ALLEN BENJAMIN
AND ASSOCIATES
TOWN PLANNERS

WAYLAND
MASSACHUSETTS

January, 1953

Winchester Planning Board
Winchester
Massachusetts

Gentlemen:

I am enclosing herewith my final report on the master plan study for the Town of Winchester, prepared in pursuance of your request. This report contains specific recommendations for elementary school, fire station, and playground sites; for new major streets, for off-street automobile parking areas, and for zoning by-law changes.

Plans showing the location of the proposed improvements and recommended zoning map changes are being submitted separately. You have already received supplementary reports on population growth and school site selection for consideration.

At this time I wish to express my appreciation to the Board for the continuing interest and assistance you have given in the execution of this study.

Also, I would like to thank the other departments and officers concerned for the information and friendly criticism which they provided, and particularly the Town Engineer and his staff for their invaluable cooperation.

Sincerely yours,

Allen Benjamin

Allen Benjamin

AB:EE

REPORT ON MASTER PLAN STUDY FOR THE TOWN OF WINCHESTER, MASSACHUSETTS

Prepared January, 1953 for the
Winchester Planning Board by
Allen Benjamin and Associates
Wayland, Massachusetts

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ELEMENTARY SCHOOLS WEST OF CAMBRIDGE STREET

Present Situation

The entire area west of Cambridge Street constitutes a single elementary school attendance district. The boundary between this district and the remainder of the town, which follows along Cambridge Street for its entire length in Winchester, is a relatively inflexible line. This is because the street carries heavy vehicular traffic and is therefore a major line of hazard which should not be crossed in home-to-school travel. Furthermore, the street demarks a pronounced change in topography, street pattern, and residential density, thus forming an unusually logical division between neighborhoods.

The Parkhurst School serving the public elementary pupils (kindergarten through grade six) of the district west of Cambridge Street is seriously overcrowded. This seven-room school with a design capacity of one hundred and seventy-five pupils can readily be expanded into a ten-room school with a capacity of two hundred and fifty pupils. Further expansion into a complete double unit, with fourteen classrooms and a capacity of three hundred and fifty, while possible, would require drastic reduction in the already small open spaces of the site.

Future Prospects

A special study on the future growth of the area west of Cambridge Street (described under "Zoning and

Land Use") indicates that the approximately five hundred dwellings now located here will increase to over one thousand by 1972. This should result in a corresponding increase in the public elementary school membership of the district to about four hundred and thirty pupils by 1972. Thus, even if the Parkhurst School is doubled, its capacity alone would be inadequate to serve the West Side twenty years hence -- and probably inadequate fifteen years hence. The expected 1972 membership, at an average of twenty-five pupils per room, would necessitate a total of seventeen classrooms. This is precisely the number that would be available if three rooms were added to the Parkhurst School and a new seven-room unit were constructed.

The elementary membership will continue to rise to about six hundred at the end of fifty years, which would call for at least twenty-four classrooms -- seven more than the number needed by 1972. These additional rooms could be provided by completely doubling the new school, or by constructing another separate seven-room unit.

Ultimate development of the area west of Cambridge Street to maximum density permitted by topography and zoning will produce a further rise in elementary school membership, to about seven hundred pupils. This membership, under prevailing standards, would require the provision of twenty-eight classrooms, which is the number that would be contained in two complete double-unit schools.

In order to select a site for the needed new elementary school building, it is first necessary to delineate in a general way the new attendance district which such building will be required to serve. By trial and error, the present Parkhurst District was divided into two districts, one of which would continue to be served by the Parkhurst School and the other by the new school. The boundary between the districts finally selected follows, from the Woburn line to High Street, a proposed major road (recommended under "Major Streets") and from High Street to the Arlington line, along the Country Club property and Hutchinson Road. The districts are so constituted that for both 1972 and ultimate development, the number of dwellings contained in each will be directly proportional to the recommended pupil capacity of their respective school buildings. For fifty-year growth, a slight eastward shift of the boundary would be necessary to maintain the load-capacity ratio.

Size of Site Required

The new elementary school building required in the near future to serve the necessary new attendance district should have a generous site. If possible, the site should be sufficiently large to permit inclusion of playfield and other playground facilities, adequate not only as a school adjunct, but as a needed element in the year-round recreational plant of the area. The site should therefore contain about eight acres of usable land, of which

at least five acres should be physically adaptable to playfield development. This will allow three acres for the building, landscaped grounds, service areas, parking spaces, and driveway.

3 acres for school
5 " playground

The eight-acre total size will satisfy a frequently used formula for area of school site: five acres minimum plus one acre for each one hundred pupils. (Here, about three hundred and fifty pupils are ultimately expected.) At the same time, if the prospective playfield is regarded as a recreational facility exclusively, its five-acre size will adequately serve all dwellings not served by other existing and proposed playfields in the vicinity (described under "Recreation Areas"). ~~(From eight to nine hundred ultimate houses will be more accessible to this site than other playfields.)~~ It should be emphasized, however, that the above acreage figures are minimum ones only. A site having more usable space than any hard and fast minimum will generally allow increased flexibility in design and permit better insulation of facilities from surrounding property.

Evaluation of Potential Sites

Within one-half mile of the center of the proposed new attendance district, there were found to be seven locations containing eight acres or more of open land, at least three acres of which have a moderate natural land slope (under ten per cent). These areas were all initially considered to be potential school and playfield sites.

However, in addition to the factor of size, already discussed, there are many other qualities of a good school site which must be given consideration -- such as centrality of location, freedom from hazards, safety of approach, and physical adaptability. The standing of each potential site in regard to these and other important factors was carefully determined. Because of the large amount of detail involved in this evaluation, a special report on the subject was made to the Planning Board.

As might be expected, no one site proved to be the best in every single regard; it was therefore considered necessary to "score" the sites as to their relative standing on each factor, weighing the scores in accordance with the importance of that factor. Two scoring systems were used: a "Score Card" suggested by the Massachusetts School Building Assistance Commission, and a simplified scoring which placed more weight on the factor of centrality. The site subsequently recommended for acquisition scored the highest under both systems.

Recommendations for Action

Recommended: THE ACQUISITION OF AN ELEMENTARY SCHOOL SITE ON THE WEST SIDE OF RIDGE STREET OPPOSITE LOCKELAND ROAD

The area recommended for acquisition is bounded on the east by Ridge Street, on the south by an existing property line (at right angles to Ridge Street and about two hundred feet south of its intersection with Lockeland Road), on the west by an existing property line (near

Dunster Lane), and on the north by a proposed new street connecting Dunster Lane with the end of Lockeland Road. The site contains a total of about eleven and one-half acres, of which about five acres are relatively level and well suited for playfield construction. It is contemplated that the playfield would be located on the section of the site nearest Ridge Street and that the school building would be erected on the higher land to the rear, about midway between Ridge Street and Dunster Lane.

This site, and the building location in particular, are well protected from any possible nuisances in the vicinity. The surrounding section is zoned for low-density residential occupancy, and there are no non-conforming uses nearby of a detrimental type. The slope of the land gives visual protection from the south and west, while the proposed new secondary street and the short length of Ridge Street bounding the site on the other two sides, provide additional insulation. The site is an attractive one, with natural variations in slope and cover.

As was the case with all but one of the possible sites in the district, this recommended site has some frontage on a major street. However, it is considered that any possible hazard from vehicular traffic can be minimized or entirely eliminated through proper placement and design of the facilities on the site. Specifically, although the proposed playfield within the site will be about twenty feet from Ridge Street, it may be completely

separated from that street by planting, fences or other physical barriers, with access permitted only from the new minor street along the north side. The building location within the site will be over five hundred feet from Ridge Street and two hundred feet from the new minor street (with access only from the latter).

Even more important, perhaps, is the matter of the children's safety from vehicular traffic in their home-to-school travel. This factor may be measured in terms of the number of necessary major street crossings in such travel, and is a function of site location which cannot be altered by any changes in design within the site itself. The total number of pupil-street crossings necessary to reach the recommended site was identical with the number for one other site and substantially less than for all the other sites considered. (The future major streets within the school district are Ridge Street south of Johnson Road, Johnson Road and its proposed extension to the Lexington line, and Lockeland Road.) If these future lines of hazard are plotted on the map, it is apparent, even without computation, that the recommended site serves the largest (and potentially most populous) of the areas uncrossed by these lines.

The recommended site has relatively good centrality. The probable building location within the site is two thousand and fifty feet walking distance from the expected 1972 population center of the attendance district and twenty-four hundred feet walking distance from the

ultimate center. Although the furthermost ultimate dwelling in the school attendance district (located in the extreme northwest corner of the town), will be a mile and one-half from the building, over eighty per cent of the total expected dwellings will be within one mile of the building.

The five acres needed for playfield and other playground purposes will require a moderate amount of grading; however, the amount required, based on preliminary studies, is less than in any other site but one, and approximately equal to the amount required in that site. There seems to be no particular problem as to ledge or drainage, but if construction difficulties do later appear, the site is sufficiently large to permit some shifting in the placement of facilities. The probable building location is considered especially satisfactory in that it will have excellent drainage and should receive little or no surface water run-off from other land.

Other Proposals for the Future

The need for immediate enlargement of the Parkhurst School through the addition of three rooms has already been discussed, and this is provided for in the Planning Board's capital budget. The construction of the seven-room elementary school building on the new site recommended for acquisition can, of course, be deferred for some time. However, a conservative estimate of growth rate indicates that unless the building is available for

? check

use by 1963, the Parkhurst School, as enlarged, will have at least thirty-five pupils per room. Further projection of growth indicates that seven more rooms will need to be available in the district by 1983, which is only thirty years hence. After the provision of this second completely new unit, the average pupil load per classroom in the area west of Cambridge Street should not exceed twenty-eight to thirty for at least another forty years.

RECREATION AREAS

Present Situation and Objectives

The built-up sections of town, lying largely to the east of Cambridge Street, are well served by a variety of public recreation areas. In addition to areas developed for one or more special forms of recreation, (as the Palmer Playground), there exist a number of areas providing for a variety of play activities, including field sports (as Leonard and Ginn Fields). It is with the latter type of relatively large multi-purpose areas (over three acres) that this report is concerned. To differentiate such areas from special purpose facilities, they will be referred to herein as "playfields" (rather than as "playgrounds," which is the technically correct designation for such fields if under twelve acres in size).

The playfields located east of Cambridge Street not only all exceed the minimum standard size of three acres, but equal or exceed the size (above this minimum) recommended for the number of dwellings which they respectively serve. (Standards of the American Public Health Association call for a "playfield" size ranging from three acres to serve a neighborhood of two hundred and seventy-five dwellings to a "playfield" of six acres to serve a neighborhood of thirteen hundred and seventy-five dwellings.)

Even more important than the size of the existing playfields is their distance from the dwellings which

they serve. It was found that approximately ninety per cent of the homes east of Cambridge Street are within three-quarters of a mile walking distance of one or more playfields, which distance may be considered as the desirable maximum for Winchester . (Standards vary somewhat in this regard, ranging from a recommended maximum of only one-half mile to a distance equal to the locally acceptable maximum walking distance for an elementary school. Although the latter distance in Winchester is officially one mile, all but five per cent of the dwellings east of Cambridge Street are within three-quarters of a mile of the nearest elementary school.)

In 1924 a master plan of existing and proposed recreation areas was prepared under the direction of the Planning Board. This plan called for the provision of a play area (either a playfield or small play lot) within a quarter of a mile of every dwelling. It was felt at that time that the very small children (pre-school age) should be able to find some play space within that distance of their home. This standard of service has not as yet been provided in Winchester, even in the built-up sections, and it is here considered that before the present playfield system is supplemented by the addition of play lots, it should be first extended to give the present standard of coverage to any unserved sections. (This will be discussed in more detail later.)

If the recommended playfield standards are applied to the town as a whole, certain specific deficiencies are

to be found. First, there is one section (and only one) of substantial size east of Cambridge Street which is more than three-quarters of a mile from the nearest playfield. This is the section surrounding Winter Pond and extending from Wildwood Cemetery to Hodgemore Avenue. (Two very small sections, one in the extreme northeast corner of the town and the other in the extreme southeast corner are also over three-quarters of a mile from a playfield, but they contain a relatively small number of dwellings, and are only slightly over the three-quarter mile limit.)

The real problem arises west of Cambridge Street. The Wildwood Street playfield, although containing three acres within its boundaries, has only about two acres of usable land. Thus it is below the minimum recommended size. Further, it now serves the entire area west of Cambridge Street and a substantial section east of Cambridge Street containing altogether about seven hundred dwellings. As this number of houses calls for a playfield of at least three and eight-tenths usable acres, the seriousness of the present deficiency becomes even more apparent.

Future Prospects

The area east of Cambridge Street in the vicinity of Winter Pond is experiencing some new residential building, and a slight further increase in the number of dwellings located therein is expected; consequently, the need

for a playfield in this area will increase somewhat with the passage of time. However, it is again west of Cambridge Street that the future will precipitate the most serious change in the recreational situation. The present five hundred odd dwellings in this area are expected to increase to a near ultimate of two thousand dwellings, forty-five per cent of which will be located over three-quarters of a mile walking distance from the Wildwood Street playfield.

Recommendations for Action

Recommended: THE ACQUISITION OF LAND ADJACENT TO THE WILDWOOD STREET PLAYGROUND FOR ENLARGEMENT

A recommendation under the heading of "Major Streets" calls for a new diagonal street extending from Johnson Road, near Wildwood Street, northeasterly along the slope behind the playground to Cambridge Street near its intersection with Pond Street. It is here recommended that the present Wildwood Street playfield be extended northerly to the line of that new street, and extended easterly (along the level land behind the conservatories) to the line of a possible future street paralleling Cambridge Street, and about three hundred feet therefrom. The area recommended for acquisition contains approximately five acres, of which about three acres are potentially usable. The unusable acreage is along the edge of the slope, and will serve as a buffer strip between the playfield and the proposed new street.

The playfield, as enlarged, will be of proper size and shape to accommodate either a second soft-ball diamond or one hard-ball diamond (not recommended). There will also be ample space for an enlarged play area for young children and for a paved area to accommodate basketball and other deck games. The playfield will be of sufficient size to serve adequately about one thousand dwellings. At least three hundred dwellings east of Cambridge Street will continue to rely on this field and it will provide for about seven hundred of the ultimate dwellings west of Cambridge Street.

Recommended: THE ACQUISITION OF A PLAYFIELD SITE AT THE NORTHEAST CORNER OF THE INTERSECTION OF RIDGE STREET AND JOHNSON ROAD

The area recommended for acquisition is roughly rectangular in shape, extending from the intersection of Ridge Street and Johnson Road about ~~nine~~ eight hundred feet north along Ridge Street and about ~~seven~~ two hundred feet east along Johnson Road. It contains approximately nine and one-half acres. This site is not only well suited to playfield purposes, but may also be used for extensive recreation such as sliding, skiing, picnicking, and nature study; thus, the recommended size is somewhat larger than is needed for playfield purposes alone.

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The five-acre playfield recommended under "Elementary Schools" for inclusion in the proposed school site will, as noted thereunder, serve up to nine hundred families; the enlarged Wildwood Street playfield will, as noted above, serve about seven hundred families west of

Cambridge Street . Thus, there remain about three hundred ultimate families west of Cambridge Street to be accommodated by the playfield here proposed. The map showing ultimate dwelling distribution indicates that three hundred houses will be over three-quarters of a mile from either of the other fields, but these same houses will be within three-quarters of a mile of the proposed site.

Recommended: THE DEVELOPMENT OF A PLAYFIELD ON WATER DEPARTMENT LAND OFF POND STREET AT BRANTWOOD ROAD

This playfield will be adjacent to the proposed Brantwood Road-Sylvester Avenue street connection, recommended under "Major Streets." Between this proposed street and Brantwood Road are at least four acres of relatively level land, and this is the area recommended for development. The field will lie between the new street and the residential section which it is designed to serve, hence, no major street crossings will be envolved.

No acquisition of land is necessary to carry out this recommendation, as the property is all owned by the town; it will, however, be necessary to provide, by agreement or transfer, for the maintenance and operation of the field by the Park Department instead of the Water Department.

The proposed playfield is primarily intended to serve the dwellings in the section around the cemetery and Winter Pond, which is now over three-quarters of a mile from any field. While the site is admittedly

"off center" in this unserved area, a careful field check revealed no other location of adequate size. Moreover, all unserved dwellings will be within that distance of the proposed field (three-quarters of a mile).

The development of this playfield serves another purpose, as well. For some years, the Planning Board's capital budget has carried an item for improving the so-called Middlesex Street playground. The site of the latter is relatively inaccessible and is crossed by a trunk sewer with elevated manholes. It is considered that the recommended playfield on the Water Department land will provide in the same general neighborhood better facilities than are possible in the Middlesex site; consequently, further expenditures in the latter location need not be made.

Other Proposals for the Future

As noted earlier in this report, the 1921 master plan recommended the provision of play areas within a quarter of a mile of every dwelling. If the town decides to provide such play areas (after giving all sections adequate playfield service), then it will be necessary to acquire some additional parcels of land.

Almost every playfield either does, or can, provide in one corner play area facilities for small children. However, in the residential sections more than a quarter of a mile from such fields, small lots of about ten thousand square feet in area will be needed. In the undeveloped sections of the town public acquisition may not

be necessary, for if the town adopts the "improved planning law," developers may be required to provide play areas and dedicate them to public use.

FIRE STATIONS

Present Situation and Future Prospects

Although special committees in Winchester have been recommending a second fire station in the western part of town since at least 1904, a single station still serves the entire community. One of the reasons consistently given for the construction of a second station was the frequent delays in alarm response caused by the railroad-grade crossing in the center. With the prospective elimination of this crossing, the need for another station can no longer be predicated on this formerly important factor.

The question now facing the town is this: If a normal run from the central station is assured, is a second station still necessary to protect existing and future homes and other buildings in the western part of town adequately? To answer this question, it is first necessary to consider these existing and prospective buildings in relation to their distance from the central station (modified by any unusually steep grades or other delaying factors) and, second, to consider the supplementary protection available through mutual aid arrangements with adjacent communities.

The standards of the National Board of Fire Underwriters call for an engine or hose company within one and one-half miles of all closely built residential sections. (While the term "closely built" — used in contradistinction to "scattered" — is not defined, it may be

interpreted as a spacing sufficiently close to permit the spread of fire from one house to another, if uncontrolled — a spacing typical of most built-up sections of Winchester, including areas west of Cambridge Street.) The built-up sections east of Cambridge Street are served by the central station in general conformity with this standard, as ninety-eight per cent of all dwellings so located are within one and one-half miles of that station. However, west of Cambridge Street there are now one hundred and ninety dwellings over one and one-half miles from the central station. Nearly two thousand dwellings are ultimately expected west of Cambridge Street, of which over thirteen hundred will be outside of the one and one-half mile distance.

Mutual aid arrangements are in effect with adjacent communities, some of which call for first-alarm response by out-of-town apparatus to Winchester fires. One of the towns concerned has already indicated that its own increased growth may mean a termination of regular first-alarm response; in any case, even if such arrangements were continued permanently (for which there is no guarantee), over nine hundred and fifty of the ultimate dwellings in the area west of Cambridge Street are beyond one and one-half miles from <u>any</u> fire station.

Protection standards also require that a fire company should be able to reach special hazards in a maximum of three minutes after receipt of an alarm. There are at least two major life hazards in the area west of Cambridge

Street — the Parkhurst and Maryclift schools. The Parkhurst School is definitely beyond any three-minute run from the central station. While the Maryclift School is somewhat inside the ~~one and~~ one-half mile boundary from the central station (and therefore theoretically within a three-minute run, at thirty miles per hour), deductions must be made of about one-half minute for apparatus to get out of the station, and additional time for the full stop frequently required at the traffic light on Cambridge Street and for reduced speed on the steep grade up High Street beyond the crossing. Furthermore, future plans if carried out will result in the existence of two other major life hazards in the area, both of which will be beyond any possible three-minute run from the central station. These, specifically, are the proposed new elementary school on Ridge Street and the proposed local shopping center on Lockeland Road.

Recommendations for Action

Recommended: THE ACQUISITION OF A FIRE STATION SITE BETWEEN HIGH STREET AND LOCKELAND ROAD AT THEIR INTERSECTION WITH RIDGE STREET

This site, containing about eight-tenths of an acre, is triangular in shape, bounded by Lockeland Road, Ridge Street, and a proposed diagonal street from Lockeland Road northwesterly to High Street, at its intersection with Ridge Street. It is recommended that the site be acquired now while still undeveloped, but that the construction of the building be deferred until existence of

the new school, shopping center and additional homes in the vicinity make its need more pressing. The land within the site is below road level and will require some fill before final use; however, the construction of the proposed diagonal street will necessitate a cut, and the material removed therefrom may advantageously be used to grade the adjacent station site.

With the completion of the proposed diagonal street and of the proposed Dunster Lane connection (described under "Major Streets"), the station site will be at the intersection of five roads radiating outward through the residential district to be served. Apparatus runs out of the new station, when built, will have favorable initial grades, especially runs to the east (the most frequent probable direction) which will utilize the down-grade of Lockeland Road.

The proposed site has good centrality within the presently unserved residential district; of the thirteen hundred ultimate dwellings over one and one-half miles from the central station, ninety-nine per cent will be within one and one-half miles from the new station (and ninety-three per cent will be as close as one mile to the station). The site is also near the major life hazards of the district, being adjacent to the proposed local shopping center, one thousand feet from the proposed elementary school, four thousand feet from the Parkhurst School and forty-seven hundred feet from Maryclift Academy.

A fire station on this site should produce the minimum possible effect on nearby residential property. Unlike

other potential sites, this location will not be completely surrounded by houses, as it is bounded on all sides by major streets, across two of which will be located other non-residential uses. Moreover, it will occupy land not well suited to house lots because of its acute angular shape and complete visual exposure.

MAJOR STREETS

Present Situation

The major streets of Winchester, with few exceptions, are well located and of proper width and alignment to accommodate present vehicular traffic. Moreover, the needs of future traffic have generally been anticipated, with advance provision being made for new streets through Board of Survey layout, exterior line establishment, or actual right-of-way taking.

The present adequacy of the street system is in no small measure due to the foresight and continuous planning of the municipal officials concerned. A valuable guide in this planning has been a master street plan, prepared in 1924 by the Planning Board in cooperation with other departments. This plan was completely revised during the past year.

Specifically, the location of each project shown on the 1924 street plan and not already accomplished or underway was carefully examined in the field. Where the original proposal seemed no longer feasible due to street or building changes in the vicinity, alternate proposals were considered. In a few instances, wholly new projects were developed. The relative need for and priority of each project deemed feasible was evaluated in terms of present and estimated future traffic conditions, regional highway needs, the probable growth of the town, and the relationship with other proposed improvements. In at least five instances the final location recommended for

a street improvement either altered the location of a proposed school site, playground, parking area or other facility, or had its own location altered by that of the facility.

Future Prospects and Objectives

The anticipated growth of Winchester from about 16,500 persons in 1952 to 21,500 in 1972 should produce at least a proportional increase in the number of automobiles in town, and a corresponding increase in the total volume of local traffic. The effect of growth will, of course, be the greatest in the area west of Cambridge Street, where the doubling of population within twenty years will mean the transformation of most of the rural-type roads now serving the area into urban streets. Where proper rebuilding of the traveled ways will necessitate substantial changes in right-of-way lines, such realignments should be provided for in advance.

Some entirely new major streets of the collector type (i.e., for collecting traffic from minor residential streets leading off them) will undoubtedly be needed when the large open areas in the West Side are subdivided; however, it is considered that streets of this type should be laid out and constructed by the various developers, rather than by the town. Such private construction of residential streets, both major and minor, may be required by the town if it reestablishes the Planning Board under the "improved planning law," as is proposed.

The 1924 plan was primarily concerned with streets for through traffic. It recommended a town-wide grid of north-south and east-west "thoroughfares," spaced one-quarter to one-half mile apart. It is here considered, however, that the present objective of the town should rather be one of keeping the number of through traffic streets at a minimum, not only because of cost but because of the often detrimental effect of heavy traffic on residential neighborhoods. Moreover, the future of through traffic is largely dependent on still unclear plans for new regional highways by the State and M.D.C. Consequently, recommendations for through streets are limited to necessary improvements in through routes already established and for which there is reasonable certainty of continuing use.

Recommendations for Action

Recommended: THE LAYING OUT OF JOHNSON ROAD FROM RIDGE STREET TO THE LEXINGTON TOWN LINE IN ACCORDANCE WITH CURRENT PLANS

The extension of Johnson Road from its present intersection with Ridge Street westerly (to an eventual junction with Maple Street in east Lexington) will complete an inter-town route to which Winchester is already committed. This proposal has been studied in detail by the town and county engineering departments, and layout plans have been prepared. The proposal is here endorsed, as it is considered that the east-west route of which

the extension is a part is of major importance, and that its use will be independent of any foreseeable changes in regional highways.

Particular attention was given in this study to the actual location of the proposed road, as three of the elementary school sites along Ridge Street lay within its mapped right of way. Therefore, any decision to recommend one of these sites would have necessitated an alteration in alignment of the road. The school site finally selected and recommended is located elsewhere, so that the original Johnson Road layout may now be followed.

Recommended: THE EXTENSION OF HIGH STREET TO INTERSECT JOHNSON ROAD NEAR THE LEXINGTON LINE

High Street is now laid out as a public way for the entire distance from Ridge Street to the Lexington boundary, even though the traveled way is built for only part of this length. At a point about three hundred feet east of its boundary, the High Street layout comes within two hundred feet of the proposed extension of Johnson Road (and then makes an angular turn westerly to parallel that Road). This proposal provides for a tangential extension of High Street, at the point of near-contact, across the intervening property to join with the Johnson Road layout.

The 1924 master street plan showed, in addition to Johnson Road and its extension, a second east-west route

across this part of town, running from Lockeland Road westerly to the Lexington line. It is here considered that if High Street is connected to Johnson Road, as proposed, and a diagonal street is built between Lockeland and High Streets, as later recommended, the need for the 1924 proposal will be met. After such construction, the section of Johnson Road between the town line and Maple Street in Lexington will be available for east-west use by vehicles traveling in Winchester along either Johnson or Lockeland Roads.

Recommended: THE LAYING OUT OF A DIAGONAL STREET BETWEEN LOCKELAND ROAD AND RIDGE STREET AT ITS INTERSECTION WITH HIGH STREET

This proposed street, about three hundred feet in length, will form at the intersection of Ridge and Lockeland Road a triangle, whose apex is that intersection and whose sides are Ridge Street, Lockeland Road and the proposed new street itself. It will provide a direct connection between Lockeland Road and the section of High Street west of Ridge Street for the use of east-west traffic, and a direct connection between Lockeland Road and the section of Ridge Street north of High Street for the use of northwest-southeast traffic.

Although the need for this diagonal street is independent of the fire station site, which it borders, the street should considerably facilitate access from the station in apparatus runs to the north.

Recommended: THE LAYING OUT OF A NEW STREET FROM RIDGE STREET AT LOCKELAND ROAD TO DUNSTER LANE

This proposed street, about thirteen hundred feet in length, would provide a direct vehicular connection between the end of Dunster Lane and the end of Lockeland Road. As its suggested location coincides with the north boundary of the proposed elementary school site, it should be laid out in conjunction with the establishment of that site.

The need for the proposed street is, however, independent of the school location. About one hundred houses in the extreme southwest corner of town now have no access to the remainder of the community except by passing through part of Arlington. The present travel distance between the end of Lockeland Road and the end of Dunster Lane is about thirty-seven hundred feet, including a length of street which is extremely steep and narrow for use by school busses and fire engines; the travel distance between these same two points after the proposed street is constructed will be thirteen hundred feet, or about one-third of the present distance.

The proposed street will at the same time serve as an access road to the new school building, taking the place of at least five hundred feet of driveway which would otherwise be necessary to make the school accessible from Ridge Street.

Recommended: THE ALTERATION OF RIDGE STREET ALIGNMENT TO REDUCE THE CURVE AT THE TOP OF THE HILL NORTH OF JOHNSON ROAD

This proposal calls for a change in right of way in order to straighten the extremely sharp and blind curve in the location described. While there are other sections of Ridge Street where the traveled way also needs some realignment, this is considered to be the only location where such realignment cannot be done within the existing fifty-foot layout.

Recommended: THE ESTABLISHMENT OF AN ENTRANCE OFF JOHNSON ROAD OF A FUTURE STREET EXTENDING ACROSS THE WOBURN LINE TO ROUTE 3

Both the 1924 master street plan and the present revised plan call for an eventual through street from Johnson Road (about midway between Ridge Street and Westland Avenue) northerly to Route 3 in Woburn (near the gravel pits one-quarter mile north of the town boundary). This proposal provides for protecting the entrance to this street against the possible construction of dwellings by voting to establish the exterior lines of the way for a distance of about two hundred feet back from Johnson Road. (The possibility of protecting the Woburn end of the street might well be discussed with the appropriate officials in that city.) If the town also votes to establish the Planning Board under the "improved planning law," it is quite possible that the remainder of this proposed street within Winchester may eventually be built by subdividers rather than the town.

In any case, the proposed street should better accommodate north-south traffic in this general area than Ridge Street north of Johnson Road. The grades of the latter are excessive, particularly within Woburn, and it does not provide as direct a connection with Route 3 as would the proposal.

Recommended: THE LAYING OUT OF A NEW STREET BETWEEN JOHNSON ROAD AND POND STREET

This proposed street begins at Johnson Road four hundred and fifty feet north of its intersection with Westland Avenue and after making a sweeping curve to the east, extends in a nearly straight line northeasterly along the ridge behind the Wildwood Street playground, crosses Cambridge Street at an angle five hundred feet south of the Pond Street intersection, passes behind the filling station at the corner, and joins Pond Street six hundred feet east of Cambridge Street. It is here recommended that the right of way of the proposed street be laid out now to protect its route against being blocked by building development. Actual construction of the street, which is about twenty-six hundred feet in length, will not be needed until Johnson Road is built as far as Ridge Street, and possibly completed into Lexington.

As already noted, Johnson Road and its extension are part of an important east-west route across the town. Pond Street is another link in this route. It already carries a considerable volume of through traffic, and

recommendations made later in this report would increase its importance. Specifically, a proposed connection between Pond Street and the planned Horn Pond Brook Road will make the former part of a route from the west and northwest to the center, and a proposed connection between Lake Street (in Woburn) and Cross Street will make it a more direct route for east-west traffic. The recommended new street under discussion will provide direct connection between the two major elements in these routes: Johnson Road and Pond Street.

The new street will serve as a "cut-off" for the present devious connection between Johnson Road and Pond Street which utilizes part of Wildwood and Cambridge Streets, and involves an excessive grade (on Wildwood Street) and a dangerous intersection (at Wildwood and Cambridge Streets). The proposed "cut-off" will have a maximum grade of about five per cent, will made a direct and controllable crossing of Cambridge Street, and will shorten the present distance between its two extremities by over one-quarter of a mile.

Other Proposals for the Future

The 1924 master street plan recommended, as part of the Johnson Road-Pond Street east-west route, the construction wholly within the city of Woburn of a diagonal street connecting Lake Street (a continuation of Winchester's Pond Street) with Border Road (and thence to Cross Street). The area through which this street would have passed is

now occupied by a large and deep excavation, so that its construction is no longer feasible. It is here considered that an equally satisfactory improvement of the east-west route may be accomplished through the construction of a diagonal street a block further to the east between Lake Street and Main Street opposite Cross Street. This diagonal street would necessitate the condemnation of at least two dwellings, but it is considered a sufficiently important link in the overall east-west route to justify such taking. It is therefore recommended that the Selectmen contact the appropriate Woburn and county officials in order to initiate action.

Another improvement recommended for future action is a new street across the Water Department land off Pond Street, from Brentwood Road to the proposed Horn Pond Brook Road, near Porter Street. This street, together with the southern section of the Horn Pond Brook Road, will provide direct access to the center of town for traffic coming east on Pond Street. At the same time it will provide a cross connection for local traffic between the residential sections in the vicinity of Winter Pond and the residential sections northeast of the center.

Most important perhaps of the projects recommended for the future is the laying out and construction of a road from Washington Street near the Town Hall to Main Street north of the Square, by-passing the central business district. The route recommended, and shown on the master plan, is generally as follows: It would begin

at a new traffic circle at the intersection of Washington and Mount Vernon Streets, extend northwesterly through the Skillings property ~~behind the proposed new town hall parking lot~~, cross the river about five hundred feet north of Mount Vernon Street, pass just north of the proposed extension of Winchester Place, go under the railroad tracks and intersect Main Street between the bridge and the filling station just north of the theater.

The provision of this by-pass seems justified on at least three distinct grounds. First, it will facilitate the movement of through traffic on Route 38, as evidenced by a recent traffic analysis by the State Department of Public Works. While such a benefit may be of no direct interest to the town in itself, it should make State assistance in constructing the road considerably more likely. Secondly, the by-pass will reduce the number of vehicles using the streets in the business district, thus speeding up the flow of necessary traffic, making it easier to enter and leave curb parking spaces, and generally increasing the desirability of the center as a place to shop. Thirdly, the by-pass will make possible the closing of Main Street between the Junior and Senior High Schools, thus removing a line of major hazard from the school area and producing a single, undivided school campus.

ZONING AND LAND USE

Present Situation

About ninety-two per cent of the land in Winchester is zoned for residential purposes only, the remaining eight per cent being zoned for either business or industry. The central business district of the town is, of course, zoned for business; the other non-residential zones lie almost wholly within a triangular shaped section whose apex is the central business district and whose sides are Main Street, the Woburn boundary, and Washington Street. There is no business zone west of the Church Street section of the central business district, the few roadside establishments along Cambridge Street existing as non-conforming uses in a residence zone.

92% Residence
8% Bus + Ind.

The regulations contained in the zoning by-law which apply to each of the various types of zones in the town, were completely revised in March 1952 as part of the master plan study. The revision, adopted by vote of town meeting at that time, has recently been approved by the Attorney General and posted by the Town Clerk, so that the new regulations are actually in effect.

The map, which indicates the location of the various zones, has not been comprehensively revised since its original adoption, although it has been changed in particular sections by occasional amendments. During this past year, studies were made of present and future land use needs of the town, which, when compared with the

existing zoning map, indicated the need for a number of changes in zone boundaries.

First of all, a present land use map was made in the section of town bounded by Main Street, Washington Street, and the Woburn line. Within this section every property was visited in the field and its use classified on a map in one or more broad categories: industry, retail business, automotive or other heavy commercial use, public or semi-public use, single-family dwelling, two-family dwelling, and multiple-family dwelling. Vacant lots and undeveloped tracts were indicated as well.

A special study was also made in the area west of Cambridge Street because of the rapid residential growth of this section -- a growth expected to continue for many years. This study is described in detail in a separate report submitted to the Planning Board, entitled "Report on Residential Growth in the Area West of Cambridge Street." As part of this study maps were prepared indicating: present buildings and structures, property lines, topography (with ten-foot contours), and slope in percentage categories.

As the area west of Cambridge Street is now zoned for residential purposes, and as this use seems to be the most appropriate one for the section, it was assumed that the remaining vacant areas will eventually be occupied by dwellings. An estimate was therefore made both statistically and graphically as to the number and location of

future dwellings on all vacant tracts and lots. Consideration was given to the location of property lines, the slope of the land, the space occupied by future streets, and the minimum lot size required by zoning. It was predicted that there will ultimately be a total of 1,845 dwellings west of Cambridge Street with 1,077 of this number by the year 1972. This should mean an ultimate population west of Cambridge Street of about 6,100 persons, and a 1972 population of about 3,554. By 1972, the population of the town as a whole, including this section, is expected to reach 21,500.

Consistent with the assumption that the area west of Cambridge Street will remain residential in character, the only non-residential uses which need to be provided for are those required to serve the residential population. These include public uses such as schools, playfields and the like, and facilities for convenience shopping. The need for the latter, i.e., for a local shopping center, was made the subject of further investigation.

As town boundaries do not serve as barriers to shopping travel, an examination was made of present and possible future shopping centers in the entire region surrounding the area west of Cambridge Street. (This included parts of Woburn, Lexington, and Arlington as well as Winchester.) All existing stores and other business establishments were designated on a map, and the number and type of enterprises in each location listed. A great deal of this information was available from a Boston Globe survey of

several years ago, and this was supplemented by a field survey of the entire region.

There are many sets of "standards" pertaining to shopping centers and their distribution. The maximum recommended travel distance between a dwelling and the nearest local center ranges from a quarter of a mile to one mile. Applying the higher and more conservative figure, it was found that there is a large "dumb-bell" shaped section, including the area west of Cambridge Street and an area of equivalent size in the eastern part of Lexington, which is inadequately served for convenience shopping. (This unserved area also includes a small section of Arlington, south of Hutchinson Road.)

Future Prospects

In the central business district of the town, the expected growth in population of the tributary trading area should produce some demand for more stores of the "downtown" type as differentiated from the "local" type of store for convenience shopping. It is considered, however, that within the sections now zoned for business purposes in the center, there is ample space for the erection of the needed structures. This is discussed in further detail under the section "Automobile Parking."

In and near the area covered by the land use survey, (north of the business district), it is considered that there is an overzoning for business rather than any

deficiency. Detailed recommendations submitted to the Planning Board for study provide for reducing some of the "shoe-string" business zones in this section. In the area generally south of the central business district, there is no local shopping center presently provided. However, this section is so compactly developed that there are no suitable sites available.

An increased demand for industrial sites within the town is expected, especially in view of the general trend throughout the metropolitan district toward industrial decentralization. There is presently some room for industrial expansion in areas already zoned for such purposes, and recommendations for minor zone boundary changes have been made to the Board. Admittedly, the whole problem of industrial zoning raises a conflict, as on one hand a new industry may provide additional sources of employment and tax revenue (without increasing the school burden), but on the other hand it does not always make a desirable neighbor.

In the area west of Cambridge Street, which is now largely over one mile from the nearest shopping center, the ultimate construction of about two thousand dwellings will clearly justify the establishment of a local business center. The location of this center should be designated now while the area is relatively open, thus combining the advantage of being able to select the best site, with the advantage of giving citizens notice as to its location before dwellings are constructed.

Recommendations for Action

Recommended: THE ESTABLISHMENT OF A LIMITED BUSINESS ZONE AT THE INTERSECTION OF RIDGE STREET AND LOCKELAND ROAD

This recommendation involves two separate actions in connection with the present zoning by-law. The first is to amend the text of the by-law to provide for a limited type of district and regulate its use, and the second is to amend the zoning map to place the site in question in such a district.

The site recommended for rezoning is located at the southeast corner of the Ridge Street-Lockeland Road intersection. It is bounded on the north by Lockeland Road, on the east by a line from Lockeland Road southerly (more or less parallel to Ridge Street and about four hundred feet in length), on the south by a line extending from Ridge Street eastorly about six hundred feet (at a right angle to the above line), and on the west by Ridge Street. It contains about three and one-half acres.

The potential trading area of stores and other business establishments on this site, if limited to one mile in radius, will not encompass all of the section of Winchester, Lexington, and Arlington now not adequately served. However, the service area of this site lies wholly within the presently unserved section, so there is no overlapping. The dwellings in the vicinity of Westland Avenue and between there and Cambridge Street would be more than one mile from this site; however,

because of the slope toward Cambridge Street and the relatively stronger drawing power of the larger central business district, it is considered that they will continue to be served by the latter area. The unserved section of Lexington already contains, at the intersection of Lowell and Maple Streets, the nucleus of a local shopping center which if expanded should serve future dwellings in the western half of the presently unserved section.

Within one mile of the proposed Winchester site, there now reside about one thousand persons. This number should increase to about twenty-five hundred by 1972 and to an ultimate forty-nine hundred persons. That this tributary population justifies a local center is seen by comparing it with the various standard minimums, which range from seventeen hundred to thirty-three hundred persons.

Based on a careful analysis of the types of stores already available in the surrounding sections and the probable shopping habits of the future residents of the area to be served, (and relying on similar studies recently made in Bedford and Westwood), a tentative list was prepared of the probable type and size of stores which might be expected in this center. The total size, expressed in terms of floor area, was then expanded into total land area by adding an equal area for service driveways, landscaping, and building set back and adding twice the floor area for off-street automobile parking.

This resulted in an estimated total land area needed of two and eight-tenths acres, which can easily be accommodated within the three and one-half acre area recommended for rezoning.

The location of the proposed site also meets other desirable criteria: it is relatively level, it is at the intersection of major streets, it is all on one side of the street (to eliminate the necessity of pedestrian crossings), and it is adjacent to a proposed fire station and school site, so that it would have a minimum of effect on residential development.

The recommended changes in the text of the zoning by-law, to accompany the map change, provide for the establishment of a limited business district, enumerate the uses to be permitted (stores and other convenience establishments), regulate the size and number of signs, and limit the frequency of driveway openings on the street (to minimize any traffic hazards). The proposed regulations also require the provision, by the developer, of off-street parking spaces on the premises having an area equal to twice the ground floor area of the buildings. Lastly, the proposed regulations provide for the approval of the entire layout by the Planning Board before any business structures can be erected.

Recommended: THE AMENDMENT OF THE ZONING BY-LAW TO PROVIDE FOR INCREASED CONTROL OVER EARTH REMOVAL

Several instances of soil stripping from residential lots and of gravel pit enlargement in commercial districts

indicate the need for further revisions in the zoning by-law beyond the comprehensive revisions adopted a year ago. Two particular changes are proposed.

The first amendment recommended would give the Board of Appeals jurisdiction over earth removal operations in business and industrial districts. Under both the former and the revised by-laws such operations were considered business uses and did not need a Board of Appeals' permit. However, the requirement for such authorization is permissable under the statute, and it is now believed that such a provision will give the town additional protection.

The second proposed amendment would make present regulations regarding earth removal in residence districts more specific. In both the former and the new by-law earth removal is permitted, without special authorization, if done "in connection with the construction of a building for which a permit has been issued;" apparently, this language may be construed as allowing the removal of most of the top soil from a lot as long as a house is being erected. Under the amendment, only the volume of material excavated from the cellar hole may be taken from the premises, unless approved by the Board of Appeals.

Other Proposals for the Future

The readjustment of the boundaries of business and industrial zones throughout the town has already been referred to. Recommendations made to the Board are being

studied, and at a later date it is expected that a number of these will be submitted to the town for its consideration.

The need for additional industrial sites has also been discussed. There is one excellent site, however, available for future use without the necessity of a zoning change; this is the town-owned area now used as a municipal dump. When the filling of this area is completed, it is recommended that it be sold as an industrial site or sites with suitable restrictions. Although foundation difficulties would limit the type of industrial plant, there are many instances in the metropolitan area where filled areas have been successfully used. The location of the site is considered ideal for several reasons. It is well served by transportation facilities, being adjacent to both a major street and a railroad. Also, it is almost completely insulated from residential areas and the remainder of the town, being bounded by the aforementioned major street and railroad, and by the Aberjona River, the opposite bank of which is also used for industry.

AUTOMOBILE PARKING IN WINCHESTER CENTER

Present Situation

Field surveys on the use of automobile parking spaces, both curb and off-street, in the vicinity of the central business district were made during three different weeks in the months of October and December 1952. A total of 1203 spaces within a 1000-foot radius of Winchester Square were inventoried as to location and capacity, classified as to type, and spot checked as to the number of vacancies available during all daytime hours and days of the week. A series of vertical and oblique aerial photographs showing parking areas were also taken during a period of peak use.

Of the 1203 total spaces serving the business district, 539 are curb spaces and 664 are off-street spaces. Of the off-street spaces, 329 are open to general public use, while the remaining 335 are restricted to patrons or employees of adjacent buildings. Thus, a total of 868 spaces (curb and off-street together) are available for use by the public.

As might be expected, the number of vacant spaces available at any given time in a particular curb or off-street parking area varies considerably with the location of the area. Areas in which no vacancies were found on twenty per cent of the observations (5 out of 30) were: the post-office side of Waterfield Road, both sides of Thompson Street, and the west side of the Parkway between

Waterfield Road and Main Street. In addition, no vacancies were found on at least one observation (1 out of 30) on: Converse Place, the railroad side of Common Street, the common side of Common Street south of Church Street, the south side of Waterfield Road, the Parkway beside the Mill Pond, the south side of Mount Vernon Street, the railroad side of Shore Road, the north side of Church Street between Elmwood and Main streets, the west side of Washington Street between Mount Vernon Street and the Mystic Valley Parkway, and both sides of Main Street between the Square and Washington Street. All other areas open to the public were found to have at least one vacancy on every occasion.

An analysis of the location, number, and frequency of parking vacancies in relation to the location of the buildings which generate the parking demand was also made. This analysis indicated that during times of peak use there are from 700 to 750 feet of walking distance between some business buildings and the nearest vacant parking space. While this is not an unreasonable distance for long-term parking (over two hours duration), it is clearly excessive for short-term parking, which is the major type in the district.

In Winchester center, buildings over 300 feet from the nearest parking vacancy at any given time may be said to have a "parking problem," whose seriousness increases in proportion to any increase in the distance above 300 feet and in proportion to the frequency with which no vacancies occur.

Recent studies of parking habits in other communities indicate that the maximum walking distance acceptable to the average short-term parker (under two hours) is roughly one-half of the distance acceptable to the average long-term parker (over two hours). As the long-term parker in Winchester can find a vacancy within 700 to 750 feet of his destination, by the comparable standard the one- or two-hour parker should be able to find a space within 300 feet. The occasional double parking and frequent "cruising" in search of a space in front of those buildings not having vacancies within 300 feet is evidence that this is the distance beyond which the parker's resistance increases substantially. In the numerous municipal zoning by-laws which require off-street parking, 300 feet is the most popular maximum distance specified, further evidence of the validity of the 300-foot limit.

The Winchester analysis showed that the buildings on both sides of Thompson Street and the buildings in the block bounded by Converse Place, Mount Vernon, and Main Streets are the "critical" buildings, all being over 300 feet walking distance from a parking area always having a vacancy. Of these, the most critical buildings are those adjacent to the central section of Thompson Street (midway between Main Street and Waterfield Road), which are over 700 feet in distance from parking areas where a patron can be sure of finding a space. All other business, public and semi-public buildings in the center were found to have parking vacancies within 300 feet on every observation.

Future Prospects

All factors point to a worsening of the parking situation in the center of town, unless action is taken at once to provide additional spaces in the proper locations.

First of all, a further increase in the number of automobiles coming to the business district for short-term parking is expected. The town of Winchester, with a population of about 16,500 in 1952 is expected to reach a population of at least 21,500 by 1972, and the number of automobiles in the town should increase in at least direct proportion to this population. Furthermore, the Winchester business district serves not only the townspeople, but numerous persons from adjacent communities, most of which are also increasing in population. While it may be argued that any increase in population (and therefore in automobiles) will be offset by the diversion of trade to outlying shopping centers, it is not considered that this trend is inevitable if the central area is made increasingly efficient, in part through better parking and traffic facilities.

The increase in traffic on Common Street and Waterfield Road, resulting from the proposed connection of the two streets under the new railroad embankment, will necessitate the elimination of about 35 parking spaces on these streets. These are all spaces with no vacancy at least some of the time, and together constitute about fourteen per cent of the total number of spaces in the

most critical area of the business district. Furthermore, during construction of the proposed railroad grade separation there will be a temporary loss of between 50 and 60 spaces now used for long-term parking on the railroad side of Common Street and in the railroad station lot.

Objectives of a Parking Program

There are at least three objectives of a constructive parking program in Winchester center. Most important, the number of available parking spaces within 300 feet of the business buildings not always served by a vacancy in that distance should be increased. This may be done either by providing one or more new off-street parking lots in the critical locations (where, unfortunately, there is little or no suitable land available) or by making some of the present spaces in such locations, now occupied by all-day parkers, available for customer use. The latter result may be accomplished by restricting such spaces to one- or two-hour occupancy. This in turn will necessitate the provision of additional spaces elsewhere to accommodate the displaced long-term parkers, but such spaces can be satisfactorily provided at a greater distance from the business buildings (up to 700 feet), where more vacant land is available.

Secondly, in those locations where no critical parking problem now exists, due to a sufficiency of privately owned off-street spaces open to the public, the permanent availability of such spaces should be insured through

public acquisition of lots in or near such sites. And, thirdly, where existing municipal lots are not fully utilized because of difficult ingress or egress, (whether vehicular or pedestrian), such access should be improved where possible within limits of reasonable expenditure.

Recommendations for Action

Recommended: ACQUISITION AND DEVELOPMENT OF A MUNICIPAL PARKING LOT ADJACENT TO THE PRESENT RAILROAD STATION LOT

The land recommended for acquisition is "L" shaped in area, adjoining the present station lot on the south (beyond the signal tower) and on the west (toward the rear of the buildings fronting on Church Street). It contains about one acre, including a forty-foot access strip to Church Street near its intersection with Rangley Road. The lot can be developed for parking either independently of or in conjunction with the station lot, although joint development is recommended. The latter would be mutually advantageous to both the town and the railroad as it would allow a better arrangement of access lanes, parking spaces, and maneuvering areas. If a satisfactory joint arrangement cannot be worked out, it is suggested that a forty-foot access strip be acquired between the proposed public lot and Common Street in the general location of the entrance drive to the present station lot. The proposed municipal lot and the station lot, together, should provide spaces for about 185 cars, which is an increase of 110 over the number of cars that can now be accommodated in this location. Physical

improvement as well as acquisition of the facility is recommended for 1953 in order that the extra spaces will be available to compensate for the spaces to be withdrawn during construction of the grade crossing elimination.

With the raising of the railroad tracks and the provision of an underpass between Common Street and Waterfield Road, the Common Street end of this lot will be within 300 feet walking distance of the nearest business buildings on Thompson Street. Thus, even though the lot is primarily intended as a long-term parking area, it will be of direct use to the short-term parker whose destination is on the other side of the tracks (in the sections now having few, if any, vacant spaces). Furthermore, this lot should facilitate the restriction of unlimited spaces elsewhere to short-term use, as it will provide additional spaces for the displaced long-term parkers, thus making such restriction acceptable.

Also, the recommended lot will be within 300 feet of the business establishments on Church Street. Therefore, if curb parking on one side of this street were to be eliminated, readily accessible spaces would be available for the displaced vehicles. Parking on one side of Church Street, instead of both sides as at present, would result in a wider traveled way without the necessity of any public taking of valuable frontage.

Recommended: THE ENLARGEMENT OF THE PRESENT MUNICIPAL PARKING LOT BEHIND THE POLICE AND FIRE STATIONS

The land recommended for initial acquisition is a

rectangular parcel of about one-sixth acre, lying between the northern boundary of the present parking lot and the nearest dwelling to the north, and extending in width from Winchester Place to the park property along the river. If this parcel is developed as a parking area and the present paved area on the town lot is enlarged (by extending it toward the river on town land) a total of at least 25 additional automobiles can be accommodated.

A separate small strip of land lying between the fire station and the building to the east might also be acquired. This strip of land is in the general location of a proposed future street whose exterior lines were established by the town several years ago. Pending the construction of that street (which would require the removal of the business building), the parcel suggested for acquisition could be used as a drive for one-way traffic entering the parking lot from Mt Vernon Street.

While the present municipal lot was found to have at least one vacancy on all of the thirty spot checks, it, nevertheless, had a high degree of use. As in the case of the proposed new lot near the railroad station, the increase in the size of this lot would facilitate the restriction of what are presently long-term spaces in the more critical sections.

The lot on the opposite side of Winchester Place, now leased by the town and restricted to two-hour parking, may at any time be withdrawn from parking use. Acquisition of this area as a public lot is not recommended, as the

location is considered to be a more desirable one, from the town's point of view, for new commercial buildings (discussed in more detail later). The recommended enlargement of the town lot, across Winchester Place, would, however, fit into the long-range plan and at the same time serve as insurance against a withdrawal of the leased area.

Recommended: THE ACQUISITION AND DEVELOPMENT OF A MUNICIPAL PARKING LOT ADJACENT TO ELMWOOD AVENUE NEAR PARK STREET

The land recommended for acquisition constitutes two of the three privately owned adjacent parcels now used for parking between Main Street and Elmwood Avenue. It would also include a twenty-foot access strip to Main Street along the north boundary of the third vacant parcel. The lot can be developed for the parking of about 37 automobiles, which is 10 more than the number now accomodated on the three parcels taken together (without any formal grading or other improvement).

Except for the narrow access strip to Main Street, the acquisition of the front parcel is not recommended, as this land with its frontage on Main Street is a desirable site for the construction of a commercial building. As already noted, the rear land can accommodate the necessary number of cars.

Although this recommended municipal lot is outside of the present critical parking sections, it is certain that if the three vacant parcels now used for parking were all withdrawn from such use by their private owners (as they may well be), a critical short-term parking

problem would be created. This is evidenced by the fact that when 25 cars occupied the area (on one of the observations), an equivalent number of vacancies open to the public were not available within a radius of 650 feet of the Main Street entrance to the site. The provision of a municipal parking lot on this site is therefore primarily a matter of maintaining present accommodations and preventing a parking problem from arising. However, it will also complete a well-rounded distribution of municipal lots throughout the business district so that most commercial properties will be served by at least one public facility.

Recommended: THE CONSTRUCTION OF A FOOT-BRIDGE ACROSS THE MILL POND BETWEEN THE TOWN HALL PARKING LOT AND THE CONVERSE PLACE FOOTPATH

This recommendation requires no land acquisition. The proposed bridge will provide direct pedestrian access between the parking lot behind the town hall and the buildings in the vicinity of Converse Place, which now have a critical parking problem. The present foot-bridge from the town hall lot north to the island would probably be replaced by an entirely new structure extending completely across the river, and using the island for mid-support.

The town hall lot now holds 36 cars in its non-restricted spaces (13 spaces are limited to use by town officials). The entire lot is over 700 feet walking distance from the nearest business building having a critical parking problem. After provision of the new bridge, at least 22 of the spaces in the lot would be within that

distance of such buildings, and thus reasonably accessible for their employees and long-term patrons. While the lot as a whole was found to have an average vacancy of fifty per cent and never less than 5 open spaces during the 30 spot checks, the provision of the bridge should make a substantial increase in its usability.

Recommended: THE RESTRICTION TO ONE- AND TWO-HOUR PARKING OF THE PRESENT PARKING SPACES ON COMMON STREET ADJACENT TO THE RAILROAD TRACKS, ON THE POST-OFFICE END OF THE PARKING LOT BETWEEN THE TRACKS AND THE RIVER (WHERE ELEVEN SPACES ARE ALREADY SO LIMITED), AND ON THE WEST SIDE OF THE PARKWAY BETWEEN WATERFIELD ROAD AND MAIN STREET (NOW UNDER M.D.C. JURISDICTION)

These spaces presently used by long-term parkers are all within 300 feet walking distance (or will be after the railroad construction is completed) of the "critical" buildings. If parkers of more than two-hour duration are forced by restriction to utilize areas further away, many of these spaces will become available for customer parking. Field surveys indicated that in the 39 unlimited spaces on Common Street along the tracks, from 20 to 30 are regularly occupied by all-day parkers; that in the 11 spaces along the Parkway between Waterfield and Main Streets, from 4 to 7 are occupied by all-day parkers; and that of the 39 unlimited spaces beside and opposite the present restricted spaces on the post-office end of the railroad lot, 21 to 24 are occupied by all-day parkers. The restricting of these spaces might, therefore, be expected to result in a net, total increase of from 45 to 61 spaces available for customer use.

Admittedly, the restriction of parking in these spaces will require cooperation between the town and the railroad, and the town and the M.D.C. In the case of the railroad, the recommended provision by the town of additional spaces for all-day parkers should facilitate such cooperation. It is considered that the only alternative to such restriction, from the town's point of view, is the physical construction of more spaces in the critical sections (where such construction would be more difficult and expensive than the recommended long-term lots further away).

Other Proposals for the Future

Add need for church parking

In addition to the projects recommended for action now, there are several proposals which are suggested for inclusion in the long-range master plan of the center (or which are considered as probably necessary if certain of the recommended projects do not materialize).

The eventual extension of the public parking lot behind the fire and police stations is recommended to include all of the area bounded on the south by that building, on the west by Winchester Place and its proposed extension, on the east by the proposed street along the river (whose exterior lines are already established), and on the north by the necessary cross-connection of that street to Winchester Place (on what is now park property). If new business buildings constructed in the vicinity are confined to the area between Winchester Place and Shore Road (rather than in the section described above), they

will form with existing business buildings a compact commercial district which will be served on the east by a continuous belt of parking spaces between the district and the new peripheral street, an ideal arrangement.

The development of a small public parking lot on the Skillings property across from the town hall is also recommended as part of the long-range plan. It is considered that this proposed lot would be used principally for accommodating the cars of occupants and visitors to the town hall, leaving the present lot behind the hall for the long-term parking generated by the business district. The expected increase in use of the town hall lot (resulting from the proposed foot-bridge across the Mill Pond) may necessitate the construction of the recommended lot on the Skillings property in the relatively near future. Otherwise, it is considered that its provision can be deferred until the lot can be graded and built in conjunction with the construction of the adjacent by-pass road recommended under "Major Streets."

Church parking
It would also serve churches in the area

The provision of additional short-term parking spaces in the vicinity of Waterfield Road is considered to be an absolute necessity if the recommended conversion of long-term spaces into short-term spaces along Common Street and elsewhere in the vicinity cannot be accomplished. Furthermore, such provision may be necessary, in any case, with the expected increase in the number of cars using the business district. Studies were made of a number of possible methods of providing more spaces near Waterfield Road, and two are suggested for future action.

An off-street parking lot accommodating about 35 cars ~~may~~ could be constructed on the east bank of the river between Waterfield Road and Main Street (along the Mystic Valley Parkway). This would require cooperation with the M.D.C., so that the area now used for angle-parking within the M.D.C. right of way may be included in the proposed lot.

Also, a vehicular bridge ~~may~~ could be built across the river parallel to and slightly south of the present Waterfield Road bridge. Waterfield Road would then be a divided two-way street of sufficient width to permit angle-parking on one side and parallel parking on the other side of each of its two traveled ways, for most of its length. This would mean an increase of about 25 parking spaces over the present number on Waterfield Road, and an even greater increase over the number that can remain on the road after it is connected with Common Street, if the single bridge is required to carry the heavier two-way traffic.

APPENDIX

PROPOSED AMENDMENTS TO THE WINCHESTER ZONING BY-LAW

I. Insert a new Section 4, as follows:

SECTION 4. LIMITED BUSINESS DISTRICTS. In Limited Business Districts, no new building shall be constructed or used, in whole or in part, and no building or structure, or part thereof, shall be altered, enlarged, reconstructed or used, and no land shall be used for any purpose except:

A. Any of the purposes authorized without permission of the Board of Appeals in Single Residence Districts (as enumerated, with any restrictions thereon, in paragraph B of Section 2, hereof).

B. One or more of the following purposes:

1. Restaurant or other eating place.

2. Any of the following retail stores: book, stationery or news store, cigar store, drug store, dry goods or variety store, florist or gift shop, food store or meat market, hardware or electric appliance store, wearing apparel store.

3. Business or professional office or agency, bank or other financial institution.

4. Personal service shop of a barber, hairdresser, manicurist, or shoe shiner.

5. Any of the following service establishments, dealing directly with the customer: collection station for laundry and dry cleaning, frozen food locker, hand or self-service laundry, photographic studio, radio and household appliance repair shop, shoe and hat repair shop, watch and clock repair shop.

6. Automobile service station for the dispensing and sale to the public of gasoline and oil for motor vehicles, and the incidental washing, greasing and minor repairing thereof (such as replacing headlight bulbs and spark plugs, and tire changing).

7. Customary accessory uses clearly incidental to and located on the same premises with any of the foregoing uses.

6. Signs, except sky signs as defined in the Building Laws, pertaining to goods sold, services furnished or trade conducted on the premises; provided that no exterior sign or aggregate of signs (whether or not attached to a building) shall exceed one square foot in area for each 50 square feet occupied by the ground floor of the building or buildings to which they are accessory, and provided further that such signs shall not exceed three in number for each separate and distinct business enterprise on the premises.

C. Any purpose intended to serve the normal shopping needs of adjacent residential areas which the Board of Appeals shall specifically find to be of the same general character as any of the foregoing uses (as enumerated in paragraph B of this Section) if permission of said Board be obtained in accordance with the procedure and conditions set forth in Section 8 hereof.

In Limited Business Districts, the following special regulations shall also apply:

1. No building or structure shall be constructed, altered, enlarged or reconstructed so that any part thereof, except eaves and uncovered steps, shall be within 25 feet of any street line.

2. Each dwelling house hereafter constructed shall be provided with a lot conforming to the area, width and frontage requirements applicable to such lot if located in the Single Residence District nearest thereto.

3. No building shall be constructed, altered, enlarged, reconstructed or used for purposes authorized by paragraphs B and C of this Section unless there is provided on the lot or land associated therewith, and within 300 feet thereof, automobile parking space having a total standing and maneuvering area of not less than two times the ground floor area of said building and located, graded, drained and otherwise constructed in accordance with the site plan required by paragraph 5 of this Section. Such space shall be permanently maintained, and available for the use of customers and employees of the building. No automobile parking space required by this Section for a particular building shall, during the existence of such building, be counted as required space for another building.

4. All vehicular access to and from any lot used for purposes authorized by paragraphs B and C of this Section shall be through designated driveway openings at the street line, and not more than two such openings (one of which shall be for entrance and the other for exit) shall be permitted at any street line for each 300 feet of lot frontage along said line. A lot having less than 300 feet of frontage on a street line shall not be used for purposes authorized by paragraphs B and C of this Section unless said lot is provided with vehicular access through driveway openings used in common by two or more lots having a total continuous frontage along a street line of at least 300 feet for each two openings at said line. Designated driveway openings shall not be more than 20 feet in width at the street line and shall be located not less than 20 feet apart.

5. No lot shall be used for purposes authorized by paragraphs B and C of this Section except in conformity with a site plan approved by the Planning Board. Said plan shall be submitted to the Board for approval through the Building Commissioner, and shall show among other things all existing and proposed buildings, structures, parking spaces, driveway openings, driveways, service areas, and landscape features (such as fences, walls, planting areas, and walks) on the lot. In addition to the construction and maintenance of parking spaces required by this Section, the provision and maintenance of specified other facilities shown on the site plan may be required by the Board as a condition of its approval. No building permit shall be issued until the Board has approved the site plan or has allowed forty-five days to elapse after submission without acting thereon. In considering a site plan under this Section, the Board shall assure such a degree of convenience and safety of vehicular and pedestrian movement, both within the site and in relation to adjacent streets and land, as is consistent with a reasonable use of the premises for purposes permitted by this Section.

II. At the end of Section 2B 9f, add the following:

Provided, however, that unless permission of the Board of Appeals be obtained in accordance with the procedure and conditions set forth in Section 8 hereof, the amount of sod, loam, sand, gravel or

other earth product removed from the premises shall not exceed the amount of such material contained before construction in the particular space to be occupied by the foundation of the building or structure.

III. At the end of Section 5A and at the end of Section 6A2, change the period to a comma and add the following:

except that removal of sod, loam, sand, gravel or other earth product from the premises shall be authorized only if permission of the Board of Appeals be obtained in accordance with the procedure and conditions set forth in Section 8 hereof.

SPACE REQUIREMENTS FOR PROPOSED LOCAL SHOPPING CENTER AT INTERSECTION OF LOCKELAND ROAD AND RIDGE STREET

Type of Establishment	Possible Needs for Trading Area: In 1952 (for 1000 pop.) No. and Kind	Floor Area*	In 1972 (for 2500 pop.) No. and Kind	Floor Area*	Ultimately (for 4900 pop.) No. and Kind	Floor Area*
Food	1 gen. with meat	1200	1 gen. with meat	1200	1 gen. with meat	1200
			2 grocery	2400	2 grocery	2400
					1 market for all foods	4000
Drugs			1 drug store	3000	1 drug store	3000
Service	1 laundry collection station	1600	1 laundry collection station	1600	1 laundry collection station	1600
			1 barber shop	900	1 barber shop	900
					1 beauty shop	1400
					1 shoe shop	570
Eating			1 lunchroom	3000	1 lunchroom	3000
					1 restaurant	5000
General Mch.					1 variety store	3200
Automotive	1 filling station	1000	1 filling station	1000	2 filling stations	2000
Office	1 real estate	900	2 real estate	1800	2 real estate	1800

* in square feet

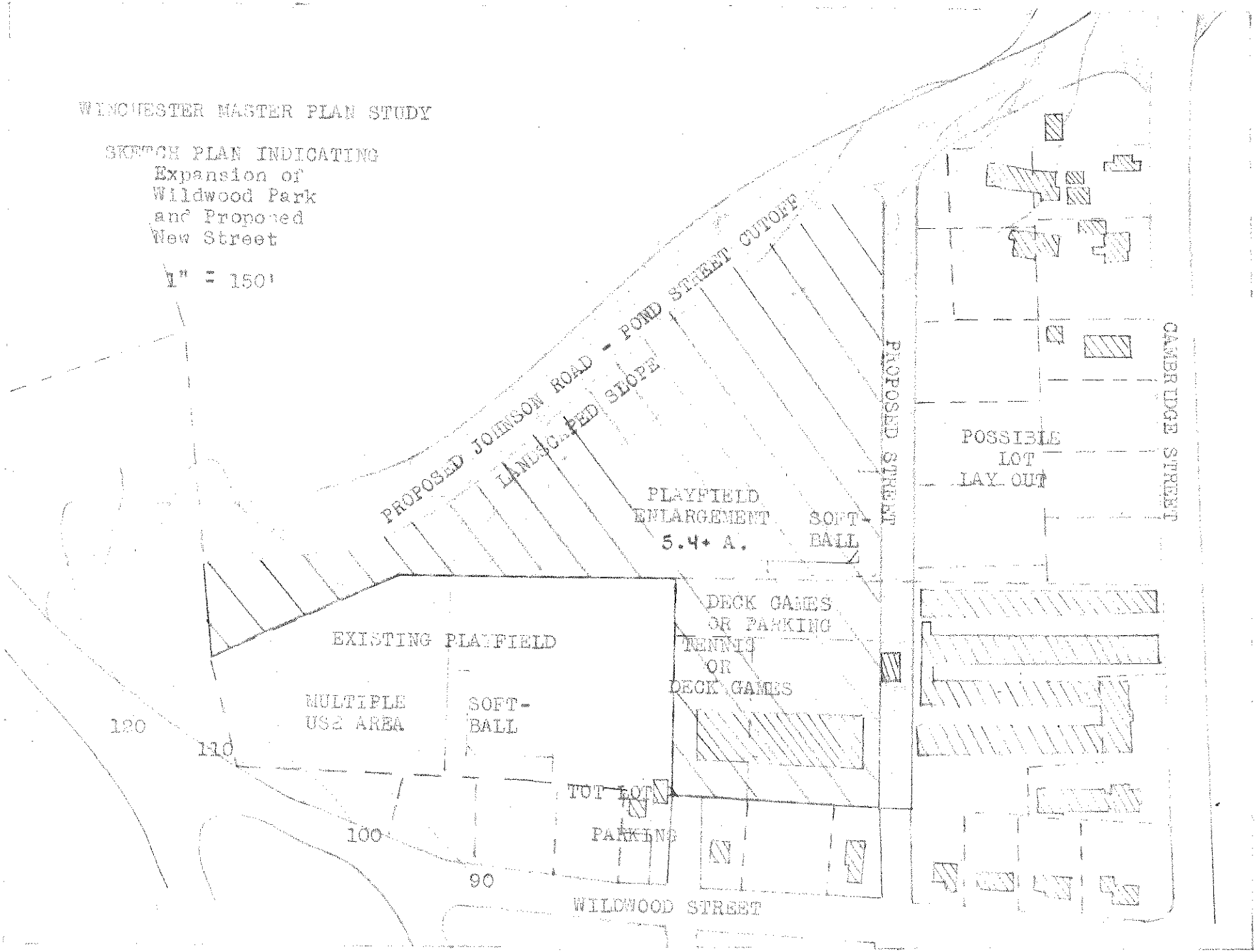
TOTAL FLOOR AREA NEEDED	4700	14,900	30,070
Allowance for parking space (2 x floor area)	9400	29,800	60,140
Allowance for possible bldg. separation, service areas, and unused set-back (1 x floor area)	4700	14,900	30,070
TOTAL LAND AREA NEEDED	18,800 sq. ft. (0.43 acres)	59,600 sq. ft. (1.40 acres)	120,280 sq.ft. (2.76 acres)

WINCHESTER MASTER PLAN STUDY
Sketch Plan Indicating
Proposed School
Site and Playground
1" = 200'
PROPOSED ROAD
BUILDING AREA
PLAYGROUND AREA
11.5± A
LOCKELAND
RIDGE STREET
JAMES STREET
DOTHAN STREET
HENRY STREET
DUNSTER LANE

WINCHESTER MASTER PLAN STUDY

SKETCH PLAN INDICATING
Expansion of
Wildwood Park
and Proposed
New Street

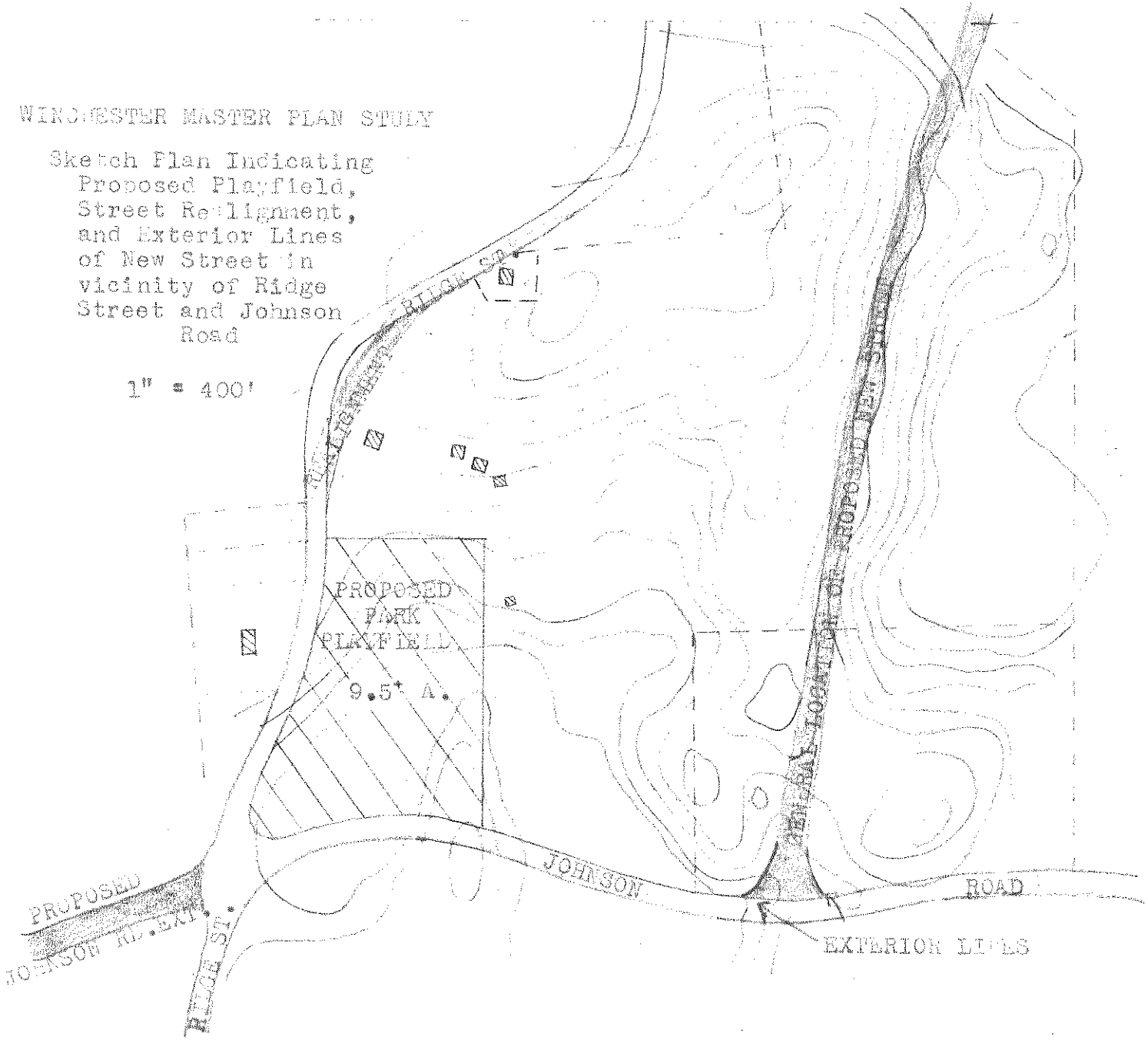
1" = 150'



WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating Proposed Playfield, Street Realignment, and Exterior Lines of New Street in vicinity of Ridge Street and Johnson Road

1" = 400'



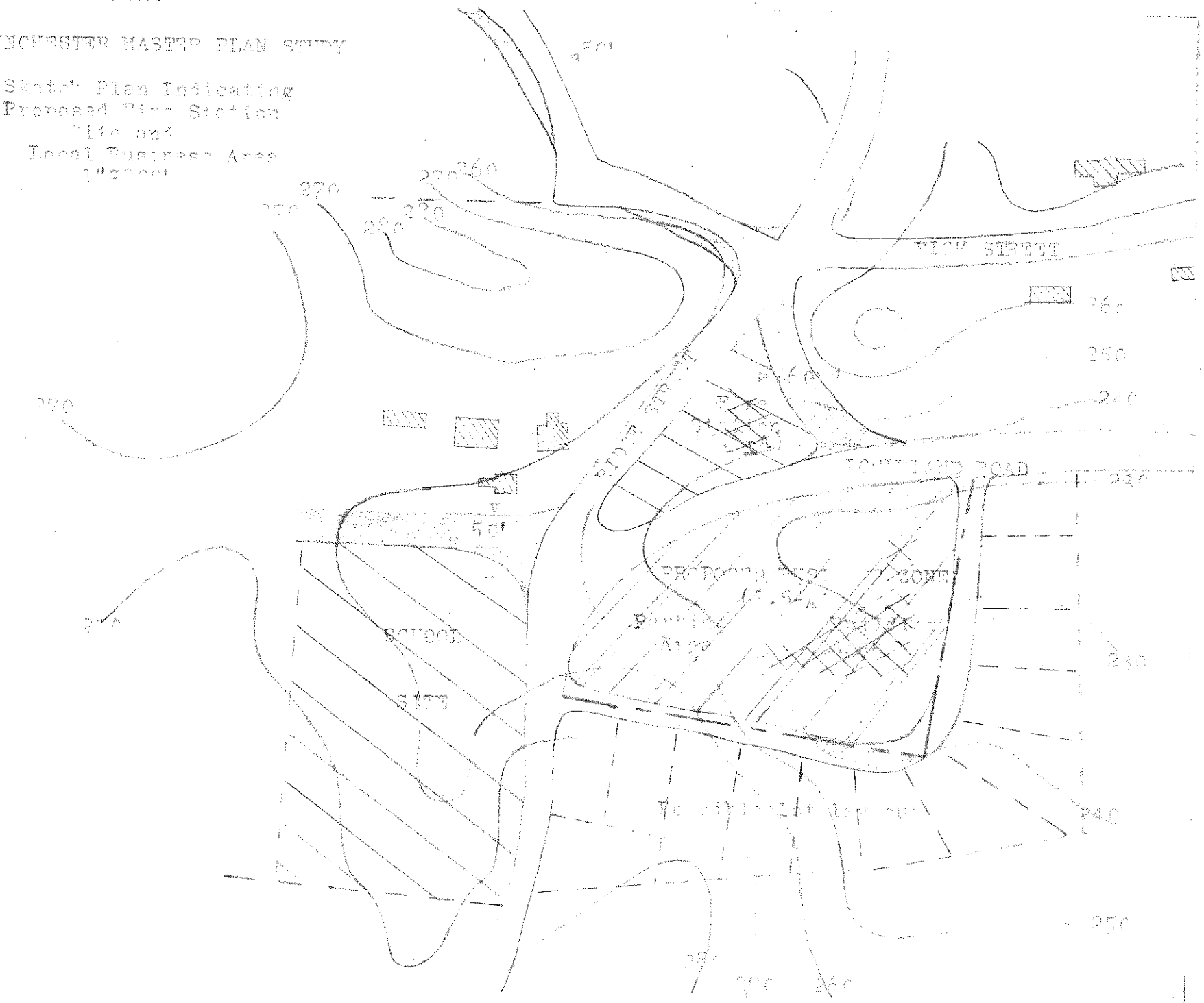
WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating
New Street
and
Playfield

1" = 160'

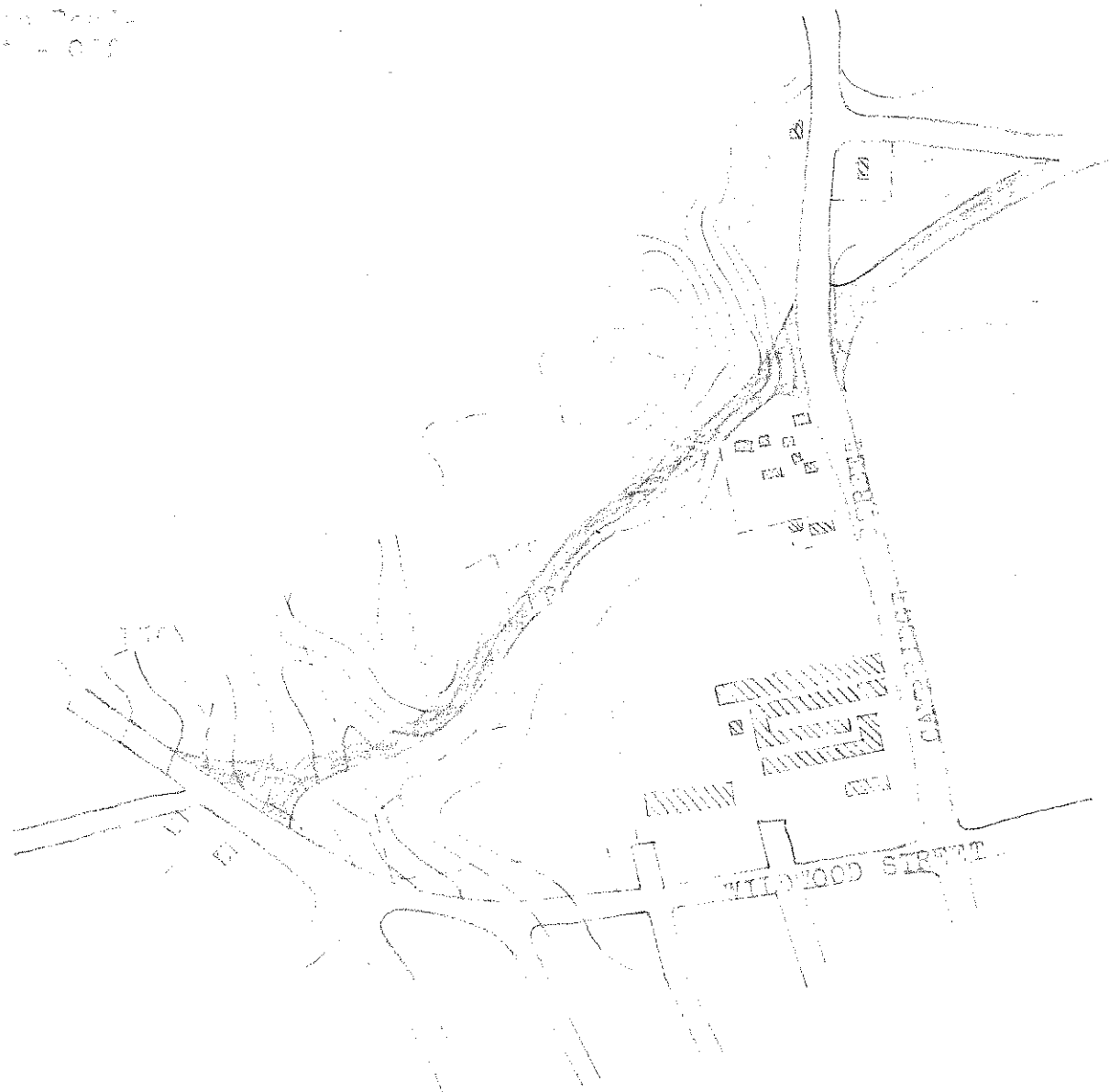
WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating
Proposed Fire Station
Site and
Local Business Area
1"=200'



WINCHESTER MASTER PLAN STUDY

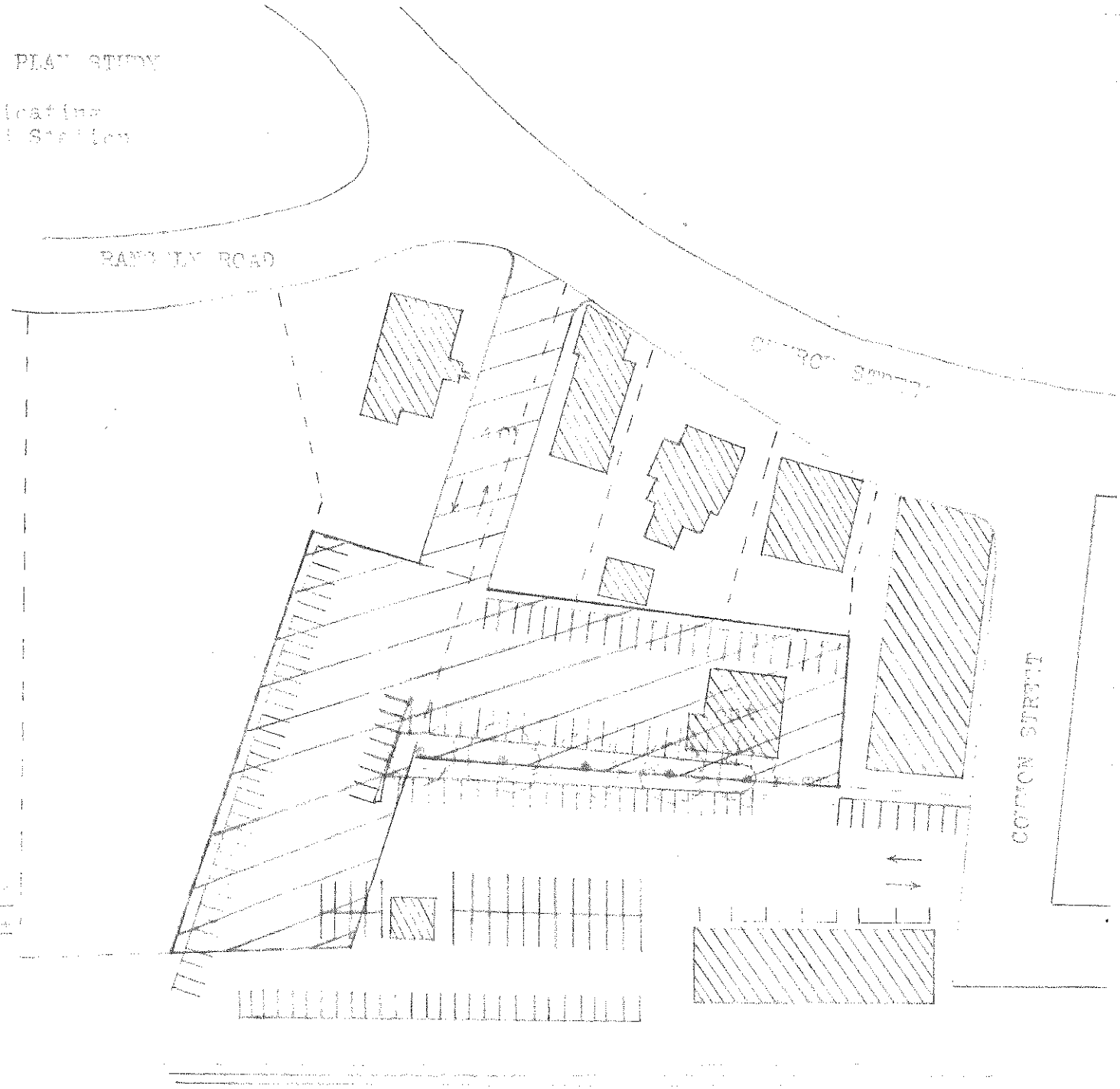
Sketch Plan Indication
Proposed Johnson Pond
Pond Street Cut - Off



WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating
Expansion of Railroad Station
Parking Lot

1"=[illegible]

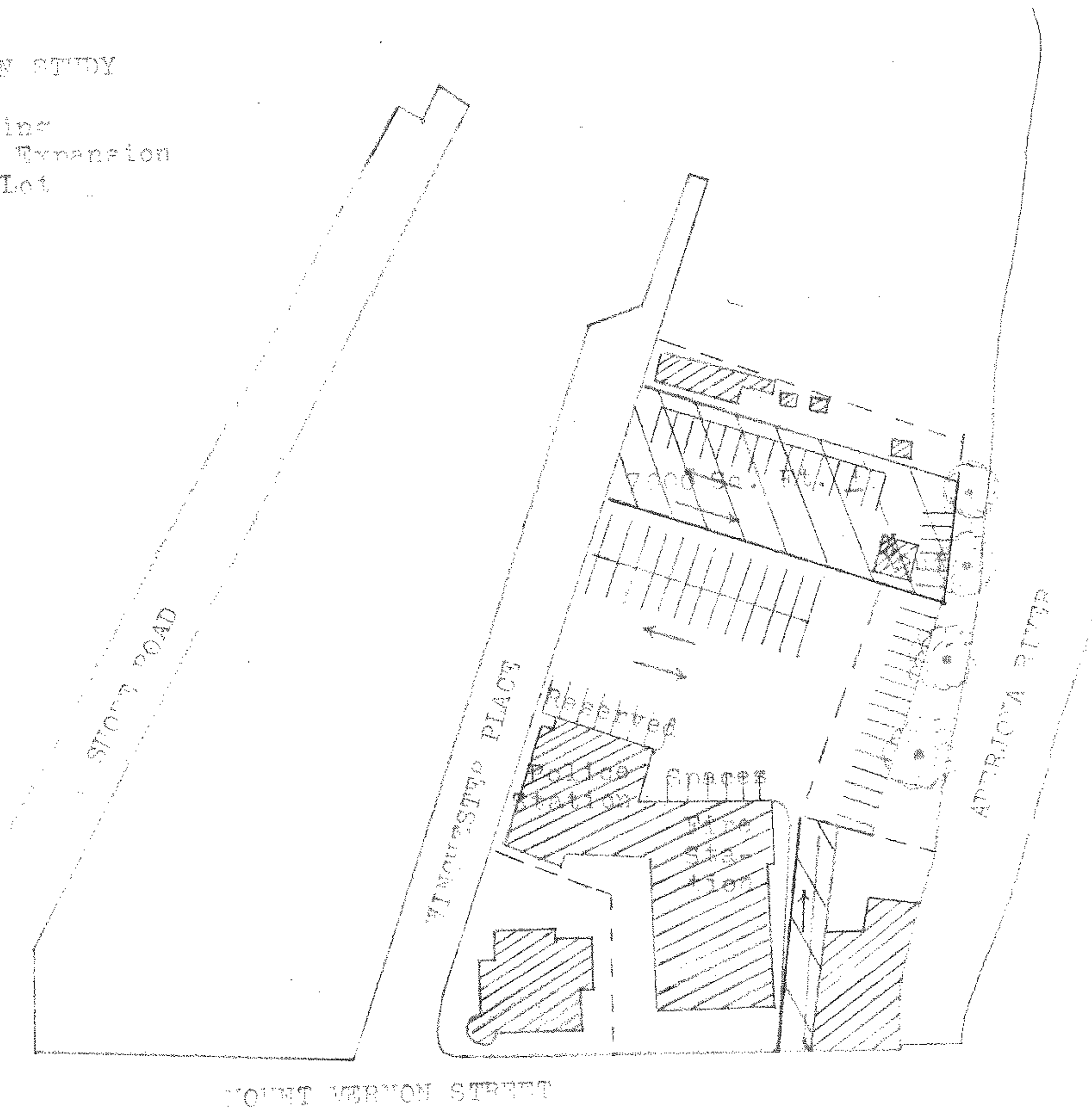


NOTE:
Ultimate capacity [illegible]
Present capacity [illegible]

NET GAIN [illegible]

WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating
Proposed Entrance to and Expansion
of Municipal Parking Lot
1"=60'



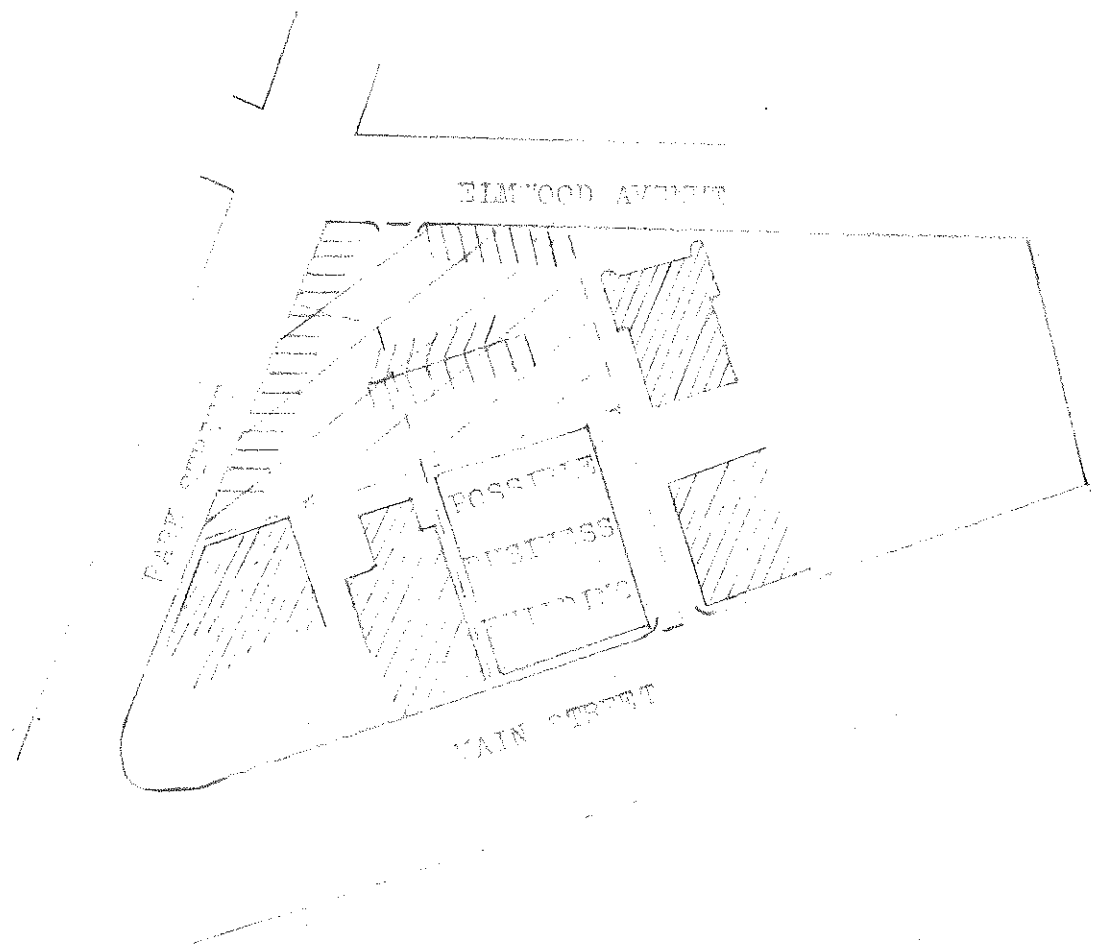
NOTE:
Ultimate Capacity
(exclusive of reserved
spaces) 50± cars
Present Capacity
(exclusive of reserved
spaces) 24± cars

NET GAIN 25± cars

WINCHESTER MASTER PLAN STUDY

Sketch Plan Indicating
Proposed Municipal Parking Lot
and
Possible Layout

[illegible]



NOTE: [illegible]

WINCHESTER PARKING STUDY — FREQUENCY OF PARKING VACANCIES

WINCHESTER PARKING STUDY — FREQUENCY OF PARKING VACANCIES

Parking Area	Total Spaces	Instances of Vacancies 0	1	2	3	4	5 or more	Spaces x 30	Total Vacancies	Average Vacancy	% of Vacancies
Main Street - between railroad and Wedge Pond, west side	22	-	-	3	3	1	23	660	197	60.5	29
Main Street - between railroad and Wedge Pond, east side	12	-	3	4	5	4	14	360	128	4.2	35
Theater Parking Lot	100	-	-	-	-	-	30	3000	2554	85.1	85
First National Store Parking Lot	43	-	1	-	-	-	29	1290	658	21.9	51
Parking area - bounded by Main, Elmwood, and Park streets	27	-	-	1	-	-	29	810	300	10.0	37
Shore Road - 2/3 distance from Mt. Vernon to Wedge Pond, west side . .	17	1	2	3	3	7	14	510	141	4.7	28
Shore Road - 2/3 distance from Mt. Vernon to Wedge Pond, east side . .	14	-	1	1	2	2	24	420	180	6.0	43
Town Parking Lot - between Winchester Place and Shore Road	24	-	-	1	1	3	25	720	352	11.7	49
Town Parking Lot - behind Fire Station	44	-	3	4	2	4	17	1320	206	6.8	16
Converse Place - between Mt. Vernon and Main streets - both sides . .	22	3	3	2	3	2	17	660	141	4.7	21
Main Street - between Converse Place and Mt. Vernon St., east side . .	11	3	9	4	2	2	10	330	103	3.4	31
Mount Vernon Street - between Main St. and Washington St., south side.	18	1	2	-	3	1	23	540	225	7.5	42
Mount Vernon Street - between Main St. and Washington St., north side.	23	-	2	-	1	3	24	690	310	10.3	45
Town Hall Parking Lot	49	-	-	-	-	-	30	1470	715	23.8	49
Washington Street - between Mt. Vernon Street and Parkway, west side .	8	1	1	1	4	1	22	240	162	5.4	67
Mystic Valley Parkway - between Washington and Main sts., north side .	21	2	2	4	2	5	15	630	197	6.6	31
Main Street - between Washington Street and railroad, east side . . .	27	3	-	-	1	2	24	810	281	9.3	35
Main Street - between Washington Street and railroad, west side . . .	31	1	2	-	1	-	26	930	300	10.0	32
Thompson Street - west side	12	12	9	5	3	1	-	360	42	1.4	12
Thompson Street - east side	10	8	9	5	1	4	3	300	57	1.9	19
Railroad Parking lot - east side of tracks	108	-	1	1	1	-	27	3240	739	24.6	23
Waterfield Road - west and south sides	19	1	3	2	3	1	20	570	207	6.9	36
Waterfield Road - north (post-office) side	8	5	3	4	6	6	6	240	85	2.8	35
Mystic Valley Parkway - between Waterfield Rd. and Main St., north side.	11	10	5	3	-	-	4	330	36	1.2	11

WINCHESTER PARKING STUDY (continued)

Parking Area	Total Spaces	Instancies of Vacancies 0	1	2	3	4	5 or more	Spaces x 30	Total Vacancies	Average Vacancy	% of Vacancies
Church Street - between Main Street and Vine Street, north side . . .	8	3	1	8	5	1	12	240	106	3.5	44
Church Street - between Common and Main Street, south side	18	-	-	1	-	-	29	540	339	11.3	63
Common St. - between Church St. and railroad lot entrance, west side .	6	-	2	6	12	4	6	180	97	3.2	54
Common St. - between Church St. and turn of Common St., east side . .	13	4	2	5	3	4	12	390	108	3.6	28
Railroad Parking Lot - west side of tracks	74	-	2	3	-	-	26	2220	552	18.4	25
Common Street - along railroad tracks, east side	39	1	-	6	9	3	11	1470	159	5.3	11
Common Street - along railroad tracks, west side	37	4	2	3	5	4	12	1110	254	8.4	23
Church Street - between Common St. and School St., north side	20	-	-	1	2	4	23	600	299	9.9	50
Church Street - between Common St. and School St., south side	22	-	-	-	2	2	26	660	236	7.8	36

Note: Observations made at 9:00 a.m. and 11:00 a.m., 1:00 p.m., 3:00 p.m. and 5:00 p.m. between October 23 and November 3, 1952, a total of thirty checks.