, the present system of car operation is affecting appreciably the servant problem.

As the town grew its colored areas grew likewise, adjacent to the white areas. As a result the several separate and distinct colored areas came into being. But now with the advent of business and industry into some of these old areas the residents thereof are being forced farther and farther away from their places of labor to the point in some instances that domestics are required to travel on street cars an hour or more before reaching their destinations--a condition incident to the present transit system. And as the city increases in population and area this situation will become even more acute. An examination of Plate #15 shows that at this time a domestic residing in the neighborhood of Davis and Eighth Street will consume 40-45 minutes in continuous riding time in going from her home to the site of her day's work in Avondale, regardless and irrespective of waits and transfers! This state of affairs is not only unfair to the negro element but likewise unfair to those dependent upon them for domestic service. This condition is due to the routings of the transit system with its bottle neck at Broad and Bay and the obsolete system of louping.

TABLE #18 Transit Information, 1928.

| Line                    | Total Round Trips | Non-Rush Hour Headway                      | Rush Hour Headway               |
|-------------------------|-------------------|--------------------------------------------|---------------------------------|
| 1. Avondale-Main        | 109               | A. M. 9 $\frac{1}{4}$ P.M. 7 $\frac{1}{2}$ | A.M. 7 $\frac{1}{2}$ P.M. 7     |
| 2. Avondale-Brentwood   | 17                | Night only 12                              |                                 |
| 3. Brentwood            | 84                | 11                                         | 9 $\frac{1}{2}$                 |
| 4. Depot-Fairfield      | 101               | 11                                         | 9                               |
| 5. Enterprise           | 73                | 15                                         | 12                              |
| 6. Florida Ave. LaVilla | 65                | 13                                         | 15                              |
| 7. Kings Road           | 78                | 15                                         | 12                              |
| 8. Lackawanna           | 89                | 15                                         | 10                              |
| 9. Murray Hill          | 94                | A.M. 13 P. M. 11                           | 10                              |
| 10 Ortega               | 51                | 30                                         | 15                              |
| 11 Phoenix Park         | 75                | 15                                         | 13                              |
| 12 South Jacksonville   | 75                | 16                                         | 12                              |
| 13 Walnut Pearl         | 114               | 10 $\frac{1}{2}$                           | A.M. 6 $\frac{1}{2}$ P.M. 7 1/3 |
| 14 Talleyrand-Meets     | 72                | 15                                         | 13                              |
| 15 Myrtle Ave-Oakland   | 52                | 20                                         | 20                              |



JACKSONVILLE  
THE  
TRANSPORTATION  
AND  
DISTRIBUTION  
CENTER  
OF  
THE  
SOUTHEAST

Right shows freight terminal of Atlantic and East Coast Term.Co., type of in town freight terminal where ample parking space is provided.



View of Jacksonville Terminal Company's yards from top of new Beaver Street viaduct. This is one of the largest terminal units in the world.



To the right, the new shops of the Southern Ry. at Grand Crossing. The Seaboard, Atlantic Coast Line, Fruit Express Co., and Fla. East Coast operate shops in this vicinity.



## TRANSPORTATION

Jacksonville is best known to the world as a strategic transportation center, a distribution point of major importance served by five trunk line railway systems, (a) The Atlantic Coast Line, (b) The Seaboard Air Line, (c) The Southern Railway, (d) Georgia, Southern and Florida, and, (e) The Florida East Coast Railway, which penetrate directly or thru their connections every point in the United States. Since 1924 each one of these systems has made extensive capital expenditures to meet the needs and anticipations of the fast growing frontier. Extensions of lines, installations of additional yards, double trackage, terminal facilities, additional rolling stock and equipment represent some of the improvements these lines have effected. In Jacksonville, terminal facilities for passenger train and express handling have been made, all tending to make Jacksonville one of the outstanding railroad terminal stations in the world.

Passenger terminal facilities are under the control and management of the Jacksonville Terminal Company, offering thereby a unified operation under a joint ownership. The passenger terminal facilities are such that a maximum of 5000 people per hour can be dispatched through it and as many as twenty-five trains per hour handled. On the average day 3000 passengers pass in and out of the terminal and during the season November-April 11500 people per day is the average.

In addition to the trunk lines referred to above there are four Terminal Railroads operating in Jacksonville and environs, as follows: (a) Jacksonville Terminal Company (passenger), (b) St. Johns River Terminal Company, (c) Atlantic and East Coast Terminal Company, and, (d) Municipal



Dock and Terminal Company. Diagram #2 illustrates the extent of the several railroad properties in Jacksonville; this map shows clearly how the railroads have divided the city land area into many parts. From this map it will also be noted that each major trunk line, excepting the Florida East Coast Railway has access to St. Johns River frontage on the south and east of the business district, thereby affording connections with steamship lines, the various piers and industries of those areas. It will be noted further that the St. Johns River Terminal Company forms a belt line around the city from Grand Crossing in the northwest, to the northeast, thence southerly to the river, and also that the Seaboard, Coast Line and Municipal Docks and Terminal Road have a junction point known as the F. and J. Junction. The East Side belt serves warehouses, piers and industry and port terminals. The belt line is complete about the city excepting for two blocks between Hogan and Main Streets connecting the Seaboard and the St. Johns River Terminal Company.

A study of the present trackage indicates a duplication of belt lines in certain districts, which could be overcome by a unified operation. In the vicinity of the F. and J. Junction the Atlantic Coast Line Road, Seaboard, St. Johns River Terminal Company and Municipal Docks and Terminal Company each have main lines operated separately, thereby giving only a single track operation. The Seaboard and St. Johns River Terminal Company parallel their lines almost to the river, the former extending eastward to Commodore Point and the latter westward to Main Street. A Seaboard connection should be made from its Maxwell line eastward and thereby effect a connection with the Southern along the waterfront. A unified operation of these lines would more than double present facilities. Supplementing these suggestions, there should be several short connecting lines made along the water front to facilitate and expedite car movements, namely, (a) a connection along Talleyrand Avenue between the A. C. L. and the S. A. L. near the Wilson and Toomer plant, (b) a connection between the Seaboard at the Armour plant with the Municipal

Docks and Terminal lines in the property of the City of Jacksonville, and (c)  
a connection between the Municipal Docks and Terminal Company with the line  
of the St. Johns River Terminal Company at the plant of Eppinger and Russell  
Company.

The several rail companies operate the following yards and dray tracks:

TABLE #20

Atlantic Coast Line

|            | Classification Tracks | Storage Tracks | House Tracks | Team Delivery Tracks | Industrial Tracks | Repair & Service Tracks | Not Classified | Total |
|------------|-----------------------|----------------|--------------|----------------------|-------------------|-------------------------|----------------|-------|
| Jax. Yards | 2560                  | 320            | 200          | 640                  | 530               | 500                     | 200            | 4950  |

Seaboard Air Line

|                  |     |  |     |     |     |     |     |      |
|------------------|-----|--|-----|-----|-----|-----|-----|------|
| W. Jax Yards A   | 797 |  |     |     |     |     |     | 797  |
| W. Jax Yards B   | 806 |  |     |     |     |     |     | 806  |
| Honeymoon Yd.    | 208 |  |     |     | 183 |     |     | 391  |
| Hogan St. Yd.    |     |  | 219 | 175 | 236 |     | 15  | 645  |
| Short Belt Yd.   |     |  |     |     | 210 |     |     | 210  |
| Long Belt Yd.    | 102 |  |     |     | 414 |     |     | 516  |
| W. Jax. Shop Yd. |     |  |     |     |     | 400 | 150 | 550  |
|                  |     |  |     |     |     |     |     | 3915 |

St. Johns River Terminal Company

|                  |     |     |    |     |     |     |  |      |
|------------------|-----|-----|----|-----|-----|-----|--|------|
| St. J. R. T. Co. | 364 | 555 | 57 | 259 | 166 | 106 |  | 1507 |
|------------------|-----|-----|----|-----|-----|-----|--|------|

Municipal Docks and Terminals

|               |     |     |  |  |  |  |  |     |
|---------------|-----|-----|--|--|--|--|--|-----|
| 13th-21st Yd. | 140 |     |  |  |  |  |  | 140 |
| Dock Yard     |     | 308 |  |  |  |  |  | 308 |

Jacksonville Terminal Company

|                 |  |     |  |  |  |  |  |     |
|-----------------|--|-----|--|--|--|--|--|-----|
| Interchange Yd. |  | 610 |  |  |  |  |  | 610 |
| Coach Yard      |  | 268 |  |  |  |  |  | 268 |

During 1924-25, as previously stated, each of the lines made substantial extensions to their trackage and terminal facilities in Jacksonville, ample to care for a number of years. And too, each company owns considerable property and expansion can be made readily and easily. In this connection a few thoughts for future consideration are given forth.



(1) At some future time carry the main Seaboard tracks between Trout River and the present passenger terminal more directly into the city over a new right of way. A cut off near Duval Station running southwesterly across Trout River north of Riverview to a point near Mondrief Road thence on a wide curve into the Grand Crossing area and thence parallel the Atlantic Coast line into the terminal station. Such rerouting would not materially increase the mileage into the city and would certainly economize on time. The principle feature of this development would be the lessening of danger along the present Seaboard entrance line into Jacksonville, at many of which crossings gate men must be maintained. Of course the present line would remain but it would become principally a distributor and collecting line to be operated mostly at night as the St. Johns River Terminal Company is now operated.

(2) In visualizing the future expansion and development of Jacksonville a balanced relationship between railroad facilities and improvements, industrial requirements port demands and the general expansion program of the city should be kept constantly in mind. The major highways have been so defined that traffic to and from the eastern areas of the city can be transferred to western and river front termini expeditiously and efficiently.

At present several of the principal freight terminals are located along Bay Street from Catherine Street to Jefferson. It is not at all unbelievable that a time will come in the future when these termini will be obliged to seek larger quarters where freight can be handled with little delay. In the light of this probability it is suggested that the several carriers contemplate and study their future needs with respect to the efficiency and ease of movement in the modern city especially as they pertain to a unified operation of freight terminals.

## FIRE DEPARTMENT.

The promotion and assurance of safety and protection is an objective of city planning, especially that safety derived from an adequate, well equipped fire department. Obviously in the preparation of the city plan it is possible to provide for future fire stations that will not only conform to the plan but also satisfy the city's need for a long time. In considering the matter of future fire stations two guiding factors predominate, first, the type of development and its density to be served and, second the need of quick access to every part of the district.

In former years fire apparatus of a light and primitive type was pulled either by man or beast and it is only within comparatively recent years that city departments as a whole have been motorized, a factor which today materially influences fire protection facilities and insurance rates. Motorized equipment enables the city to better arrange its districts and utilize its equipment and men to better advantage. Most of the present day older stations, it may be stated, are heritages of horse drawn days.

The City Plan is primarily interested in future fire station sites, their location with respect to population drifts, with respect to major highways and railroad grade crossings. It is also interested in the acquisition of proposed station sites before the district expands and builds up appreciably and while the most favorable sites are yet to be acquired economically.



TABLE #11

## List of Equipment and Men of Fire Department.

#1 Adams and Ocean.

|                                                         |         |
|---------------------------------------------------------|---------|
| 1- 80' Aerial Truck                                     | 10 men. |
| 1- 1000 gallon Rotary Pump                              | 10 "    |
| 1- High Pressure Hose Wagon                             | 5 "     |
| 2- Chief's Buggy                                        | 2 "     |
| Chief, four drivers, two fire alarm men, one inspector. | 9 "     |

#2 Fourth & Main Streets.

|                          |      |
|--------------------------|------|
| 1-750 Gallon Pump Engine | 9 "  |
| 1-City Service Truck     | 10 " |

#3 Catherine Street Near Bay Street.

|                          |     |
|--------------------------|-----|
| 1-750 Gallon Pump Engine | 9 " |
| 1-Repair Shop            | 2 " |

#4 Broad & Adams Street.

|                            |      |
|----------------------------|------|
| 1-City Service Truck       | 10 " |
| 1-750 Gallon Pump Engine   | 9 "  |
| 1-High Pressure Hose Wagon | 6 "  |
| 1-Assistant Chief's Buggy  | 2 "  |
| 2-Assistant Chiefs         | 2 "  |

#5 Riverside Avenue & Forest Street.

|                          |     |
|--------------------------|-----|
| 2-Hose Wagons            |     |
| 1-750 Gallon Pump Engine | 8 " |

#6 Florida Avenue & Pippin Street.

|                          |     |
|--------------------------|-----|
| 1-750 Gallon Pump Engine | 9 " |
| 1-Hose Wagon             |     |

#7 Kings Road & Davis Street.

|                          |     |
|--------------------------|-----|
| 1-750 Gallon Pump Engine | 8 " |
|--------------------------|-----|

#8 Rosselle & Stockton Streets.

|                          |     |
|--------------------------|-----|
| 1-750 Gallon Pump Engine | 9 " |
|--------------------------|-----|

#9 24th & Perry Streets.

|                          |     |
|--------------------------|-----|
| 1-750 Gallon Pump Engine | 9 " |
|--------------------------|-----|

#10 Selma & McDuff Avenue.

|                          |      |
|--------------------------|------|
| 1-Service Truck          | 8 "  |
| 1-750 gallon Pump Engine | 10 " |

#11 Talleyrand & 18th Street.

|                                                |        |
|------------------------------------------------|--------|
| 1-750 Callom Pump Engine with Generator        | 8 men. |
| 1-High Pressure Pumping Station                | 2 "    |
| 1-Fireboat (Washington & Bay Streets at River) | 10 "   |

Department has 179 men on payroll as of August 1st, 1929.

Truck Company should have twelve men.

Wagon Company should have twelve men.

Table #11 gives a list of existing fire stations, their locations, equipment and manpower. Plate #12 pictures several fundamental features, (a) the extent of the high pressure system, (b) present grade crossings, (c) fire station locations, and, (d) area lying outside a zone one and a half miles from a fire station. Diagram #15 shows graphically the Jacksonville fire losses over a period of years.

An examination of Plate #12 will show that generally speaking fire stations are favorably and advantageously located, yet one will note from close observation that many of the most completely equipped central stations are virtually confined within an area enclosed by railroads (note grade crossings). Two areas in particular are "railroad locked" having no fire stations within their confines, (1) that triangular area between the Atlantic Coast Line and Seaboard railroads having its apex at the Beaver Street viaduct, and (2) that area north of the Atlantic Coast Line (Gummer Log Road) near Panama Gardens, Norwood and Pearl Court. Stations are needed in each of these districts now and should be established without much further delay, and thereby supply fire protective service without the fear of train blockades.

The radius of effectiveness for fire stations recommended by the National Board of Fire Underwriters is three quarters of a mile in high value districts and one and a half miles in residential. The circular arcs on Plate #12 circumscribe the zones which clearly and unmistakably emphasize the dire, immediate need of a fire station somewhere in the St. Johns Park area to serve



Ortega, Lake Shore, and St. Johns Park. This station should be located preferably near 64th Street and Lake Shore Boulevard accessible and servicable to north and south as well as east and west thoroughfares. This station is needed badly at this time--within the past four weeks two homes have burned to the ground because of lack of fire protection. At present the station nearest to this area is that at McDuff and Selma Streets.

The station at Broad and Adams is poorly located now, and provisions have already been made by the City Commission to move and locate it elsewhere.

The central station at Adams and Ocean Streets is obsolete and crowded and should be replaced at either its present site or at one nearby where a station of adequate size could be provided, and where the efficiency of the department would not be impaired.

When the Central Station is rebuilt the present Catherine Street station should be consolidated with it.

In defining a Major Street Plan the needs and efficiency of the fire department was kept foremost in mind. Direct travel routes, minimizing curves, jogs and dead ends are essential. With Rosselle and DeMere Streets opened and extended as shown on the major street plan the Mirray Hill, St. Johns Park and Lake Shore regions are more direct and closer to the fire stations.

Plate #12 also shows the area within the high service district, installed during 1907 and 1909. The pumping station located at the foot of Newman Street supplies the high pressure system. This district should be extended in the near future in the down town district, and also, be augmented by a similar system along the Talleyrand, industrial and port district.

To make the High Pressure service more effective and efficient it would be advisable to construct a large suction system on the river front from which the pumps of the station and the fire boat could draw a certain quantity of water.

The City, as noted from Table #11, maintains a fire boat, placed in

service during 1921.

The Board of Fire Underwriters state in their latest report on the Jacksonville Fire Department, "The Fire Department is an efficient and well organized force under good supervision and commanded by capable officers."

The fire alarm system of the Janewell type is installed on the second floor of the central station at Ocean and Adams Streets. In accord with progressive, modern thought and ideas of the National Board of Fire Underwriters this system should be installed in a detached fireproof building located and constructed to obviate as far as possible all liability of service interruption.

#### Fire Station Architecture.

In years past all fire stations could easily be detected by their formality, frigidity and lack of convenience or comfort. Four brick walls, automatic swinging doors labelled them far and near. But today residential tendencies require different treatments from an architectural standpoint. Fire stations are today being built to resemble comfortable homes, and in establishing the aforesaid proposed stations the architectural treatment should be appropriate to the neighborhood of their locations. The Commission is to be commended for the splendid, commodious quarters constructed during recent years. And too, firemen, are to be congratulated on the appearances of their buildings and surrounding grounds.

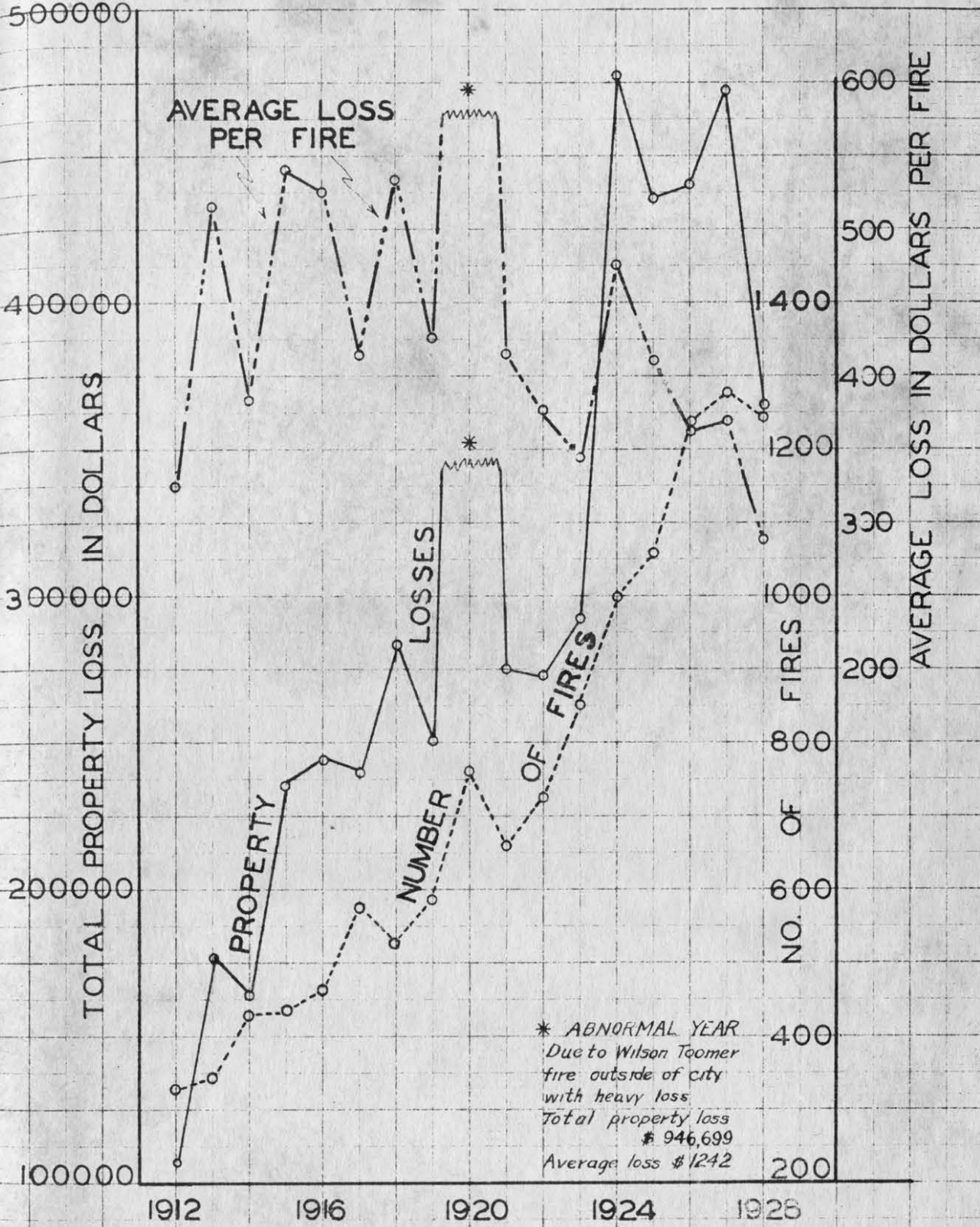




RIVERSIDE POLICE STATION(above)  
FIRE STATION AT ROSSELLE ST  
and STOCKTON STREET  
(below)

These types of municipal architecture are interesting and illustrate the trends in this direction. The fire station is especially attractive with its spacious yard, well trimmed and flowered.





\* ABNORMAL YEAR  
 Due to Wilson Toomer  
 fire outside of city  
 with heavy loss.  
 Total property loss  
 \$ 946,699  
 Average loss \$ 1242

JACKSONVILLE  
 FIRE LOSSES  
 1912-1928

DIAGRAM 15



## SCHOOLS

Adequate provisions for future schools should most assuredly have a prominent place in any city plan, particularly as it relates to the locations of future schools and play yard facilities.

During 1926-27 The Institute of Educational Research, Division of Field Studies of Teacher's College, Columbia University conducted an exhaustive extensive survey of schools in Jacksonville and Duval County, under the direction of Dr. George D. Strayer. The report of this survey, a volume of 433 pages, is complete with much useful, enlightening information and numerous constructive suggestions for improvement, advancement and betterment of the school system. Naturally it is not a purpose of this report to either make or criticise an educational survey, but instead, to only consider those elements of the school problem that affect or fit into the future structural city plan.

As the city's population increases and its territory expands, school facilities must likewise expand in an orderly consistent manner. And too, sites for future schools should be sought and acquired when the most appropriate and accessible property is available at an economical figure, and in localities where the future schools will adjust themselves to the city plan most effectively.

Plate #13 shows the relative locations of every school (white, and colored) within the city of Jacksonville; and around each is drawn a circle of influence having a half mile radius--an acceptable, effective distance for pupils to walk.

Table #12 enumerates the varied physical data pertinent to each school, its site and average and daily attendance for the school year 1927-28. Table #13 gives the distribution of the gross school enrollment among the several schools. For the year 1927-28 the average daily attendance was 21722 and the gross enrollment was 29341; on a basis of 145000 population the percentage of average

daily attendance was about 15% of the population. The percent attendance for the year averaged nearly 74.0%. The colored enrollment and attendance averaged about 30% of the white. Following, (Table #14) are given the average daily attendance figures for several past years, also percent of which average is of population.

Table #14

| Year    | Average Daily Attendance | Percent Daily Attendance to Population. |
|---------|--------------------------|-----------------------------------------|
| 1921-22 | 14347                    | 15.6                                    |
| 1922-23 | 15800                    |                                         |
| 1923-24 | 17155                    |                                         |
| 1924-25 | 18163                    | 13.46                                   |
| 1925-26 | 19161                    |                                         |
| 1927-28 | 21722                    | 15.0                                    |

From the foregoing tables it will be noted that 72.0% of the white enrollment was in elementary schools, 19.3% in Junior High Schools and 8.7% in Senior High Schools. The 1920 population of Jacksonville showed that nearly 70% of the population under twenty years of age were thirteen years old or less. On this basis of distribution the predictions given in Table #15 are considered conservative and reasonable.

These computations are made on the basis of a total, gross enrollment and naturally are subject to variations of like amount one side or the other.

A study of the school situation discloses that the future needs will be confined largely to the rapidly growing outlying and suburban areas. Small schools built ten to fifteen years have outlived their usefulness yet are still serving these outer areas, supplemented in most instances by crude annexes. With citizens moving from older, central sections of the city to the suburban areas, the extent of and demand for school service in these central sections not be so acute. In fact the time has already come when the elementary enrollment of some of the central school buildings is declining.





Type of more recent ELEMENTARY SCHOOL in  
JACKSONVILLE, FLORIDA.  
NORWOOD SCHOOL

TABLE #15

| Year    | Gross Enrollment<br>(White and Colored) | Av. Daily Attendance | Enrollment |        |        | Colored |
|---------|-----------------------------------------|----------------------|------------|--------|--------|---------|
|         |                                         |                      | Elementary | Junior | Senior |         |
| 1927-28 | 29341                                   | 21722                | 14723      | 3944   | 1787   | 8887    |
| 1928-29 | 30000                                   | 22500                | 15100      | 4025   | 2180   | 9000    |
| 1929-30 | 32000                                   | 24000                | 15400      | 4100   | 2230   | 10600   |
| 1934-35 | 38000                                   | 28500                | 18300      | 4875   | 2640   | 12600   |
| 1939-40 | 42000                                   | 31500                | 20100      | 5375   | 2910   | 14000   |
| 1944-45 | 48000                                   | 36000                | 23000      | 6150   | 3330   | 16000   |
| 1949-50 | 53300                                   | 40000                | 25600      | 6850   | 3700   | 17700   |
| 1954-55 | 60000                                   | 45000                | 28800      | 7700   | 4150   | 20000   |
| 1959-60 | 64000                                   | 48000                | 30800      | 8200   | 4450   | 21300   |
| 1969-70 | 73000                                   | 55000                | 35000      | 9350   | 5050   | 24300   |

Several sections need immediate school buildings and site attention.

That large area between Enterprise Avenue and Moncrief Avenue (See Plate #13) is fast becoming a focus of colored population as one can readily see from Plate #14 and Plate #2 of population trends. This area needs a school for colored now; school is being conducted in a small church near Spires and Kings Road--wholly inadequate.

The Brentwood section too is growing rapidly and between 1940-50 its school population will more than double. Similarly the Panama section will more than double its school population and demand attention.

The Springfield area according to population tendencies will show little if any material increase during the next ten to fifteen years; its chances for a population decrease are very favorable unless the present zoning ordinance for this area is modified soon.

The Fairfield and LaVilla sections will experience only moderate increases.

The old Riverside (Riverside Park School) section will experience a small increase but not a growth comparable with that which will come to West Jacksonville, Murray Hill, West Riverside, St. Johns Park and Ortega where great population increases may be expected during the forthcoming twenty years.

The Norwood, North Shore, Pearl Court and Panama Gardens areas will experience decided growths and they also will need added school facilities within the next ten years.



TABLE #16

|                             | Average Daily Attendance |      | Rooms Available | Rooms necessary based on 1927-28 attendance at 35 per room |
|-----------------------------|--------------------------|------|-----------------|------------------------------------------------------------|
|                             | Feb. 1927                | 1928 |                 |                                                            |
| 2. Central Grammar          | 602                      | 508  | 30              | 15                                                         |
| 3. East Jacksonville        | 381                      | 346  | 11              | 10                                                         |
| 4. Riverside                | 775                      | 700  | 22              | 20                                                         |
| 5. La Villa                 | 310                      | 230  | 12              | 7                                                          |
| 6. Springfield              | 725                      | 585  | 20              | 17                                                         |
| 8. Northeast Springfield    | 741                      | 718  | 26              | 21                                                         |
| 9. Fairfield                | 335                      | 304  | 11              | 9                                                          |
| 10. Lackawanna              | 510                      | 531  | 17              | 16                                                         |
| 11. West Springfield        | 563                      | 529  | 16              | 16                                                         |
| 12. West Riverside          | 957                      | 881  | 28              | 26                                                         |
| 13. Panama Park             | 550                      | 503  | 21              | 15                                                         |
| 14. Grand Park              | 267                      | 228  | 10              | 7                                                          |
| 15. Brentwood               | 437                      | 478  | 12              | 14                                                         |
| 16. Ortega                  | 185                      | 191  | 6               | 6                                                          |
| 17. New Springfield         | 384                      | 364  | 10              | 11                                                         |
| 18. Central Riverside       | 638                      | 618  | 16              | 18                                                         |
| 19. Murray Hill             | 212                      | 293  | 7               | 9                                                          |
| 20. Fishweir                | 381                      | 469  | 14              | 14                                                         |
| 21. Woodstock               | 337                      | 337  | 11              | 10                                                         |
| 22. John Gorrie J. H. S.    |                          | 1443 | 71              |                                                            |
| 23. Norwood                 | 240                      | 228  | 6               | 7                                                          |
| 24. Tenth & Market          | 270                      | 312  | 9               | 9                                                          |
| 25. Kirby-Smith J. H. S.    |                          | 1747 | 62              |                                                            |
| 33. Robert E. Lee S. H. S.  |                          | 794  | 23              |                                                            |
| 35. Andrew Jackson S. H. S. |                          | 800  | 23              |                                                            |

Judging from these statistical data it is logical to assume that when Jacksonville's 1950 population approximates 350000-400000 provisions should be available for two new senior high schools, two junior high schools and fifteen new elementary schools!

In contemplating new school locations and modifications several significant points should be considered as follows:-

- (1) Adequate size
  - (a) For building and its future extensions.
  - (b) For proper setting of building and its removal from noise and dust of street.
  - (c) For outdoor games and physical education.
  - (d) For school gardens.
- (2) Orientation of building.
- (3) Suitability of construction.
- (4) Safety.
- (5) Healthfulness--Abundance of fresh air.
- (6) Reasonable centrality to contributing area.
- (7) Reasonable accessibility.

To acquire a better conception of conditions in the several schools Table #16 was prepared, based on the average daily attendance of the schools for the year 1927-28, and a room assignment of thirty-five pupils. It is apparent from Table #14 that the annual increase in average daily attendance at schools approximates 10%.

An examination of Plate #15 reveals a considerable overlapping of effective regional circles which illustrates past performance. With population concentrated and districts small schools were erected close together. In this age of improved streets and transit methods schools can be farther separated from each other. The one outstanding defect in our physical school property is the deplorable lack of site. Not a school in the entire Jacksonville region has sufficient ground space to profice for adequate recreation and give a proper setting. School buildings have been crowded on small sites in areas where ample lands could have been acquired at figures much less than now. No school should be erected on a site that cannot give at least seventy-five (75) square feet of play space per pupil enrolled. This would require a recreation area



or yard of 67500 square feet for each elementary school of 900 daily attendance. To crowd buildings on small lots necessitating the use of street space for play purposes is inexcusable and unfair to the coming generation, especially when sites of sufficient area can be acquired plenty of time in advance. The past is history and from it the citizenry can profit and in anticipating the future needs the errors of the past should be avoided. The major part of the school building program has been effected since 1915 (sixteen schools), these located in areas remote and sparsely settled, at that time and much less valuable. These examples merely offer a justification for the consideration and acquisition of new and larger sites for the future. More than fifty percent of the schools in the Jacksonville region are deficient in site areas.

Another defect is that of building capacity; many schools are now overflowing; pupils are obliged to sit and study in makeshift portables; during the year 1927-28 there were twelve portable school buildings and during the current (1929-30) year there will be several more. The present Junior and Senior High School sites are wholly inadequate, too limited in area offering little opportunity for economical expansion. If possible lands adjacent and west of R. E. Lee High School should be purchased now to avail this school of adequate nearby grounds. A high school building should be located on a plot of twenty to thirty acres similar to that recently acquired at Tampa. To meet the situation as regards city schools the following suggestions are made, which in many respects are identical with or are modifications of those made by the Survey Committee.

Brentwood School:- Acquire several lots to the west of this school to provide more recreational space, also ample ground for a future building or expansion program.

Central Grammar School:- Several lots to the west on Ashley Street should be acquired to permit of more play space.

East Jacksonville School:- The remainder of the block should be acquired to provide adequate setting and recreational facilities.

YEAR 1927-1928

SCHOOL DATA  
Jacksonville and Vicinity

| School Number | School Name                    | School Address                                                       | Class Rooms   | Number Grades | Capacity Main Building | Portables     |              | Capacity Portables | Average Attendance | Construction       |                                           | School Lot           |
|---------------|--------------------------------|----------------------------------------------------------------------|---------------|---------------|------------------------|---------------|--------------|--------------------|--------------------|--------------------|-------------------------------------------|----------------------|
|               |                                |                                                                      |               |               |                        | Number Bldgs. | Number Rooms |                    |                    | Date Main Bldg.    | Date Additions                            |                      |
|               | Duval High School              | Ashley & Ocean Sts.                                                  | 21            |               |                        |               |              |                    |                    | 12/14/07           | 2/10/20                                   | 105x210              |
|               | Central Grammar                | Church & Liberty Sts.                                                | 30            | 6             | 1428                   |               |              |                    | 508                | 4/1/02             | 5/27/22<br>10/31/11<br>8/13/17<br>1/27/22 | 4 lots               |
|               | East Jacksonville              | Ashley & Florida Avenues                                             | 11            | 6             | 450                    |               |              |                    | 346                | 5/31/11            | 1/30/18                                   | 1/2 block            |
|               | Riverside                      | Gilmore & Chelsea Sts.                                               | 22            | 6             | 812                    | 1             | 2            | 60                 | 700                | 5/31/11            | 1/18/17                                   | 4 1/2 lots           |
|               | LaVilla                        | Clara Terrace                                                        | 12            | 6             | 525                    |               |              |                    | 230                | 7/26/17            |                                           | 1.07 acres           |
|               | Springfield                    | 5th & Hubbard Sts.                                                   | 20            | 6             | 815                    | 1             | 2            | 60                 | 585                | 10/31/10           | 7/31/12<br>1/1/18                         | Parts 7 lot          |
|               | <del>South Jacksonville</del>  | <del>Davis &amp; Cedar Sts.,<br/>South Jacksonville</del>            | <del>19</del> | <del>6</del>  | <del>815</del>         | <del>1</del>  | <del>3</del> | <del>90</del>      | <del>791</del>     | <del>6/22/16</del> |                                           | <del>1 Block</del>   |
|               | Northeast Springfield          | 16th & Franklin Sts.                                                 | 26            | 6             | 852                    |               |              |                    | 718                | 10/31/09           | 5/20/16<br>9/4/26                         | 10 lots              |
|               | Fairfield                      | Victoria & Albert Sts.                                               | 11            | 6             | 565                    |               |              |                    | 304                | 10/31/11           | 3/13/20                                   | 4 lots               |
|               | Lackawanna                     | Lackawanna & Shearer                                                 | 17            | 6             | 596                    | 1             | 2            | 60                 | 531                | 10/31/09           | 1/30/18                                   | 14 lots              |
|               | West Springfield               | 9th & Perry                                                          | 16            | 6             | 678                    |               |              |                    | 529                | 7/1/12             | 7/31/16                                   | Parts 4 lot          |
|               | West Riverside                 | Herschell & James Sts.                                               | 28            | 6             | 960                    | 1             | 2            | 60                 | 881                | 2/13/13            | 6/22/16                                   | Block                |
|               | Panama Park                    | Lawton Avenue                                                        | 21            | 6             | 688                    |               |              |                    | 503                | 5/20/16            | 6/27/22<br>10/30/26                       | 317x111x250<br>x224* |
|               | Grand Park                     | Cannon St. & Avenue D                                                | 10            | 6             | 270                    |               |              |                    | 228                | 12/1/16            | 7/1/20                                    | Block                |
|               | Brentwood                      | Golfair & Springfield Blvds.                                         | 12            | 6             | 462                    | 1             | 2            | 60                 | 478                | 9/1/12             | 10/31/19                                  | 6 lots               |
|               | Ortega                         | Princeton & Park                                                     | 6             | 6             | 240                    |               |              |                    | 191                | 8/28/22            |                                           | 3 lots               |
|               | New Springfield                | 21st & Walnut Sts.                                                   | 10            | 6             | 468                    |               |              |                    | 364                | 5/20/16            |                                           | 1 lot                |
|               | Central Riverside              | Gilmore & Acosta Sts.                                                | 16            | 6             | 672                    | 2             | 4            | 120                | 618                | 10/30/16           |                                           | 14 lots              |
|               | Murray Hill                    | Dancy & 17th Sts.                                                    | 7             | 6             | 253                    | 1             | 2            | 60                 | 293                | 6/10/16            |                                           | 12 lots              |
|               | Fishweir                       | Clyde & Herschell Sts.                                               | 14            | 6             | 545                    |               |              |                    | 469                | 7/31/16            | 7/22/22<br>1/5/26                         | 1 lot                |
|               | Woodstock                      | Commonwealth & St. Clair                                             | 11            | 6             | 426                    |               |              |                    | 337                | 5/20/16            | 7/1/20<br>9/30/26                         | 2 lots               |
|               | John Gorrie Junior High        | College & Stockton Sts.                                              | 71            | 3             | 2137                   | 1             | 2            | 60                 | 1443               | 3/1/24             | 3/3/27                                    | Block                |
|               | Norwood                        | 55th St. & Lem Turner Road                                           | 6             | 6             | 251                    | 1             | 2            | 60                 | 228                | 4/1/26             |                                           | 19 lots              |
|               | 10th & Market                  | 10th & Market Sts.                                                   | 9             | 5             | 340                    |               |              |                    | 312                | 11/1/26            |                                           | 5 lots               |
|               | KirbySmith Junior High         | 10th & Hubbard Sts.                                                  | 62            | 3             | 1975                   | 1             | 2            | 60                 | 1747               | 3/1/24             | 3/3/27                                    | 1/2 block            |
|               | Part Time School               | * Housed in Building No. 1                                           | 21            | Ungraded      | 750                    |               |              |                    |                    |                    |                                           |                      |
|               | Night Grammar                  | * Housed in Building #1                                              | 4             |               |                        |               |              |                    | 87                 |                    |                                           |                      |
|               | <del>London Jr. Sr. High</del> | <del>Mystic Av. nr Atlantic Blvd.<br/>South Jacksonville, Fla.</del> | <del>28</del> | <del>6</del>  | <del>800</del>         |               |              |                    | <del>540</del>     | <del>9/1/27</del>  |                                           | <del>23 lots</del>   |
|               | Robt. E. Lee High              | Knight & McDuff Aves.                                                | 23            | 3             | 900                    |               |              |                    | 794                | 9/1/27             |                                           | 9.73 acres           |
|               | Andrew Jackson High            | 28th & Main Sts.                                                     | 23            | 3             | 900                    |               |              |                    | 800                | 9/1/27             |                                           | 1 Block              |

## LORED

|                        |                                      |    |    |      |  |  |  |  |      |                    |         |                        |
|------------------------|--------------------------------------|----|----|------|--|--|--|--|------|--------------------|---------|------------------------|
| Stanton Grammar & High | Ashley & Broad Sts.                  | 29 | 12 | 2160 |  |  |  |  | 1096 | 10/10/01           | 3/1/11  | 1 Block                |
| Oakland                | Pippin & Bridier                     | 21 | 8  | 1062 |  |  |  |  | 675  | 3/1/11             | 8/20/19 | 4 lots                 |
| LaVilla colored        | Church & Stuart                      | 12 | 8  | 561  |  |  |  |  | 1071 | ?                  |         | 1/2 block              |
| West Lewisville        | Copeland & Run Sts.                  | 8  | 8  | 505  |  |  |  |  | 718  |                    |         | 1 lot                  |
| Long Branch            | 24th & Franklin Sts.                 | 8  | 8  | 356  |  |  |  |  | 343  | 4/24/17            |         | 4 lots                 |
| South Jacksonville     | East of St. Augustine Road           | 8  | 8  | 461  |  |  |  |  | 364  | 1/12/22            |         | 3 acres                |
| Davis Street           | Davis nr. 12th St.                   | 26 | 8  | 1226 |  |  |  |  | 784  | 4/24/19            | 5/15/22 | Parts 3 blocks         |
| Cookman                | Davis & 7th Sts.                     | 20 | 8  | 996  |  |  |  |  | 933  | 1/20/25(purchased) |         | 4 blocks               |
| Campbell's Addition    | 4th & Franklin Sts.                  | 16 | 8  | 720  |  |  |  |  | 683  | 2/7/27             |         | 1 block                |
| Benjamin Park          | Day & Elm Sts.                       | 2  | 8  | 68   |  |  |  |  | 61   |                    |         | Rented building        |
| West Jacksonville      | nr. McDuff, north of<br>Commonwealth | 1  | 8  | ?    |  |  |  |  | 34   |                    |         | Rented church building |

TABLE 12



Fishweir School:- The four lots to the east of this school should be acquired, thereby giving added ground for recreation and future extension when needed at an early date.

Fairfield School:- The remainder of the block should be acquired.

Grand Park School:- This school is located where property can easily be acquired before industrial development makes the price prohibitive. Several lots to the east of this building should be acquired now.

Lackawanna School:- This school faces an early expansion and at least four lots to the west, (the remainder of the block preferably) should be acquired to provide for the future needs.

Murray Hill School:- This school will be discussed subsequently, under new construction.

Norwood School:- This is another school located in a rapidly growing area and several lots in the rear should be acquired to provide ample ground for recreation and future development.

New Springfield:- Another school in a rapidly growing section where additional property should be acquired to the east, west or north of the site. This site is badly crowded.

Northeast Springfield School:- Five or six lots to the east of this school should be acquired to provide for future expansion; this site too is woefully lacking in area.

Riverside Park School:- Four lots north of the school site should be acquired. Fortunately the school is across from a playground.

LaVilla School:- No additional ground necessary.

Panama Park School:- Several lots to the south of this school should be purchased for future expansion.

Ortega School:- Ample grounds here for the present.

West Riverside School:- This school has a sizeable site now but two additional lots to the west would place it in a creditable position. Added

play space is needed.

West Springfield School:- This site is badly crowded now and the remainder of the block should be acquired and the buildings razed. This is an expensive undertaking but only in this way can the children of Springfield be properly treated.

Tenth and Market School:- The property through to Liberty Street should be acquired and devoted to a school playground.

Woodstock Park School:- Grounds are satisfactory.

Relative to a new building program; it is useless to consider any new building programs for down town sections, the present districts should be rearranged in such a way that the schools of Springfield, Fairfield, West Springfield and Northeast Springfield could be adapted to future needs with such additions as are suggested in the Survey Report. At some future time the West Springfield school must be replaced by a more commodious building.

A new school of adequate proportions should be built in Murray Hill, and, it is suggested that the County purchase the City Park property as a school site and the city, with the funds, purchase a new park site south of the existing school property and also that the present school building be used as a Community Center. Such a plan would give Murray Hill a credible park, a Community Building, and a new school.

Brentwood should have a new school with sufficient acreage, and in the rebuilding program the present plant should be eliminated.

Panama Park, Norwood, Grand Park and Woodstock Park should be rebuilt or enlarged within five years.

The Lackawanna #10 should be replaced completely with a new and adequate unit.

The St. Johns Park region should have a school.

Two new Junior High Schools will be needed, one in that area north of



Lake Shore and south of Murray Hill to care for the area west of the A. C. L. who now journey to John Gorrie and the second north of the A. C. L. to serve Panama Park, Norwood, Riverview and North Shore.

With normal growth no new senior high schools will be needed before 1935 yet when needed sites of adequacy and accessibility should be selected. The senior high school site of the future should contain twenty-five to thirty-five acres, large enough to accommodate a structure of commanding and respectful proportions and still leave ample room for athletic and recreational grounds. The shortcomings of the present senior high school sites should be avoided.

In designating proposed sites for new schools care has been exercised to locate them in sections where the greatest service will be rendered the greatest number in the future years.

SCHOOL SUMMARY.

|                                    |     |                       |             |                |     |
|------------------------------------|-----|-----------------------|-------------|----------------|-----|
| Business Section                   | --- | no increase expected. |             |                |     |
| Moncrief Section                   | --- | will increase         | 3.5 to 4.0  | times to 1950. |     |
| Brentwood                          | "   | "                     | 2.0 to 2.5  | "              | " " |
| New Springfield                    | "   | "                     | 2.0 to 2.5  | "              | " " |
| Fishers Corner                     | "   | "                     | 2.0 to 2.5  | "              | " " |
| Kooker Park                        | "   | "                     | 2.0 to 2.5  | "              | " " |
| Springfield                        | "   | "                     | about 0.25  | "              | " " |
| Fairfield                          | "   | "                     | " 0.3       | "              | " " |
| Oakland                            | "   | "                     | " 0.3       | "              | " " |
| Commodores Point                   | "   | "                     | " 0.3       | "              | " " |
| LaVilla                            | "   | "                     | " 0.3       | "              | " " |
| Enterprise, Kings Road, Grand Park |     |                       | 1.5 to 2.0  | "              | " " |
| Riverside                          |     | will increase         | about 2.0   | "              | " " |
| Panama Park                        | "   | "                     | " 3.5       | "              | " " |
| Lem Turner, Norwood                | "   | "                     | 4.0 to 4.5  | "              | " " |
| Lackawanna, West Jacksonville      |     |                       | 4.5 to 5.5  | "              | " " |
| Murray Hill                        |     | will increase         | 6.0 to 6.5  | "              | " " |
| Avondale, Fishweir, Ingleside      |     |                       | 4.5 to 5.0  | "              | " " |
| St. Johns Park                     |     | will increase         | 5.5 to 6.0  | "              | " " |
| Ortega                             | "   | "                     | 9.5 to 10.0 | "              | " " |



## PORT OF JACKSONVILLE

The future growth and importance of Jacksonville is very closely associated with the systematic and economic development and operation of its port. Unquestionably as eager, businesslike exploitation of its port would redound to the upbuilding and prosperity of the city, its industry and commerce.

Jacksonville is today the ninth port (on tonnage basis) on the Atlantic seaboard, a position which can only be continued or improved by diligent persistent efforts to divert business to this port, improve local conditions and bring industry to Jacksonville. See table #19 for list of the ten major Atlantic seaboard tonnage ports in 1927.

The fundamental purpose of a port is to facilitate the transference of passengers and cargo between land and water carriers, and in so doing the facilities at each port should be such that a ship may obtain full service in one place, and if possible, at one berthing. This latter involves provisions for adequate rail, street and barge connections.

It has been said that the supremacy of a port is largely dependent upon three (3) factors: first, the tributary commerce; second, the size and accessibility of the harbor and, third, the efficiency of its terminal facilities. The first depends naturally upon the so-called "back country" producing its manufactured, agricultural and mining products, the second and third points are due largely to works of engineering and citizens.

Jacksonville is the marketing point for a potential rich "back country" More than 15000 square miles of agricultural lands are tributary to Jacksonville, landcapable of producing many staple crops and of late producing quantities of high grade tobacco. In this area of more than sixteen counties

**TABLE #19**

**Ten Leading Ports on the Atlantic Seaboard  
(Tonnage Basis-Millions of Tons)  
Year 1927.**

|                           |       |
|---------------------------|-------|
| New York                  | 176.0 |
| Philadelphia              | 27.0  |
| Baltimore                 | 17.0  |
| Norfolk                   | 16.8  |
| Boston                    | 16.6  |
| Newport News              | 7.9   |
| Hempstead, New York       | 8.1   |
| Providence, Rhode Island  | 5.1   |
| Jacksonville, Florida     | 3.7   |
| Fall River, Massachusetts | 2.8   |



**TABLE #20****Imports and Exports (Jacksonville 1920-1926)**

|      | T O N S   I M P O R T S   ( F O R E I G N ) |        |              |                                     | T O N S   E X P O R T S   ( F O R E I G N ) |            |        |                                |        |       |
|------|---------------------------------------------|--------|--------------|-------------------------------------|---------------------------------------------|------------|--------|--------------------------------|--------|-------|
|      | Coffee<br>(Food)                            | Cement | Crude<br>Oil | Fertilizer<br>Material<br>Chemicals | Rosin                                       | Turpentine | Lumber | Phosphate<br>Rock<br>Chemicals | Cement | Coal  |
| 1920 |                                             |        | 180000       | 192168                              | 40951                                       | 17834      | 214942 | 150341                         | 4422   | 32412 |
| 1921 |                                             |        | 201617       | 43971                               | 50659                                       | 18714      | 60871  | 121002                         |        | 85282 |
| 1922 | 960                                         |        | 190127       | 102798                              | 85462                                       | 12780      | 12125  | 146162                         | 11800  | 16984 |
| 1923 | 4840                                        | 8838   | 332000       | 101902                              | 115088                                      | 10858      | 40358  | 104522                         |        |       |
| 1924 | 7197                                        |        |              | 68000                               | 82219                                       | 11717      | 26000  | 55385                          |        |       |
| 1925 | 6751                                        | 49812  | 250286       | 160000                              | 81577                                       | 13189      | 50000  | 16850                          |        |       |
| 1926 | 10373                                       | 46816  | 345437       | 150000                              | 64253                                       | 10932      | 20000  | 22975                          |        |       |

there are less than two million acres in farms (only about one quarter of the tributary land area). This area produces about one million dollars worth of dairy products which could be increased many fold. In fact the "back country" has untold possibilities which, if capitalized, would mean much to Jacksonville as well as to the port of Jacksonville.

European ports have had the benefit of many years of planning but American ports as a rule have not been built along any predetermined plans but instead are the results of private exploitation of port facilities directed or limited by economic influences.

Many major American ports are located on rivers which indicates that distance from the ocean is no serious handicap. New Orleans is 110 miles from the gulf, Montreal is 1000 miles from the Atlantic while Los Angeles built an artificial harbor on San Pedro Bay, and Houston built a ship channel in each of these cases navigation encounters no interference between the port and ocean.

That Jacksonville was recognized early as a port of possibilities was evidenced in 1852 when local citizens became interested in jetties at the mouth of the river and financed surveys and studies by Captain Eads of Mississippi River fame, also later when the County bonded to provide channel improvements. This preliminary activity led to the 1912 bond issue by the City of Jacksonville for \$1,500,000 to construct municipally owned piers and terminals, commenced in 1914 and completed in 1916. Later an additional pier was added.

The Jacksonville Harbor is located twenty-eight miles above the entrance of the St. Johns River and embraces the entire river from a point about two miles above the city to a point about two miles below it. (See Diagram #16). A channel thirty feet deep and six hundred feet wide extends from the ocean to a point opposite Mayport three and three quarters miles from the entrance,





DIAGRAM 16



at which point an anchorage basin dredged to a depth of twenty-seven feet is maintained. From this Mayport anchorage to Jacksonville a channel thirty feet deep of varying width is available.

The mean range of tide is five feet at the south jetty and about one foot at Jacksonville. There are strong tidal currents in the St. Johns River as far as Dame Point. The mean channel velocities at the strength of the current are: Mayport, ebb 2.4 knots, flood 1.9 knots. Dame Point, ebb 1.4 knots, flood 1.3 knots. Tidal currents have little effect above Jacksonville.

Anchorage is available abreast the city in a depth approximating ten fathoms.

The prevailing winds are northeasterly during the fall and winter months and southwesterly during the spring and summer months.

The United States Government has been supervising the St. Johns River between Jacksonville and the jetties since 1880 when the original work was initiated in accord with an act of that year providing for a fifteen foot channel at mean low water. Later acts of congress provided for a channel three hundred feet wide in straight reaches, increasing to six hundred feet on bends and through the jetties and thirty feet deep (Act of 1920), also for the performance of other works incidental to channel improvement.

#### Jacksonville Municipal Docks.

Under authority of a special act of the Florida Legislature in 1912, the City of Jacksonville acquired a strip of St. Johns River frontage approximating one and a half miles, north of the Eighth and Talleyrand Avenue intersections, comprising about 144 acres. At present there are three piers, Piers #1 and #2 extending 1000 feet from the bulkhead line with a width of 260 feet, and Pier #3 1000 feet long and 350 feet wide. There is also a cotton warehouse in conjunction with the piers, the remainder being devoted to storage. The property and piers are connected by the line of the Municipal Docks and Terminal Railroad Company with the several railroads serving the Jacksonville



region.

There are seventy-eight piers and wharves in Jacksonville accessible or available to thirty feet of water at mean low water. Twelve (12) of these are owned by railroads, four (4) by steamship companies, three (3) by the city of Jacksonville and the remainder by private individuals or companies. Of those owned by railroads, seven (7) are owned by the A. C. L., three (3) by the Seaboard and two (2) by the St. Johns River Terminal Company. The Clyde Line owned three piers and the Merchants and Miners one. The city also leases a pier at the foot of Market Street. Of the privately owned piers those of the Commodores Point Terminal Company are the largest, covering nearly 135 acres, having a berthing space available parallel to the channel of about 5000 feet.

No where along the river is there located a strictly shipside warehouse for storage; practically all warehouses with the exception of that at Commodores Point are transit sheds and to enter actively in interior business ship side warehouses of the storage type should be provided.

The port is equipped with ample ground storage spaces for many years, several small floating dry docks and a marine railway at the Merrill Stevens plant are available.

There is only one grain elevator at Jacksonville, located at Commodores Point on a rail siding, not conveniently situated or equipped for direct delivery to a ship's hold.

The port of Jacksonville is served by a number of steamship lines which connect with the principal ports on the Atlantic, Gulf and Pacific. Coastwise lines operate frequent regular schedules.

Diagram #17 shows the territory naturally tributary to the Port of Jacksonville. Exports through Jacksonville have been of a more diversified character than imports. Coal from Kentucky, phosphate from Florida, iron and steel from Alabama and Illinois, and naval stores from southeastern states and

in recent years citrus fruit have constituted the principal exports handled thru the Port.

All railroads with the exception of the Florida East Coast Railway connect with the water front, also the line of the Municipal Docks and Terminal Company and the St. Johns River Terminal Company. The latter operates about 13.5 miles of track connecting all rail carriers entering Jacksonville. The A. C. L. and S. A. L. all reach their own terminals direct (Diagram #2); the Southern reaches its piers and those of several steamship and oil terminals over trackage of its subsidiary the St. Johns River Terminal Company. The Municipal Docks and Terminal Company connects with all rail lines.

Practically all the water frontage with the exception of a few hundred feet is accessible to or has connecting rail facilities and in accord with the proposed major highway plan the whole frontage will be provided with highway facilities conducive to an efficient, economical handling of freight from truck train or shipside.

To expedite and facilitate port movements via rail the two blocks of track between Main and Hogan Streets should be completed at some time and thereby result in a more economical efficient service to the future advantage of the port. Practically all ship unloading is done by the ship's tackle, cranes, or other loading devices. Some of the private docks are equipped with special loading or unloading devices. At the municipal docks a travelling locomotive crane and electric trucks are available to assist loading or unloading.

Diagrams #18, #19 and #20 indicate graphically the activities of the Jacksonville port over a period of years, especially as it relates to imports and exports. The total net tonnage credited to the Port, both imports and exports and coastwise, have not increased substantially since 1920, it varying from a minimum of 2.3 million tons in 1921 to 4.8 million tons in 1923. In



1927 the net tonnage credited to Jacksonville was 3.7 million tons. It will be noted from the diagrams and tables that the principal exports are lumber, and naval stores while the principal imports are crude oil, fertilizer materials and coffee. It is also startling to note that since 1923 the import tonnage has been for the most part bulk cargo and twice as great as the export tonnage, indicating that instead of giving bottom or bulk cargo for the return trip the carrier is put to the expense of picking up its return cargo at different ports. Tables #20 and #21 show that even though the import and export tonnages were low the values of these tonnages were higher than ever. From 1922-27 the coffee imports into Jacksonville increased from approximately 2000 to 14000 tons or seven times in five years.

The foregoing indicates that ample ground is available for the future development and expansion of port facilities, at least until that time when the Port is so organized and conducted that Jacksonville's advantages are recognized. The Port today is not making creditable progress, and what is needed more than all else is a reorganization of the management, more advertising and intensive promotion.

It is well at this point to remind the citizenry that the continued supremacy of the Jacksonville Port is their responsibility and obligation solely. The port of Mobile has the entire state of Alabama behind it; South Carolina supports and promotes the Port of Charleston while Georgia is back of Savannah. It is inconceivable to think of the State of Florida financially supporting or aiding the Port of Jacksonville, therefore the responsibility rests on the people themselves--and this responsibility should urge a complete, thorough rehabilitation of the port governing body as its first step.

North of Phoenix Park to Trout River lies a large area accessible by railroad and highway available for future port development, also to the northeast at Eastport, the former site of the Brooks-Scanlon plant.

In visualizing the busy, active water front of the future, with its

many docks teeming with loaded bottoms from near and far, area of industrial development and storage is being provided nearby also several wide, direct arteries of roadway leading into the business center, by-passing the business center to railroad termini and to industrial areas being provided in the northwest section of the city. Attention is directed to the proposed cross-town traffic ways--21st Street, 9th Street, 3rd Street, Union Street, Duval Street, 63rd Street, each of which will assist the port, regional and industrial development of Jacksonville.

#### Water Front Improvement

A casual inspection of the Jacksonville waterfront from Ortega bridge to Market Street reveals several conditions amenable to correction for aesthetic and sanitary reasons. In the residential sections, Ortega included, there has been little effort expended by property owners to perpetuate a continuity of bulkhead alignment, and further, no connected effort has been made toward the erection of pleasing, attractive types of piers and shelters. As a result of this lack of uniformity one finds many pieces of property filled and bulkheaded considerably in front of that adjacent with abrupt return walls to the shore line, creating dead pockets for the accumulation, storage and decomposition of filth and sewage. These pockets also act as depositories for water hyacinths particularly objectionable during the summer months. Conditions along this waterfront are not conducive to the general welfare nor to the public's health and therefore should be corrected.

As one enters the down town water front, especially that area between Main and Market Streets, a collection of miscellaneous structures of questionable safety are found. Machine shops, automobile storage, fish markets, etc., superstructures of low cost occupy frontage of value. The character of development constitutes a menace from fires.

The United States War Department, acting through the office of Chief of Engineers, has designated two lines along the Jacksonville waterfront, one



the pier head line, the other the bulkhead line. The former extends from Long Branch to Fishweir Creek and to this line piers may be constructed but not beyond. According to rules of the United States War Department, no one is authorized or permitted to erect any structure in a navigable stream before the plans for such structures have been examined and approved by the United States Engineers, and prior to a consideration of any application for such permission the applicant must have received in writing a statement from abutting property owners that such proposed structure is approved by them. All bulkheads and hydraulic fills along the waterfront have been made in accord with this plan, but unfortunately the United States Engineers have never designated a bulkhead line south of Fishweir Creek, which act has unfortunately contributed to the aforesaid conditions in the residential sections.

Therefore in the light of what already prevails it is suggested that the United States Engineers be requested to establish a bulkhead line along the entire water front to the City Limits beyond which no bulkheads can be installed, and further that steps be taken by the City of Federal agencies to abate the sanitary nuisances now prevailing where abrupt pockets occur, by compelling the construction of return bulkheads in a manner to obviate the collection of refuse. The plan being followed at the St. Vincents Hospital and Barrs Street meets the situation satisfactorily.

For the improvement of that river front between Main and Market Streets it is suggested and urged that a new bulkhead line be defined about 150 feet beyond the present one, that a substantial bulkhead be installed and the area behind filled creating thereby a elongated, rectangular quay with parallel dockage. On this large area with railroad line on one side and deep water on the other a public market place could be erected, and a small landscaped fringe of waterfront park erected. This work obviously is to be performed by property owners.

At the foot of Newman Street the present high pressure pump station could be augmented by a large cistern or pump cump having direct screened connections with the river and from which water for the high pressure system could be delivered.

Jacksonville, it is estimated expends \$18,000,000 annually for food-stuffs. With suitable, accessible dockage where trucks and produce could be easily unloaded alongside much of the "back country" products would find their way into this eighteen million dollar market.





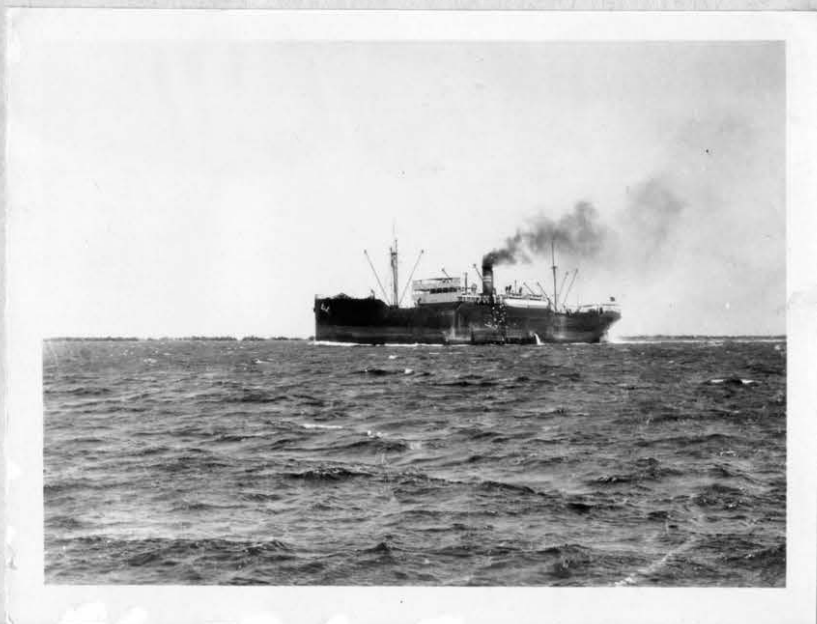
General view of activity at the MUNICIPAL DOCKS. Vessels docked along side pier No.1 unloading and loading freight.



Most of loading and unloading at MUNICIPAL DOCKS is done with ship's tackle. Loading rosin for export.

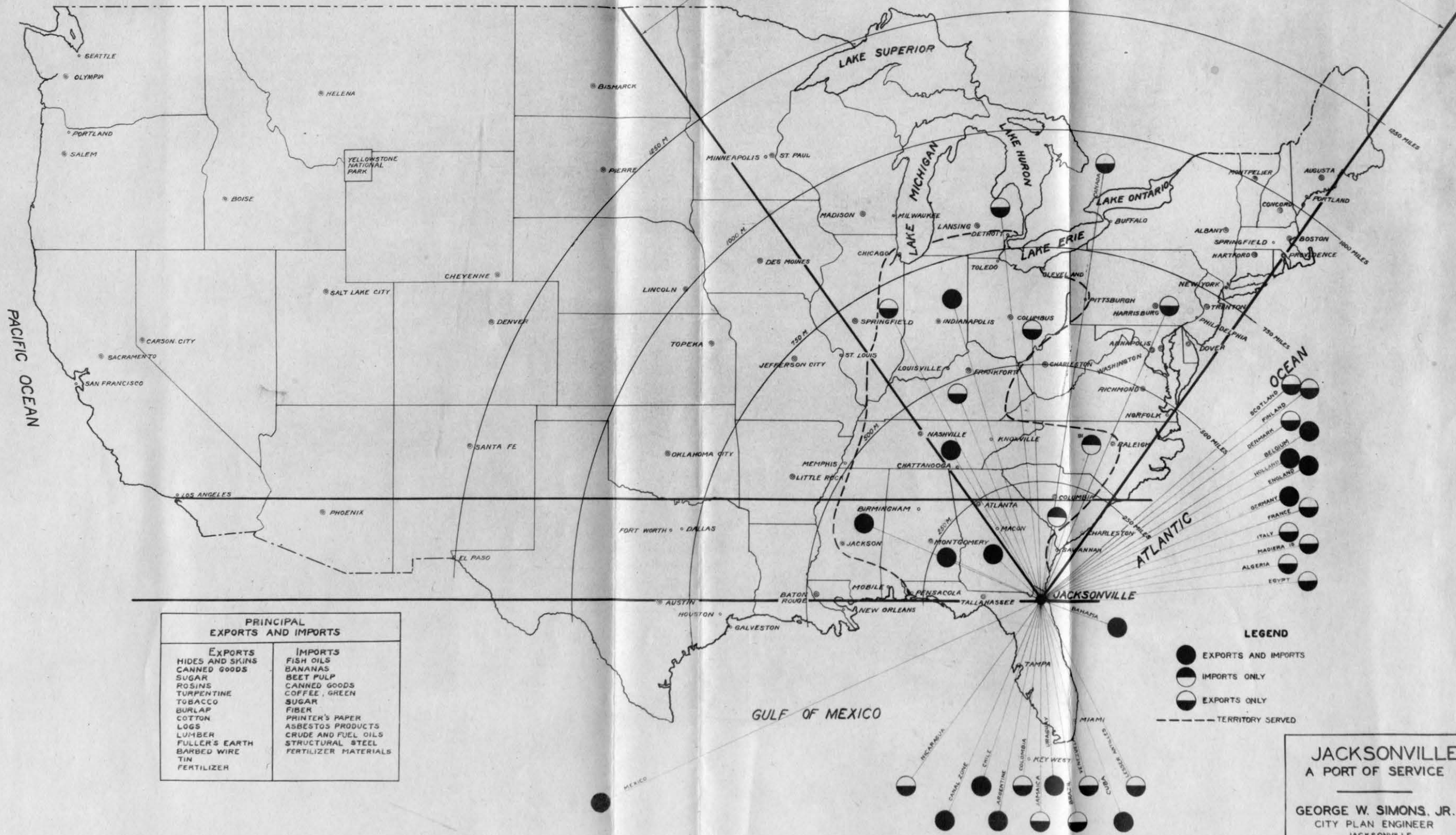


Jacksonville, Florida.  
The mouth of the St. Johns welcomes the  
freighter and passenger vessel from the seven seas.





82 PERCENT OF THE POPULATION OF U.S.A. LIVE WITHIN THESE LINES



| PRINCIPAL EXPORTS AND IMPORTS |                      |
|-------------------------------|----------------------|
| <b>EXPORTS</b>                | <b>IMPORTS</b>       |
| HIDES AND SKINS               | FISH OILS            |
| CANNED GOODS                  | BANANAS              |
| SUGAR                         | BEEF PULP            |
| ROSINS                        | CANNED GOODS         |
| TURPENTINE                    | COFFEE, GREEN        |
| TOBACCO                       | SUGAR                |
| BURLAP                        | FIBER                |
| COTTON                        | PRINTER'S PAPER      |
| LOGS                          | ASBESTOS PRODUCTS    |
| LUMBER                        | CRUDE AND FUEL OILS  |
| FULLER'S EARTH                | STRUCTURAL STEEL     |
| BARBED WIRE                   | FERTILIZER MATERIALS |
| TIN                           |                      |
| FERTILIZER                    |                      |

**LEGEND**

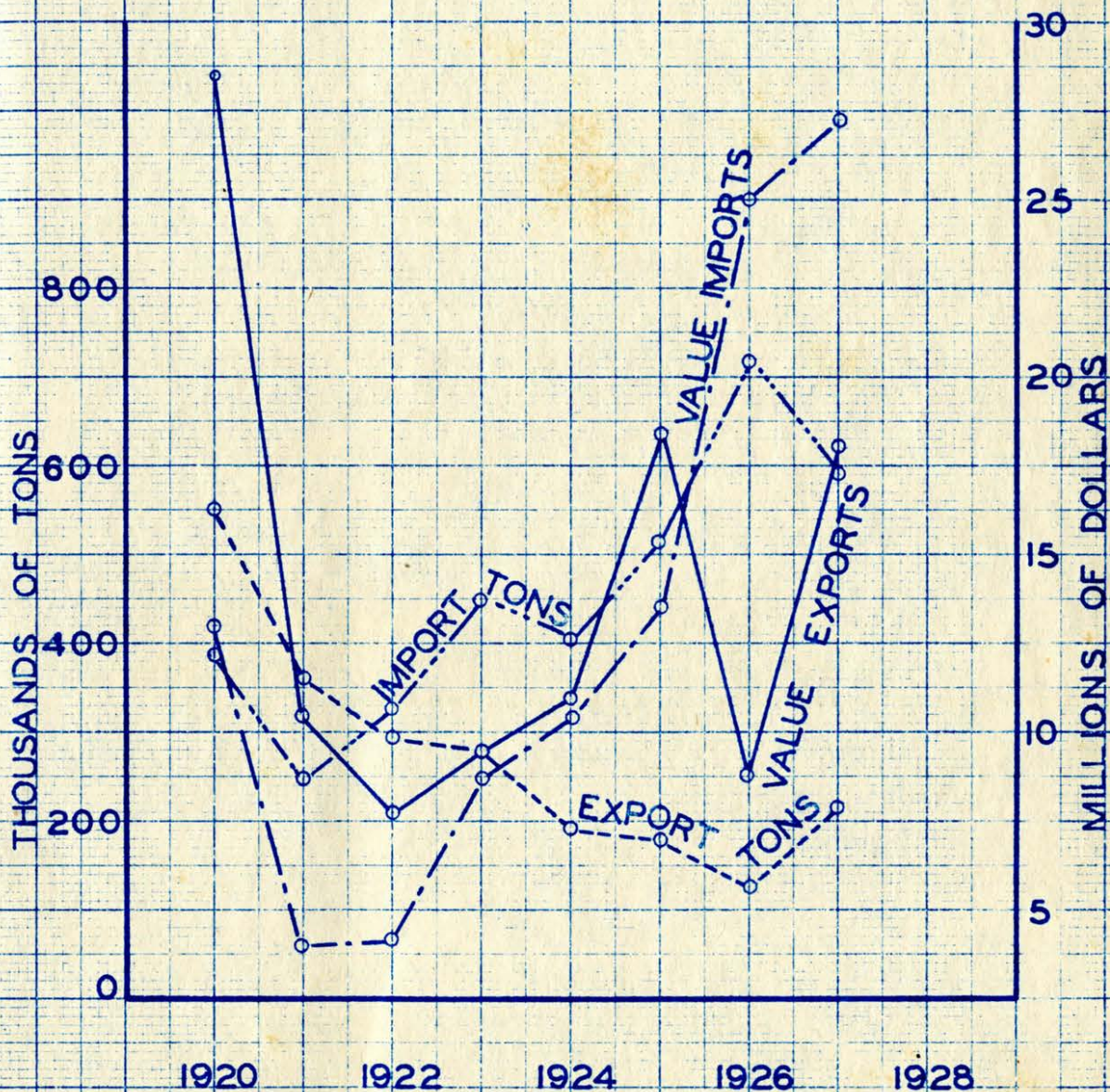
- EXPORTS AND IMPORTS
- ◐ IMPORTS ONLY
- ◑ EXPORTS ONLY
- TERRITORY SERVED

**JACKSONVILLE**  
A PORT OF SERVICE

GEORGE W. SIMONS, JR.  
CITY PLAN ENGINEER  
JACKSONVILLE

DIAGRAM 17

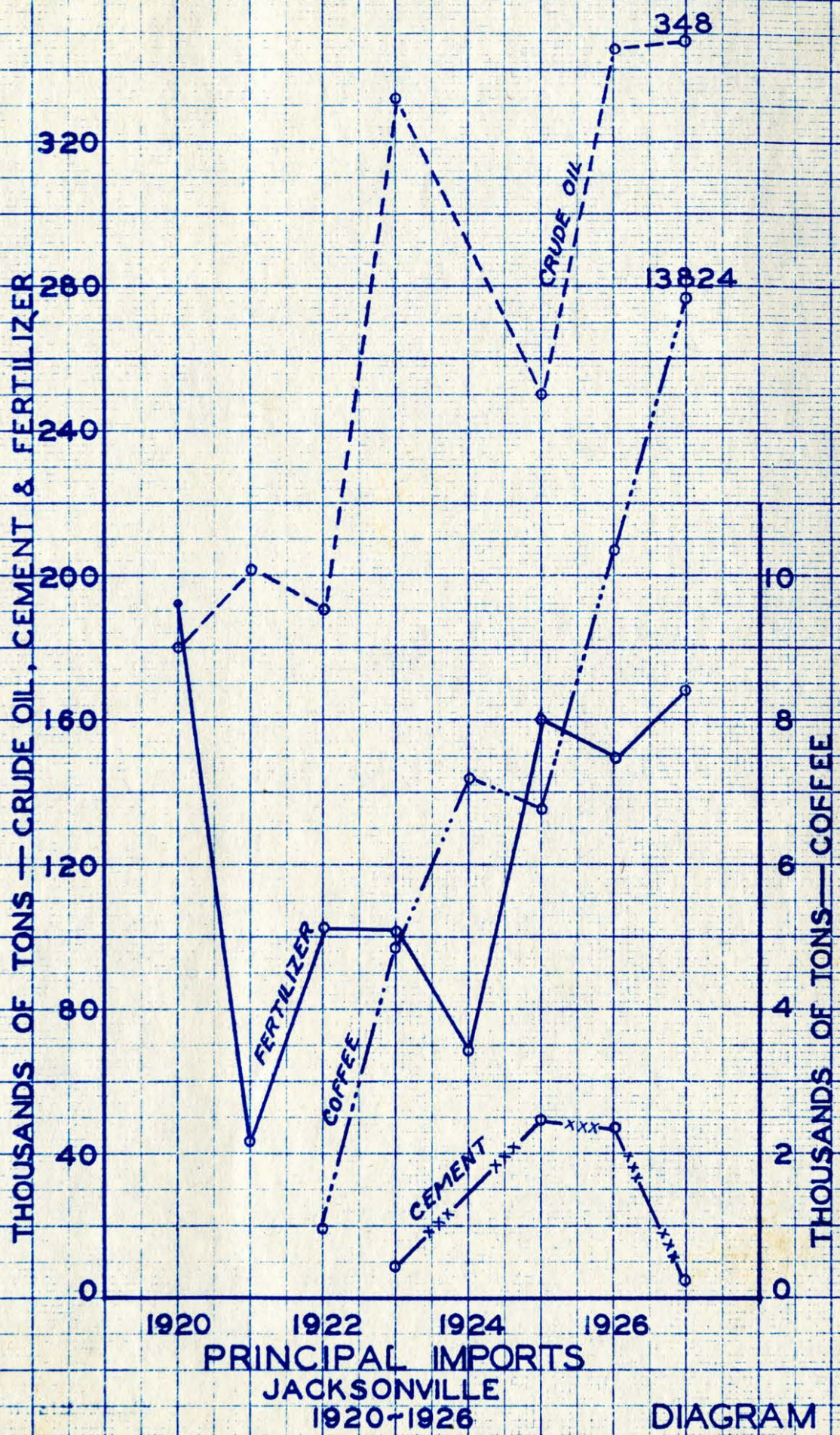




VALUES AND TONNAGE  
IMPORTS AND EXPORTS  
JACKSONVILLE

DIAGRAM 18

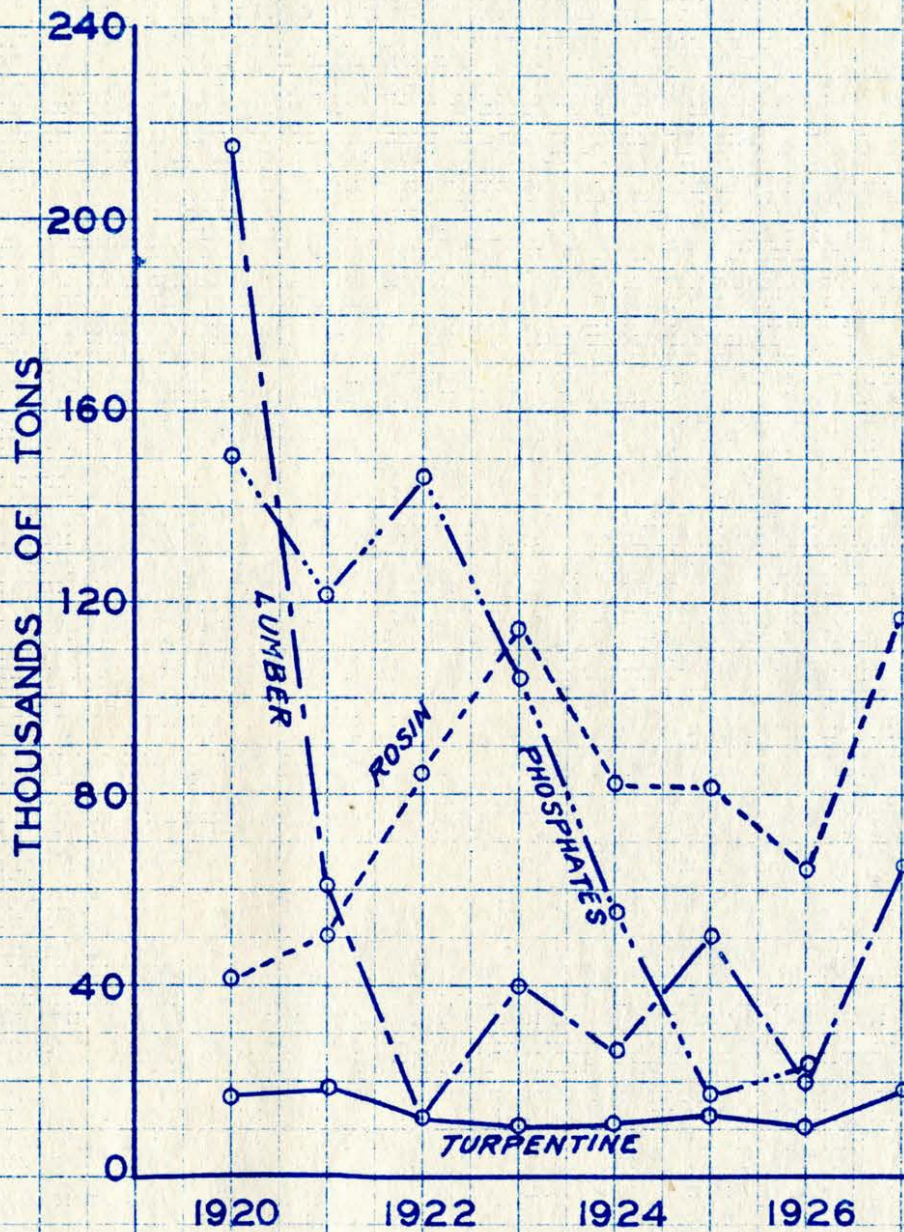




PRINCIPAL IMPORTS  
JACKSONVILLE  
1920-1926

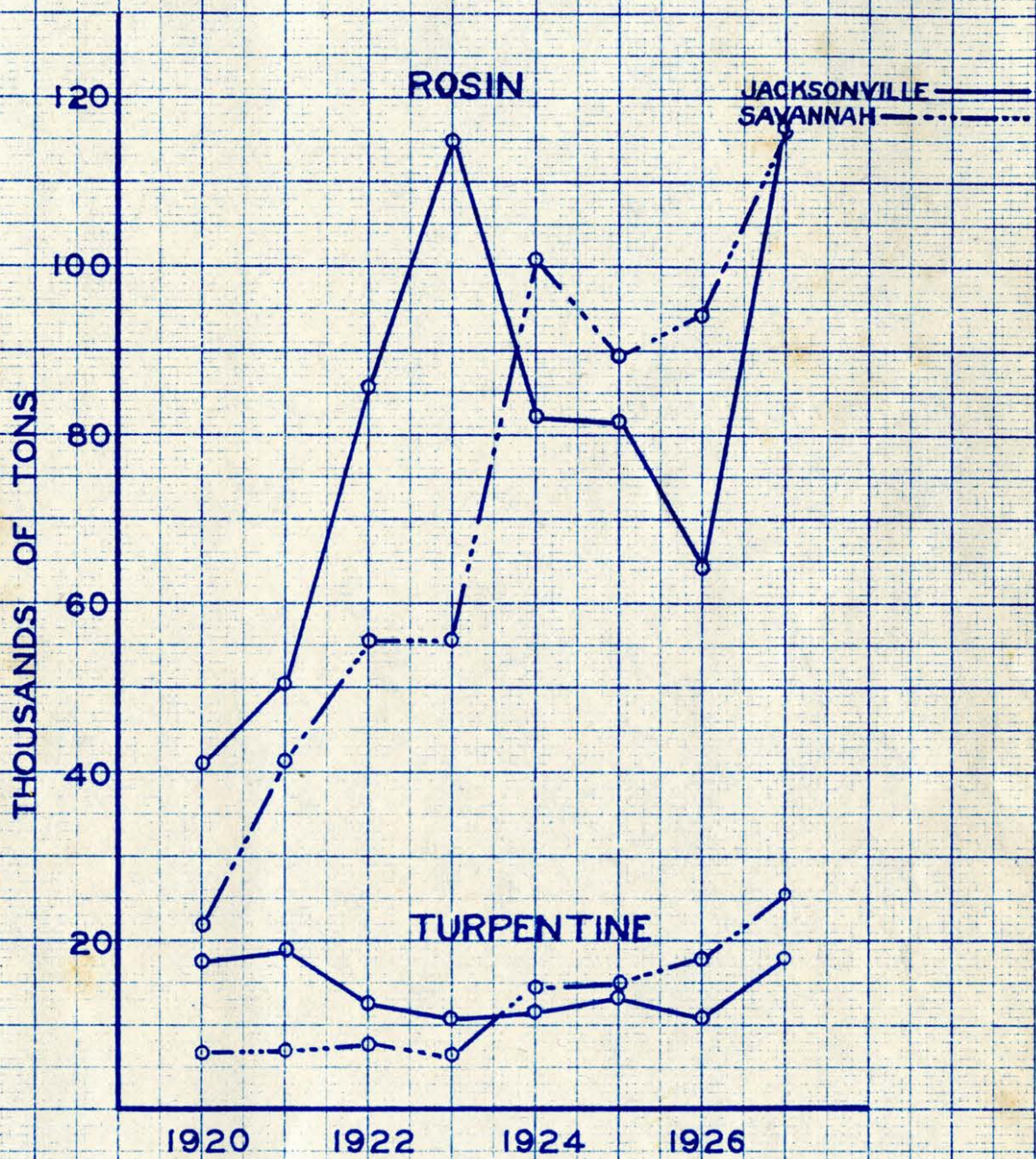
DIAGRAM 19





PRINCIPAL EXPORTS  
 JACKSONVILLE  
 1920-1926





NAVAL STORES EXPORTS

DIAGRAM 20-A



## PORT ACTIVITIES 1927

| NAME<br>OF<br>PORT | FOREIGN |            |           |             | DOMESTIC              |             |                        |             |                |             | TOTAL COMMERCE<br>CREDITED<br>TO THE PORT |             |
|--------------------|---------|------------|-----------|-------------|-----------------------|-------------|------------------------|-------------|----------------|-------------|-------------------------------------------|-------------|
|                    | IMPORTS |            | EXPORTS   |             | COASTWISE<br>RECEIPTS |             | COASTWISE<br>SHIPMENTS |             | OTHER DOMESTIC |             | TONS                                      | VALUE       |
|                    | TONS    | VALUE      | TONS      | VALUE       | TONS                  | VALUE       | TONS                   | VALUE       | TONS           | VALUE       |                                           |             |
| JACKSONVILLE       | 592,690 | 27,186,578 | 219,712   | 18,068,446  | 1,267,815             | 90,484,870  | 711,017                | 43,215,318  | 922,518        | 39,833,820  | 3,713,752                                 | 218,789,032 |
| TAMPA              | 212,155 | 13,549,993 | 873,960   | 9,447,736   | 1,169,428             | 61,916,812  | 871,749                | 15,695,982  | 246,183        | 1,423,947   | 3,373,477                                 | 102,034,470 |
| SAVANNAH           | 408,299 | 19,096,105 | 482,480   | 96,022,159  | 904,822               | 189,637,380 | 444,056                | 208,764,874 | 167,008        | 4,123,193   | 2,406,669                                 | 517,643,711 |
| CHARLESTON         | 780,468 | 11,700,477 | 462,658   | 36,372,744  | 889,927               | 93,849,761  | 262,936                | 46,250,426  | 384,256        | 11,833,332  | 2,780,249                                 | 200,006,740 |
| WILMINGTON         | 67,686  | 2,164,914  | 12,010    | 169,807     | 37,516                | 874,609     | 4,679                  | 221,775     | 614,009        | 49,299,625  | 735,900                                   | 52,730,730  |
| NORFOLK            | 497,905 | 20,969,261 | 2,209,309 | 119,501,778 | 1,205,585             | 188,502,153 | 10,880,233             | 314,471,844 | 2,061,835      | 137,973,726 | 16,854,867                                | 781,418,762 |
| MOBILE             | 352,597 | 8,805,207  | 714,139   | 45,126,593  | 627,827               | 29,345,384  | 660,029                | 25,524,485  | 1,608,155      | 35,193,780  | 3,962,747                                 | 143,995,449 |
| GALVESTON          | 480,510 | 23,387,031 | 2,121,202 | 292,029,712 | 1,017,792             | 171,733,911 | 1,797,122              | 194,117,108 | 431,604        | 6,737,827   | 5,848,230                                 | 688,005,589 |

COMPARATIVE RECORDS  
OF EIGHT SOUTHERN PORTS

TABLE 21



## AIR PORT

Air traffic has increased at an amazingly rapid rate since the war, especially during the past few years. The economic value of the airplane to commerce and industry is being recognized and appreciated more and more. The United States Department of Commerce statistics show that more than 15000 miles of air ways are now in regular operation and on more than 12000 miles of these air mail is carried. It is also estimated that more than 50000 miles are being flown daily. Similar statistical information shows the increasing production of planes; in 1921 there were 302 planes produced, in 1926 there were 1186 and in 1927, 1995 planes. That air traffic tendencies is inspiring air-mindedness is certain and our cities to maintain their progressiveness must be prepared to meet the situation.

The airport is as definite, positive and established transportation utility today as the railroad depot was seventy-five or eighty years ago! Many cities owe their remarkable growths to the early development of railroad transportation facilities and the advantages incident to them. Similarly many cities today will grow or stagnate in proportion to the interest and enthusiasm displayed in providing ample and adequate aviation facilities.

Colonel Lindbergh in his book "We", says:

"Large and well equipped airports situated close to cities will go far toward developing commercial air lines and keeping the United States at the top in aeronautical activity----The cities that see the future of air transportation and provide suitable airports will find themselves the center of air lines radiating in every direction."

Most cities are awakening to the new era but unfortunately many have not yet caught the vision.

Jacksonville's municipally owned airport is on the direct Miami-Atlanta New York air lane; it is fast developing into one of the outstanding ports of the country. Naturally, there are those who criticize the condition of the

present airport, its equipment and appurtenances but generally speaking, the city is to be commended for the start it is only made. One of the principal objections to the present airport is its inaccessibility to the down town hotel section but this feature will be overcome largely with the completion of the Main Street widening program. Not only must the Main Street pavement to Trout River be of sufficient width to adequately accommodate the motor traveling public to and from the airport but it must be widened from the north approach of the bridge to the airport. On days of exhibition flights, arrivals of prominent aviators or tours of flyers the present narrow roadway is dangerously crowded. And also, adequate provisions for parking should be made available at the airport to obviate danger to flier and motorist.

The Jacksonville airport is located on city owned property seven miles north of the Post Office on the <sup>1</sup>/<sub>2</sub> Atlantic Coastal Highway. It occupies a part of a 640 acre tract. It was designed by City Engineer W. R. Cheddan and constructed with city labor under his supervision. In 1925 the legislature authorized a bond issue of \$100,000 for the airport but none of these bonds were sold until the fall of 1927 when one half the issue was disposed of. There are three landing strips laid off in a triangular form, one east and west, one north and south and the third northeast to southwest. These former two are 2100 feet long by 100 feet wide and the latter 2500 feet long by 100 feet wide. A northwest-southeast lane is graded. Landing strips are tapped with a bituminous finish. The field is equipped with hangars, field office, shops fuel supply and night lighting.

With Jacksonville and Florida growing steadily and aviation becoming increasingly popular and useful, with Jacksonville occupying a strategic position there is every reason to believe that aviation as a transportation utility will exert a singular influence upon the future of Jacksonville, and to meet this situation it would be advisable to contemplate more airports, either publicly developed or privately developed.



In fact it is quite probable that future advances in aviation will require separate landing fields for the traffic of different types. In the future one field will probably be devoted to speedy mail, passenger and express lines; another to governmental services such as the Forest patrol, National Guard, aviation supervision, etc.; another to air instruction for pilots and aircraft methods and exhibition flying, another for commercial and industrial uses and finally one for private flying. Then too there will be the necessity for a field favorably adapted to the receiving and care of blimps and zeppelins. These requirements must be anticipated now if the community is to keep pace. In Los Angeles County, California, today there are 49 airports and landing fields!

The United States Department of Commerce examines and rates air navigation facilities and issues regulations for the rating of airports. The highest rating for a field is A-1-A based on general facilities and equipment, dimensions and night lighting equipment (Aeromatic Bulletin #16 United States Department of Commerce).

In considering sites prospective airports safety should be given foremost consideration, in conjunction with convenience and service. Air traffic must be reliable and not be subjected to hazards. There should be a freedom of smoke, fog and unfavorable wind circuits, as well as a freedom from obstacles of hazards in air approaches; high ground should be given preference to low. There should be lanes of at least 2500 feet length in every direction and preferably longer in directions of prevailing winds. Sites should be efficiently drained, free from soggy, ponding areas. Ports should preferably be located remote from high tension power lines, and if power lines must for any good reason be located near the edges of an airport they should be placed underground. Obstacles on the edges of the landing field reduce the available landing area by a distance equal to seven times the height of the obstacle.

The area required for the future airport will depend upon the amount of use to which the field will be put. If many planes are to arrive and depart each hour it may be necessary to use different parts of a field for arrival and departure, regulating these movements by a signal system such as is used at the Templehof in Berlin. Again an area considered essential now, may be far too large a few years hence, depending on aviation advances. It may be possible in the near future to ascend and descend vertically from the field with the assistance of the helicopter and when this time arrives landing ports will be developed on flat topped buildings. Already airplanes land on ships and the government is incorporating a landing field atop the new Chicago post office.

The airport sites should be so selected that the time period between the city's center and airport is minimized, and if possible near the water for use of seaplanes.

#### Available Sites

As stated above the time is rapidly approaching when to maintain her position in the air world Jacksonville will be obliged to consider improved airport facilities and extensions either municipally or privately owned and in developing a city plan the probable localities of these ports should be anticipated. While there are lands north of the city adequate and suitable for airport development it is true that these lands lie north of Trout River and their directness and accessibility to town is absolutely dependent upon highways with bridge crossings.

To the west and northwest of Jacksonville lie vast areas of land well drained or susceptible of ready drainage which are easily accessible to Jacksonville over direct highways with a minimum of grade crossings, at distances no greater than the present airport. Airports in this area would not only be directly accessible to the waterfront, industrial and business centers



by direct arteries of the proposed major highway plan but also would have direct accessibility to Riverside, Avondale, Murray Hill, Ortega and the several clubs.

While it will admittedly be very necessary for Jacksonville to ever be alert and fully conscious of the progress in aviation and keep abreast of the times with airport facilities, it is questionable whether the responsibility of providing and financing airports should be assumed by the city entirely. It is perfectly proper for the city to stimulate and encourage an air-mindedness, and provide accessibility, utilities, etc., but certainly private enterprise should also be encouraged to invest something, as they have elsewhere. Why shouldn't the airplane transportation line provide its terminal facilities just as the railroads and steamboat lines do theirs?

It is therefore suggested that the city continue to develop and improve its airport, aiming to make it one of the outstanding in the South. And as a part of this improvement program, it is suggested further that efforts be made to acquire the fringe of property on the west between the airport and the Fernandina highway thereby effecting an essential control over obstacles within this area.

A basin for seaplanes should be developed, especially facilities for docking, fueling, etc. For such purpose the river off Memorial Park and Commodore's Point offer sites worthy of consideration.

And finally, when and if it becomes necessary and advisable for the city to contemplate additional airports that such ports be located in areas west of the city tributary to Kings Road, Enterprise and Edgewood Avenues.

## ZONING

There is one group of people that believes the promotion and execution of "city beautification" ideals comprises the whole field of city planning; there is still another group which comprehends city planning solely in the light of Zoning. Neither conception is true as both are integral phases of a comprehensive planning program.

Generally speaking, zoning is greatly misunderstood by the laity; it is thought of by many as an arbitrary means of dictating to a freeholder how he must utilize his property. The primary object of zoning as expressed by the late Prof. Whipple of Harvard, is:

"To protect the basic phases of life against injury by providing adequate place--separation of residence, business and industry; and to prevent monopoly of natural light and air, necessary to health, by restricting the height and bulk of buildings in ways appropriate to their neighborhood."

Again as specified in the Standard State Enabling Act prepared by the United States Department of Commerce,

"Such regulations (zoning)-----are designed to lessen congestion in streets; to secure safety from fire panic and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewage, schools, parks and other public requirements."

The tendency in American cities to concentrate and use land intensively results in congestion and the arise of unfavorable uses. Loss of light and air, the creation of nuisance, the increasing dangers to life and limb and uncertainty of property values are several of the reasons for zoning. Zoning will save the small home; it will make home owning a paying instead of a losing investment for the citizen of average means. Zoning makes it easier to obtain money for the development of small homes and property. Zoning improves



land and rental values and simultaneously prevents the depreciation of residence property. Zoning prevents congestion in low priced areas and improves traffic conditions. Zoning requires a man to so use his property that he will not injure his neighbor and gives to him the protection which the citizen of large means is able to secure by private restriction.

Zoning has been variously defined, but one of the best definitions is that of Mr. Bassett, Counsel of the Zoning Committee of New York,

"Zoning is the creation by law of districts in which regulations differing in different districts prohibit injurious or unsuitable structures and uses of structures and land."

Recently Zoning has been defined by another able legal mind, Alfred Bethman of Cincinnati who says of Zoning:

"A comprehensive zone plan is one which divides the territory of the municipality or zoned community into zones or districts in each of which certain standards are set forth in the zoning ordinance as to the use, height or bulk or location of buildings or premises."

The right to zone or district a community is based upon the inherent right of a people to promulgate laws for the public health, safety, morals and general welfare---a right commonly referred to as the "police power."

The United States Supreme Court has held (case of Eubank vs Richmond) that the police power extends not only to regulations which promote the public health, morals and safety, but to those which promote the public convenience or the general prosperity. But in defining regulations predicated on the "police power" they, first, must be based on the health, safety, morals and general welfare, and second, they must be reasonable, non-discriminatory and non-confiscatory. This latter point was classified by the United States Supreme Court in the case Barbier vs Connolly,

"Regulations for these purposes may press with more or less weight upon one than upon another, but they are designed, not to impose unequal or unnecessary restrictions upon any one, but to promote, with as little individual inconvenience as possible, the general good. Though in many respects necessarily special in their character, they do not furnish just ground of complaint if they operate alike upon all persons and property under the same circumstances and conditions. Class legislation, discriminating against some and favoring others, is prohibited; but legislation which, in carrying out a

public purpose, is limited in its application, if within the sphere of its operation it affects alike all persons, similarly situated, is not within the (14th) amendment."

The constitutionality of Zoning is frequently questioned; we ought as well question the constitutionality of taxation! We are all familiar with the recent questions relative to the constitutionality of taxation methods in Florida and just as such questions are fraught with difficulties so is the new science of zoning an understanding of which is being classified rapidly by the courts. The decision of the United States Supreme Court, in the Euclid Village case (Euclid vs Ambler Company) removed all doubt as to the constitutionality of zoning in general. The court said in part:

"The ordinance now under review and all similar laws and regulations must find their justification in some aspect of the police power, asserted for the public welfare. In solving doubts, the maxim sic utere tuo ut alienum non laedas, which lies at the foundation of so much of the common law of nuisances ordinarily will furnish a fairly helpful clue. And the law of nuisances, likewise, may be consulted, not for the purpose of controlling, but for the helpful aid of its analogies in the process of ascertaining the scope of the power. A nuisance may be merely a right thing in a wrong place--like a pig in the parlor instead of the barnyard. If the validity of the legislative classification of zoning purposes be fairly debatable, the legislative judgement must be allowed to control."

Relative to the exclusion of business and apartments from residential zones the Supreme Court said,

"This question involves the validity of what is really the crux of the more recent zoning legislation, namely, the creation and maintenance of residential districts, from which business and trade of every sort, including hotels and apartment houses, are excluded.

"The decisions of the state courts are numerous and conflicting; but those which broadly sustain the power greatly outnumber those which deny it altogether or narrowly limit it; and it is very apparent that there is a constantly increasing tendency in the direction of the broader view. We shall not attempt to review these decisions at length but content ourselves with citing a few as illustrative of all."

The Court then cited the decisions of courts in nine states upholding zoning, and in three states where adverse decisions were granted, and then says,

"The decisions enumerated in the first group (upholding zoning) agree that the exclusion of buildings devoted to business, trade, etc., from residential districts, bears a rational relation to the health and safety of the community."



The court then recites some of the grounds for this conclusion as follows:

(1) promotion of the health and security from injury of children and others by separate dwelling houses; (2) suppression and prevention of disorder; (3) facilitating the extinguishment of fires and enforcement of street traffic regulations and other welfare ordinances; (4) aiding the health and safety of the community by excluding from residential areas the confusion and danger of fire, contagion and disorder which in greater or less degree attach to location of stores, shops and factories; (5) construction and repair of streets rendered easier and less expensive by confining the greater part of heavy traffic to streets where business is carried on; and with reference to the apartment house the court says:

"With particular reference to apartment houses, it is pointed out that the development of detached house sections is greatly retarded by the coming of the apartment houses, which has sometimes resulted in destroying the entire section for private house purposes, that in such sections very often the apartment house is a mere parasite constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district. Also, coming of the apartment house is followed by others interfering by their height and bulk with the free circulation of air and monopolizing the rays of the sun which otherwise would fall upon the smaller houses, and bringing ---the disturbing noises incident to increased traffic and business and the occupation---of larger portions of the streets, thus detracting from their safety and depriving children of the privilege of quiet and open spaces for play.---Under these circumstances, apartment houses which in a different environment would be not only entirely unobjectionable but highly desirable, come very near to being nuisances.

"If these reasons, thus summarized, do not demonstrate the wisdom or sound policy in all respects of those restrictions which we have indicated as pertinent to the inquiry, at least, the reasons are sufficiently cogent to preclude us from saying, as it must be said before the ordinance can be declared unconstitutional, that such provisions are clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals or general welfare."

It has been deemed advisable to devote considerable space to the Euclid case as detailed in the decision of the United States Supreme Court (1926) because in it are contained so many vital points pertinent to zoning, and as zoning relates to Jacksonville. In this decision and others too numerous to mention, zoning of a reasonable, impartial character based upon the public health, safety, morals and general welfare and enforced under the police

powers is justifiable.

A prerequisite of a municipal zoning ordinance is an enabling act granted by the state legislature, enabling the city to define and promulgate zoning regulations. Zoning ordinances not based upon state enabling acts have several times been declared unconstitutional by state supreme courts. Fortunately the legislature of 1923 gave to Jacksonville the authority to district or zone, and acting under this authorization the City Council of Jacksonville during 1925 approved a set of zoning regulations supplemented by a district or zone map prepared under the direction of the City Building Commissioner, John Fowler, which has been operative in Jacksonville since 1925.

The Jacksonville ordinance in many respects is typical of many throughout the United States. It provides for six (6) zones, i. e., Residence "A" and "B"; Business "A" and "B" and Industrial "A" and "B", prescribing limitations for each. The Building Commissioner of the city is the administrator of the ordinance and the Fire Committee of the City Council sits as the Board of Appeals. The ordinance, since its approval in 1925 has been amended nine times; the Board of Appeals has heard 528 complaints, approving 430 of them and rejecting 38.

It is proper at this point to commend Commissioner Fowler for the comprehensive ordinance developed and the generally satisfactory manner he has interpreted and administered its several provisions. Naturally during its four years of operation the necessity of changes or modifications has been obvious and to this task has the present study been devoted. It is not the purpose of this report to submit a new ordinance or destructively criticize the present one but rather to present the results of a prolonged study of the ordinance in conjunction with a study of the physical city, the trends of construction and growth and make such suggestions and recommendations as seem warranted and advisable for the strengthening, modifying or amending the present ordinance. To profit by the shortcomings of the past is one of the



objectives of this study.

There have been some abuses of the present zoning ordinance by property owners failing to abide by its provisions. The ordinance states that a corner lot owner must indicate his lot frontage preference. Instances can be observed about the city where corner lot owners have wittingly violated the ordinance provisions by installing store frontages within specified residential territory and subsequently have not been restrained from so doing by the Building Department, and unfortunately no violator can be penalized under the present ordinance. Such procedure has immediately caused uneasiness among adjoining owners on the residential street and caused them to request similar business privileges. Only recently such an atrocity has been committed on Post near King Street. Unless a zoning ordinance is rigidly enforced and administered by an impartial non-political Board of Appeals its virtue cannot be fully realized.

Perhaps the most unfortunate result of the 1925 zone ordinance was the placement of Springfield as a whole in a Business "A" zone. This act has met with a severe reaction--a depreciation and an uncertainty of property values. It is now difficult, if not almost impossible to secure loans on home property in this area.

Many former residents, during the past four to five years, have left Springfield to live in other sections where property is restricted. Tenement dwellers have entered Springfield and the property generally speaking is depreciating and when this state starts its rate of progress is rapid. Poorly placed business has sprung up at scattered points and with each new business the sphere of effective depreciation widens. There are still in this area many beautiful homes of old families and working people--homes representing a lifetime of labor and saving, which are constantly faced with the thoughts of adjacent filling stations or stores. Why shouldn't these people be protected? Why shouldn't the beauty and distinctiveness of Hubbard Street, Silver Street,

Boulevard and Perry Streets, as well as that of several cross streets be preserved? These streets removed from the present Business zone will advance more than all else the restoration of Springfield to its proper place.

Zoning ordinances must be based upon a careful study and survey of existing developments, future trends and those influences which modify or tend to modify the physical city and the regulations prepared therefrom should correspond substantially to the survey results. With this point in mind an intensive field survey of every piece of property in Jacksonville was instituted noting therein the following:-

|                                  |                              |
|----------------------------------|------------------------------|
| Street width                     | Number families per building |
| Roadway width                    | Property uses                |
| Paving material                  | Open air uses                |
| Roadway conditions               | Swamps                       |
| Sidewalks                        | Forests                      |
| Trees over 18 inches in diameter | Paths                        |
| Front yard depth                 | Refuse dumps                 |
| Side yard depth                  | Character of building        |
| Rear yard depth                  | Utility                      |
| Parks, playgrounds               | Churches                     |
| Schools                          |                              |

Following this field survey the physical data pertaining to uses of property was transferred in colors to a map showing all lots, the resulting mosaic illustrating clearly the present physical status of the city. From this survey considered in conjunction with other studies several points mentioned elsewhere in this report were further emphasized: (1) that Jacksonville is predominately a city of single family dwellings, there being approximately 35000 single family dwellings. According to the 1920 census about 25% of the population owned their own homes and doubtless the percentage is now higher. The trend of single family dwelling construction has been particularly noticeable in outlying sections---Murray Hill, St. Johns Park, Norwood, etc., (2) that the duplex type of home is becoming a significant factor in the tendencies of dwelling construction in Jacksonville as shown by building permits of the past five years (See Diagram #21); there are approximately 2000 duplex dwellings in the city now. The duplex or two family house



"reached a peak nationally in 1923 and 1924 when in 257 cities they accommodated about one fifth of the families provided for by all new construction. Since that time they have steadily diminished in importance, being less than one seventh in 1927." (Recent Economic Changes--1929).

The construction of duplex homes in Jacksonville has not been confined to any one section of the city, yet the tendency toward their construction has been greater in some sections than others. In West Riverside, New Springfield and west of Avondale many new duplexes have been built in recent years, also in Springfield. In the latter area the trend toward the duplex has been very perceptible, but here many large, former one family homes have been readapted to accommodate two families. Plates #2, #3 and #4 show the drift of population, vacant areas and locations of building permits during 1927-28, factors which vitally influence any reasonable zoning effort. (3) That the several railroad properties are natural barriers, segregating industrial, shipping and residential areas, classifying residential areas, and confining directional growth to several sections. This is more emphatically illustrated in Plate #3 showing vacant areas. (4) That the apartment house is becoming a factor in Jacksonville construction as elsewhere in the country. Diagram #22 depicts the apartment house trend in the United States, also in Jacksonville for the past ten years. There are in Jacksonville approximately three hundred apartments, an apartment being considered as a unit housing more than two families. The trend toward apartment house dwelling has been the subject of much study and discussion recently. In Jacksonville it has been a factor since 1920. Records of the two years, 1927-28, indicate that the apartment of magnitude, eight apartments and more, is confined to close-in radius--Riverside and Springfield, with few scattering apartments beyond. The apartment area will probably remain within these two close in, easily accessible sections.

Relative to the provisions of the present zoning ordinance; it restricts about 7% of the land area to Resident A; about 17% to Resident B; about 8% to Business A; about 6% to Business B; about 10% to Industrial A; about 4% to

Industrial B; and about 43% is wholly unrestricted. The unrestricted zones include principally those areas occupied by the colored population of the city (See Plate #14). According to the present zone ordinance more than one hundred miles of street frontage are zoned and available for business uses-- a large part of this being confined to Springfield. Plate #17 illustrates the zoning plan of Jacksonville today, the large black area just above the central business area being Springfield.

The decentralization of business has been much in evidence during the past five years; improved living conditions, hand-to-mouth buying and the inconvenience of parking has encouraged decentralization with its incidental rise of the chain store and outlying business centers, which if spaced and grouped at proper intervals will dispose of the business street frontage problem. The principle difficulty in Jacksonville has been the improper, illogical location of some business-- due not so much to the zoning ordinance itself but to store building propensities prior to 1925; and, as a result of building since, many blocks of hitherto residential property has been blighted by the introduction of much misplaced business. Throughout the city many vacant stores render silent judgement on illadvised locations.

The belief prevails among free holders generally that any vacant lot regardless of location can suddenly, mysteriously and miraculously become a productive mine by erecting thereon a store building. Throughout Jacksonville property owners persist in this exaggerated belief in the face of many vacant store rooms or business property in all sections of the city. Not only is this fallacy reflected in big vacant store rooms but also in the extremely low rentals of outlying occupied stores.

Every community can economically support a reasonable amount of business frontage beyond which the rate of return on the investment is reduced to a minimum or to a point approximating the carrying charges. What then should be



the relative proportion of business to population?

To ascertain this amount of essential business frontage the Regional Plan Association of Chicago did considerable intensive research work among cities and towns of different types and populations in the Chicago region--- cities ranging from the purely residential in character to those strictly industrial; in all forty (40) cities were investigated. "In each place "exact measurements were made of ground floor frontage actually in use" from which it is curious to note that approximately fifty front feet of business property are in use for every one hundred people in the cities measured, regardless of the type or size of community.

Similar studies conducted in Milwaukee and elsewhere closely checked those of Chicago. In Los Angeles---a community approximating Jacksonville in character---a similar study disclosed information indicating "it safer to use a ratio of 25 feet of frontage per 125 people," <sup>less</sup> more than one half the frontage justified in the Chicago region.

Based on the Chicago and Los Angeles information, Jacksonville could normally and conveniently support an active business frontage varying from 30000 to 75000 lineal feet, yet according to the field survey and a recent survey made by the Real Estate Board, Jacksonville now has more than 100000 lineal feet of street frontage occupied by store frontage!

Recent studies made elsewhere in the country approach the community business requirements differently, showing that from 185-353 people can support one grocery store unit; from 1364 to 1979 people, one drug store and about 2500 tributary people one clothing store. Jacksonville, then, viewed from this angle, with nearly 1000 grocery stores and 130 drug stores has sufficient stores of these types to care for nearly 225000 people now. This shows in another way that no store shortage exists and the demand for additional units is not acute now.

This report does not attempt to discourage business; business has a proper function in every zone plan and an effort is made in this to suggest a means of restoring order from chaos. To accomplish this it is recommended, for instance, that some districts be zoned to greatly reduce the business frontage, while in others small community business areas be added and, finally that business be provided in some sections at a future time when the needs for such are greater than now. It is aimed in this way to acquire a better balance. All property cannot be business; there must be provisions for a potential purchasing power because without population there can be no market.

Jacksonville under the present zone ordinance, has acquired several separate and distinct, decentralized neighborhood business districts which are rendering an invaluable community service. Main Street in Springfield, Lem Turner Road in Norwood, Five Points in Riverside, King Street near Park, St. Johns Avenue in Avondale, Popular Point, Edgewood Avenue at Post, etc., afford neighborhood trading facilities for the present and for a considerable time in the future. In each of these localities, hundreds of lineal feet of vacant frontage still remain for commercial exploitation without throwing open hundreds of additional feet to satisfy, pacify or rescue from financial embarrassment an aggressive free holder. Unless all the results of intensive research and the predictions of economists and businessmen alike utterly fail Jacksonville will need very little business frontage development for the next ten years, and possibly longer.

In proposing zoning suggestions to be discussed subsequently, modified and supplemented by reasonable regulations, it is not without some trepidation, moderated only by the knowledge that public opinion is the court of last analysis before a final map and ordinance can become effective. The public must be given every opportunity to be heard because they ultimately are the judges. To fully acquaint the citizenry with the several suggestions proposed



it is suggested that a series of public meetings be held, one in each ward and one with each civic or community league to discuss the proposals. In this manner the final drafted ordinance will more nearly approach the ideal.

In developing the proposed zone map the fundamental essentials of "public health, safety, morals and general welfare" have been kept in mind, as well as the demands for residence, business and industry for the present and future.

The following table shows how the present ordinance compares with the proposed one:

TABLE #21

| Present Map  |              | Proposed Map |               |
|--------------|--------------|--------------|---------------|
| Res. A.      | 7% land area | Res. A.      | 17% land area |
| Res. B.      | 17% " "      | Res. B.      | 18% " "       |
| Bus. A.      | 8% " "       | Res. C.      | 19% " "       |
| Bus. B.      | 6% " "       | Bus. A.      | 4% " "        |
| Ind. A.      | 10% " "      | Bus. B.      | 5% " "        |
| Ind. B.      | 4% " "       | Ind. A & B   | 18% " "       |
| Unrestricted | 48%          | Unrestricted | 18%           |

A study of the map of basic physical data shows clearly that Jacksonville is predominately a city of single family dwellings, yet the present zone map makes no provisions for a zone restricted solely to single families, due in all probability to the absence of a higher court ruling on this point prior to 1925 when the ordinance was passed. Since the Euclid vs Ambler decision by the United States Supreme Court in 1926, cities are making provisions for single family zones. With the exception of those areas where deed restrictions prevail no where in any present class "A" zone are duplex and small apartments restricted. Therefore it seems advisable and consistent for the protection of these areas now developed predominately with single family homes of the smaller, better types and where land values warrant same to create a new Residence A zone restricted to Single Family homes on a parity with those restricted by deed. Such a plan would protect the investments of those who can ill afford to be injured by encroachments and further would prevent a

repetition of the Springfield situation.

An examination of the basemap also discloses many areas built up with single and two family houses---a popular, and not objectionable type of development. To meet this demand a "Residence B" zone is proposed restricted to one and two family dwellings solely, in those areas showing a trend in that direction. This classification would be practically consistent and parallel with the present Class "A" zone.

In such close in areas as Riverside and Springfield, a new Residence "C" zone is proposed conforming closely with the present Residence "B" zone, in which one, two or a multi-family dwellings can be constructed to provide for the apartment house development of the future.

Reference to the proposed zone map (Plate #18) will show the limits and relative locations and sizes of the several zones.

The present zone map indicates considerable "Business B" property, especially in that area between McCoy Creek and Lackawanna Avenue in Riverside and along the Seaboard and Coast Line tracks. Manufacturing is excluded from "Business B" as now constituted yet light industry prevails, therefore to meet this situation much of this present "Business B" is being rezoned as an "Industrial A" to be consistent with existing tendencies. No change is proposed in the location or extent of "Industrial B" property.

It is advised for reasons stated previously that "Business A" business of first class retail characteristic, be restricted or abandoned in many instances and expanded in others. It is suggested that all of Springfield except as noted below be changed into "Residence C" to accomodate single family, duplex and apartments. (a) That Pearl Street-Fifth to S. A. L. Road; Main Street from First Street to S. A. L.; Walnut Street, First to Eleventh; First Street--Laura to Market Street; Eighth Street from Perry Street to the Railroad; be designated "Business A" and (b) that area bounded by the alley south of Twelfth Street and Railroad on North and Liberty Street on the east



be designated "Business B" and (c) that area bounded by Liberty on West, Eighth on the South and railroads on the east be designated "Industrial A" (d) Before the next legislature a more comprehensive, enabling act should be compiled and enacted, one providing for a non-political Board of Appeals independent of the Council or Commission. An act similar to that prepared by the Zoning Advisory Committee of the United States Department of Commerce is recommended as a guide.

These several suggested modifications will have a tendency to protect developed home areas of the single family character, and provide additions for the future, also permit areas for the development of single and two family dwellings exclusive of apartments and also provide for apartments in areas which by virtue of their "near-in" locations are rapidly being transformed into apartment areas.

In contemplating any new plan of zoning the character of the property contiguous to the city must be considered along with the trend in those outlying areas. It is universally customary in developing new residential areas to restrict the character of developments by deed provisions; such was done in Avondale, Panama Gardens, Shadowlawn, Arden, Ortega Terrace, Venetia and Lake Shore, the three latter being contiguous to, but outside the city limits.

A zoning ordinance should always be accompanied by a map or maps clearly defining and qualifying each of the several districts; the validity of an ordinance without the map is questionable. And on the zone map each district should have definite terminals instead of having a given zone type merely indicated along a street. These qualities of indefiniteness contribute to ambiguity and complicate interpretation.

A councilman or commissioner should not be obliged along with his other duties to also be a member of a Zoning Board of Appeals. Such Board should be independent of political bodies and thereby be more free in their deliberations. As constituted at present a councilman sitting on the Board of Appeals

is placed in a potentially embarrassing position.

The proposed map also incorporates a greater area than at present. As was previously stated, 48% of the present land area is unrestricted; under the proposed scheme only 15% is unrestricted. Areas north of Brentwood now unzoned are given classifications to Trout River. Norwood is given districts Residential "A" "B" and "C", North Shore area Panama Gardens and Pearl Court are given Residential "A" classifications, etc.

In preparing the proposed zone map the existing conditions, general land values, building trends and acceptable practices in accord with modern zoning tendencies have been kept in mind throughout, and further the termini of the several zones have been made specific.

Following this exhaustive study of zoning the following recommendations are made:

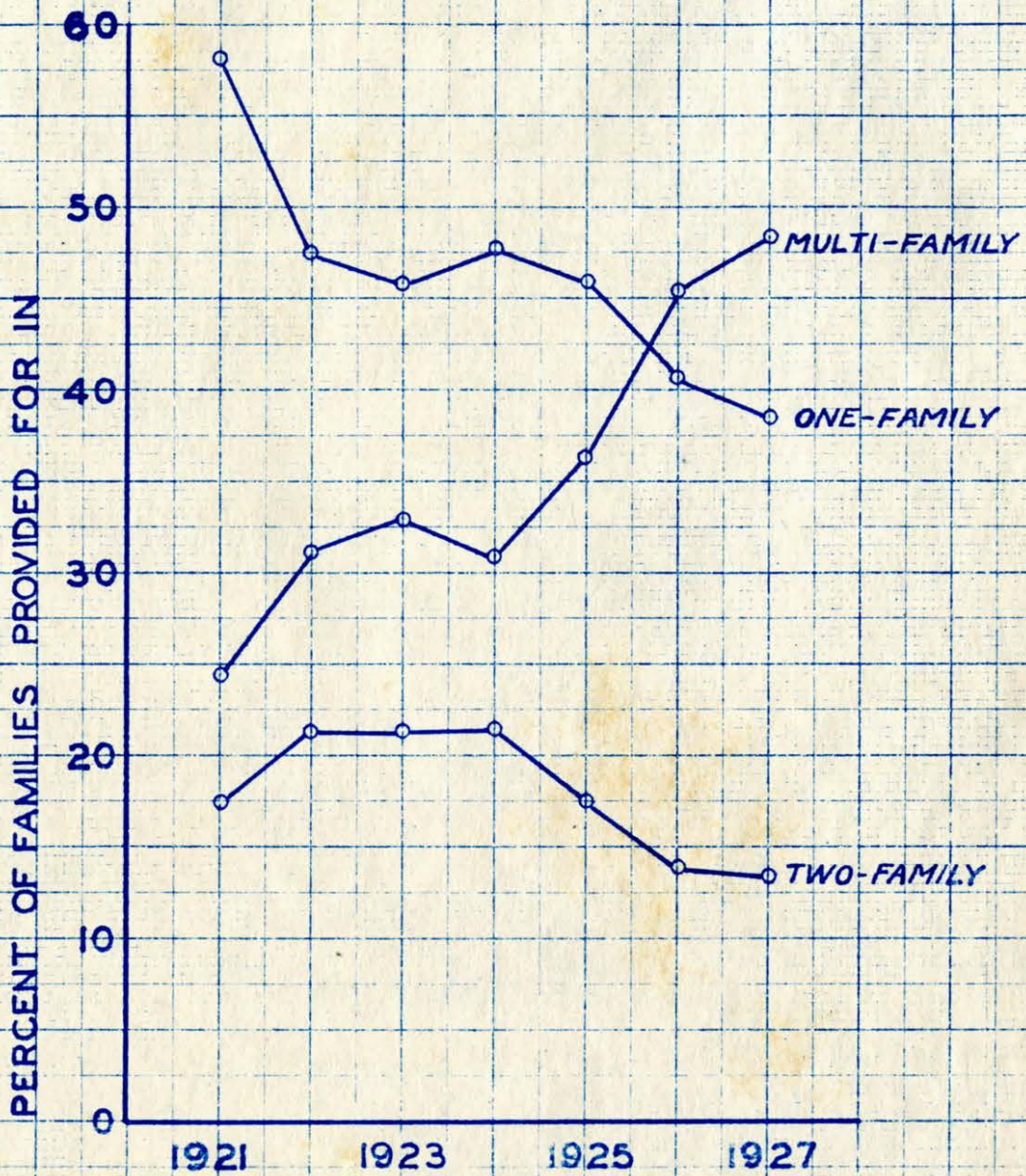
- (a) The present zoning ordinance be amended or rewritten to conform to the present tendencies, as shown in the field survey and as indicated on the proposed zone map.
- (b) The proposed zoning map which must always accompany the ordinance shall have definite terminal limits for each district.
- (c) The proposed ordinance shall be specific and orderly as regards the Board of Appeals; consistent with the legislative act enabling the city to zone.
- (d) That the proposed ordinance shall be equipped with a penalty clause.



TABLE 722

|                | Average   | Lot   | Street  | Average |      |          | Density |
|----------------|-----------|-------|---------|---------|------|----------|---------|
|                | Lot       |       |         | Front   | Side | % Area   |         |
|                | Dimension | Area  | Widths  | Yard    | Yard | Built On | Acres   |
| Panama         | 50 x 100  | 5000  | 50 - 60 |         |      |          | 5.0     |
| Panama Gardens | 100 x 300 | 30000 | 50      |         |      |          | 5.2     |
| Norwood        | 50 x 100  | 5000  | 50      | 14      | 21   | 20       | 3.4     |
| Brentwood      | 50 x 100  | 5000  | 50 - 70 |         |      |          | 14.0    |
| Fairfield      | 50 x 100  | 5000  | 30 - 50 |         |      |          | 28.7    |
| Springfield    | 40 x 120  | 4800  | 66      |         |      |          | 23.2    |
| Grand Park     | 50 x 100  | 5000  | 40 - 60 |         |      |          | 1.0     |
| Woodstock      | 50 x 100  | 5000  | 60      |         |      |          | 3.9     |
| Lackawanna     | 50 x 100  | 5000  | 40 - 60 |         |      |          | 7.5     |
| Murray Hill    | 50 x 100  | 5000  | 50 - 60 |         |      |          | 5.5     |
| Riverside      | 60 x 125  | 7500  | 80      |         |      |          | 14.3    |
| Avondale       | 60 x 100  | 6600  | 60      | 26      | 13   | 17       | 15.2    |
| St. Johns Park | 75 x 125  | 9375  | 60      | 22      | 24   | 12       | 5.14    |
| Ortega         | 85 x 150  | 12750 | 100     | 45      | 30   | 10       | 4.15    |

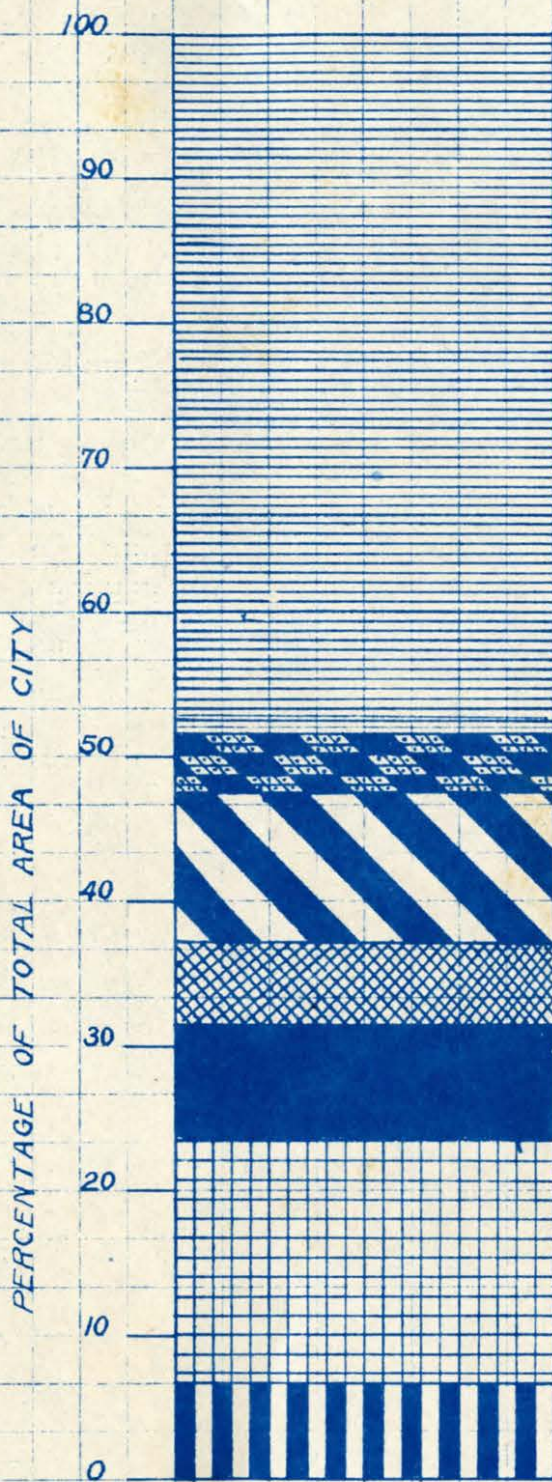




## DWELLING TENDENCIES IN UNITED STATES

FROM RECORDS OF 257 CITIES





NOT  
ZONED 48.22 12.866

|        |       |       |
|--------|-------|-------|
| IND. B | 4.22  | 1.128 |
| IND. A | 10.37 | 2.768 |
| BUS B  | 5.73  | 1.530 |
| BUS A  | 7.94  | 2.119 |
| RES B  | 16.76 | 4.469 |
| RES A  | 6.74  | 1.800 |

LEGEND      PERCENTAGE      SQUARE MILES

DISTRIBUTION OF  
PRESENT USES OF LAND  
IN THE  
USE ZONES  
MADE BY

GEO. W. SIMONS, JR.

DIAGRAM 22 A



PARK AND PARKWAY  
SCENES  
IN  
JACKSONVILLE

\*\*\*\*\*

JACKSONVILLE  
CAN HAVE  
BEAUTY  
SPOTS



The views at the top  
and left respectively  
AVONDALE CIRCLE park-  
way and EDGEWOOD AVE  
Parkway in Avondale.

Parkways similar to  
these can be developed  
anywhere in Jackson-  
ville.

Parkways have an  
aesthetic value. They  
cannot be used for re-  
creation.



Beauty spot in  
SPRINGFIELD PARK

Why cannot Jackson-  
ville have more such  
place?







Views in Memorial Park, Jacksonville.



## PARKS AND RECREATION

It is doubtful whether there is a more interesting and popular part of City Planning work than that pertaining to Parks, Open Spaces and Recreation. Certainly at least, no phase of planning should be of greater relative concern because on the adequacy of its parks, their improvement, maintenance and the completeness of its recreation system depends to a great degree the beauty and wholesomeness as well as the health, relaxation and enjoyment of its citizenry.

The park of yester year was a sylvan tract in some scenic locality where the citizen could retire and enjoy that passive relaxation and recreation incident to the peaceful enjoyment of its rural, sylvan and naturally scenic character. Passive or semiactive recreation was advocated, the dominant ideal being the peaceful enjoyment of the beautiful. No provisions were made in those early parks for active recreation; none had tennis courts, swimming pools, baseball diamonds or football fields. This early conception of the park was probably all right for that time but today the physical requirements of the people demand that active recreation must be included in any discussion or plan for future parks. In other words as recently stated in a report of the Bureau of Labor Statistics:

"At the end of nearly three quarters of a century of park development in the United States the term 'park' has come to mean any area of land or water set aside for outdoor recreation purposes, whether it be recreation of a passive or an active nature or of any of the degrees between those two extremes, and that the recreation is expected to come in part at least from beauty of appearance."

This definition justly includes our streams and beaches.

Parks generally speaking can be classified roughly as follows:

1. RESERVATION:- One or more large areas located in scenic rural sections,



remote from the city and maintained as far as possible in its virgin state. To be used for camping parties, fishing, arboretum, etc.

2. LARGE PARKS:- Naturalistic areas to preserve for the city dweller native topography and shrubbery. Such areas afford contacts with wild nature, nearer the city than the reservation and thereby available and accessible to more city dwellers. Hills and Dales of Dayton, Ohio, Franklin Park of Boston, Fairmount Park of Philadelphia and Overton Park of Memphis are parks of this class.

3. IN TOWN PARKS:- Plazas, squares, parkways or public gardens within the confines of the Business area. These offer places of public gatherings (Hemming Park), or sites of sub-civic centers as proposed at Myrtle Avenue and College Street, etc.

4. NEIGHBORHOOD PARKS:- These park spots are of primary importance; they are as indispensable as water and sewerage. Such areas, small in compass as a mile provide the neighborhood which they serve a vital means of intimate contact. They should be accessible, within walking distance (one half mile as a rule) of every one in the neighborhood. The wise city will provide a neighborhood park in each square mile of territory. Neighborhood parks must be serviceable--not merely wooded areas with sidewalks and benches scattered around, but their layout and arrangement should reflect the character of the community they serve. There should be no drives through them. Walk ways should be inviting--landscaping planned by a competent artist to insure setting and artistry. The whole arrangement should be trim, neat and adapted to the environment. Riverside Park, Willow Branch, Boone Park, Brentwood Park, Hooker Park, Woodstock Park, Gillen Park and the recently acquired Panama Park area give to the city splendid, well located areas which can and should be properly landscaped and equipped. There should be at least an acre for every 10,000 people in the area.

5. PARKWAYS AND BOULEVARDS:- A system of parkways utilizing creeks or drainage outlets with pleasure drive ways developed on either side. Such a system of boulevards and parkways along creeks afford the realization of a harmonious coordinated connected system of parks, supplemented by an acquisition of valuable drainage outlets. Such a system of parkways also lends itself to the development of a comprehensive, connected metropolitan parkway system combining the urban with the rural.

6. AREAS DEVOTED TO EDUCATIONAL - RECREATIONAL PURPOSES:- These are utilized for arboretums, botanical gardens, zoos, stadii, golf courses and airports.

7. SMALL SQUARES - OVALS, ETC.:- Small areas in which landscaping predominates. Examples of these thruout Avendale.

8. WATER FRONT PARKS:- River drives, beaches, bathing, etc. The foregoing defines several types of parks and recreation areas, but refers to no playground facilities or provisions which will be discussed subsequently.

Before proceeding to an analysis of the Jacksonville park situation it would be advisable to quote a paragraph from the Birmingham Park Report by Mr. Olmstead in which the crux of the case is clear,

"Park efficiency depends primarily on two fundamental factors: (a)

accessibility, and (b) the amount and quality, per unit of investment, of the opportunities provided for recreation--that is, for active play, for picnics, for enjoying the beauty of woods, turf and flowers, for the contemplation of broad, impressive scenery and for that refreshment for nerve strained, city strained men and women and children which we all know can be found in beautiful 'natural' country scenery, in the mountains, in the forests or in the fields."

According to the Commissioner of Parks, the City of Jacksonville owns the public lands, designated as parks, shown in Table #23. Many of the so-called parks it will be noted are small squares, triangles, strips or segments dedicated as parks or parkways in the original plats or were purchased for such by the City; these possess a value solely from the aesthetic standpoint and are little utility value. The approximate acreage of useful park areas (exclusive of small plots) is 275.

A casual examination of Table #23 and Plate #19 readily shows the need for more and larger parks. On a basis of 140,000 population and a gross acreage of 275, Jacksonville can boast today of only one acre per 509 people. The tendency among progressive alert cities is to devote at least 10% of its area to parks, or approximately one acre per 100 people. An examination of Diagram #23 pictures Jacksonville's relative position in this respect among other cities. The recent acquisitions of the new Woodstock Park, Gillen tract and the tract in Panama are to be highly commended; these tracts are all splendidly located to serve future tributary areas. Plate #19 shows the location of all park areas, with circles of half a mile effective radius drawn around those of principal importance.

One of the first recommendations relative to a future park development and expansion program is the improvement and care of what is already owned. Many of the areas now called parks are in a native, unimproved state imparting the atmosphere of the unkempt and shoddy; a few benches, perchance a sidewalk, and a bed of flowers labels the area "park." There is no evidence of predetermined planning or landscaping at any but Memorial Park. From all outward



POPULATION

0 100 200 300 400 500

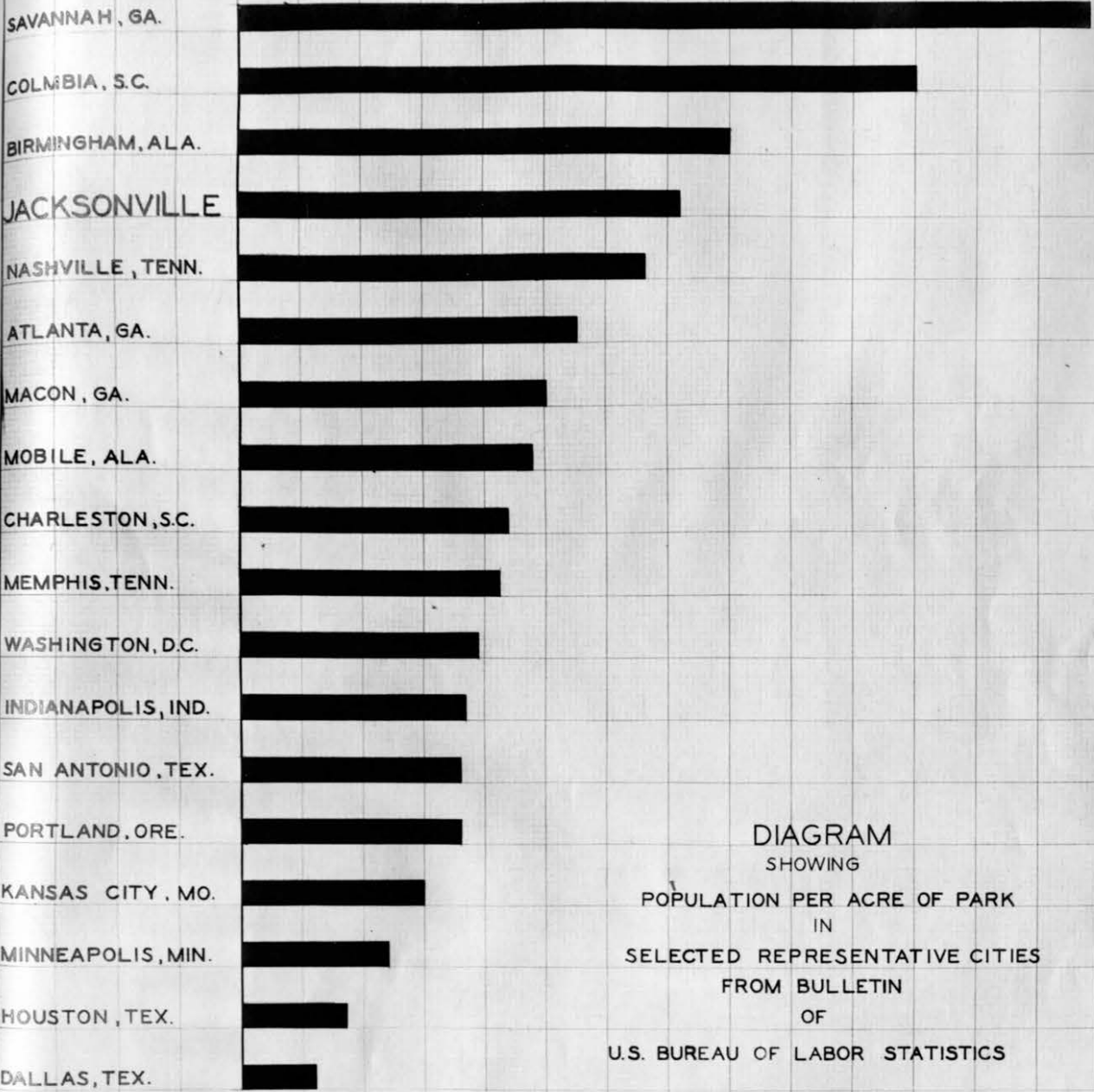


DIAGRAM  
SHOWING  
POPULATION PER ACRE OF PARK  
IN  
SELECTED REPRESENTATIVE CITIES  
FROM BULLETIN  
OF  
U.S. BUREAU OF LABOR STATISTICS

DIAGRAM 23  
23

appearances the following parks are unimproved and in their present condition are of little or no use to the tributary citizens, yet each one is susceptible to ambitious treatment and transformation into useful, attractive neighborhood parks; Glenn Lyra, Walter Edwards, Hollybrook, Murray Hill, and Stockton. The recently acquired Gillen and Panama Park sites are not included in this list, but they too are wholly unimproved as yet. Boone Park and Woodstock Park have been owned by the city for several years yet they are little improved to date,

Table #23 includes Hart Park, a tract of 100 acres located just north of State Road #1 near Marietta--the old plantation of I. D. Hart, the father of Jacksonville. This tract is lost in the woods yet it is one of Florida's beauty spots with its virgin shrubs, trees and wild crabapples. Most assuredly this park should be developed under the guidance of a master hand be converted into an arboretum, under the direction of the Federated Circles of Garden Clubs of Jacksonville. Such a development of beauty near Jacksonville, connected with the parkway program to be suggested subsequently, would annually attract thousands of people to Jacksonville.

A study of the existing park needs, conditions, supervision and maintenance in conjunction with a study of trends and tendencies elsewhere convinces one, first, that Jacksonville will need additional park area to care for its growing population, such areas to be selected with due regard to the demands; second, that a legislative act should enable the purchase of strictly local neighborhood park areas by assessments against areas and properties directly benefitted by such acquisition instead of by the city as a whole; and third, that there should be a reorganization, consolidation or coordination of the activities, and administration of the present Park Department and the Playground and Recreation Board to achieve and succeed with a wholehearted, efficient and harmonious future municipal program.

Parks and Recreation are so closely allied, their objectives have so



much in common and the success of one is so dependent upon the success of the other that to be successful and efficient their works should be closely coordinated and preferably be under the guidance and direction of one Board or Commission. No other department in the city can exert a more wholesome influence upon the morale, the stamina and healthfulness of the citizenry than a well-directed harmonious functioning Park and Playground Commission. Parks must be utilized to an extent for recreation and to accomplish their best results a cordial happy relationship should prevail between those administering parks and those directing recreation, functioning under a sole director.

The park and playground system as a coordinated unit should be so developed that playgrounds will be situated for service, that neighborhood parks will serve the whole community, that athletic fields will be established to minimize travel to them yet be serviceable to all sections, that large parks will provide varried scenic enjoyment and utilitarian services, etc.

During the past year the City Council and City Commission have been besieged with proposals and petitions to purchase park lands---some desirable others not. Some sites proposed were strictly of a neighborhood value, while others would benefit the city as a whole. Under the present plan of purchase the city as a whole is obliged to pay for an area of neighborhood value solely and imparting a neighborhood enhancement. This proceddure should be modified. Neighborhood parks benefit the immediate service area---not especially the city as a whole. The citizens tributary to them benefit directly; therefore why shouldn't the property of the tributary area be assessed for the purchase? Similarly where a park area is of equal value to all sections---where it benefits equally one area as it does another, the city as a whole should pay. Such practice has been prevalent in Minnesota (the Elwell act) and under its provisions the magnificent park system of Minneapolis has been developed, one of the outstanding park systems in this country. It is strongly urged that the city investigate the possibilities of the Elwell act for meeting



Views in Piedmont Park, Atlanta,  
a large in-town park.  
(above) pool, (below) Golf Course.





Jacksonville conditions in the future.

"Parks are an asset, their benefits are real, assessments for their cost are equitable and the payment of such assessments is a good investment, readily appreciated by every community," says Engineer Godward of Minneapolis.

According to the Elwell act of Minnesota:

1. Assessments must be made in proportion to benefits received, the assessment in no case being greater than the benefits.
2. The assessment must not be confiscatory, i. e., it must not be greater than the estimated value of the land assessed.
3. The assessment must be spread irrespective of the relative cash value of the various parcels of land affected.

Plate #19 shows the locations of all Parks, Playgrounds, Schools, etc., also circles of three quarters of a mile radius around each neighborhood park. (The Panama Park tract purchased since this plate was made) An examination of this plate shows the need for additional parks in the (a) St. Johns Park, Lake Shore section, (b) Norwood section, (c) North Shore section, and (d) that colored area in the vicinity of Edward Waters College, north of Kings Road. At least ten and preferably fifteen to twenty acres should be acquired in each of these sections for development into neighborhood parks. Plate #19 also shows tentative locations of several new neighborhood parks. The St. Johns Park region should be considered first in making future park acquisitions, next the Norwood area and third, the North Shore. In the latter section a sufficient amount of Trout River frontage should be acquired to fit into what the city also owns there. In the St. Johns Park district property on McGirts River should be acquired, available to Lake Shore as well as to St. Johns Park. Boone Park is the last park south until one reaches Ortega.

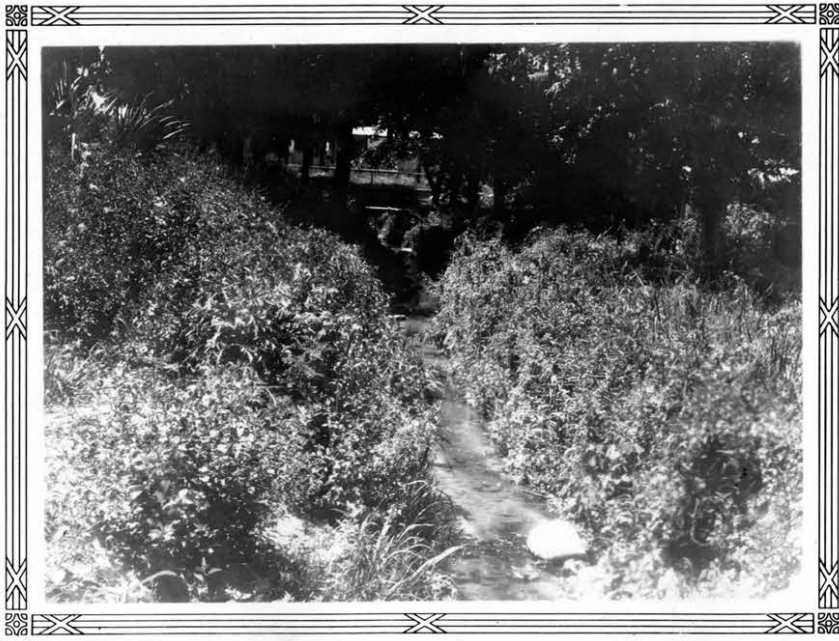
In several sections of the city, existing neighborhood parks should be enlarged to care for the future. Kooker Park should be extended northward to Twenty-first Street, and the East Jacksonville Park should be extended eastward by acquiring the property to Weare Street, also the block bounded by

Weare, Duval, Haines and Church Streets. The closing of Haines Street between Duval and Church Streets would give this section a neighborhood park of adequate proportions.

The McCoy and Hogan Creek improvements now in course of construction will contribute greatly to the aesthetics of the park system, especially the McCoy Creek development where previously **no parkway** existed. This improvement should be continued both north and southward, the former branch connecting with Westbrook Park and the latter with the recently acquired Gillen tract and thence towards Murray Hill. The acquisition of one hundred feet on both sides of these two forks tributary to McCoys Creek from the north and south, and converting them into beautiful parkways with drives on either side would create a splendid parkway system from Myrtle Avenue to Murray Hill and Westbrook. The possibilities of such a parkway are great; it would give Jacksonville a pleasure drive badly needed. Supplementing this last suggestion, attention is directed to the several small creeks in Jacksonville tributary to the St. Johns River, namely Deer Creek, Bigelow Branch, Smith Branch, Long Branch, Big and Little Fishweir and Moncrief Creek. Each of these affords a valuable useful drainage outlet serving extensive tributary areas. Sanitary and drainage conditions have been such in the past that each creek has been a potential health menace, a source of considerable expense to the Health Department. These creeks for the greater part of their lengths flow thru private lands, portions of which should be owned and controlled by the city for future drainage purposes. A strip 100-150 feet wide on both sides should be adequate for future park development. A parkway of this character was made along Sweetwater Branch at Gainesville, Florida, and today property on either side is among the most favored in the city. This scheme would create a connected parkway and boulevard system along each creek and simultaneously provide controlled drainage systems.

The present Murray Hill Park would serve more advantageously as a new





SWEETWATER BRANCH IMPROVEMENT, GAINESVILLE, FLORIDA  
The above photograph shows how the whole of Sweetwater Branch appeared only a few years ago, merely a small surface stream with shaggy, rough, unkempt unattractive banks, similar in all appearances to the several surface streams in Jacksonville that can be similarly improved and beautified.



How a stretch of Sweetwater Branch appears today. Note what a little properly directed effort has accomplished.



SWEETWATER BRANCH, GAINESVILLE, FLORIDA

These two views show clearly what transformations can be made in small surface streams in our communities. What was formerly an unattractive location is now numbered among the most favored of Gainesville. If the city of Gainesville can do such things with Sweetwater Branch, most assuredly the city of Jacksonville can with such streams of opportunity as Long Branch, Deer Creek, Bigelow Branch, McCoy Creek, Fishweir Creek and Willow Branch.







BIGELOW BRANCH(near East Fourteenth street) (above)

Here are the views of two small surface streams in Jacksonville that offer great possibilities for improvement and simultaneously give to the city essential and valued drainage outlets. These streams can be acquired, a few hundred feet on both sides and beautified in a manner similar to Gainesville's Sweetwater Branch shown previously.

"The beginnings of a parkway system"

Upper section of McCOY CREEK(near McDuff Avenue)(below)





WESTBROOK PARK, near Enterprise and McDuff Ave. (above)

The above shows what can be done toward utilizing a small stream in Jacksonville. While this park is well kept, there are chances for improvement, especially in keeping the place trim, clean and neat.

The lower picture, showing a section of McCoy Creek, is in direct line with a continuation of the McCoy Creek development already started.

Upper section of McCoy Creek, near Post Street (below)





school site, as suggested in the previous chapter on Schools. It is therefore recommended that the present park area be disposed of to the County Board of Public Instruction as a future school site and the City, in turn, purchase a new and larger, more advantageously located park site south of Murray Hill, west of the tracks, serviceable not alone to Murray Hill but likewise to that large undeveloped area southward destined to build up within the next five to ten years.

While it is true that several neighborhoods will need park areas in the near future, and further that park extensions are advisable in other areas, it is also true that Jacksonville needs more than all else at this time an outstanding, expansive park of proportions presenting a variety of scenic and utility features and attractions, to be ultimately developed into one of the most magnificent, beautiful parkway systems of America. The essentials of such a beauty spot are at the door of the city awaiting consideration---- the greatest opportunity ever presented to any city contemplating park expansion.

An examination of the regional topography surrounding Jacksonville discloses (See Diagram #24) a most fortunate natural condition conducive to the development of a magnificent metropolitan park system. Two creeks or streams have their origin in the highlands about seven miles west of the City Hall, in the vicinity of Marietta near Hart Park, one Ribault River or old Six Mile Creek, and the other Cedar River. The former, Ribault River, flows northeasterly into Trout River near the Lem Turner Road, the latter, Cedar River, flows southerly and southeasterly into Ortega River near Lake Shore. No point in this circular area is more than seven miles from the City Hall. The acquisition of strips of land on both sides of these creeks from Lake Shore to Lem Turner Road would enable Jacksonville to develop by degrees a parkway system as magnificent as any in the whole southland and one of the





PLATE 24

ST. JOHNS

JACKSONVILLE

RIVER

ST. JOHNS

Oakhurst  
Bride City

Grand Crossing  
Monarch Sta

Brooklyn

Murray Hill

South Jacksonville

St. Johns Park

Lakeside Park

Ortega

Hohingwood  
Phillips Pt

Floral Bluff

Eggleston Heights

Arlington

Empire Pt

St. Nicholas

Phillips

Spring Glen

Little

Phillips

Phillips

Phillips

Phillips

Phillips

Phillips

Phillips

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The sketch represents a river valley between two hills. In the foreground is the sea, with a bay that is partly inclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends

Public and through roads are shown by fine double lines; private and poor roads by dashed double lines; trails by dashed single lines.

Each quadrangle mapped for the topographic atlas is designated by the name of a principal town or of some prominent natural feature within the quadrangle, and on the margins of the maps are printed the names of adjoining quadrangles for which atlas sheets have been published or are in preparation. The sheets are sold at 10 cents each in lots of less than 50 copies or at 6 cents each in lots of 50 or more copies, whether of the same or of different sheets.

The topographic map is the base on which the geology and the mineral resources of a quadrangle are represented, the maps showing these features being bound together, with a description of the quadrangle, to form a folio of the Geologic Atlas of the United States. Circulars showing by index maps the published topographic atlas sheets and geologic folios covering any State or region will be sent free on application.

Applications for maps or folios should be accompanied by cash—the exact amount—or by post-office money order (not postage stamps), and should be addressed to—

THE DIRECTOR,

United States Geological Survey,  
Washington, D. C.

January, 1915.

CONVENTIONAL SIGNS

CULTURE  
(printed in black)

|              |                                 |                   |                 |                                                        |                             |                                            |                       |                            |      |
|--------------|---------------------------------|-------------------|-----------------|--------------------------------------------------------|-----------------------------|--------------------------------------------|-----------------------|----------------------------|------|
|              |                                 |                   |                 |                                                        |                             |                                            |                       |                            |      |
| Rail or path | Railroads                       | Electric railroad | Tunnel          | Wharves                                                | Breakwater and jetties      | Bridges                                    | Drawbridges           | Ferry<br>(point up stream) | Ford |
|              |                                 |                   |                 |                                                        |                             |                                            |                       |                            |      |
| County line  | Civil Township or district line | Reservation line  | Land grant line | City, village or borough line                          | Small park or cemetery line | Triangulation or primary traverse monument | U.S. mineral monument | Boundary monument          |      |
|              |                                 |                   |                 |                                                        |                             |                                            |                       |                            |      |
| Oil wells    | Mine or quarry                  | Prospect          | Shaft           | Mine tunnel<br>(showing direction) (direction unknown) | Mine tunnel                 | Light-ship                                 | Lighthouse or beacon  | Life-saving station        |      |

WATER  
(printed in blue)

|              |                  |                                  |                   |                         |                 |              |                                         |
|--------------|------------------|----------------------------------|-------------------|-------------------------|-----------------|--------------|-----------------------------------------|
|              |                  |                                  |                   |                         |                 |              |                                         |
| Streams      | Falls and rapids | Intermittent streams and ditches | Canals or ditches | Aqueducts or waterpipes | Aqueduct tunnel | Lake or pond | Unsurveyed streams and abandoned canals |
|              |                  |                                  |                   |                         |                 |              |                                         |
| Intermittent | Glacier          | Spring                           | Salt marsh        | Fresh marsh             | Grassy pond     | Tidal flat   |                                         |

Territory, has been covered only by reconnaissance results of which have been mapped on a scale of 1:250,000, or about 4 miles to an inch. The maps of nearly all the remaining of the surveyed area have been published on a scale of 1:62,500, or about a mile to an inch. These maps each representing 2° of latitude by 4° of longitude, areas that are of economic importance, aggregating 3,000 square miles, have been surveyed in great detail and mapped on a scale of 1:62,500, or about a mile to an inch.

A survey of the Hawaiian Islands was begun in 1892, and the resulting maps are being published on a scale of 1:62,500, or about a mile to an inch.

The features shown on these atlas sheets are classified in three groups—(1) *water*, including seas, canals, swamps, and other bodies of water; (2) *relief*, including mountains, hills, valleys, and other elevations; (3) *culture* (works of man), such as towns, railroads, and boundaries. The conventional signs for these features are shown below, with explanations. Some of these features appear on some earlier maps.

|                                                                                                |                                                                                               |                                                     |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------|
|                                                                                                |                                                                                               |                                                     |
| City or village                                                                                | Roads and buildings                                                                           | Metaled road<br>(distinguished on recent maps only) |
|                                                                                                |                                                                                               |                                                     |
| Dam                                                                                            | Canal lock<br>(point up stream)                                                               | U.S. township section line and located corner       |
|                                                                                                |                                                                                               |                                                     |
| Bench mark<br>(Temporary bench marks shown by brown cross and black figures without lettering) | Cemeteries                                                                                    | Church                                              |
|                                                                                                |                                                                                               |                                                     |
| Figures<br>(showing heights above mean sea level, instrumentally determined)                   | Contours<br>(showing height above sea horizontal form, and steepness of slope of the surface) | Depression contour                                  |
|                                                                                                |                                                                                               |                                                     |
| Wash                                                                                           | Cliffs                                                                                        | Mine                                                |

RELIEF  
(printed in brown)





RIBAULT RIVER (Old Six Mile Creek)

These pictures taken from the Moncrief Road bridge look along the site of the proposed Metropolitan Park. Imagine a boulevard along this stream with areas for picnicking, camping, fishing, etc. No city in America has such an opportunity before it for the development of a comprehensive park plan.







Views taken along TROUT RIVER near Lem Turner Road. This present County Road would become a part of the scenic drive from Lake Forest to Lake Shore. Winding roads, native shrubs, clean uncut trees, broad expanses of water and bluffs would greet the pleasure driver on this scenic route.



outstanding of the world. A picturesque, scenic boulevard system established from Lake Shore to Lake Forest would provide a scenic highway along two of the most beautiful waterways to be found anywhere---streams bordered with lowlands, highlands and bluffs fringed with tropical shrubbery. The parkway strips would lend themselves to expansion at favored intervals into large park areas, scenic spots to which the tired and weary could retire for the relaxation and enjoyment of picnic, fish, boat or camp. The two streams, as a part of their ultimate development could be joined together near their points of origin creating thereby a boating and canoeing paradise extending from McGirts to Trout River, and finally, bridle paths could be extended throughout the park area giving outlet to those enthusiasts who now journey forth in restricted areas. This development would also give to the future Jacksonville a control over the principal drainage outfalls around the city--in itself of inestimable sanitary value. This park system incorporates a minimum average of about 2200 acres. And notably this proposed park system is adjacent to and capable of connection with Hart Park to the west, already owned by the city, thereby giving access to and enabling the ready development of this virgin sylvan area into a great arboreatum.

This suggestion scents of the impossible, the impracticable and visionary! It is a large ambitious order, but one easily and successfully accomplished by an eager, enthusiastic citizenry who desire to achieve great, seemingly insurmountable objects for their city. It is not a program to be "put over" in a day but one to be executed over a period of years.

The city owned property at Forest and Palm, now used for two baseball diamonds should be graded, landscaped and beautified with shrubs and trees to provide an additional neighborhood park which would be a very useful unit in the comprehensive system.

Subdividers and developers, within or outside the city should be encouraged to provide adequate park and recreation untis in their plans of



development. Curved street layouts lend themselves particularly to attractive treatment as one can observe in Avondale.

Bridge approaches should be kept trim and be planted with native shrubs.

The foregoing park improvements will give to Jacksonville a comprehensive park system to aspire to---to work for and realize as the city grows and expands. From the standpoint of economy the time to acquire outlying lands is in advance of development.

#### Recreation.

The recreational activities of the city are conducted under the direction and management of the Playground and Recreation Board, operating independent of the City Commission, City Council and the Commissioner of Parks. With the exception of one area (Lackawanna Play Field) all other recreational activities are carried on in neighborhood parks under a "temporary franchise" from the City Commission. Plate #19 indicates where playgrounds are located; Plate #20 enumerates the equipment at each.

The Playground and Recreation Board receives annually from the City taxes, not less than one mill, which in 1927 netted \$94000 and in 1928, \$94000 minus a ten percent deduction. The Board can purchase property, purchase, build or install equipment and facilities as well as operate and direct recreational activities.

Public recreation is an essential of modern city life; play and contact with nature are universally recognized as antidotes for the poisons of modern life. No city can afford to minimize or slight its recreational obligations. Recreational activities as interpreted today not only comprehend playgrounds with swings, teeters and sand boxes for children, but also include swimming pools, athletic fields, camps for boys and girls, community centers for adults, grounds and facilities where drills, pageants, exhibitions and amateur theatricals can be held.

Community recreational facilities can be classified as follows:-

- (a) Interior block playgrounds for small children one to six years of age. Home Play.
- (b) School ground playgrounds---six to fifteen years of age.
- (c) Neighborhood Parks---fifteen to twenty-five years of age.
- (d) Athletic fields---fourteen to twenty-four years of age.
- (e) Reservations, camps, for boys, girls, adults.
- (f) Community Centers, for adults.

Small children, less than five years of age, constituting about ten percent of the population do not patronize public playgrounds to any appreciable extent.

Their play is usually done at home, but with the increasing trend toward apartment dwelling in certain sections home grounds are being reduced and street play is becoming increasingly hazardous. To provide for these small children, about 15000 of them in Jacksonville now and to be about 40000 in 1950 the proposed platting regulations of the city (See previous chapter of this Report) will suggest minimum lot sizes and also encourage future land developers to provide adequate and safe playgrounds. Interior play areas (see Diagram #25) are becoming increasingly popular and wherever placed in plats provide excellent opportunity for play activities, not alone of the younger ages, but of the older groups as well. In all neighborhood parks small plots should be defined (about 2500 square feet) to be devoted solely to the small children. This provision is absolutely necessary in those areas zoned for apartments. By preserving adequate rear yard regulations considerable home play space can also be acquired.

Children from six to twelve years of age spend a great part of their time at school where the desire and instinct to play is keen and alert. Adequate grounds should therefore be provided for play at each elementary school.

According to information in the chapter on Schools nearly 15000 children were enrolled in elementary schools during 1927-28, and in 1940 this number will have increased to approximately 20000. Most assuredly the children of the future should not be restricted and confined to the present inade-





Jacksonville, Florida.  
Water Sports have a great place in  
the recreational life of  
Young and Adult Jacksonville.



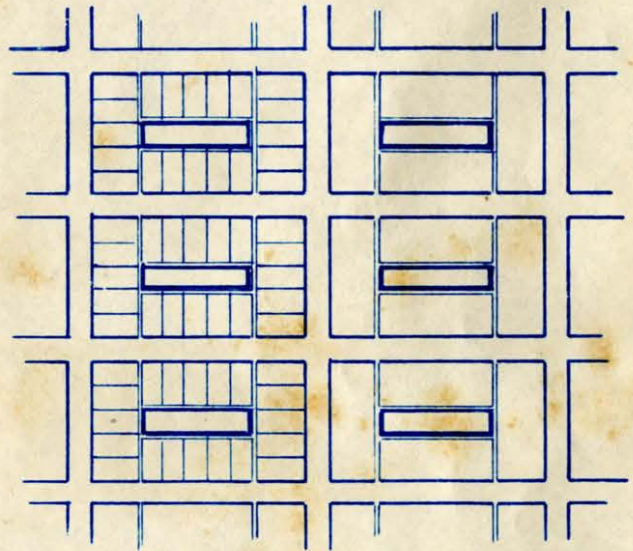
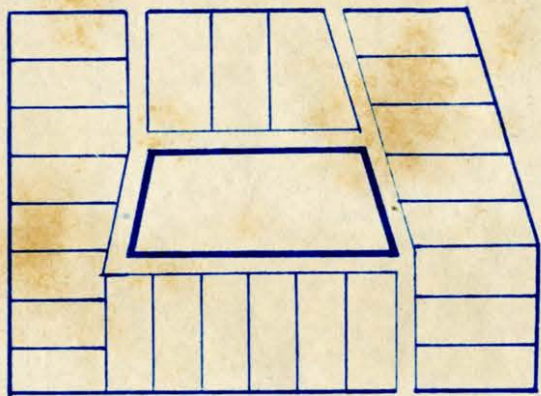
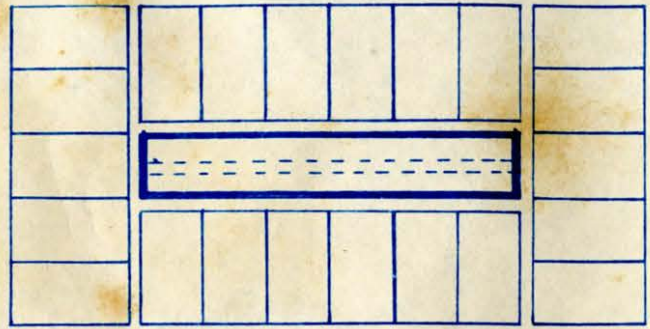
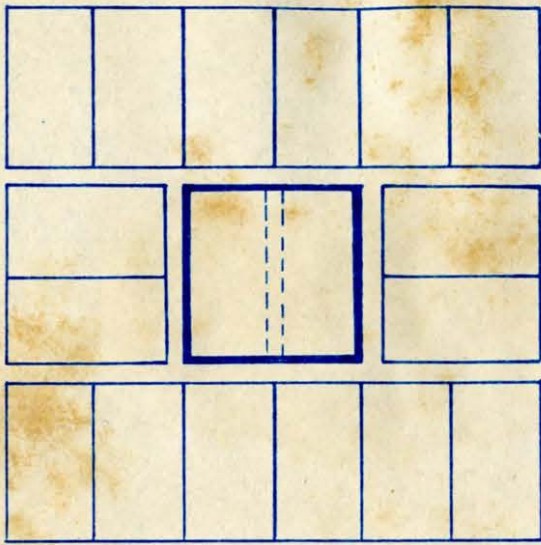


**JACKSONVILLE, FLORIDA.**

The beaches and jetties are factors in the healthfulness and recreation of the citizenry.







**A PLAN OF USEFUL DEVELOPMENT  
INTERIOR PLAYGROUNDS**

**GEORGE W. SIMONS, JR.  
CITY PLAN ENGINEER**

Street Triangles - Park Ways - Circles, etc.

Avondale----twenty-four street parks and triangles  
Barrs Terrace (parkway) Barrs Street and St. Johns Avenue  
Bettis Park----all in Ortega (street parks)  
Cortez Park---- " " " " "  
DeSoto Park---- " " " " "  
Marbuett Park " " " " "  
Point Park " " " " "  
Bryan Park----Trout River, east of Pearl Street, triangle  
North Shore Park----Trout River, east of Pearl Street, triangle  
Trout Park----- " " " " " " " "  
Acosta Park----Park and Acosta Streets, street triangle  
Detroit Park----Woodstock, triangles  
Jassamine Park----Murray Hill, street parkway  
King and Post Streets---street triangle  
Nolan Park----Ortega Boulevard and 63rd Street  
Pine Grove Park----Pine Grove Avenue at St. Johns  
Selma and Downing Park----Selma and Downing Streets  
Stinson Park----Ortega bridge head  
Twenty-first and Hubbard Streets----21st and Hubbard  
Edgewood Avenue----parkway  
Ingleside Avenue----parkway



TABLE #23

| Park          | Location                     | Approx. Acreage. |
|---------------|------------------------------|------------------|
| Boone         | St. Johns Avenue & VanWert   | 29.0             |
| Brentwood     | Colfair & Springfield Blvds. | 20.0             |
| Brown's       | Beaver & St. Johns River     | 6.0              |
| City Electric | Talleyrand at Power Pl.      | 9.0              |
| Confederate   | Main & Phelps                | 5.0              |
| Fairfield     | Duval & Wear                 | 4.0              |
| Glen Myra     | 8th & Bridier                | 6.0              |
| Hollywood     | Fitzgerald & Sunshine        | 21.0             |
| Kooker        | 18th Street & Kooker         | 6.0              |
| Edwards       | 11th & Franklin Streets      | 2.5              |
| Murray Hill   | Kerle & Harkisheimer         | 8.3              |
| Riverside     | Park & Gilmore               | 14.0             |
| Springfield   | Laura; 1st to 8th            | 43.0             |
| Stockton      | Ortega Blvd.                 | 3.5              |
| West Brook    | Westbrook Avenue & Orchid    | 6.0              |
| Willow Branch | Park & Willow Branch         | 15.0             |
| Woodlawn      | Stockton & McCoy Creek       | 0.9              |
| Woodstock     | Enterprise, West of McDuff   | 14.0             |
| Gillen        | West of McDuff               | 11.5             |
| Panama        | Buffalo Avenue               | 10.0             |
| Zoo           | North Trout Creek            | 10.0             |
| Oakland       |                              | 0.9              |
| Hart          | near Marrietta               | <u>100.0</u>     |
|               | TOTAL                        | 350.00           |



The Zoo.  
Jacksonville has the beginning of a splendid Zoo.



quate school grounds and crowded into streets, and for this reason the previous recommendations for additional school grounds were made. Unfortunately many Jacksonville schools are located on major highways which is not conducive to safety.

Neighborhood Play Parks should be located preferably within every square mile of area; they can properly be included in the Neighborhood Parks referred to in the preceding section. They should be equipped with sandpiles, shelters, swings, teeters, volley ball, basket ball and tennis courts, etc. Such play parks can be established in existing neighborhood parks without destroying the beauty or possibilities of the park from an aesthetic standpoint. A judicious use of shrubs and hedges will convert a playpark into a community asset.

Community athletic fields should preferably be located near high schools, equipped with baseball diamond, football field, track and other facilities for the use of the older population as well as the schools. In remote corners smaller equipment for the younger folks can also be provided.

Reservations for camping parties, outings, the rental of huts, horseback riding, golf and recreation of the older folks can be located and developed at intervals in the metropolitan park scheme referred to in the preceding section.

Community centers for indoor social and recreational activities should be encouraged and provided in every populous section of the city. The public school is the logical center for use, where the patrons can assemble to discuss the problems of the locality and create or stimulate a new civic consciousness.

Reference to Plates #19 and #20 illustrate the distribution and character of equipment at the present play areas. At present school grounds are not being used to advantage for supervised play and generally speaking all



View showing type of neighborhood  
PLAY PARK  
being installed by  
the  
PLAYGROUND AND RECREATION BOARD

NORWOOD PLAY  
PARK

Located at the corner of Lem Turner Road and Escambia St.



recreation sites are deficient in equipment. The Playground and Recreation Board should be commended however for the progress they have made during the past two years, especially in their development of the Norwood Play Park and Lackawanna Play Field both of which are outstanding achievements.

To ascertain to what extent the several supervised play areas were being patronized a series of checks were made at each one, the interesting results of which are shown on Plate #21. From this study one will observe that railroads and major highways exert an influence on the range of effectiveness of a play space. Few children from Woodstock, for instance, or from Westbrook cross State Road #1 to the Lackawanna Play Field. Similarly few from the Riverside section cross the Atlantic Coast Line Road to go to the Lackawanna Play Field and few cross Edgewood Avenue to attend play at Willow Branch. It will further be noted that none of the patronage at the Riverside Park site comes from the area south of Riverside Avenue where home play predominates. The dire need of a Play Park in North Central Springfield is clearly shown from the widespread attendance at the small Whiddon lot at Peral and Cottage Streets. This information shows where facilities are needed.

In contemplating the future playground and field program for Jacksonville, one must have a knowledge of the population, its distribution, trend of movement and character. And further, in planning such a program one should endeavor to make facilities of all types and for all uses accessible or within reach. Equipment of one type should not be concentrated in one section, and equipment of another in a second section. If an athletic field with swimming pool and recreation facilities is accessible to one group of predominating characteristics, then it should also be made available eventually to other sections. As stated elsewhere play facilities for the younger folks (six to fourteen) should be available and easily accessible in practically

### Playground and Recreation Sites

|                    |                                    | Number<br>of<br>Acres | Percent of<br>Total Park<br>Area |
|--------------------|------------------------------------|-----------------------|----------------------------------|
| Brentwood          | Golfair Blvd. & Springfield Blvd.  | 0.3                   | 0.15                             |
| Confederate Park   | Hubbard & Market Sts. Hogans Creek | 4.0                   | 100.00                           |
| Durkee Field       | Myrtle Avenue & 7th Street         | 5.0                   | 100.00                           |
| East Jacksonville  | Georgia St. between Monroe & Duval | 2.8                   | 100.00                           |
| Walter Edwards     | 11th & Franklin Streets            | 2.5                   | 100.00                           |
| Fairfield          | Duval & Weare Streets              | 0.25                  | 0.06                             |
| Springfield        | Fifth & Perry Streets              | 0.30                  |                                  |
| Springfield        | Second & Boulevard                 | 0.001                 | 1.01                             |
| Springfield        | Tourist Playground                 | 0.001                 |                                  |
| Forest & Palm Sts. | Forest & Palm Streets              | 11.0                  | 100.00                           |
| Lackawanna         | Lackawanna Avenue                  | 9.0                   | 100.00                           |
| LaVilla            | Clara Terrace, Church to Beaver    | 3.0                   | 100.00                           |
| Stadium            | East Adams at Haines               | 11.3                  | 100.00                           |
| Norwood            | Lem Turner Rd. & Escambia Street   | 0.7                   | 100.00                           |
| Oakland (Col.)     | Union & Ionia Streets              | 0.9                   | 100.00                           |
| Stanton (Col.)     | Beaver & Clay Streets              | 0.4                   | 100.00                           |
| Riverside          | Park & Gilmore Streets             | 4.0                   | 30.00                            |
| 2nd & Clark        | Second & Clark Streets             | 1.3                   | 100.00                           |
| Westbrook          | Westbrook Avenue                   | 1.0                   | 16.00                            |
| Whiddons           | Pearl & Cottage Streets            | 0.3                   | 100.00                           |
| Wilder Park (Col.) | Second & Johnson Streets           | 4.0                   | 100.00                           |
| Willow Branch      | Cherry & Park Streets              | 4.0                   | 27.00                            |

Total Acres-----66.1

100% indicates that entire park area is devoted to playground and recreation.



every square mile utilizing school sites in all instances where necessary. And finally existing park areas should be utilized in part for recreation there is no logical consistent reason why recreation of an active nature should be prohibited from any park area. But in utilizing park areas the privilege should not be abused and the landscaping scheme coordinated with that of the recreation. Therefore in the light of the foregoing observations the following recommendations are made:-

1. That portions of all neighborhood parks be allotted to the Playground and Recreation Board for development into active serviceable neighborhood playground units, such units to be equipped with facilities for children as well as for adults.
2. That school grounds be devoted to a large degree to supervised neighborhood recreation.
3. That the Playground and Recreation Board consider the establishment and development of a neighborhood play park, similar to that in Norwood, in every square mile of populated land area, where existing neighborhood parks will not permit readily of such development.
4. That complete athletic fields similar to that in Lackawanna be established and developed in the following areas:- (a) Panama, (b) Brentwood, (c) St. Johns Park, and (d) East Jacksonville, The stadium grounds could provide for the latter. And in this connection it is advised that a portion or all of the present State Fair Grounds be acquired for development into an athletic field and extensive neighborhood park to serve the future Brentwood, Norwood and North Springfield sections.
5. That provisions should be made for the establishment, when necessary, of complete recreation units in the proposed new park areas for Murray Hill and St. Johns Park.
6. In the development of Willow Branch Park, a open garden theater should be provided utilizing the natural sloping banks on both sides of the stream. A



View in WILLOW BRANCH PARK, JACKSONVILLE, taken from Sydney Street looking south. The sloping banks and beautiful trees lend themselves to development into an outstanding open air GARDEN THEATER.



natural stage can easily be excavated from one bank and the seats terraced in the other. Such a development would be an outstanding contribution of cultural value where drills, community pageants, plays and musicals could be staged.

7. That Pilcher Park at 10th and Liberty be converted into a neighborhood play unit now, and further that this park be augmented by the lots extending to the east lot line of the school property.

8. That additional play space be provided in the area between Main and Pearl Streets and between First and Eleventh. The small loaned lot at Cottage and Pearl is the sole play area now. This area should have a full block.

9. That Springfield Park be developed so as to permit active recreation from Eighth Street to Laura Street.

## WATER SUPPLY

The City of Jacksonville owns and operates its water supply and distribution utility. The main station established in 1879 is located in Water Works Park between Main and Laura Streets near First; the new Riverside station, established in 1926, is located at McDuff Avenue and A. C. L. tracks.

All water is derived from an artesian source, the Ocala limestone formation. There are a total of twent~~h~~<sup>y</sup>-one wells varying in depth from 650 feet to 1150 feet; two wells have however been closed because of their diminished flow, namely wells at Main and Phelps and 7th and Silver. Table #25 gives in clear tabular form a history of the Jacksonville well supply. As will be noted from the foregoing table the several wells are located in diverse sections of the city, yet the first fourteen are on well sites within one mile of the main station. The water supply wells and distribution systems of Ortega, and Murray Hill were acquired in 1927 and those of Woodstock and Milldale in 1928.

In addition to those areas served by the city's system, several privately owned and operated water supply systems are serving remote areas small in compass as shown by Plate #22.

The water from wells tributary to the main station flows through three main collecting lines to the station grounds where they connect with two aerators and two covered reservoirs. From the reservoirs or aerators the water flows into a suction tunnel from which it is pumped to distribution also to storage. The areator basin capacity is 85000 gallons each and that of the north reservoir is 1.8 million gallons. The storage reservoir located at the corner of Orange and Laura Streets has a capacity of 3.0 million gallons. Wells can be diverted direct to distribution if necessary. At the suction



# HISTORY OF ARTESIAN WATER SUPPLY, CITY OF JACKSONVILLE

| No. | LOCATION<br>MAIN ST. PUMPING STA.         | SIZE | YEAR<br>DRILLED | DEPTH<br>IN FT. | YEAR<br>ACQUIRED | DATE<br>INTO SER. | PUMP UNIT<br>AVAILABILITY | INITIAL FLOW<br>GALLONS PER DAY | ESTIMATED<br>FLOW 1-1-1920 | WELLS DEEPEINED |       |           | EST. FLOW<br>JAN 1 <sup>ST</sup> 1926 | ACTUAL FLOW<br>JUNE 1 <sup>ST</sup> 1929 | TEMPERATURE |        |
|-----|-------------------------------------------|------|-----------------|-----------------|------------------|-------------------|---------------------------|---------------------------------|----------------------------|-----------------|-------|-----------|---------------------------------------|------------------------------------------|-------------|--------|
|     |                                           |      |                 |                 |                  |                   |                           |                                 |                            | DATE            | DEPTH | FLOW      |                                       |                                          | DATE        | DEG F. |
| 1   | MAIN AND PHELPS                           | 6"   | 1886            | 650             |                  |                   |                           | 360,000                         | 90,000                     |                 |       |           | 80,000                                |                                          |             |        |
| 2   | SOUTH OF ELECTRIC SUB STATION             | 10"  | 1889            | 1020            |                  |                   |                           | 864,000                         | 300,000                    |                 |       |           | 200,000                               | 256,000                                  |             |        |
| 3   | 7 <sup>TH</sup> ST. AND SILVER            | 12"  | 1896            | 950             |                  |                   |                           | 800,000                         | 0                          |                 |       |           | 0                                     | 0                                        |             |        |
| 4   | 7 <sup>TH</sup> ST. AND SILVER            | 10"  | 1904            | 770             |                  |                   |                           | 650,000                         | 150,000                    | 1921            | 1260' | 1,780,000 | 750,000                               | 790,000                                  |             |        |
| 5   | 1 <sup>ST</sup> AND LAURA STS.            | 10"  | 1901            | 950             |                  |                   |                           | 1,600,000                       | 305,000                    | 1924            | 1270' | 1,800,000 | 1,200,000                             | 1,440,000                                |             |        |
| 6   | MARKET AND PHELPS                         | 10"  | 1905            | 980             |                  |                   |                           | 1,900,000                       | 240,000                    | 1922            | 1248' | 2,000,000 | 1,750,000                             | 2,070,000                                | 2/10/29     | 85     |
| 7   | HUBBARD AND CONFEDERATE PK.               | 10"  | 1907            | 980             |                  |                   |                           | 1,810,000                       | 300,000                    | 1923            | 1250' | 2,000,000 | 1,750,000                             | 1,520,000                                | 2/10/29     | 85     |
| 8   | LIBERTY " " "                             | 10"  | 1910            | 980             |                  |                   |                           | 1,310,000                       | 350,000                    | 1923            | 1250' | 1,600,000 | 750,000                               | 710,000                                  |             |        |
| 9   | THIRD AND BOULEVARD                       | 12"  | 1911            | 980             |                  |                   |                           | 700,000                         | 650,000                    |                 |       |           | 500,000                               | 640,000                                  |             |        |
| 10  | FIFTH AND HOGANS CREEK                    | 12"  | 1912            | 1015            |                  |                   |                           | 1,900,000                       | 1,500,000                  |                 |       |           | 1,200,000                             | 895,000                                  | 2/10/29     | 80     |
| 11  | SEVENTH " " "                             | 10"  | 1912            | 1015            |                  |                   |                           | 2,362,000                       | 1,700,000                  |                 |       |           | 1,200,000                             | 1,750,000                                | 2/11/29     | 77.5   |
| 12  | SECOND " " "                              | 10"  | 1916            | 1042            |                  |                   |                           | 2,350,000                       | 800,000                    | 1925            | 1277  | 2,000,000 | 1,470,000                             | 1,090,000                                | 2/11/29     | 80.5   |
| 13  | EIGHTH " " "                              | 10"  | 1918            | 1071            |                  |                   |                           | 1,800,000                       | 1,650,000                  |                 |       |           | 1,100,000                             | 1,495,000                                |             |        |
| 14  | FIRST " " "                               | 10"  | 1921            | 1150            |                  |                   |                           | 2,250,000                       |                            |                 |       |           | 1,150,000                             | 975,000                                  |             |        |
|     | <u>RIVERSIDE PUMP. STA.</u>               |      |                 |                 |                  |                   |                           |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 15  | MCDUFF AVE AND SELMA                      | 12"  | 1926            | 1034            |                  | 4-19-27           |                           | 2,448,000                       |                            |                 |       |           |                                       | 1,712,000                                | 2/11/29     | 82     |
| 16  | SELMA W. OF MCDUFF AVE.                   | 12"  | 1927            | 1039            |                  | 4-19-27           |                           | 2,361,000                       |                            |                 |       |           |                                       | 1,580,000                                |             |        |
|     | <u>EMERGENCY PUMP STATIONS</u>            |      |                 |                 |                  |                   |                           |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 17  | CORTEZ PARK - ORTEGA                      | 8"   | 1923            | 729             | 1927             | 2-24-28           | 750,000                   |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 18  | DESOTO PARK - ORTEGA                      | 8"   |                 | 720             | 1927             | 2-29-28           |                           |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 19  | MURRAY HILL - POST AND TRASK              | 6"   | 1913            | 900             | 1927             |                   | 750,000                   |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 20  | WOOSTOCK - HURON AND BEAVER               | 10"  | 1911            | 1079            | 1928             |                   | 750,000                   |                                 |                            |                 |       |           |                                       |                                          |             |        |
| 21  | MILLDALE - 63 <sup>RD</sup> W. OF BUFFALO | 8"   | 1914            | 700             | 1928             |                   | 750,000                   |                                 |                            |                 |       |           |                                       |                                          |             |        |

TOTAL — 3,000,000

RIVERSIDE PUMP STA. WELLS  
3,292,000

TOTAL 16,923,000

TABLE 25



tunnel the water is chlorinated.

At the Riverside plant the water flows into the large covered storage reservoir of 1.0 million gallons capacity from which it is pumped direct.

The main station is equipped with two twelve million gallon per day steam driven compound plunger double acting pumps supplemented by two motor driven centrifugal pump units each having a capacity of five million gallons daily. The Riverside station is equipped with a motor driven centrifugal unit of eight million gallons daily capacity. In the Ortega, Murray Hill, Woodstock Park and Panama sections motor driven centrifugal pump units are installed each having capacities of 750,000 gallons daily.

The distribution system, it will be noted from Plate #22, serves the city as a whole, there being as of July 31, 1929, 316.93 miles of mains of which 149.43 miles are of cast iron and 167.5 miles of galvanized iron. Table #26 relates comparative data relative to distribution and consumption. Cast iron pipe ranges in diameter from four inches to twenty-four inches and galvanized from two inches to three inches. As of July 31, 1929 there were 25306 services of which 97.13 percent were metered. All cast iron pipe eight inches and smaller in diameter is of Class B. (A. W. W. Ass'n.); ten inches and over of Class C. (A. W. C. Ass'n.).

The average daily pumpage for 1928 was 12.0 million gallons per day of which 9.2 millions were delivered from the main station and 2.8 millions from the McDuff Avenue plant. Table #27 and Diagram #26 show how the consumption (average daily pumpage) has increased by years from 1918 to 28 (inclusive); in ten years it has doubled and the number of services more than doubled. Diagram #26 also predicts the consumption trend for the future; in 1950 an average daily consumption approximating 300 million gallons must be provided for.

In contemplating a future metropolitan water supply system two factors should be kept foremost in mind, namely, (a) quantity and (b) quality. The



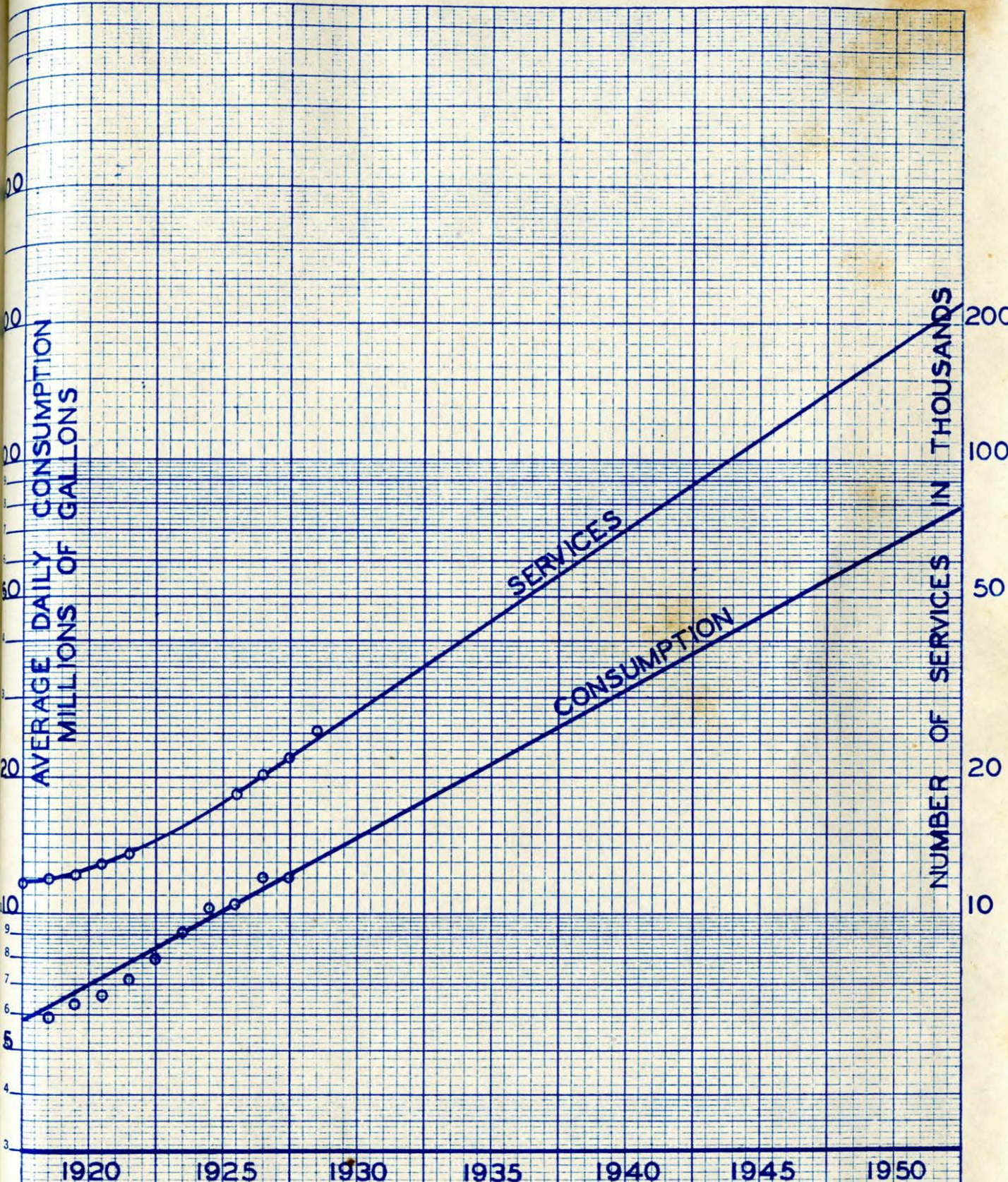


DIAGRAM 26



latter will be discussed subsequently. The foregoing Diagram #26 indicates the trend of pumpage requirements, also the future requirements based on the present. Table #25 also shows that the combined flow of all wells at this time barely approximates the total consumption of today. This point predicts an acute situation!

TABLE #26

|              | Total Miles Mains | Sizes of Mains (inches) | Sizes of Services (Inches) | Pump Cap. M.G.D. | Av. Daily Cons.Cap. | Number Services | Percent Metered |
|--------------|-------------------|-------------------------|----------------------------|------------------|---------------------|-----------------|-----------------|
| Jacksonville | 300.0             | 2-20                    | 3/4-6                      | 42.0             | 85                  | 23650           | 97              |
| Tampa        | 150.0             |                         |                            | 25.0             | 96                  | 20000           | 57              |
| Miami        | 250.0             | 4-36                    | 3/4-6                      | 30.0             | 75                  | 18400           | 75              |
| Macon        | 150.0             | 2-20                    | 3/4-1                      | 22.0             | 123                 | 14000           | 83              |
| Atlanta      | 550.0             | 6-36                    | 3/4-6                      | 105.0            | 107                 | 52000           | 100             |
| Birmingham   | 709.0             | 2-30                    | 3/4-6                      | 71.0             | 64                  | 52317           | 100             |
| Nashville    | 285.7             | 2-36                    | 1/2-6                      | 20.0             | 112                 | 34000           | 97              |
| Knoxville    | 250.0             | 2-30                    | 3/4-6                      | 66.0             | 71                  | 23000           | 100             |
| Memphis      | 400.0             | 4-42                    | 5/8-4                      | 35.0             | 80                  | 38000           | 100             |
| Montgomery   |                   |                         |                            |                  | 77                  |                 |                 |

Table #25 also discloses another point of vital significance, the loss of artesian flow. It will be observed from this table that the flow from many of the older wells has decreased nearly 50% since their drilling. Even the new Riverside wells drilled in 1926-27 have shown a decrease of flow of about 30% in three years! The Fifth Annual Report of the Florida State Geological Survey (page #149) relates interesting observations and measurements by the late Captain R. N. Ellis, formerly Superintendent of Water Supply of Jacksonville, which show that there has been a progressive, steady loss of artesian flow since 1885! A well which in 1886 flowed 864,000 gallons in twenty-four hours diminished to 188,568 gallons in 1896; a second well delivering 1.35 million gallons initially in 1896 decreased to 419,902 gallons in 1901, etc. In other words to maintain a balance between production and consumption it has been necessary to drill new wells, and in drilling these new wells it has been unfortunate that each has been drilled within the circle or range or influence of its predecessor. As a result of this policy of crowding



wells too close together the source is gradually being depleted and a condition of serious moment confronting the city, namely, a saltiness of its water supply. Already a number of Florida cities have suffered by following this same course and they today are endeavoring to overcome the errors of the past, namely, St. Petersburg, St. Augustine, Bradentown, etc. Miami, West Palm Beach and Tampa have already expended millions to overcome their difficulties. This condition, its seriousness and future were fully presented in a report to the Florida Water Supply Commission of Jacksonville in February 1927, with specific suggestions but to date, 1929, no developments have followed this report but well flow diminution continues regardless.

As pointed out in the report to the Water Supply Commission, the safe capacity of supply from the older wells in and near Water Works Park has been reached and a much further use of these wells with their pressure decrease will result in salt! Therefore it behooves the city to exploit new well fields far enough remote from the present "cone of depression" to prevent their quality depreciation, and these new wells should be located at least six (6) miles from the present Water Works Park and preferably farther. The establishment of the new station in Riverside on McDuff Avenue was a step in the proper direction.

The Jacksonville water supply is clear, colorless and from a hygienic standpoint pure but it possesses one seriously objectionable quality, i. e., its hardness. Waters derived from the underground limestone aquifer possess varying degrees of hardness depending primarily upon the depths of their sources which contributes so greatly to the activity of the solvent carbonic acid derived from the air and its ground contacts following its initial precipitation as rain.

Hardness of water is of two kinds, temporary and permanent, the former due to the bicarbonates of calcium and magnesium and the latter due to the

sulphates. The bicarbonate hardness is not seriously objectionable; it can be removed easily by lime treatment or boiling. The permanent hardness however is most objectionable; it is removed with difficulty at considerable cost. Permanent hardness is the principal deterrent to prospective industry. Unfortunately the water of Jacksonville is hard; its hardness is not only excessive but predominately of the permanent or sulphate character.

TABLE #27

| Year | Av. Daily Consumption in Gallons | Number of Services     |
|------|----------------------------------|------------------------|
| 1918 | 5,924,000                        | 11,608                 |
| 1919 | 5,947,000                        | 11,971                 |
| 1920 | 6,283,000                        | 12,272                 |
| 1921 | 6,587,000                        | 12,835                 |
| 1922 | 7,141,000                        | 13,603                 |
| 1923 | 7,980,000                        |                        |
| 1924 | 9,130,000                        |                        |
| 1925 | 10,300,000                       |                        |
| 1926 | 10,500,000                       | 18,355                 |
| 1927 | 12,100,000                       | 20,231                 |
| 1928 | 12,000,000                       | 22,126                 |
| 1929 |                                  | 25,306 (July 31, 1929) |

Following is an analysis of Jacksonville city water, collected by the writer and analyzed by the Water Resources Branch of the United States Geological Survey (See also Diagram #27).

|                                         |                          |
|-----------------------------------------|--------------------------|
| Total Dissolved Solids                  | 420.00 parts per million |
| Silica (SO <sub>2</sub> )               | 24.00 " " "              |
| Iron (Fe)                               | 0.15 " " "               |
| Calcium (Ca)                            | 76.00 " " "              |
| Magnesium (Mg)                          | 28.00 " " "              |
| Sodium (Na)                             | 12.00 " " "              |
| Potassium (K)                           | 2.1 " " "                |
| Bicarbonate Radicle (HCO <sub>3</sub> ) | 163.00 " " "             |
| Sulphate Radicle (SO <sub>4</sub> )     | 165.00 " " "             |
| Chloride Radicle (Cl)                   | 15.00 " " "              |
| Nitrate Radicle (NO <sub>3</sub> )      | 0.42 " " "               |
| Total Hardness (CaCO <sub>3</sub> )     | 305.00 " " "             |

To acquire an idea how the Sulphates and Hardness of Jacksonville water compares with those of other Florida well waters the following table is included



TABLE #28

|                    | Bicarbonate | Sulphate | Total Hardness |
|--------------------|-------------|----------|----------------|
| Jacksonville       | 163.0       | 165.0    | 305.0          |
| Pensacola          | 2.9         | 4.1      | 12.0           |
| Tallahassee        | 144.0       | 4.9      | 130.0          |
| Lake City          | 223.0       | 16.0     | 202.0          |
| Jacksonville Beach | 139.0       | 202.0    | 336.0          |
| Leesburg           | 144.0       | 4.1      | 134.0          |
| Haines City        | 189.0       | 3.5      | 146.0          |
| Sebring            | 2.4         | 2.7      | 8.6            |
| Fort Pierce        | 255.0       | 296.0    | 332.0          |
| Sarasota           | 183.0       | 398.0    | 556.0          |

These results show how the waters of the western part of the State (Pensacola and Tallahassee) differ from those of eastern and southern Florida, also how as one approaches the coasts the sulphate hardness increases. The effect of the ridge region (Haines City and Sebring) is also shown. Now these values are compared with those of cities elsewhere in the country, an element of great interest to prospective industry.

TABLE #29

|                 |         |       |       |       |
|-----------------|---------|-------|-------|-------|
| Jacksonville    | (Wells) | 163.0 | 165.0 | 305.0 |
| Birmingham      | (River) | 52.0  | 8.8   | 43.0  |
| Atlanta         | (River) | 6.6   | 7.8   | 11.0  |
| Memphis         | (Wells) | 104.0 | 0.0   | 63.0  |
| Dayton          | (Wells) | 339.0 | 84.0  | 369.0 |
| Lawrence, Mass. | (River) | 0.0   | 0.0   | 11.0  |
| Los Angeles     | (River) | 165.0 | 59.0  | 163.0 |

These analytical data illustrate conclusively the effect of sulphate hardness, also that it contributes primarily to the Jacksonville Total Hardness. And in Table #29 a group of manufacturing cities are compared with Jacksonville; in only one instance (Dayton, Ohio) does the Sulphate hardness equal one half of what it is in Jacksonville!

The object of this report is not to present a treatise on water supply, but it rather is to emphasize the acuteness of a situation confronting a city whose future is so greatly dependent upon acquiring basic industries whose prime requisite is sulphate free water. As stated in Water Supply Paper #559, United States Geological Survey,



- CALCIUM**
- MAGNESIUM**
- SODIUM-POTASS.**
- BICARBONATES**
- SULPHATES**
- CHLORIDES**

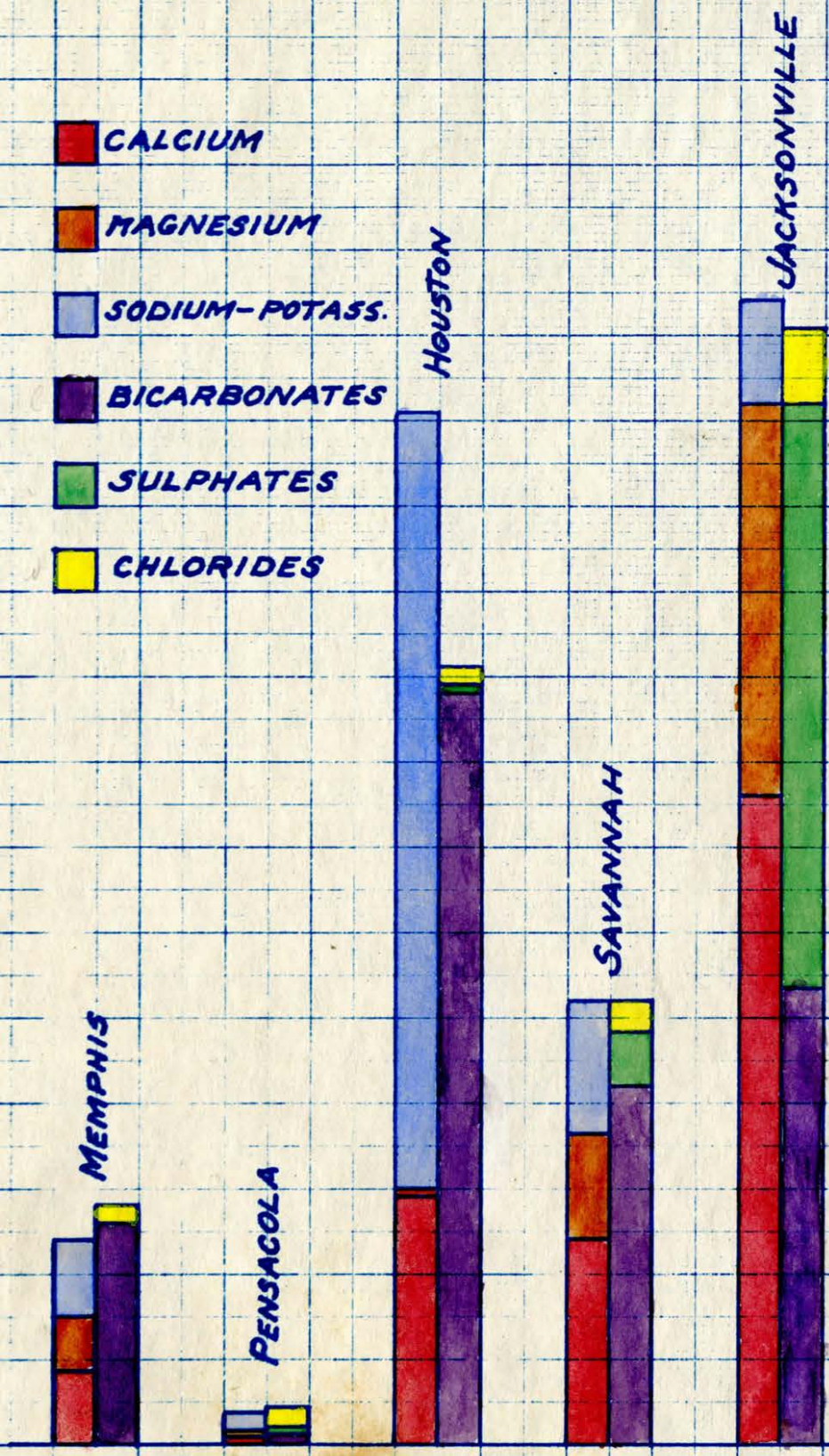


DIAGRAM 27



"Water supply is always considered in locating a new plant. In some industries, like the manufacture of paper or textiles, it is probably the most important consideration."

Not alone is hardness a deterrent to industrial development is is expensive among local consumers. It is not exaggerating the matter to say that for every day in the year at least 3.0 tons (6000 lbs.) of soap are wasted due to the present hard water which at fifteen cents per pound equals an economic waste of \$900 or \$328,500 per annum.

Anticipating a growth and development of industry in Jacksonville it is therefore advisable to contemplate water improvement, not only to acquire the necessary quantity but likewise to acquire a quality attractive to basic industry.

#### Sewerage

Plate #23 illustrates the areas of Jacksonville accessible and tributary to sanitary sewerage and drainage; this plate also shows the location of sanitary sewer outlets into the river and pumping stations. Diagram #28 shows graphically the increases in sanitary and storm sewerage mileage by years.

Comprehensive sanitary sewerage and effective drainage are inimical to improved community health and environmental conditions. The efficiency of a community's waste disposal is reflected directly in its morbidity and mortality records. As a chain is no stronger than its weakest link, so is a community as healthful as its most unhealthful unit. Nine tenths of a city's population may have its perfect health record of years ruined by an explosive outbreak among the one tenth residing in areas of no or limited sanitary facilities. No city can afford the disgrace, the economic waste and unfavorable publicity traceable directly to preventable causes, and it is to be deplored that a progressive city has among its citizenry some who consider so lightly and so carelessly the very future life of the city.

As Jacksonville increases in population and its territory expands the



MILEAGE STORM AND SANITARY  
SEWERS IN  
CITY OF JACKSONVILLE  
1909-1928

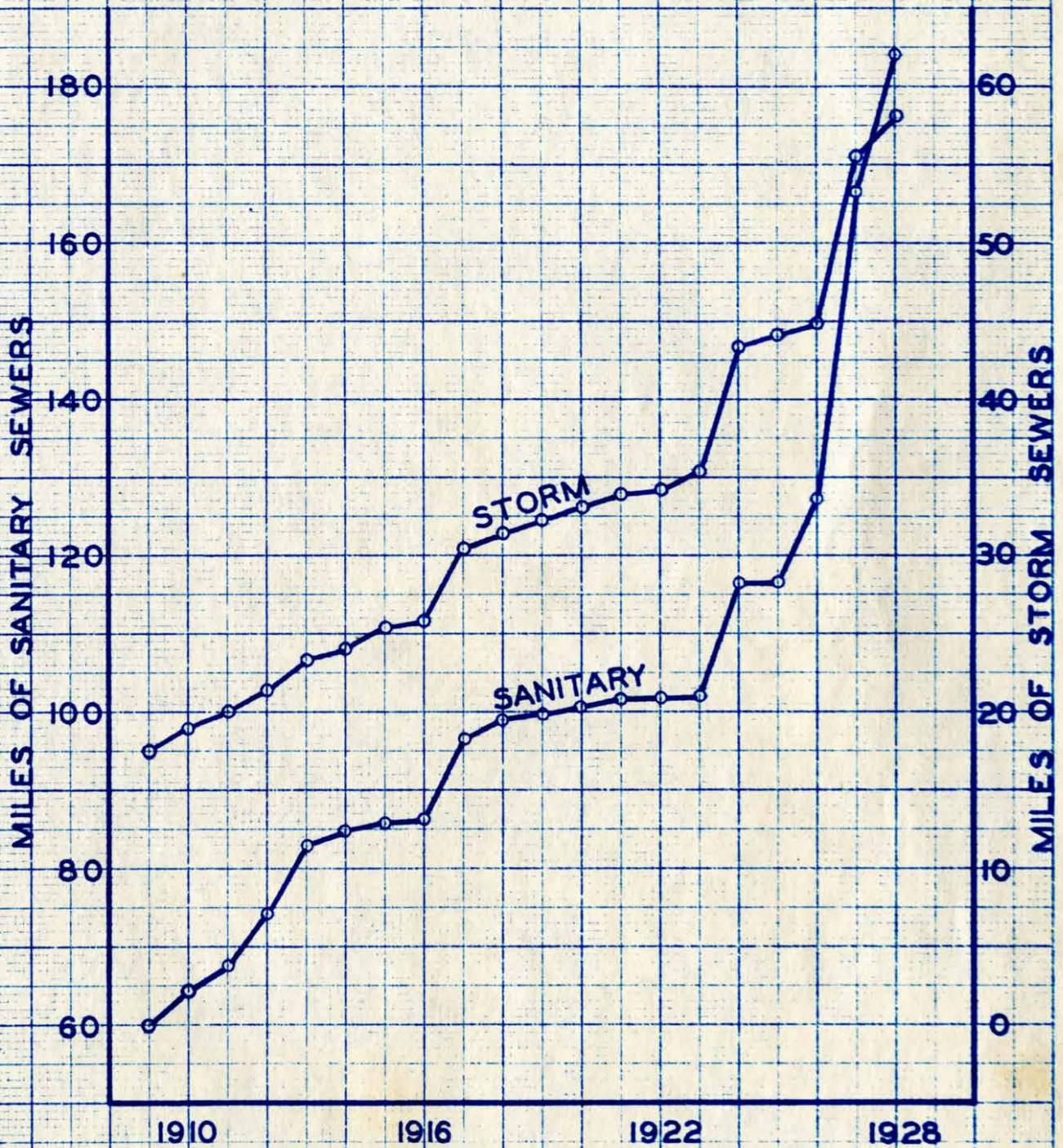


DIAGRAM 28



significant question of sewerage and drainage must be given serious consideration by its citizenry. Land owners developing tracts should avoid low, swampy or semi-swampy areas which cannot be easily or economically cared for by city utilities. Such cases can be controlled in the future by the City Commission obliging land developers to observe the Platting Rules outlined in a previous section.

Populated areas now without sewerage or with limited or crude facilities should be given attention first and subsequently areas cared for as developed. As long as these unsewered areas are permitted to remain so they are blights upon the name of Jacksonville.

Jacksonville is fortunate in many respects. Many cities of the country are obliged to spend thousands of dollars annually to treat their sewerage. Jacksonville will probably never be required to treat its sewerage, as long as such a tremendous quantity of oxygenated St. Johns River water is available for dilution. Preliminary treatment process such as screens may be necessary at some points, and one or two small disposal plants may be required to treat sewage from outlying areas at a future date, but never anything extensive or complicated.

An examination of Plate #23 shows the number of outfall sanitary sewers extending into the St. Johns river between Big Fishweir Creek and Lancaster Point. The St. Johns River in this vicinity is not only shallow but the shore fringe is separated from the deep water of the channel by a submerged island shown on Diagram #16. This island tends to create a basin between Lancaster Point and Avondale wherein there is little current and in which the amount of sewage entering the river is retained to settle and decompose. In fact this whole area comprises an elongated open septic tank.. This condition has not created much nuisance as yet but with an intense future development of Central Riverside to anticipate it is certain that the time is not far remote when the sewage now entering and settling in this basin must need be removed.

Therefore to meet **this** condition it is recommended that an intercepting sanitary sewer be installed along the river front from Ingleside to Lancaster Point to collect therein the tributary sewage and deliver same to a point near Lancaster Point from whence it can be pumped into the channel of the river several thousand feet distant.



## REFUSE COLLECTION AND DISPOSAL

One of the greatest responsibilities confronting a city administration is the protection of the public's health and the sanitation of the environment. That public health is purchaseable is axiomatic. The prevention and control of communicable disease, the safeguarding of the public water and milk supplies, the examination of foods and food handlers, the control of mosquito breeding and numerous other problems confront the health department daily--- little realized by the public. At least two dollars per year per capita should be devoted to its health protection, a pittance small enough to protect and safeguard a city's future. An epidemic from a preventable disease would cost the city in a single season more than a million dollars! And as the city grows, its undrained areas will need added attention, its additional school children will demand more intensified inspection and the several departmental activities will increase requiring more funds. It is therefore recommended that an intensive health survey of the community be instituted and a program covering thirty or more years be developed and the citizenry indicate its interest in and appreciation of health department activities by demanding adequate funds annually to insure the Jacksonville of the future of a credit-able health record.

Although refuse itself is no direct medium of disease transmission, filth and refuse have always been closely identified with health programs and frequently street cleaning and refuse collection and disposal departments are placed under the direction and supervision of Health Officers. Such an idea is erroneous. Health departments should not be obliged to finance and operate street cleaning or refuse departments. Their work is primarily health protection and those functions which have no direct bearing upon disease preven-

tion should be directed by other branches of the government.

The refuse collection and disposal service of Jacksonville is under the direction of Commissioner Anders, under whom the Superintendents of Street sweeping and Garbage Collection and Disposal operate.

The city area as a whole is divided into six districts as follows:

1. East Springfield, from Hogans Creek to 12th Street and from Main Street to the St. Johns River Terminal tracks.
2. West Springfield--From Hogans Creek to 12th Street and from Main Street to Boulevard.
3. Brentwood, Norwood, Panama Park and Pearl Court.
4. Colored districts adjacent to incinerators.
5. Riverside is divided into four separate districts.
6. Central Business and Residential Districts, from St. Johns River Terminal Tracks to Broad Street and from the river to Hogans Creek.

In those areas adjacent to the incinerators mule drawn collection carts are used; in other sections motor trucks are employed. Twelve (12) trucks are used for garbage and rubbish collection. Five (5) trucks are used for grass and combustible waste collection, two in Springfield, two in Riverside and one down town. Of the garbage trucks three are used in the central business area for night collection, four are used in Riverside and Murray Hill and five in Springfield, Fairfield, Norwood and Panama. All residential collections are made during the day time.

The city operates two dumping grounds for trash, one in Glen Myra Park on Eighth Street, the other at the old clay pit in Holly Brook Park.

All garbage is disposed of in five incinerators, two of which are located at Fifth and Cleveland Streets, and three at Forest and Palm Streets. The Cleveland Street incinerators have a combined rated capacity of one hundred and twenty (120) tons per day and the Forest and Palm a rated daily capacity of one hundred and forty tons (140). This gives Jacksonville a present incinerator capacity of two hundred and twenty (220) tons.





REFUSE INCINERATORS in action at the PALM STREET SITE

Following are the budget provisions for the past ten years for this department:

|      |           |
|------|-----------|
| 1919 | \$148,230 |
| 1920 | 141,481   |
| 1921 | 137,000   |
| 1922 | 127,000   |
| 1923 | 119,000   |
| 1924 | 127,000   |
| 1925 | 135,000   |
| 1926 | 211,870   |
| 1927 | 237,384   |
| 1928 | 286,529   |

On a basis of 140,000 population, the per capita cost of service was \$2.04 in 1928.

In an address delivered before the International Association of Street Sanitation Officials in Toronto during October, 1928, Commissioner Herlong stated that the total amount of garbage disposed of during the year 1927 was 53,895 tons or approximately 2.12 pounds per capita on a basis of 140,000 population. The amount disposed of in 1928 was 55510 tons. This quantity of garbage production would indicate that Jacksonville is **wasteful** of its food supply. Information acquired from many cities throughout the United States shows that the annual per capita garbage production rarely exceeds 200 pounds but on the basis of the foregoing figures the per capita garbage production in Jacksonville is nearly 775 pounds or more than three times that of the principal American cities. During 1928 the Street Cleaning and Garbage Department also disposed of 3127 tons of grass and brush and 11527 tons of leaves, sweepings and sand in addition to the garbage. In other words, 70164 tons of refuse were handled and disposed of during 1928, equivalent to an average daily waste production of 192 tons, or 2.72 pounds per capita on a basis of 145,000 population in 1928.

The incinerator sites are conveniently located so few hauls exceed three miles in length.

When Jacksonville population approaches 350,000 to 400,000, the daily



refuse production will approximate 475 to 545 tons.

As stated previously the rated incinerator capacities aggregated 260 tons when the furnaces were new, and at the time of purchase each was guaranteed to destroy refuse at the specified rated capacity. According to the recorded collection figures the maximum daily garbage production approaches 300 tons daily which exceeds the present incinerator capacity nearly 25%, assuming that the rated furnace efficiency is maintained. From this it would appear that an additional incinerator unit is required now, and further that with every 50,000 increase in population an additional 100 ton unit should be installed. This would signify that a new 100-ton unit constructed during the next year or two should be followed by another about 1936.

In the past, incinerators have been purchased largely on manufacturers specifications---not alone in Jacksonville but elsewhere, a procedure which is dangerous. In the future, incinerators should be purchased only upon rigid specifications prepared and submitted by the city. The incinerator manufacturers have frequently evidenced their willingness to design and bid on city's specifications. Only in this manner can the absolute rated capacity of the incinerator unit be determined. Such a plan would not prevent bidders from submitting their own designs and guarantees, but in submitting same they must conform to a general scheme of requirements.

Specifications should define the character of refuse to be burned, requiring a guarantee of performance based on the consumption of so many units of fuel per ton of refuse burned to a satisfactory ash, with a test extending over a sufficient length of time to express the results.

As the city expands and its population becomes more widely scattered more trucks will be necessary and new incinerator or disposal sites will be necessary. The city may even consider new methods of disposal at a later date, such as the Becavri system now being installed in South Jacksonville, or some method of Reduction. At any rate sites for disposal methods must be found

where a minimum of objection will result, and further where the efficient average haulage distance can be kept within reasonable range. There can be a limited additional development at the present two sites but before many years elapse the haulage distances will exceed the efficient and economical. In contemplating and selecting incinerator sites the character of the locality and the prevailing winds must be considered, also the trend of population distribution.

Ultimately three new incinerator sites should be selected, (1) one to serve the area north of Eighth Street and east of Main Street, (2) one to serve Brentwood, North Shore and Norwood, and, (3) one to serve Woodstock, Murray Hill, Avondale, St. Johns Park and Ortega. The first area could be in the vicinity of old Phoenix Park---along Lawton Avenue, the second could be west of Moncrief Road near the City Limits and the third could be located somewhere between the Seaboard Air Line right of way and the Old Gainesville Road.

Naturally whenever the need of an incinerator site is proposed the citizenry resident in the contiguous region protests violently. The thought on an incinerator with its unpleasant odors is not received with complacent joy. But on the other hand incinerators are not obliged to be as objectionably odoriferous. Furnaces of the high temperature type equipped with pyrometric control, properly operated with chlorine odor control need be no more objectionable than the average industrial plant! Furnaces of this type can be acquired when cities define their own specifications. Recent research has shown that the judicious application of chlorine to stack and flue gases will control odors around incinerators. Such practice will obviate many of the former objections, to incinerators or other methods of disposal.



## CIVIC ART AND DEVELOPMENT

City's have distinctive qualities that distinguish them from other cities. It is said that a city has a predominating personality that imparts an atmosphere of dignity, loveliness and character. The old world charm of New Orleans, Charleston, and St. Augustine, are familiar to many; the atmosphere of the Old South is reflected in Memphis, Atlanta and Vicksburg; the statliness, dignity and majesty of America is resplendent in the glory of our national capital of Washington; Boston is ennobled by its historical associations and its many schools of higher learning. Every section has its distinctive cities renowned the world over because of some outstanding characteristic. What distinguished Jacksonville among cities? What will impart to Jacksonville a distinctive personality? What should be done to make Jacksonville distinctive and different from hundreds of ordinary cities?

A city should be more than a mere collection of homes, stores, factories and railroads; it should typify life, convey a picture of a happy contented people, living in an environment of unequalled opportunity, inspired by natural beauty and possessed of a civic consciousness and everlasting pride in their city. The collective citizenry must be endowed with a deep seated urge to achieve great and good things for their city and create a virile spirit to stir the indifferent and cause them to rise above the commonplace and give an impetus and acceleration to the beautiful, orderly, efficient, wholesome, healthful and happy! As John Ildler stated once:

"If there is any one thing that makes us want to live in a town it is the spirit of the people---and where that spirit is there is also a good town, the kind of a town we would like to live in."

Jacksonville has the potential possibilities of becoming one of America's outstanding cities of charm and distinction, a city to stir the blood of

pride in every man's heart, Jacksonville is endowed with natural resources unequalled in riches anywhere but as yet unrealized, undeveloped, or unappreciated by the citizenry. No city in America has a more beautiful expanse of water at its door; no city commands greater possibilities for a large, beautiful extensive natural parkway system encircling the city from river front to river front, following the courses of streams of unparalleled magnificence! But to achieve the development and realization of these national assets to the utmost will require a type of civic pride yet unborn urged forward by an indomitable spirit and eager enthusiastic desire to construct.

But while such an ideal is being sought and labored for, there are many things that citizens can do to intensify Jacksonville's personality. Jacksonville is a city of home influences; these homes and their environments should be maintained in a manner to create and stimulate pride. Lawns and yards as well as curb parkways should be frequently trimmed; weeded areas should be kept clear and clean; the planting and care of shrubs and plants of appropriate species should be encouraged; homes should be kept painted and trim; rear yard flower gardens should be encouraged. Rubbish scattered around promiscuously is not conducive to pride and should be removed from yards and vacant lots and the landscape generally should inspire a civic loyalty and pride. In these respects, even rented properties can be maintained in a presentable attractive condition.

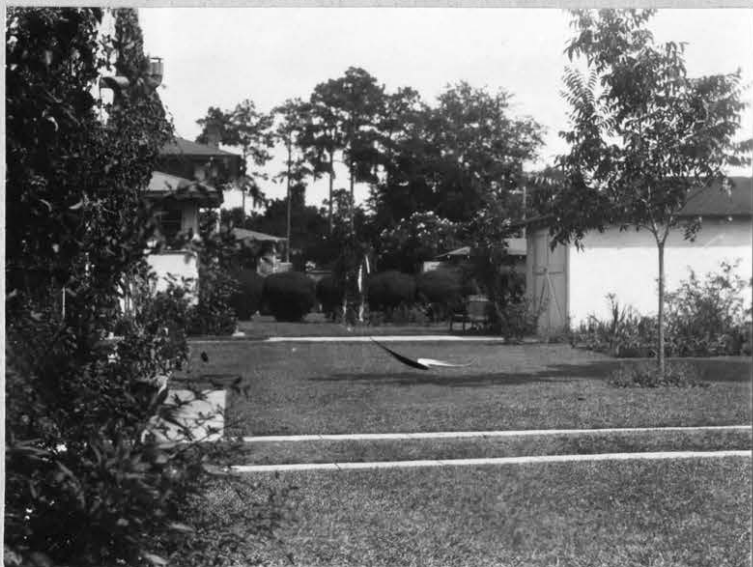
Street trees contribute a stately dignity to a city. No where in Florida or the entire South are there more dignified, proud thoroughfares than Riverside Avenue between Gilmore and Lancaster Terrace or Hubbard Street from Phelps to Fourth or Fifth with their large, old majestic oaks. Streets planted with firm, healthy, native specimens of live oaks, species of palms along predetermined planting lines impart character to the street and in later years protect the residents and properties from the sun rays. Planting lines



Street trees planted near the outside sidewalk line leaves ample park space between the curb line and tree or shrub.

Roadways can be widened without a sacrifice of trees later.

More care should be devoted to this planting method.



Rear yards should be as attractive and inviting as front yards or side gardens.

Land development providing for interior lot play spaces is encouraged. It keeps children off the street.

Street trees planted close to curb lines on recently widened streets can be saved by breaking continuity of curb line. Examples such as this in several sections of Jacksonville prove that same are safe.





"ONLY GOD CAN MAKE A TREE"

Old majestic live oaks along Waycross Road near Pickett's. Trees not only lend dignity and respect to roadsides but provide relief from heat and sun glare. Few places in the country can boast of more beautiful trees than FLORIDA.



established near the outside sidewalk line are preferable to those near curbs, obviating subsequently the necessity of removing trees for roadway widening. In some cities, tree planting lines within property lines have been established. Everywhere one travels the impression of streets particularly outside congested thoroughfares is not so much from the buildings as from the settings that these buildings are afforded. The tree is a community asset of aesthetic and economic value. It is suggested that street trees be given constant care and to accomplish this end that a city forester be retained to advise citizens on tree species, their selections and care. In carrying out a street tree planting program care must be exercised not to plant shrubs or trees within parkways at street intersections to obstruct vision.

The promiscuous use of the large unsightly billboards should be regulated especially along the entrances to the city; ordinances should limit as far as possible both location and size. Massachusetts for several years has successfully controlled billboards and it is suggested that an act similar to the one employed there be investigated for Florida use.

The architectural complexion of the roadside vending and refreshment stands need improvement and the owners of these places are urged and encouraged to make them more presentable. Throughout the New England states a movement was organized several years ago to improve the appearances of roadside stands, from which much betterment has resulted and views formerly repulsive have been transformed to objects of attractiveness.

Electric poles are as rapidly as possible going underground. A progressive program of underground extension over a period of years would ultimately accomplish this and no one structural advancement could be made in Jacksonville to do more toward an improvement of the landscape than the removal of the ugly poles now used. And too, such practice would save many trees from an otherwise ruthless destruction by careless, indifferent workers.



Small trees, hedges and bushy shrubs must not be planted within street intersections to obscure line of driver's vision.

One at left removed since photograph taken. Camphors, as below especially hazardous, also bamboos.





Electric street lighting fixtures should be standardized and only those of a modern type be selected in the future. Street lighting fixtures impart distinctiveness to the street furniture.

In looking up the main business streets, note the overhanging street signs, newstands, poles, etc. Overhanging street signs give no dignity to a street and progressive cities are eliminating them. Street news stands are usually shoddy and unsightly; a little reconditioning would change their appearances. Attractiveness, orderliness and harmony should be insisted upon to preserve dignity.

Historical sites and surroundings of significance should be preserved and respected; Monuments or plates should commemorate events of historical significance and thereby the early history of the region be instilled into the coming generation. Certainly a community with such rare history should not permit it to go by unnoticed!

Street name signs should be of uniform type and legible. Several types of street signs are now being used throughout the city---wooden types break and disintegrate quickly; the iron type installed recently is too small and rusts too easily. A study of street signs made some time ago by Messrs. Post and McCaffrey of Boston and New York led to the creation of a new type of legible sign applicable principally to main thoroughfares. The sign has recently been selected for Toledo, Ohio, and a design of it follows in Diagram #29. The present scheme of painting street names on the curbs in yellow and black is an improvement but it is questionable if this method will be wholly satisfactory over a period of years.

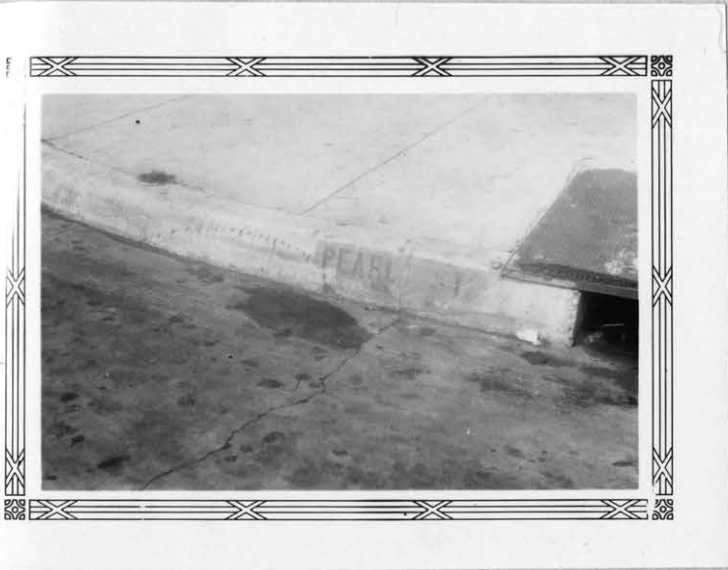
Sidewalk or street encroachments are not justified. Gas pumps, oil stands, news stands, etc., should be removed and the street area be released for traffic and pedestrian movements. In the central downtown area there is a variety of sidewalk and street encroachments by private businesses---all of which should be discontinued. There is no justifiable reason why the free

TYPES OF  
STREET  
SIGN  
USED IN  
JACKSONVILLE, FLA.



The sign at the top and left is painted along the curb-yellow field with black letters. The one at left has been partially defaced.

This type of sign is subject to considerable misuse and its life is questionable.

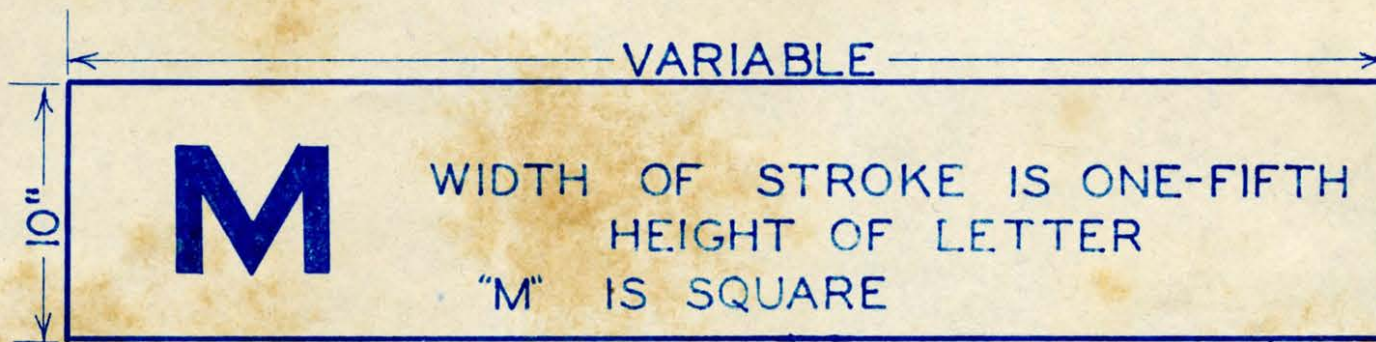


Two types of street sign shown at right. The small cast iron type is easily rusted and must be frequently painted.

The wooden type, while field with black letters is legible and durable.







SPECIMEN OF STREET SIGN  
TO BE FOR USE ON MAJOR  
STREETS

*DIAGRAM 29*

movement of pedestrians and motor traffic should be subordinated to the conduct of private enterprise at the city's expense. Street areas belong to the public and should be available to them; as the courts have stated:

"The primary use of the highway is for the purpose of permitting the passing and repassing of the public, and it is entitled to unobstructed and unoccupied use of the entire width."

Oklahoma City has enacted an ordinance prohibiting all encroachments in street areas.

In the several numerous suggestions referred to in the foregoing, Jacksonville citizenry can well take an interest, not for the great joy and satisfaction that they themselves would derive from doing the work but for the advertising effect the city will derive in the future from abroad. "By their works, ye shall know them."

Once a mayor of a northern city said:

"My City ---- is there anything more beautiful than that to speak of? You speak of 'my father' and 'my mother' in terms of endearment. Do the same in speaking of the city. If you do (Jacksonville) is assured of being the greatest city in the country."





SIDEWALKS ALONG MAIN RADIAL OR PRIMARY ARTERIES ARE  
ESSENTIAL

The upper view is along LAKE SHORE BLVD right after the dismissal of the FISHWEIR SCHOOL. A narrow roadway (18') with no sidewalks. Children have no other place to walk. WOULD THE CITY BE LIABLE IN CASE OF ACCIDENT? The lower view is along KINGS ROAD, which like the one above has no sidewalks.

BOTH ROADWAYS SHOULD BE WIDENED.



## CIVIC CENTER

The citizenry that has before it constantly an inspiring worthy objective around and through which its life and work can revolve is possessed of a finer more intense sense of civic consciousness than that citizenry content with the ordinary and commonplace, devoid of the idealistic to aspire to and stir men's blood. Numberless cities throughout America are creating and constructing idealistic spirit stirring, inspiring objectives, sources of an enthusiastic and united community pride; Chicago is expending millions to achieve its objective of a comprehensive lake front civic park, Philadelphia has nearly completed its Fairmount Parkway, the United States Government is rededicating its efforts to a completion of the L'Enfant plans for the National Capital and finally Los Angeles has started to develop its twenty-six million dollar (\$26,000,000) civic project. These idealistic, civic projects are not confined to other sections of our country alone, but here in Florida one can see the accomplishments of a united loyal and spirited citizenry in the development of objectives of civic pride. Lakeland has built its million dollar civic unit; Miami, Daytona Beach, St. Augustine, St. Petersburg and Orlando have each capitalized their water fronts transforming many of them from collections of hovels and disreputable fish houses and piers into beautiful inspiring park systems--objects of an intense civic pride.

Not only should the life and spirit of the city concentrate around an ideal unit but the conduct of its official business should be centralized. Decentralization of dependent governmental agencies is not especially conducive to departmental efficiency nor to community convenience.

The centralized civic unit is as old as the history of civilized man. The cities of ancient Greece had their "Agora" where the public demonstrations





General view of new million dollar Civic Center at  
LAKELAND, FLORIDA

This outstanding municipal project was ded-  
icated on July 1, 1928.



Fitting type of street adornment for erection in Sub-civic  
Centers. Municipal Fountain given to  
ST. PETERSBURG, FLORIDA  
by  
Civitan Club of that city.



Noteworthy waterfront park development at MIAMI, FLORIDA  
Few cities of the world can boast of a more beautified  
bay front drive than this. Less than ten years ago this  
water front was a disreputable display of derelict craft  
and fish houses. The original water line rested approxi-  
mately where innermost curb line is.





and meetings were held. The "Forum" of Rome was the great meeting ground of the old Romans, and even in the days of the Renaissance the "Forum" was the scene of public fetes, ceremonies and the enactment of law. Around these public squares of ancient days the principal public buildings were placed and in the squares, fountains, monuments and other types of civic art were erected to emphasize the dignity and strength of the community.

Public festivals and gatherings are as essential today as in the days of the Greeks and Romans, then why not provide a place with noble surroundings-- an atmosphere where the best impulses can be aroused in the heart of man? Such a provision would be a community asset whose value it would be difficult to estimate. It would instill within man a type of pride seldom granted those communities without such an asset.

Jacksonville has no centralized outstanding civic unit, no civic buildings, parks nor waterfront improvements of commanding proportions, attractiveness or beauty to arouse within man that deep-seated kind of enthusiasm, loyalty and desire that comes only from the heart to render unselfish community service and achieve the insurmountable so essential in a city of potentialities and progress at this time. Jacksonville is a sleeping giant, slumbering amid possibilities of greatness. Among the outstanding necessities of Jacksonville is a determination and will to build and by degrees realize that type of civic unit the city merits. It is an objective worthy of consideration.

At the present time governmental functions are conducted from different buildings located in diverse parts of the city. The City Hall, located centrally on Ocean Street between Forsyth and Adams Streets, is inadequate for the efficient conduct of those departmental functions obliged to locate there. The building is also obsolete not adjustable to the type of government nor permitting of ready expansion. The City Hall accomodates the offices of the City Treasurer, Auditor, Recorder, Tax Assessor, Mayor and Chairman of the City Commission, as well as the several secretaries, clerks and attaches of

each office. The chambers of the City Commission and City Council are also located in the City Hall. At the corner of Main and Orange Streets in the three story Engineer Building, are located officers of the City Engineer, City Building and Plumbing Inspector, City Health Officer with laboratories and clinics of the Health Department. At the foot of Laura Street are located the offices of the Commissioner of Public Utilities and Docks. At Liberty and Union Streets is located the Police Department and City jail. From this one can readily judge how the several departmental activities are scattered. A taxpayer to confer with the City Engineer must go to one place, to confer with the Superintendent of Plants is obliged to go elsewhere and finally to pay bills must go to a third place. Such decentralization is not conducive to the taxpayer's convenience or quiet of nerves, and it is questionable if such separation of governmental functions is conducive to efficiency of operation and economy. To overcome this condition however rests entirely with the freeholders; it is not the responsibility of either Commission or Council; they inherited the present. The promiscuous buying of lands in different locations for the erection of public buildings, each building being a considerable distance away from every other public building, seems entirely contrary to good judgement ordinarily exercised in conducting private enterprise. After an analysis of the present buildings, locations and sites one could only resist with difficulty an earnest effort to centralize governmental agencies at a point centrally located, in structures grouped within or around a plaza or mall typifying and reflecting the character, personality, dignity and spirit of a progressive citizenry.

In contemplating the location of an inspirational civic unit several primary requirements should be weighed, namely, (a) accessibility, (b) size of plot and buildings, (c) extent of development and, (d) cost. The site of the unit should be located conveniently to transit lines, reasonably near the center of the business area of the city. It should also be located where the



citizens can be most readily, efficiently and economically served, easily reached from all sections of the city, preferably where it can be reached quickly and safely by major highways. Further the port, bus and railroad terminals as well as hotels, wholesale and manufacturing districts should be readily accessible to the civic units. The area of the site should be ample to permit of a proper setting of the buildings included in the unit and impart favorable reactions to those viewing the arrangement. The magnitude and arrangement of the development will be dependent upon the number of buildings included in the plan. While some cities confine their civic center development to a municipal office group, others include city, county and federal buildings. The Los Angeles program follows the latter course, a plan of considerable merit. And finally, the cost of the development should be consistent with the community's ability or capacity to pay and the rate of accomplishment be commensurate with good financing and economy. While the cost of the unit in its entirety will be far greater than the citizenry can afford over a short period, the same amount spread over a period of years will render the undertaking possible.

In developing a civic center ideal for Jacksonville, available resources should be utilized as far as practicable and provisions be made therein to accommodate appropriately some of Jacksonville's most urgent needs. For instance before Jacksonville can become the convention city aspired to by many, adequate facilities conveniently and accessibly located must be realized. No auditorium or meeting place located remote from the central business area, hotels and transit facilities is popular with those entrusted with the selection of meeting places. The number of large conventions is limited and the future of Jacksonville as a convention city will lie principally among the more numerous small conventions of the regional, state or district character with an occasional national meeting added. It is questionable whether the large barnlike coliseum of auditorium would have a place in the civic unit but most assuredly the auditorium of smaller proportions would have, with a seating capacity of 2500

to 3500 with its complement of small committee rooms would accomodate a majority of the country's conventions and incidentally provide a convenient place for community lectures, musicales, orchestral presentations and grand opera. Such a development could have an appropriate place in a centralized comprehensive civic group.

Jacksonville's public library is no credit to the city for whose literary advancement it stands. Cramped and congested on a small lot and overcrowded within, it conforms in size and setting more to the demands of the village than a metropolis. Jacksonville citizenry could advisedly devote more thought to this institution and give to it, in the civic group, the expansion and setting it so deservingly merits.

The Central Fire Station at Adams and Ocean Streets was once an excellent example of the horse stable fire station of early days, but in this modern day fails to conform in size, accomodations and equipment to the demands of this proud city. It sorely needs improvement which could be fittingly and adantageously combined with a civic center program.

For years the Believers in Jacksonville and other civic organizations have been singing the praises and beauties of the St. Johns River to the world, urging travellers to stop in Jacksonville and enjoy the river with its scenery! But where in Jacksonville can a "stop-over" traveller or tourist view the river and its beauties? The only place is Memorial Park---a piece of ground of sacred character. Likewise Jacksonville has for long years been urging the creation of a yacht basis where the yachtsman could come to anchorage and enjoy the advantages of the port, and its mechanical facilities and perchance become interested in the city. At present such yachtsmen are obliged to seek landing among accumulations of broken down, dishevelled docks, and walk through alleys before entering the city.

In studying the problem of a proposed civic group for Jacksonville the



relative merits of several sites have been considered in the light of the foregoing fundamentals. Population distribution at present, its probable future trend in conjunction with the possibilities of the proposed major street plan and other elements entering into the general planning studies have been studied, as well as the reaction effects of developments created in different localities. There are many available sites but to select that one which will combine serviceable features, ease of traffic movement, adequacy of setting and lend itself to aesthetic development is the problem.

Two centrally located sites have been weighed relatively, (a) a site in the vicinity of and including the present City Hall and County Court House, and (b) a site on the St. Johns River between Laura and Hogan Streets and extending from Bay Street to the river. Both sites have their advantages and disadvantages and either could be appropriately developed into a civic unit of great beauty and usefulness.

#### CITY HALL SITE.

To develop a comprehensive civic center east of Main Street with ample grounds to give an appropriate setting to the ultimate surrounding buildings will necessitate the acquisition of considerable property dependent upon which of two arrangements would be selected. Diagram #30 shows one arrangement and Diagram #31 the other. Considering first the arrangement shown in Diagram #30.

A new City Hall would be erected on the site of the present City Hall, adequate in size to accommodate all departmental activities, and of proportions commensurate with the city's dignity and standing. The entire block between Ocean and Newman Streets, Forsyth and Adams Streets, the one half block between Newman Street and the Court House should be acquired. The ultimate new Court House would be erected on the present site with the land between the City and County buildings developed into a Mall or Plaza. The one half block along the north side of Adams Street between Ocean and Newman should also be

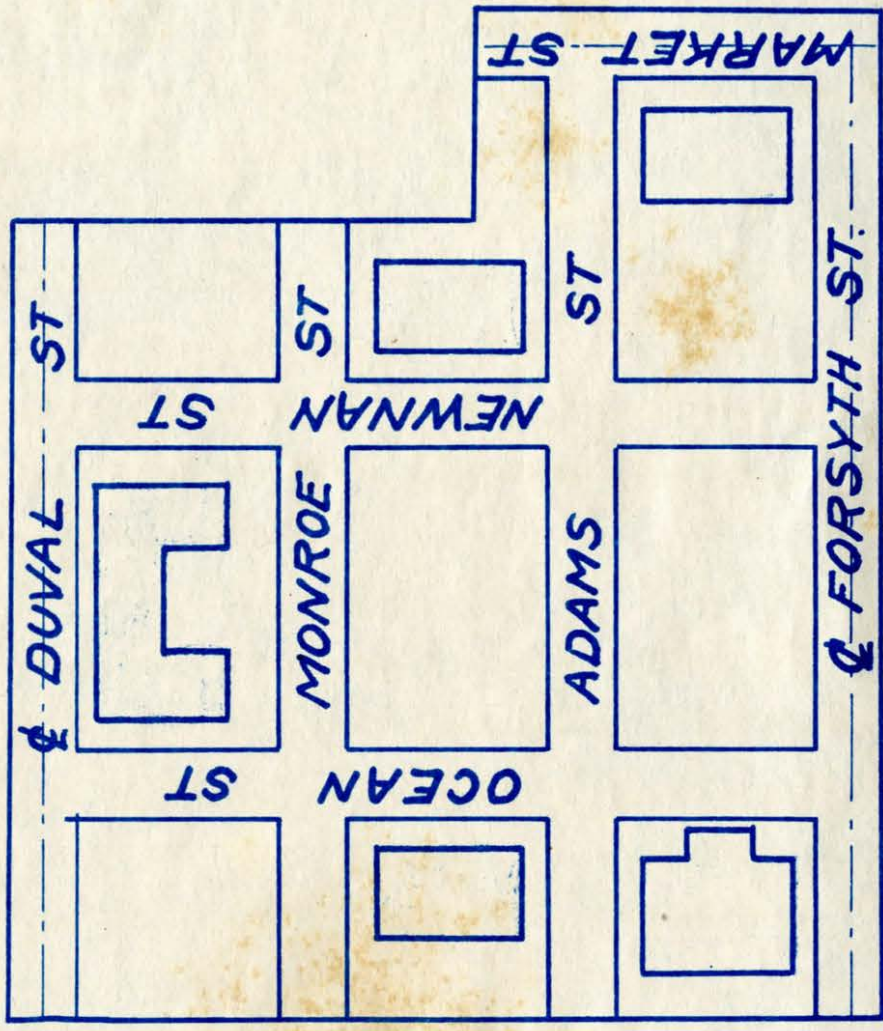


DIAGRAM 30



ST

DUVAL

ST

ST

DIAGRAM 31

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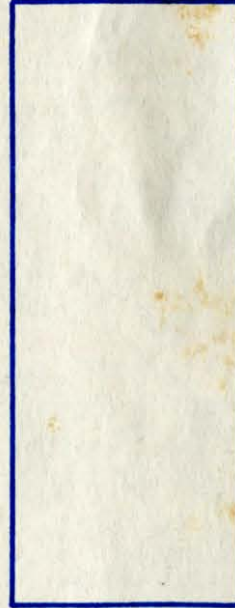
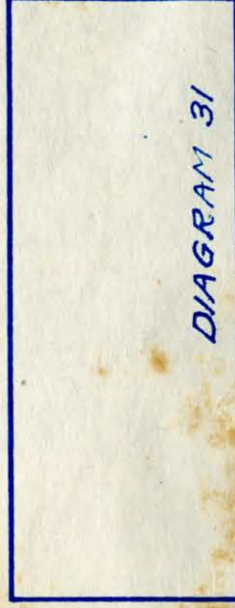
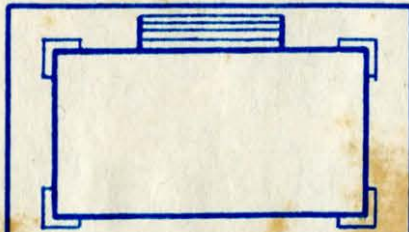
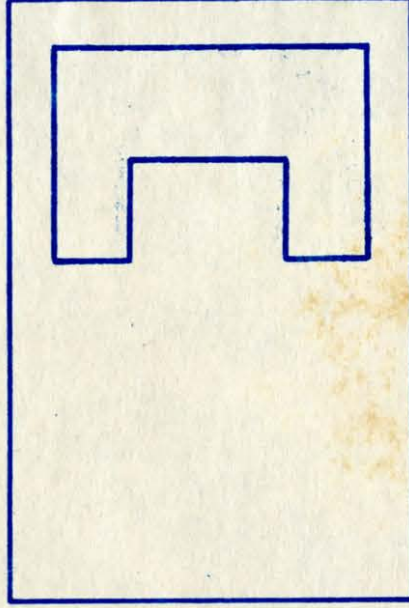
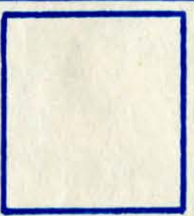
NEWMAN

ADAMS

FORSYTH

ST

OCEAN



acquired to provide adequate grounds and setting for an enlarged library, new central fire station and municipal auditorium, all facing the Plaza.

The second scheme east of Main Street shown in Diagram #31 is more pretentious, but possible. It requires the acquisition of all the blocks between Duval Street on the north, Forsyth on the South, Ocean Street on the west and Market Street on the east (six blocks). The new City Hall would be erected on its present site, the Court House on its site and the new fire station, auditorium, library and federal building be placed along a north and south axis with the federal building facing the axis on the south and Duval Street on the north. Such program would require Morocco Temple to rebuild to the east or west facing the Mall also permit other public or semi-public buildings to do likewise. This unit would have an entrance from the north at Duval or from the south.

#### St. Johns River Site.

This site, while more limited in area than those east of Main Street presents several distinctive advantages. The city already owns one parcel of land in this block occupied by the Utilities Building which could be worked into a civic idea. With the establishment of a new bulkhead line farther into the stream, additional frontage could be reclaimed for the development of a civic unit. An inspiring, towering structure erected on the river front would have between its north face and Bay Street an expanse of plaza. On the river side an esplanade could be constructed, around the southfront of the structure terminating in an appropriate pier or landing place for yachts.

In this river front structure the several departmental activities of the city could be brought together within a single unit and further the auditorium feature could be included within the building. The proximity to the river, the advertising value to visitors approaching from the south, proximity to hotels and traffic center are favorable points as well as economy of construc-



tion.

Both developments (City Hall and St. Johns River) present unusual possibilities which should be studied and exploited further. The whole subject should be investigated thoroughly by the Planning Board as a part of its 1930 program.

From a standpoint of economy the river front site has the advantage, but from the vantage of area and possibility of development the City Hall site presents the advantage, yet more expensive of realization.

## FINANCES

Cities are in the same position financially as the average citizen-- they are confronted by numerous demands for money, but their incomes are limited. And in this age of super-speed and improvement the modern progressive city needs civic improvements as never before; in view of the fact that the purchasing power of the dollar is much less and the average wage more than it was prior to 1918. So today cities are found facing two diametrically opposed demands--one, for more and better services and physical facilities and the other, for relief from taxation and the costs of government.

Briefly, conditions of the times are these, cities are increasing in size and area which in itself is creating a need for more and better governmental functions. Health departments must expand, street cleaning and refuse collection must be kept efficient, utilities must be extended and streets paved. The use of electricity, bath tubs, vaccumm cleaners, automobiles has created many of these utility demands. Where once a simply constructed pile bridge for horse drawn traffic costing about \$40,000 was adequate, the \$250,000 concrete bridge to serve heavy, speedy trucks is now required. From this and similar illustrations it can be readily concluded that many of the so-called "increases" of municipal government costs cannot all be charged to the officials, much responsibility for it lies with the individual. As long as the public desires and demands extensions and improvements of their municipal services there can be little cause for criticism, yet these demands for improved services are inconsistent with the constant cry for relief from taxes, prompted by an erroneous belief that reductions are easily made.

The expenditures of a city can be divided into two general classes, (a) those for the cost of the government or current expenses, and (b) those for the



payment of indebtedness--money put into capital investments. The latter is payment of money borrowed on promises to pay--money derived from the sale of bonds. The cost of these loans including principal and interest is usually termed "debt service". The budget recently approved by the City Council for 1930 amounts to \$4,648,084.87 of which \$1,365,830.00 or nearly thirty percent (30%) of the annual budget is for debt service, and of this budget nearly forty-three percent (43%) is raised by a tax levy.

Jacksonville is authorized to bond to the extent of ten percent (10%) of the assessed valuation, but to retain its position on the preferred list of New York savings banks an effort has always been made to maintain a seven percent (7%) ratio. At present Jacksonville with its present assessed valuation is practically bonded to capacity, a condition that will not be relieved for three or four years, until a bonding capacity can be developed. An effort will now be made to emphasize the relationship existent between city finances and city planning.

The ultimate success of any set of city planning recommendations lies in the ability or capacity of the citizenry to pay. Can the people afford it? City financing and city planning are inseparable problems. To say off hand that the several recommendations of the plan can be realized for an expenditure of fifteen to twenty millions of dollars means little to the average man--such stupendous figures usually cause him to lose faith in the whole project and instead of studiously inquiring into the possibilities of achievement criticises the entire program as the progeny of an idle, fanciful dreamer. But if expenditures can be distributed throughout the years in order of importance and in accord with the ability of the citizenry to pay without pain---then some hope lies ahead for the final and ultimate consummation of the project. No city should incur an indebtedness which it cannot afford, or which means the con-

fiscation of private property for non-payment of taxes. Therefore to ascertain to an approximate degree at least, the financial capacity of Jacksonville an analysis of the financial structure has been made.

A city's capacity to pay is directly dependent upon its assessed property valuation, its population and its extent of "debt service." In an early section of this report the population growth of Jacksonville was discussed at length and predictions for the future given, therefore this subject will not be discussed further here.

A city's revenue from taxation is limited to what may be raised by the assessment of properties within its political borders, but its expenditures must of necessity be influenced by its physical growth beyond those borders, whether that growth has already been realized or whether it is merely in prospect and regardless of whether or not formal annexation of such areas comes to pass. Rapidly growing areas contiguous to the corporate limits receive services and benefits at the expense of the people within the political jurisdiction. Fire protection and electric utilities are examples of such services; some may be charged for, yet the initial capital outlays must be borne by the politically organized city itself. Fire departments are ever alert and ready to serve settled areas outside the corporate limits.

The area growth of Jacksonville has not been rapid, nor expansive. From 1887-1919 (32 years) the corporate area of the city was 12.34 square miles; from 1919-1925 (6 years) the area was 23.3 square miles, an increase of 89 percent. In 1925 the corporate limits were again extended to 34.63 square miles or 48 percent over that in 1919. These successive area increases are shown on Plate #5. An examination of Plate #3 illustrates the extent of built up areas showing that the 1887-1919 area is now well built up but considerable vacant undeveloped and unproductive property (approximately 60%) prevails in the outer fringes of the 1925 area. The corporate limits as established in 1925 include most of those



rapidly growing sections formerly outside the city limits (Ortega, St. Johns Park, Norwood, Panama and Murray Hill).

#### City Income.

Taxation of real and personal properties and revenues from licenses, fines, franchises, water and electric light plants constitute the city's source of income to (a) defray its expenses of operation and maintenance, and, (b) for the discharge of its "debt service". Special assessments of "liens" should be added to this, but other than the city's share of such public improvements, they do not enter into the general expense and do not effect the rate of taxation. The total amount of special assessment work done each year however is important because it effects the ability of the average taxpayer to contribute to the maintenance of the government.

Property is assessed on the basis of approximately a 50% valuation. The following Table, #30, enumerates the valuations of realty and personalty from 1912 to 1928 inclusive showing increases or decreases by years. This information is also shown on Diagram #32 (1896-1928). An examination of this diagram shows that the assessed valuation of realty from 1896 to 1902 (6 years) was practically stationary at approximately eleven million dollars. The corporate area during this period was 12.34 square miles (See Plate #5). From 1902 to 1911 the realty valuations experienced a comparatively steady per annum increase averaging 1.75 million dollars, with a land area equal to that of the earlier period but subjected to more intense and rapid utilization. Following 1911 the valuations were subjected to modification by a Board of Review, resulting in an increase of 19.35 million dollars, raising the 1912 realty assessed valuations to \$47,896,080. Since this date the average annual increase has approximated 3.4 million dollars, irrespective of the fact that during this period the land area "capable of assessment" increased nearly 100 per cent! With a 48% increase in corporate area during 1925 the increase of assessed realty valuations amounted to less than 20%. And it must be remembered that when this area increase was made in 1925



PROPERTY VALUATIONS  
AND TAX RATES  
JACKSONVILLE  
1896-1928

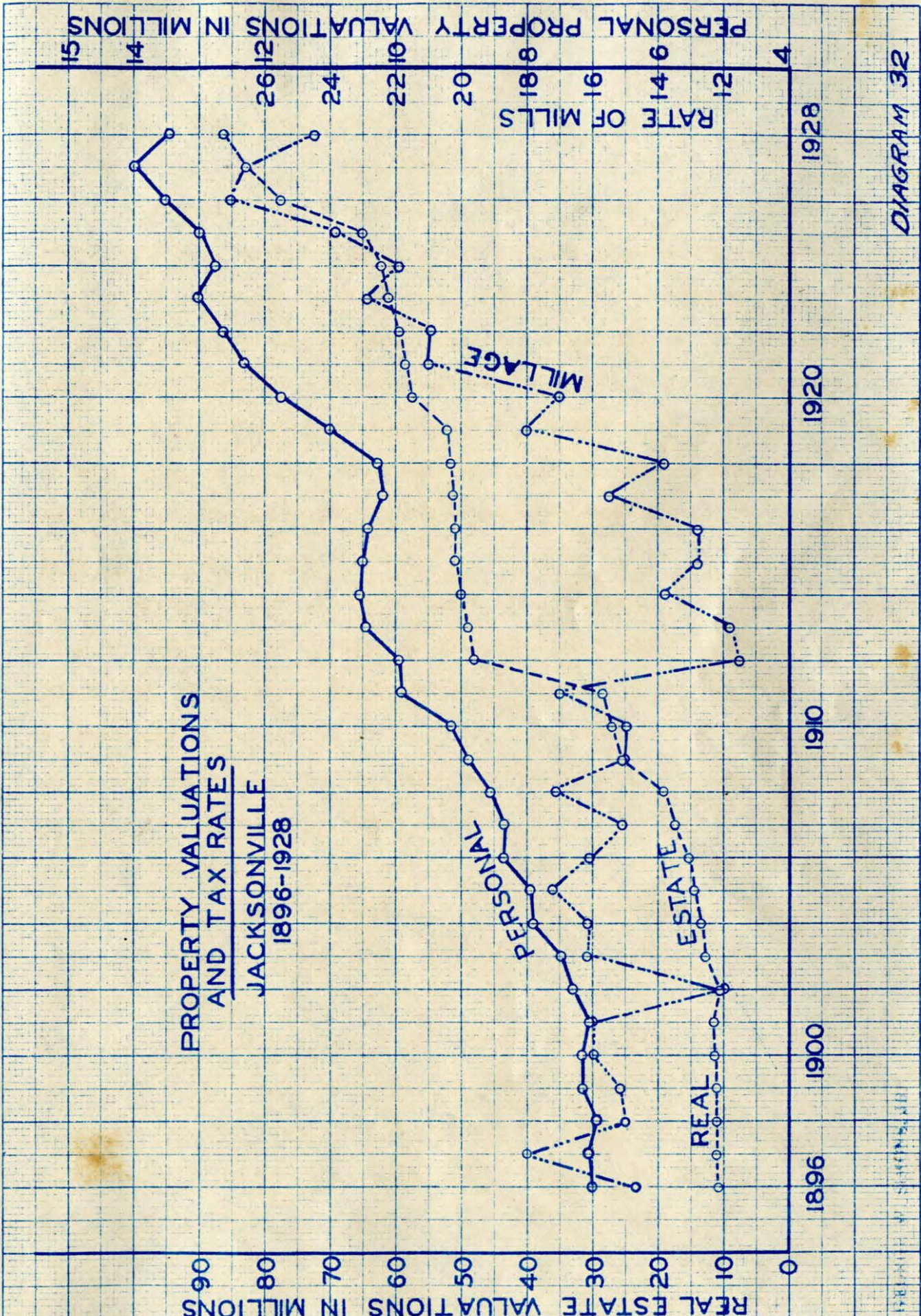


DIAGRAM 32

KEUFFEL & ESSER CO., N. Y. NO. 359-11  
20 x 20 to the Inch.



TABLE #30

## CITY OF JACKSONVILLE TAX ROLLS

| Year             | Valuation<br>Real Estate | Increase or<br>Decrease over<br>Previous year | Valuation<br>Personal<br>Properties | Increase or<br>Decrease over<br>Previous year |
|------------------|--------------------------|-----------------------------------------------|-------------------------------------|-----------------------------------------------|
| 1912             | 47,896,080.00            | ±19,355,320.00                                | 7,965,180.00                        | + 163,240.00                                  |
| 1913             | 49,064,920.00            | + 1,168,840.00                                | 8,983,760.00                        | + 1,018,580.00                                |
| 1914             | 50,174,380.00            | + 1,109,460.00                                | 9,100,200.00                        | + 116,440.00                                  |
| 1915             | 50,721,000.00            | + 546,620.00                                  | 9,002,460.00                        | - 97,740.00                                   |
| 1916             | 50,722,980.00            | + 1,980.00                                    | 8,837,460.00                        | - 165,000.00                                  |
| 1917             | 51,141,800.00            | + 418,820.00                                  | 8,458,140.00                        | - 379,320.00                                  |
| 1918             | 51,617,960.00            | + 476,160.00                                  | 8,565,260.00                        | + 107,120.00                                  |
| 1919             | 52,069,260.00            | + 451,300.00                                  | 10,045,200.00                       | + 1,479,940.00                                |
| 1920             | 57,477,700.00            | + 5,408,440.00                                | 11,578,800.00                       | + 1,533,600.00                                |
| 1921             | 58,516,620.00            | + 1,038,920.00                                | 12,654,400.00                       | + 1,075,600.00                                |
| 1922             | 59,689,040.00            | + 1,172,420.00                                | 13,271,840.00                       | + 617,440.00                                  |
| 1923             | 61,083,080.00            | + 1,394,040.00                                | 14,020,940.00                       | + 749,100.00                                  |
| 1924             | 62,276,940.00            | + 1,193,860.00                                | 13,504,640.00                       | + 516,300.00                                  |
| 1925             | 65,195,220.00            | + 2,918,280.00                                | 14,006,740.00                       | + 502,100.00                                  |
| 1926             | 77,487,340.00            | + 12,292,120.00                               | 15,009,040.00                       | + 1,002,300.00                                |
| 1927             | 82,968,720.00            | + 5,481,380.00                                | 16,036,100.00                       | + 1,027,060.00                                |
| 1928             | 86,019,000.00            | + 3,050,280.00                                | 14,887,700.00                       | -1,148,400.00                                 |
| Sum Total        |                          | 57,478,240.00                                 |                                     | 7,085,860.00                                  |
| 17 years average |                          | 3,381,072.00                                  |                                     | 416,815.00                                    |

## Increase in Land Area

|           |                   |       |              |
|-----------|-------------------|-------|--------------|
| 1887-1919 | Area in sq. miles | 12.34 |              |
| 1919-1925 | " " "             | 23.30 | 89% increase |
| 1925-1929 | " " "             | 34.63 | 48% "        |

the city's responsibility to provide improved and extended services of utilities, streets, police and fire protection became increasingly greater. Yet in all fairness to the Tax Assessor it must be noted that much of this increased area is still undeveloped.

In connection with this study of assessed valuations the trend of building permits over past years should be noted. Diagram #3 shows this trend, also Table #31.

TABLE #31

|      |               |       |          |
|------|---------------|-------|----------|
| 1919 | approximately | \$3.6 | millions |
| 1920 | "             | 3.5   | "        |
| 1921 | "             | 5.1   | "        |
| 1922 | "             | 5.8   | "        |
| 1923 | "             | 7.5   | "        |
| 1924 | "             | 7.3   | "        |
| 1925 | "             | 14.7  | "        |
| 1926 | "             | 21.3  | "        |
| 1927 | "             | 13.0  | "        |
| 1928 | "             | 7.9   | "        |

Average for 10yrs. 8.97 "

Excluding the peak years of 1925 and 1926 indicates an annual average of \$6.7 millions of dollars.

Of course much of the annual building permits were for reconstruction, replacements, repairs, etc., and it cannot be expected therefore that all of the building permits should be included in the annual increment of assessed valuation increases, but it is reasonable to assume that for future use 4.0 to 5.0 million dollars per year should be added. And too, each year public improve-

ments are made which naturally tone up real estate values; the effect of these should be reflected also in the assessed valuations. The annual increments of increase then should approximate 4.0 million dollars annually, on which basis Table #32 was developed.



TABLE #32

|      |                  |          |
|------|------------------|----------|
| 1928 | \$ 86,019,000.00 | (actual) |
| 1929 | 90,019,000.00    |          |
| 1930 | 94,000,000.00    |          |
| 1935 | 114,000,000.00   |          |
| 1940 | 134,000,000.00   |          |
| 1945 | 154,000,000.00   |          |
| 1950 | 174,000,000.00   |          |
| 1955 | 194,000,000.00   |          |
| 1960 | 214,000,000.00   |          |

Table #30 and Diagram #32 also show the trend of Personal Property valuations. While the possession of personal property indicates an ability to pay and a given amount of personal property is just as assessable as a given amount of real property yet personal taxation is unpopular and is very difficult of administration. It is reasonable therefore to expect only a small increment of increase from this source over the years, approximating \$500,000 per year, as follows:-

TABLE #33

|      |                 |
|------|-----------------|
| 1928 | \$14,887,700.00 |
| 1929 | 15.3 millions   |
| 1930 | 15.8 "          |
| 1935 | 18.3 "          |
| 1940 | 20.8 "          |
| 1945 | 23.3 "          |
| 1950 | 25.8 "          |
| 1955 | 28.3 "          |

Combining the foregoing predicted assessed valuations of realty and personalty Table #34 is developed which indicates the trend of assessed valuations on the present basis.

TABLE #34

Total Projected Assessed valuations of Real and Personal Property.

|      | Real        | Personal   | Total       |
|------|-------------|------------|-------------|
| 1928 | 86,019,000  | 14,887,700 | 100,906,700 |
| 1929 | 90,019,000  | 15,300,000 | 105,319,000 |
| 1930 | 94,000,000  | 15,800,000 | 109,800,000 |
| 1935 | 114,000,000 | 18,300,000 | 132,300,000 |
| 1940 | 134,000,000 | 20,800,000 | 154,800,000 |
| 1945 | 154,000,000 | 23,300,000 | 177,300,000 |
| 1950 | 174,000,000 | 25,800,000 | 199,800,000 |
| 1955 | 194,000,000 | 28,400,000 | 222,300,000 |
| 1960 | 214,000,000 | 30,800,000 | 244,800,000 |

The City tax rate for a number of years is shown on Diagram #32, and since 1920 by the following table:

TABLE #35

|      |            |
|------|------------|
| 1920 | 17.0 mills |
| 1921 | 21.0 "     |
| 1922 | 20.9 "     |
| 1923 | 22.9 "     |
| 1924 | 21.9 "     |
| 1925 | 23.9 "     |
| 1926 | 27.0 "     |
| 1927 | 26.5 "     |
| 1928 | 24.5 "     |
| 1929 | 21.8 "     |

It will be noted from this table that in years of intense construction activity and general prosperity a high tax rate (27.0 in 1926) is generally approved. It is singular to note that in those periods citizens urge the construction of intensive public improvements and abnormally demand development that in normal times they would criticize. Demands of citizens during 1924-26 upon authorities to spend and expand later brought down criticism by these same citizens on the same officials in 1927-28 when conditions were not so rosey. With a general financial tightening public officials are always severely criticized for executing essential work. From Table #35 it will be noted that since 1920 tax rates have varied from a minimum of 17 0 mills to 27.0 mills with an average of 22.74 mills. ~~Twenty-two~~ to twenty-four mills seems to be a reasonable rate. It is advisable to stress here the unwisdom of lowering the millage unreasonably; it is much better to maintain a reasonable rate and create a free, unattached surplus of \$200,000 or \$300,000 for use in emergency. Many times a surplus on hand could relieve a bonded indebtedness or care for an unforeseen condition. Table #36 shown what income can be reasonably anticipated from the several millages based on the total valuations given in Table #34.



TABLE #36

|      | Val.  | 20  | 21  | 22  | 23  | 24  |
|------|-------|-----|-----|-----|-----|-----|
| 1930 | 109.8 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 |
| 1935 | 132.3 | 2.7 | 2.8 | 2.9 | 3.0 | 3.1 |
| 1940 | 154.8 | 3.1 | 3.2 | 3.4 | 3.5 | 3.6 |
| 1945 | 177.3 | 3.5 | 3.7 | 3.9 | 4.1 | 4.3 |
| 1950 | 199.8 | 4.0 | 4.2 | 4.4 | 4.6 | 4.8 |
| 1955 | 222.3 | 4.4 | 4.6 | 4.9 | 5.1 | 5.3 |
| 1960 | 244.8 | 4.9 | 5.1 | 5.4 | 5.6 | 5.9 |

All figures relate to millions of dollars.

In addition to money derived from taxation, considerable is derived from various revenues itemized in each budget. From a comparison of past anticipated revenues with those actually received it is reasonable to assume that with a steady, consistent population increase there will accrue a proportionate increment of annual revenue approximating \$350,000.

It is interesting to note at this point the trend among American cities in per capita net revenue receipts and net government costs; the following tabulation was prepared by the United States Department of Commerce, Bureau of the Census:-

|      | Revenue<br>per capita | Cost for Maintenance<br>and Operation per capita. |
|------|-----------------------|---------------------------------------------------|
| 1905 | 22.79                 | 14.88                                             |
| 1915 | 30.00                 | 20.34                                             |
| 1917 | 31.97                 | 20.92                                             |
| 1919 | 35.26                 | 24.18                                             |
| 1922 | 53.57                 | 37.14                                             |
| 1924 | 58.41                 | 40.42                                             |
| 1926 | 66.14                 | 44.27                                             |
| 1927 | 69.77                 | 46.25                                             |

TABLE #37

|      | Revenue from all<br>Sources Except<br>Bonds. | Delinquent<br>Taxes. |
|------|----------------------------------------------|----------------------|
| 1924 | 2,521,340.65                                 | 222,631.85           |
| 1925 | 2,822,732.84                                 | 185,269.89           |
| 1926 | 3,115,724.90                                 | 201,528.05           |
| 1927 | 4,001,631.71                                 | 333,848.84           |
| 1928 | 4,370,675.17                                 |                      |



ANNUAL BUDGETS IN MILLIONS OF DOLLARS

5  
4  
3  
2  
1  
0

AREA OF CITY IN SQUARE MILES

30  
20  
10

1910

1920

1930

ANNUAL BUDGETS FOR JAX

DIAGRAM 34

REC'D - W. SIM. 5-18

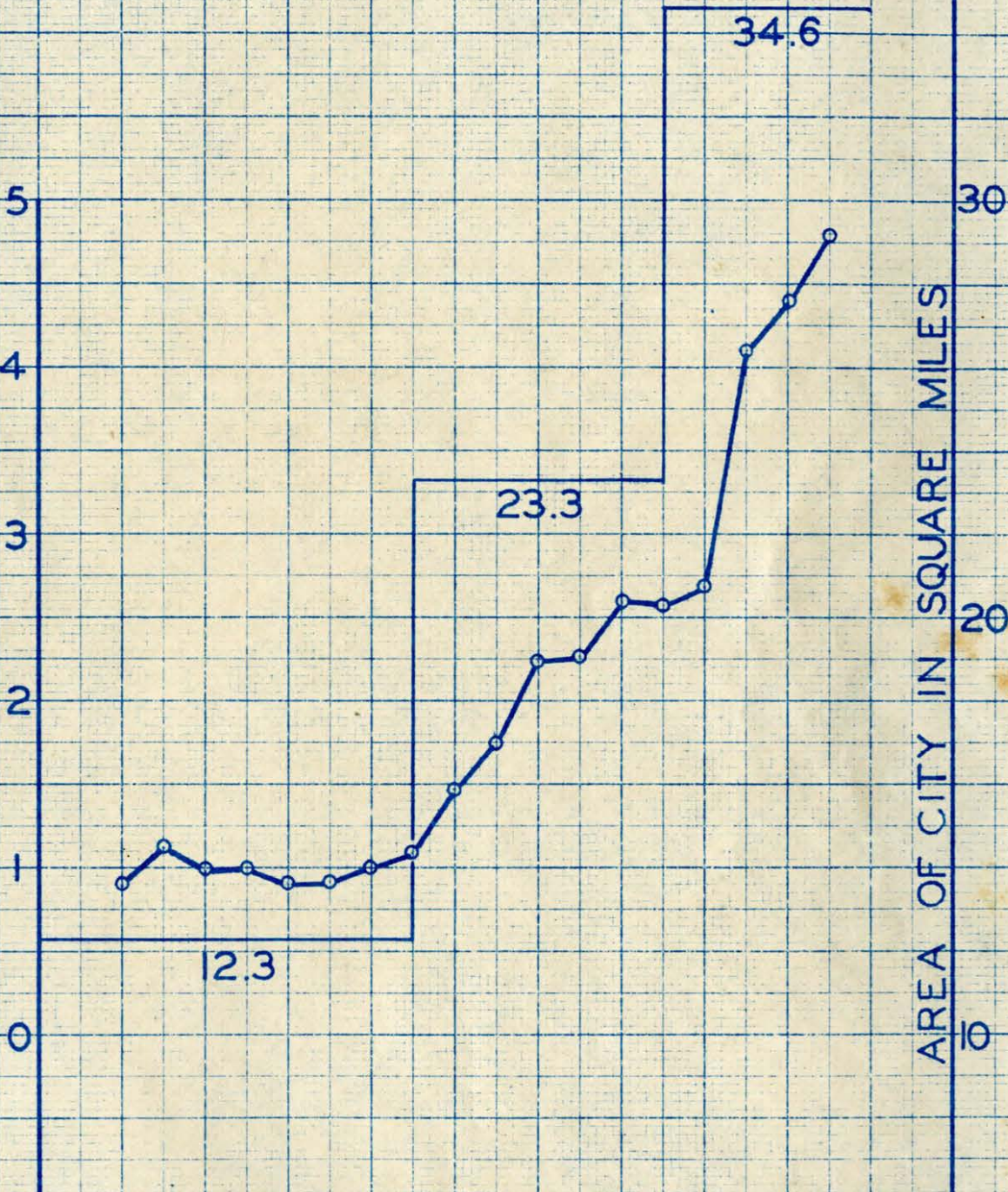




TABLE #38

|      | Gross Budget  | Annual Budget Increase |
|------|---------------|------------------------|
| 1911 | \$ 925,000.00 |                        |
| 1912 | 1,112,000.00  | + 187,000.00           |
| 1913 | 1,000,000.00  | -112,000.00            |
| 1914 | 1,000,000.00  | No Increase            |
| 1915 | 990,000.00    | - 10,000.00            |
| 1916 | 990,000.00    | No Increase            |
| 1917 | -----         | -----                  |
| 1918 | 1,102,000.00  |                        |
| 1919 | -----         | -----                  |
| 1920 | 1,475,000.00  |                        |
| 1921 | 1,750,000.00  | + 275,000.00           |
| 1922 | 2,225,000.00  | + 475,000.00           |
| 1923 | 2,225,000.00  | No Increase            |
| 1924 | 2,600,000.00  | + 375,000.00           |
| 1925 | 2,560,000.00  | - 40,000.00            |
| 1926 | 2,700,000.00  | + 140,000.00           |
| 1927 | 4,100,000.00  | + 1,400,000.00         |
| 1928 | 4,350,000.00  | + 250,000.00           |
| 1929 | 4,807,888.04  | + 457,000.00           |
| 1930 | 4,648,084.87  | - 159,104.00           |

Increase from 1920-30 \$3,172,896.00  
 215% over 1920.

Average annual rate of increase \$317,289.00

Jacksonville is not however exacting a revenue from sources which should contribute to the city; a later section will discuss possible sources of additional revenue.

As stated previously the money of the city is expended to defray current expense and pay off indebtedness, the latter amounting to nearly 30% of the total expenditure as indicated elsewhere. Table #38 shows the yearly appropriations or budgets, and Diagram #34 gives the same information graphically.

The total appropriation for 1921 was \$1,750,000; that for 1929 was \$4,807,000, an increase of \$3,057,000 or approximately 150% over the 1921 figure. The average rate of increase has been about \$368,333 (to 1929 only). Of the \$4,807,255.04 budget of 1928 for 1929 expenditures \$1,535,435 was for "debt service" (more than 30%).

#### Bonded Debt.

In addition to the expenses for current maintenance and operation the city must annually raise money for the retirement of its outstanding bonded debt. Table #39 shows the bonded debt and interest due each year; diagram #33 gives this same information. The diagram indicates the rate of bond relief, based on the assumption that no further bonds will be issued. Any issuance of refunding bonds will alter the trend of the curve.

From the foregoing discussion what Jacksonville can reasonably anticipate from taxation on the basis of the present assessment policy is shown, also what may reasonably be anticipated from revenues. A study of the several budget appropriations discloses that nearly 30% of the money is for "debt service" the remainder for the operation of the government.

As pointed out in the beginning the cost of government increases with the demands of the people and changes of the times. As the city grows and develops its police and fire departments must also grow and the personnel of its several departments must be augmented to care for expanded utilities and terri-



TABLE #39

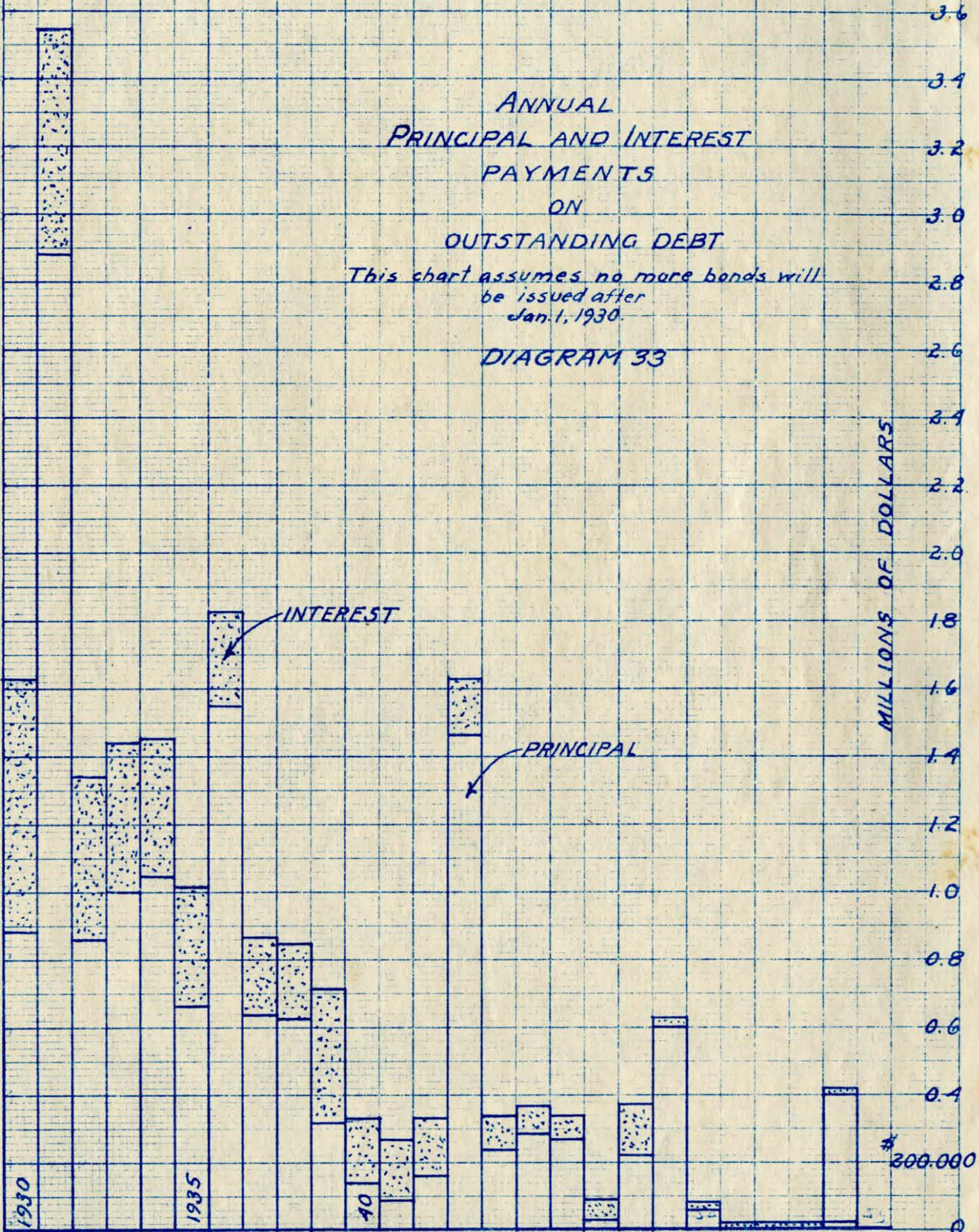
|      | P R I N C I P A L |                             | I N T E R E S T |                            | Total     |
|------|-------------------|-----------------------------|-----------------|----------------------------|-----------|
|      | General Imp.      | Docks, Paving,<br>Sidewalks | General Imp.    | Docks, Paving<br>Sidewalks |           |
| 1930 | 600,000           | 278,000                     | 522,660         | 233,170                    | 1,633,830 |
| 1931 | 1,525,000         | 1,356,000                   | 446,160         | 218,770                    | 3,545,930 |
| 1932 | 666,000           | 194,000                     | 337,410         | 150,640                    | 1,342,050 |
| 1933 | 675,000           | 328,000                     | 303,910         | 140,350                    | 1,447,260 |
| 1934 | 735,000           | 325,000                     | 267,410         | 123,495                    | 1,450,905 |
| 1935 | 625,000           | 42,000                      | 236,410         | 112,675                    | 1,016,085 |
| 1936 | 1,255,000         | 300,000                     | 174,760         | 109,575                    | 1,839,335 |
| 1937 | 514,000           | 119,000                     | 150,255         | 94,575                     | 877,830   |
| 1938 | 435,000           | 200,000                     | 128,505         | 88,975                     | 852,480   |
| 1939 | 95,000            | 220,000                     | 123,855         | 79,050                     | 517,905   |
| 1940 | 145,000           |                             | 116,705         | 68,800                     | 330,505   |
| 1941 | 45,000            | 45,000                      | 114,555         | 67,800                     | 272,355   |
| 1942 | 145,000           | 20,000                      | 107,405         | 65,550                     | 337,955   |
| 1943 | 145,000           | 1,325,000                   | 100,255         | 64,625                     | 1,634,880 |
| 1944 | 145,000           | 100,000                     | 93,105          | 5,000                      | 343,105   |
| 1945 | 295,000           |                             | 78,455          | 4,500                      | 377,955   |
| 1946 | 274,000           |                             | 65,500          | 500                        | 340,000   |
| 1947 | 25,000            |                             | 64,250          |                            | 89,250    |
| 1948 | 225,000           |                             | 53,000          |                            | 278,000   |
| 1949 | 600,000           |                             | 23,000          |                            | 623,000   |
| 1950 | 60,000            |                             | 20,000          |                            | 80,000    |
| 1951 |                   |                             | 20,000          |                            | 20,000    |
| 1952 |                   |                             | 20,000          |                            | 20,000    |
| 1953 |                   |                             | 20,000          |                            | 20,000    |
| 1954 | 400,000           |                             | 20,000          |                            | 420,000   |
| 1955 |                   |                             |                 |                            |           |



ANNUAL  
PRINCIPAL AND INTEREST  
PAYMENTS  
ON  
OUTSTANDING DEBT

This chart assumes no more bonds will  
be issued after  
Jan. 1, 1930.

DIAGRAM 33





torial improvements. A review of governmental costs in Jacksonville over a period of six years discloses that an annual increment of cost approximating \$300,000 can be anticipated. It will be noted that the annual increase of anticipated revenues exceeds by nearly ten percent the annual increase in expenditures, therefore it is again reasonable to assume that the annual increases of revenues will more than care for the annual increases in the cost of government.

On a basis of these assumptions Diagram #35 was developed, namely a tax rate of 22 mills average annual revenue varying from 2.5 million dollars in 1930 to 6.0 million in 1940 and a cost of government varying from 3.3 million dollars to 6.3 in 1940. The "debt service" is shown as the basis, it also being assumed for purposes of discussion that no additional bonded debt will be created. In other words the objective of this study is to ascertain the rate of bonding capacity in future years. 1930 is shown on the curve as recently adopted by the Council.

On the foregoing basis Diagram #35 was developed based on a tax rate of 22 mills, an average revenue of 2.5 millions in 1930, increasing at a rate of \$350,000 annually and a cost of government approximating 3.5 million dollars in 1930 and increasing at a rate of \$300,000 annually. The "debt service" is the base on which cost of government is founded; this must be provided for first. In other words an effort is here started to ascertain a rate of bonding capacity.

While it is possible that the several assumptions may vary somewhat and become either greater or less, one must remember that this is a study of average conditions and that the assumptions are all reasonable can be confirmed by an examination of former budgets of the City of Jacksonville as well as the Financial Statistics of American cities supplied by the United States Department of Commerce. For instance as a city grows its cost of departmental activities will obviously increase and when Jacksonville reaches a population of 400,000 it is



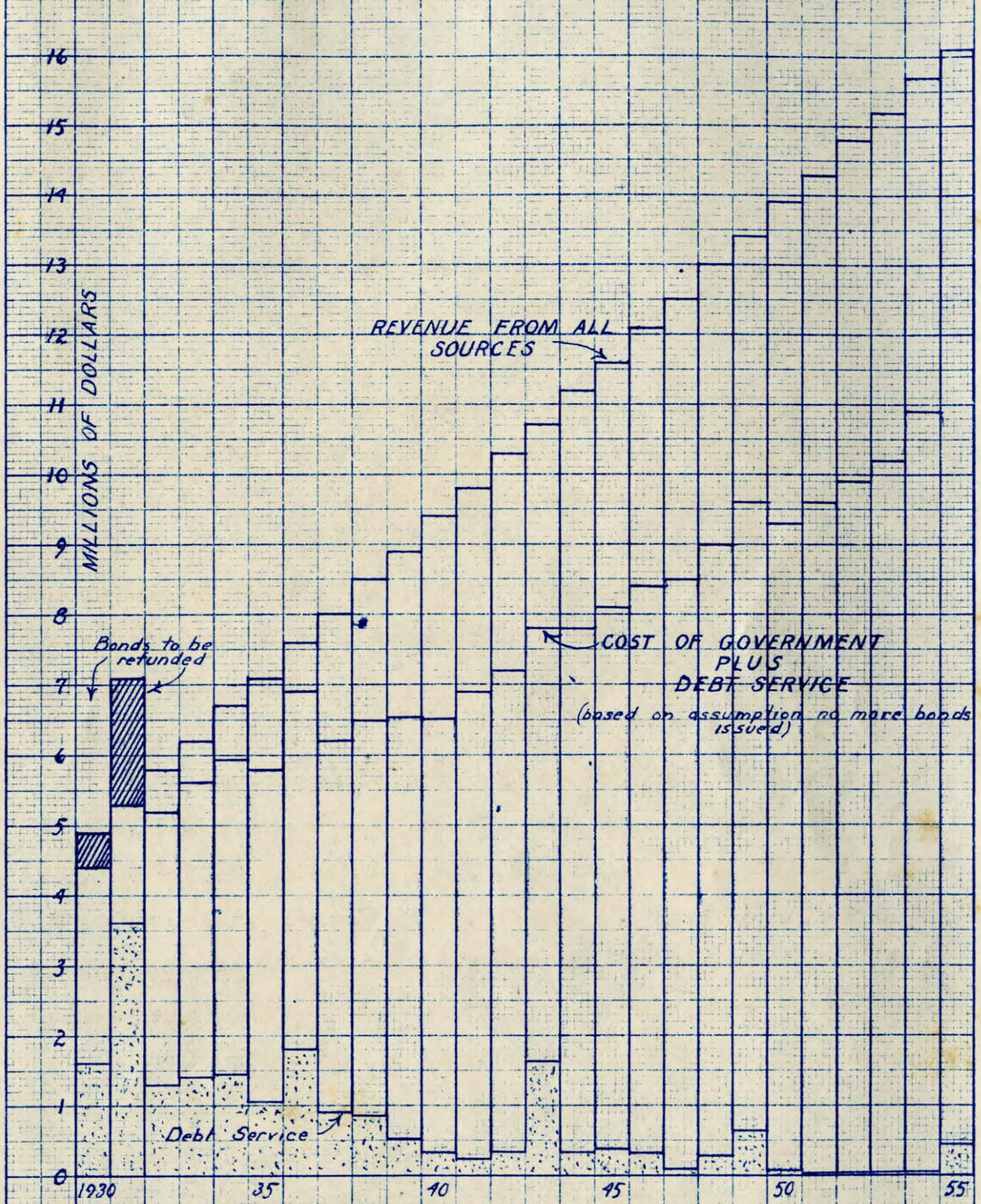


DIAGRAM 35



not unreasonable to believe that the cost of government exclusive of "debt service" will approximate 9.0 millions of dollars. Per capita government cost it has just been pointed out have been increasing annually.

The only possible change that might have to be made in the financial structure is a restatement of assessed valuations. It is quite obvious that the assessed valuations will have to be modified or equalized to better city advantage as the years pass and the city expands.

From Diagram #35 it will be noted that a few bonds must be refunded in 1930, and in 1931 more than two million dollars worth. Naturally these refunding issues will alter the basic "debt service" line slightly increasing the annual amount by \$12,000 to \$14,000 and adding two million to the cost curve about 1950 dependent on the character of the issue.

It is evident from the study that by 1932 the bonded indebtedness will have passed the line equivalent to ten percent of the assessed valuation at that time and further that by 1933 a small surplus approximating \$500,000 will have accumulated. The rates of surplus accumulations increase until 1935 a surplus of nearly a million dollars can be realized. In other words it is evident from this study that by a careful operation and maintenance of the government that a small bonding capacity can be developed by 1932-33 and that by 1935 a sizeable issue of bonds can be proposed, also in 1940.

It was previously stated that Jacksonville was not deriving all the revenue it should. At present revenue is received from the golf course, stadium pound fees, meat inspection, sewer connections, interest on deposits, municipal court fines, delinquent taxes, general licenses, dog licenses, plumbing and electrical inspection and franchise tax.

It is just to exact revenue from sources as follows:

(a) For building permits. In many cities it is necessary to pay for a building permit--the scale of charges based upon the size of job. Such fee is just and only partially defrays the cost of an inspection service for the

property owners benefit and public's protection.

(b) Taxi cabs and other vehicles for hire are allotted street space for which nothing is paid. The street surface belongs to the public and for the privilege of utilizing it for any business purposes the public should be paid. The customary "For Hire" license sold taxis is payable whether a car operates from a garage or from a street stand.

(c) Rentals should be paid the city by all down town buildings having and using vault space under sidewalks. These spaces belong to the taxpayer yet are used exclusively by building owners and should be paid for by them.

(d) Projecting balcony rooms or compartments should pay the city an annual "air and light" rental. Hotels having balcony rooms over sidewalks and deriving fees from the use of such rooms should pay the city for space occupied. If city owned property assists a concern to make profits, such concern should share the profits with the city.

(e) Fees should be derived from hanging signs projecting into public property.

(f) Sixty-two (62) interurban buses per day operating over the streets of Jacksonville pay no license or fee to the city for the use of street surfaces. The city streets are used extensively by bus owners yet no revenue is derived from such use. In some places an annual charge of \$1.00 per seat for each bus is charged; sixty-two buses with an average seating capacity of thirty would net the city \$1860 per year.

In the foregoing several sources of additional revenue are suggested-- sources utilized in many places of the country.

The execution of the plan is generally the question of concern. The plan is flexible; it cannot be otherwise. Elements dictated along one line today may be altered slightly tomorrow and to appreciate the plan to the fullest degree and realize its essential features it should be contemplated in a broad, practical way. Rather than become a rigid, cold measure it should be considered a guiding beacon responding to deviations here and there. Viewed in this light the plan can become a useful guide for the future and ultimately in its major aspects be consummated.

There are numerous recommendations in the foregoing report that can be initiated now without the expenditure of any money, others that can be realized in a few years and still others that cannot be attacked for a number of years. For instance:



- (a) The regulation of traffic movements and parking .
- (b) The preparation and promulgation of recommended ordinances.
- (c) The commencement of a policy for directional guides.
- (d) The development and improvement of park properties.
- (e) The acquisition of additional park and parkway areas.
- (f) The changes in the Zoning Ordinance.
- (g) Elimination of acute angles at several street intersections.
- (h) The establishment of building lines.

As shown by the foregoing financial study the city will be in a position within two or three years to finance:

- (a) important roadway widenings
- (b) purchase additional park tracts
- (c) improve sewerage, drainage and refuse systems.

They by 1940, the financial status will be such that some of the major developments can be undertaken. And so, by this same, practical progressive method the entire plan in its principal aspects can be realized.

Following is an estimate of cost of the major improvements outlined in the foregoing report:

|                               |             |
|-------------------------------|-------------|
| Cost of Pavement              | \$6,700,000 |
| Cost of Curb                  | 960,000     |
| Cost of Property for widening | 2,000,000   |
| Two Junior High Schools       | 700,000     |
| Three Fire Stations           | 100,000     |
| New Viaduct                   | 900,000     |
| Four Athletic Fields          | 300,000     |
| Ten Play Parks                | 50,000      |
| Three Incinerators & Sites    | 400,000     |
| 2200 acres Park Land          | 300,000     |
| Park Additions                | 500,000     |
| Sewerage Program              | 1,500,000   |
| Sewerage Interceptor          | 500,000     |
| Parkway development           | 1,000,000   |
| Civic Center                  | 2,000,000   |

## APPENDIX 1

The following is a section taken from the Official Traffic Code of Indianapolis, Indiana.

### Section 26. STANDING FOR LOADING OR UNLOADING ONLY IN CERTAIN PLACES\*- PERMITS:

(a) The Board of Public Safety shall have the authority upon request to determine, designate, and grant permits for the location of passenger zones and loading zones, in strict accordance with the provisions of this section.

(b) Whenever the owner or occupant of any premises having a frontage on any street shall present to the Board of Public Safety a written request for permission to establish and maintain during the time permitted by this ordinance a "Passenger Zone" or a "Loading Zone" in front of such premises, said Board of Public Safety shall cause an investigation to be made by a properly designated officer of the necessity for such reservation of such curb space, and if, after investigation, it is the opinion of the Board of Public Safety that the establishment and maintenance of such passenger or loading zone is essentially necessary in the successful operation of the business conducted by such owner or occupant, then said Board of Public Safety may grant to such owner or occupant of such premises a permit to establish and maintain a Passenger Zone or Loading Zone in front of such premises; provided, that such permit shall not be valid and operative until the holder thereof shall have paid to the City Comptroller of the City of Indianapolis an annual rental of Fifty Dollars (\$50.00) for the first eighteen (18) feet of space so reserved and an additional rental of Ten Dollars (\$10.00) for each additional foot of space so reserved, provided that not more than seventy-two (72) continuous feet of curb space shall be so reserved and designated as Passenger or Loading Zones.

In addition to the annual rental fee provided for herein, the holder of any such Passenger Zone or Loading Zone permit shall also deposit in the office of the City Comptroller the additional sum of Ten Dollars (\$10.00), one-half of which shall immediately go into the general fund of said city, for which deposit the City Comptroller shall give a receipt, which, when presented to the Chief of Police shall entitle such owner or occupant to receive two (2) iron Markers, bearing the inscription, "NO PARKING, PASSENGER ZONE," or "NO PARKING, LOADING ZONE," which markers such owner or occupant shall place securely upon the edge of the sidewalk facing the roadway at a distance apart not to exceed that for which the permit calls during the time such space is actually being used either as a Passenger or a Loading Zone between the hours of 7:00 A. M. and 7:00 P. M. only, and then only for the purposes as enumerated in said permit granted by the Board of Public Safety.

### STREET ENCROACHMENTS

The following section was taken from the official code of ordinances of the City of Oklahoma City, 1928.

SECTION 16-20 It shall be unlawful and an offense, for any person, firm or corporation to construct, erect, operate, maintain or permit to exist



any ice box, ice dock, gasoline pump, gasoline, storage reservoir, oil pump, oil storage reservoir tire repair, rack, tire tools or equipment, water hose connection, storage reservoir inlet or outlet, compressed air hose connection or housing for same, any mercantile business or any tools, stand, equipment or appurtenances thereof, and radio aerials, poles or wires therefor whether permanent or temporary, or any other obstruction, upon any part of any public street, alley, boulevard, parkway, sidewalk, curbing or parking within the City of Oklahoma City.

#### BUILDING LINES

The following sections were taken from the Code of Ordinances of Roanoke, Virginia. This ordinance was recently approved by the United States Supreme Court.

Section 243:- That all buildings hereafter to be erected in the City of Roanoke in the Residence District, as established by Ordinance No. 1050, or as hereafter established by ordinance, shall be built to correspond with the existing house line of the houses built in the same block.

Section 244:- That the line of the existing houses having a uniform distance from the street line, and the average distance of the existing houses not having a uniform distance from the street line, shall be the line upon which 60 percent of the houses in the block in which the proposed building is intended to be erected, have with relation to the street, and the said proposed building must be at least as far from the street as the line established by 60 percent of the houses as aforesaid. The word "block" herein used does not refer to any entire city square, but shall be construed to be that portion on one side of the street upon which the new building is proposed to be erected, bounded by the nearest intersecting streets to the right and left of said proposed building.

Section 245:- That if there are not more than two houses in the block upon which a building is proposed to be erected, the building line of said new structure may be such line as shall be fixed upon by the owner of said building, provided, however, that in no event shall the front of the proposed building be nearer than twenty feet from the front line of said lot, exclusive of the sidewalk, in case his grant shall carry him to the street line.

Where unnecessary hardship would result to the owner of property in carrying out any provision of this ordinance, the Council shall have the power, in a specific case, on petition, and after due notice and public hearing, to permit a building to be erected closer to the street line than that provided by this ordinance, in the following cases:

(a) Wherever, in their judgment, the block in which the proposed building is to be erected has greater value for business or mercantile purposes than for residence purposes at the time the new building is to be erected.

(b) Where the projection of a building in front of the set back building line is necessary to secure a building or structure practicable in construction and arrangement, for an exceptionally shallow or irregular lot.

(c) In any block wherein there are existing buildings used for business or mercantile purposes, and the Council shall be of the opinion that the

proposed building will promote the general welfare of the City and of the neighborhood.

(d) Where building to be erected is to be located upon a switching track of any commercial railroad company.

#### APPENDIX 11

In "Street Name Signs" by Post and McCaffrey, published by the Municipal Administration Service the following conclusions were reached after intensive prolonged study of street signs:-

A summary of the conclusions reached during this study gives the following characteristics to the "ideal sign".

1. Height and width of key letter "M" to be four inches, width of stroke to be four-fifths of an inch.

2. Dullest possible background, e. g., sanded black smalt.

3. Brightest possible reflecting letter;

(a) Non-tarnishing, e. g., gold leaf.

(b) Prismatic glass when more economically developed.

4. Projecting over roadway, semaphore fashion with fourteen and one-half feet clearance.

Following are specifications of Sign:

Specifications drawn for the black and gold sign as finally worked out in this experiment are:

1. Sign board: 10" wide x 1" thick, A No. 1 sugar pine.

2. Two priming coats of white lead, sandpapered between coats, all knots shellaced and all cracks puttied.

3. Sizing applied roughly to the shape of the letters.

4. Gold leaf applied to the sized surface.

5. Letters accurately cut in with lampblack ground in oil.

6. While still wet sprinkle thoroughly with black smalt and shake off excess.

7. Allow to dry, away from dust, for two days at a temperature of 60 to 80 degrees Fahrenheit. The gold leaf should be larger than the visible letter; by thus extending beneath the black paint, a lap joint is formed and all moisture excluded.





St. L. Hos.

PARK

PARK

PARK

Park

TWELFTH ST.

ELEVENTH ST.

TENTH ST.

NINTH ST.

EIGHTH ST.

SEVENTH ST.

SIXTH ST.

FIFTH ST.

FOURTH ST.

THIRD ST.

SECOND ST.

FIRST ST.

BOULEVARD

PERRY

PEARL

SILVER

LAURA

MAIN

HUBBARD

MARKET

LIBERTY

WALNUT

LOXHAN

VICTORIA

EAGLE

CAROLINE

CEDAR

NORTH

JULIA

HOGAN

WEST ORANGE

WEST UNION

WEST BEAVER

WEST ASHLEY

EAST

EAST STATE

EAST UNION

ORANGE

JESSIE

WASHINGTON

LIBERTY

FLORIDA

RAIL ROAD

PARKER

SCOFFIELD

PHELPS

IONIA

CLARK

WILLIAM

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