AMERICAN SOCIETY OF PLANNING OFFICIALS
1313 EAST 60th STREET — CHICAGO 37, ILLINOIS

Information Report No. 190 September 1964

PARKING LOT AESTHETICS

Most parking lots are ugly. In the words of one authority[1]

> . . . parking lots seen at ground level become huge wastes of bulging, shiny, monstrously colored vegetation 5 feet high. Then, after eight hours or so, this parking lot transforms itself into an empty, paved (usually black) waste of equally depressing appearance. Moreover, at certain periods a parking lot has all the unpleasant characteristics of a noisome industry -- small, smoke, noise, glaring lights, and, in addition, a disrupting effect on traffic.

The parking lot is a necessity of city life, but there is no reason for it to look like a scarred piece of earth or to dominate a residential, commercial or industrial area. Design techniques to soften the unpleasant effect of parking lots have been developed. The purpose of this report is to summarize some of these design elements and to provide some examples of design controls in zoning ordinances.

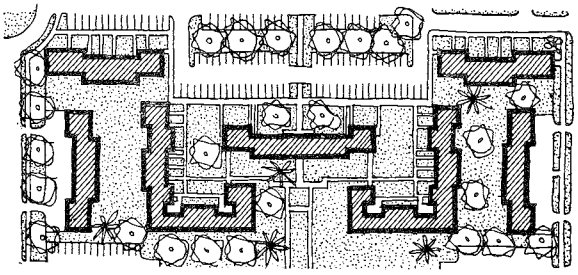
General Considerations

Some of the basic design elements in planning parking lots of improved appearance include size, location of the lot on a site, relationship to principal and abutting buildings and land uses, change in level of the lot, fencing, landscaping, pavement, lights, signs and maintenance. In certain instances the use of particular techniques will depend to a large extent on the size of the lot and the type of zoning district in which it is located, nearby land uses and, perhaps most important of all, cost. This report will discuss the various design techniques that can be applied to a parking lot, without attempting to distinguish those that might be more or less appropriate for a particular development situation because it is commercial or residential, or because of its contemplated size. Some of the principles will apply only to one particular type of parking facility, but the reference should be obvious without resorting to a reorganization of the material.

Prepared by Frank S. So.

Parking Lot Location

Figure 1*



Parking isolated at sides of site.

In many situations, such as densely constructed urban areas, the location of the parking lot will be determined by the size and shape of the site. In instances where there is no flexibility in positioning the parking area, many of the other techniques discussed in this report will have to be used. There are situations, however, where choices can be made. For example, in apartment and row house developments, it is desirable to place parking lots at the outside edges of the site and provide open space in the interior of the development (Figure 1).

Another situation in which there is a choice of location occurs with certain types of office, industrial, or institutional buildings. While many shopping center developers argue that parking areas must be visible for customer convenience and attraction, there is no need for such visibility in other commercial and industrial centers. These parking areas can be located at the side or rear of the site, thus preserving architectural unity of the street side of the building lot (Figure 2). This principle is illustrated by the design requirements in some recent urban renewal plans and in zoning ordinance provisions prohibiting parking in the front yard.

For example, the urban renewal plan in the East Arterial Industrial Project in Utica, New York, specifies that:

> No part of a setback between a building and a street right-of-way line may be used for off-street parking, except that where a building exceeds the minimum setback, off-street parking areas may be developed within the minimum setback distance by an amount equal to the amount by which said building exceeds the minimum setback. However, no such parking area shall be developed within less than 30 feet of any right-of-way line.

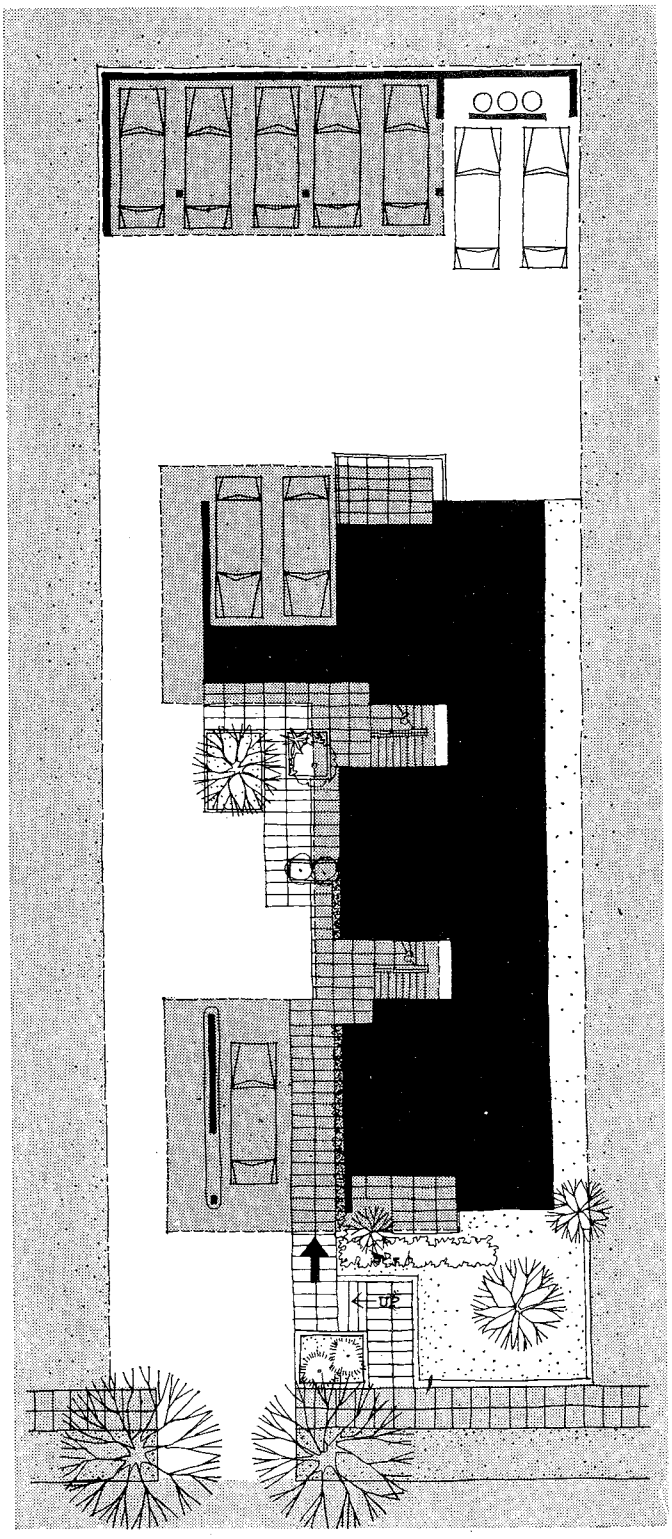
Similar provisions also are found in a small but growing number of zoning ordinances controlling the locations of parking on the lot. Some ordinances prohibit parking in front yards but permit parking in side and rear yards. Other ordinances prohibit parking in all those yard areas abutting a street of a corner lot.

The Pittsburgh zoning ordinance (1958) states that parking

> . . . shall not be within the required front yard, the required side yard abutting the street side of a corner lot and the required rear yard abutting the rear street of a through street, for the district in which it is located.

*Sources for this and all other illustrations are listed at end of the report.

Figure 2



Parking at rear of narrow apartment site.

A somewhat different provision is found in the New Haven zoning ordinance (1962):

> No parking space shall be located within any required front yard, EXCEPT THAT: parking spaces (whether enclosed or not) may be permitted to be located within a required front yard by special exception under section 32-64(D) of this ordinance upon a finding, among other things, that such parking spaces are necessary to the use with which they are connected, that they cannot be practically located elsewhere on the lot, that their location within a required front yard will not depreciate property values or cause vehicular or pedestrian traffic hazards or substantially decrease the open aspect of the street, and that such parking spaces are properly screened and otherwise arranged in accordance with the requirements of this ordinance. . . .
>
> A parking space may be located within a required side yard or rear yard, provided that no such parking space shall extend within two feet of any side lot line or rear lot line; but a parking space within an accessory building shall follow the requirements of section 32-25 as to location within required side and rear yards.

A special, perhaps unique, ordinance amendment was adopted by the city council of Beverly Hills, California, to prevent paving the entire front yard for off-street parking of residential lots. Residential property owners began paving their yards when the city banned over-night on-street parking. At first, the "asphalt lawns" could be constructed without a city paving permit, since in most cases a curb cut and driveway already existed. City officials, however, recognized that some control over the location and size of the off-street parking space would be desirable. The following ordinance was adopted by the city council:

> Paving of setbacks: One-family residential zones.
>
> No portion of any area of any setback from the front lot line of any parcel of property within any one-family residential zone shall be paved (except for not more than one walkway not exceeding five (5') feet in width and one driveway not exceeding the width of its curb cut) until a building permit thereafter has first been obtained from the Director of Building and Planning (to be issued in the same manner as other permits required under the Uniform Building Code), and unless each of the following conditions are complied with:
>
> (a) Not more than sixty-five (65%) per cent of such setback area shall be paved.
>
> (b) No portion of such setback area within three (3') feet of any property line shall be paved, except for the entrance to a driveway not exceeding the width of its curb cut.
>
> (c) A wall or hedge of not less than two (2') feet nor more than three (3') feet in height shall be provided and maintained

along the front and sides of the area paved, except for the entrance to a driveway not exceeding the width of its curb cut.

(d) The paving shall be Asphaltic or Portland Cement concrete, or equivalent, applied in accordance with specifications satisfactory to, and approved by, the Director of Building and Planning.

(e) All unpaved portions of such setback area shall be improved and maintained with landscaping satisfactory in type, amount, and arrangement to the Superintendent of Parks.

Paving of setbacks: Multiple residential zones.

No portion of any area of any setback from the front lot line of any lot within any multiple residential zone shall be paved, except for not more than one walkway not exceeding five (5') feet in width and one driveway not exceeding the width of its curb cut.

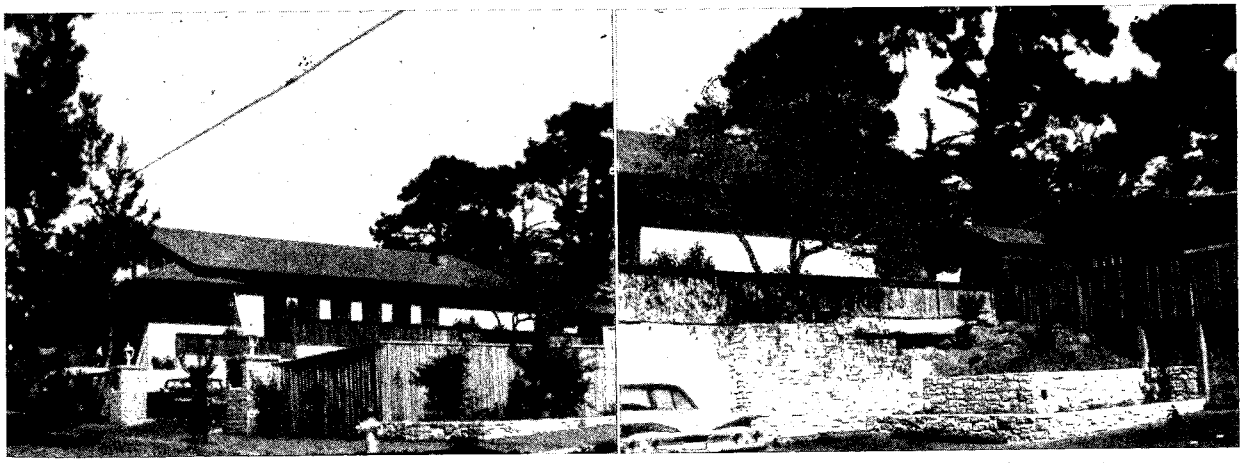
Size

Unfortunately, the huge expanse required for parking by major shopping centers and large industrial facilities creates a difficult aesthetic problem.

The method most often employed, and probably the most practical, to make the large parking lot look smaller is to use landscaping within the parking area. Unfortunately, most zoning ordinances require only one or, on rare occasions, two per cent of the parking lot area to be devoted to landscaping. Token landscaping, however, will not solve the problem.

Another technique is to divide the area into a number of smaller parking lots. Some shopping center designers, for example, recommend that large parking areas be divided into smaller lots of not more than 800 cars. The boundary areas can be landscaped or, in some cases, the site may be so planned that parking areas are separated by the buildings. In cases where a sloping site exists, there may be opportunities to have parking on different levels separated by retaining walls or landscaped banks (Figures 3 and 4).

Figure 3 **Figure 4**



Exterior and interior views of a motel parking lot in California.

Figure 5

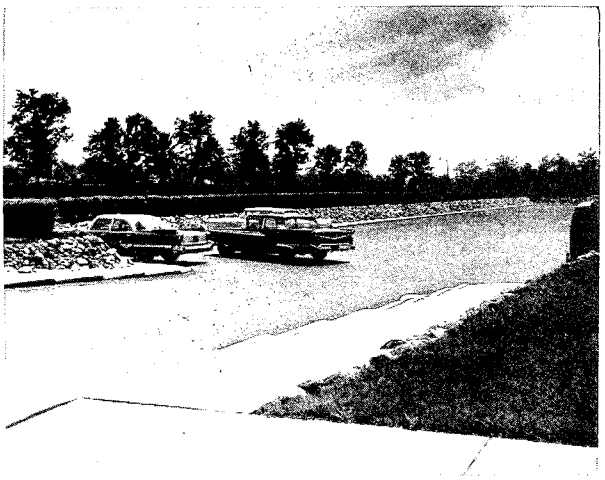


Figure 6

Two views of a large, depressed parking lot designed by Eero Saarinen.

Grade Level

One of the best methods for integrating parking areas into a landscape is to depress the level of the parking lot two or three feet. With adequate landscaping at the outside edges the parking area then will not dominate the site or the building. The accompanying photographs of the General Motors Technical Center near Detroit illustrate this principle (Figures 5 and 6).

Another technique especially suited to the row house is also illustrated here. The row house has always given the designer some problems (unless parking is provided in enclosed garages or grouped in small lots) since most people prefer parking their cars as close as possible to their home. Monotonous lot-by-lot placement of driveways and parking stalls on narrow row house lots is unattractive. One imaginative solution is the use of "boat slips," as shown in Figures 7, 8 and 9. The row house dweller still is able to park in front of his door, but he also parks below his door and yard as well.

Still another technique to conceal a parking lot effectively is to raise the ground at the edge of the lot, creating a landscaped berm (Figure 10). The sketch prepared by the Chicago Plan Department shows a residential parking lot in the middle of a neighborhood.

Landscaping

Planning for landscaping must begin with the first planning of the lot (Figure 11). There are no formulas. Each lot must be designed individually with reference to the size, street pattern, adjacent properties, nature of the soil, number of cars to be accommodated, hours and kind of use, and so forth. An allowance of 10 per cent of the lot area for landscaping is a reasonable minimum. Of all forms of greenery, trees are the most essential. They screen cars,

Figure 7

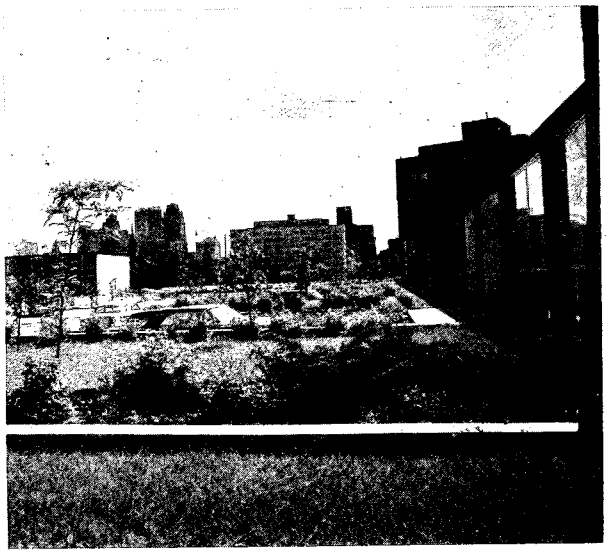
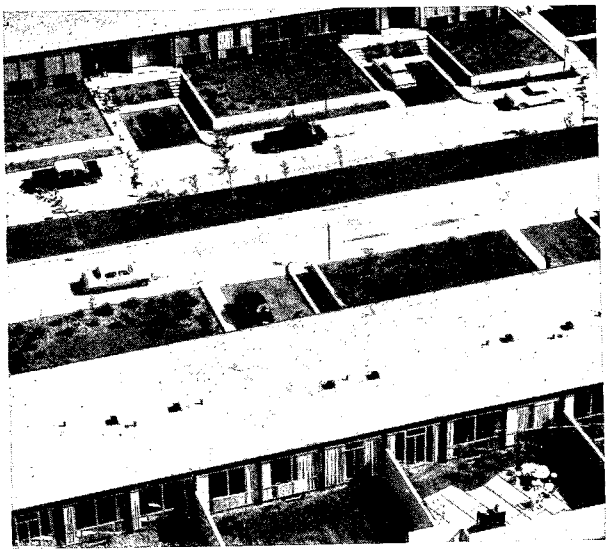
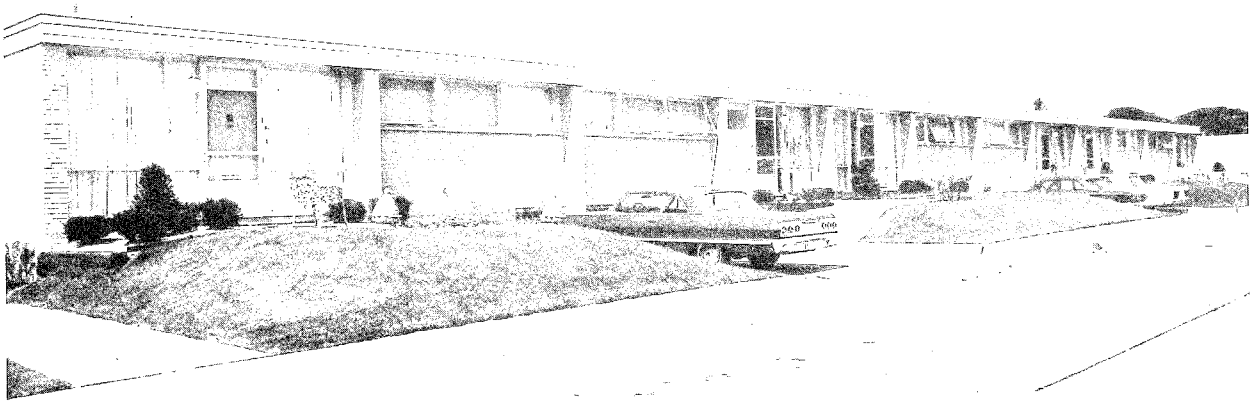


Figure 8



Aerial and pedestrian-level views of "boat slip" parking.

Figure 9

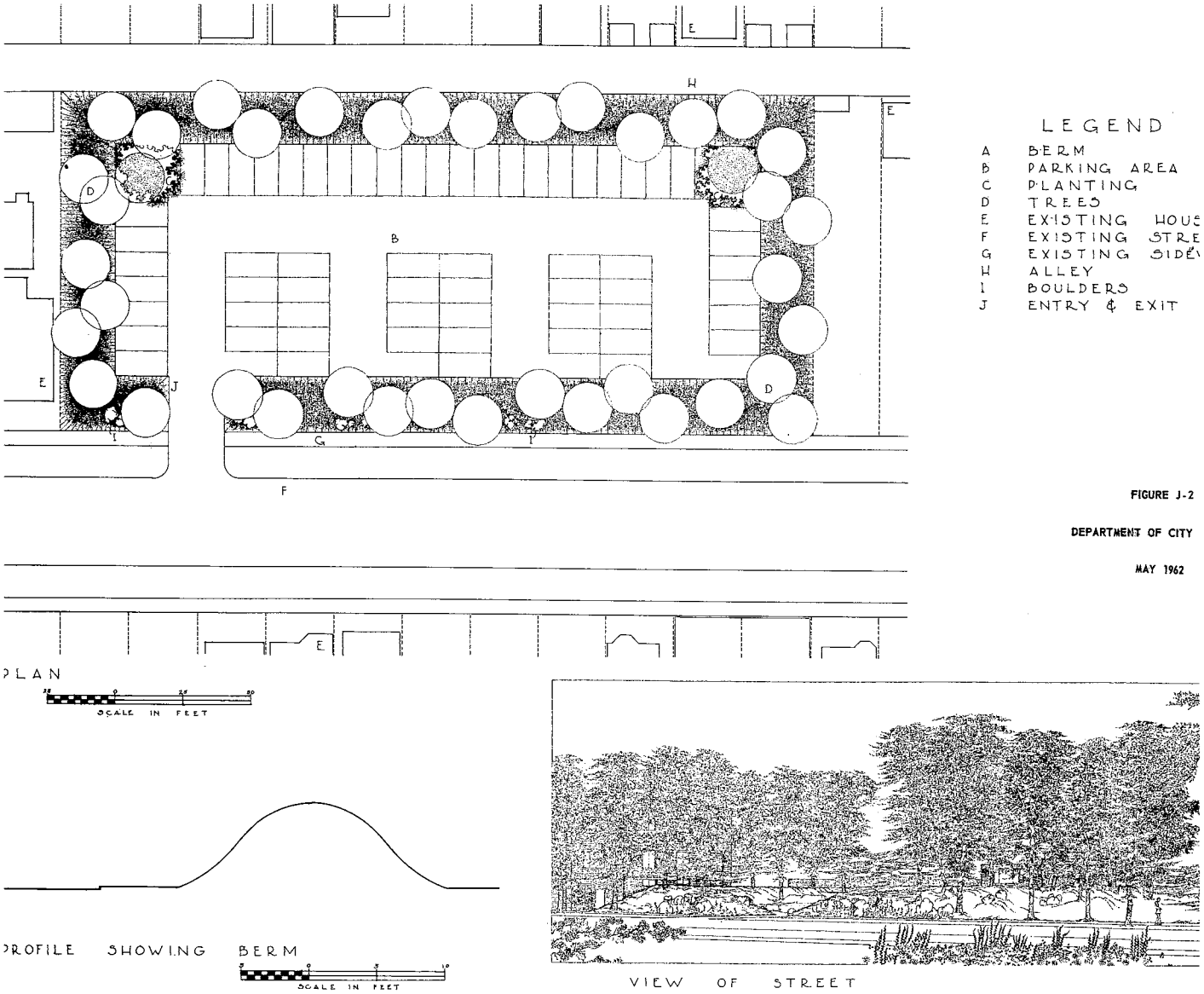


Artful grading tucks "boat slip" drives between front yards.

guide traffic, provide shade, and frame views. As a rule, trees require less maintenance than shrubs and collect less trash. They should be planted wherever needed and wherever room can be spared. Their initial cost is small compared to their advantages and the long term increase in the value of the property. Even the ailanthus, growing accidentally in the corner of a lot, should often be encouraged. It screens neighboring buildings, sometimes thriving in an area where nothing else will grow.

Shrubs, vines, and small trees can be used to help the lot conform to city ordinances which call for walls, fences, or densely planted compact hedges between the lot and adjoining residential or institutional areas. An attractive barrier will guide circulation by blocking off some areas and drawing attention to desired openings and paths.

Figure 10



A proposed parking lot site plan employing berm -- a raised hump of soil -- as a screen to improve appearance.

A planting bed for flowers, ground cover, or shrubs, within a six-inch concrete curb, can fill an otherwise unusable space in the corner of the lot, indicate angle parking, provide space for snow removal, protect tree trunks, and add to visual variety and interest. Shaped like a peninsula, it can be used at the entrance or elsewhere to establish the direction of desired circulation and break up the solid expanse of pavement.

Where space for ground landscaping is scarce, walls, fences, and special plant materials can be used. Ivy can be grown over fences. Flower pots can be hung on walls and fences and those sides of buildings which were never intended for

public view. Sometimes spaces behind store buildings, used as catch-all informal parking lots, can at small cost in both money and labor be turned into parking plazas. The ground can be attractively paved, the backs of the buildings whitewashed or painted, and a few flower boxes added to increase the value of the property as well to improve its appearance and usefulness.

A good plan requires little maintenance, but even the best plan requires regular housekeeping. Maintenance which should be anticipated and provided for includes such items as: caring for greenery, keeping fences in repair, keeping the lot free of litter, providing trash baskets when needed, seeing that autumn leaves do not choke the drainage system, and providing for snow removal. Maintenance is easier when there is a division such as a curb, stone, metal or wood strip between plants and other materials.

It is better to have a lot laid out simply which can be well maintained than to have a more ambitious parking area that cannot be properly attended.

Greenery for use around an urban parking lot must be hardy and decorative, require little care, and be able to survive soot and gas fumes. It must be adapted to the composition and acidity of the soil. In general, the best procedure is to use native-grown greenery that has proved able to withstand the rigors of the climate.

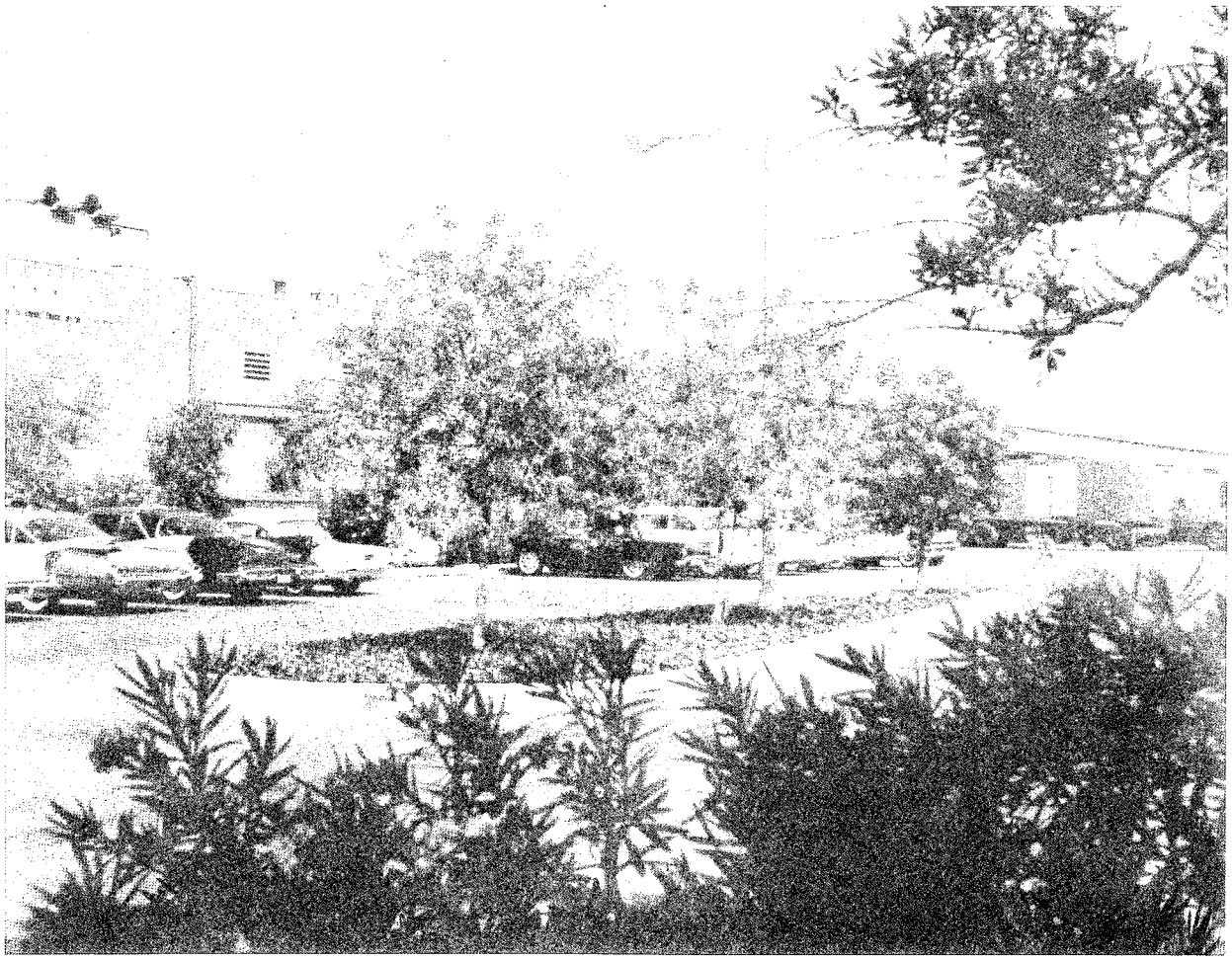
Trees selected should be those not easily subject to disease. They should be able to get along with normal rainfall and not be particularly attractive to insects. They should grow at a reasonable rate, have a long lifetime, and bear foliage of a pleasant shape and color. Trees of a three and one-half to four-inch caliber are a good choice for screening buildings up to three stories. High buildings, to be in scale, would require trees of 30 to 40 feet. Tree-planting strips should be at least five feet wide for proper tree growth; otherwise, the tree root may heave adjacent paved areas. Tree trunks must have the protection of curbs to prevent cars from backing into them. Trees should never be planted under overhead service wires.

To be avoided are trees with low-growing branches which may scrape cars, with gum or moisture which may drop on cars, or with blossoms, seeds, or pods which clog drainage or tend to produce a messy appearance. Trees or bushes with thorns on their low branches should be avoided in areas where there are children. The individual tree specimens chosen should be large enough to be effective the first year they are planted.

In choosing a particular variety of tree, the novice is often swayed by features such as flowers or color, to the exclusion of the more basic considerations listed above. The landscape architect who is qualified to select the best tree for a particular spot will consider the shape of tree required, its ultimate height, the foliage characteristics, the summer contour, the shape of the branches when they are leafless, and the texture and color of the bark. Flower and fruit effects are also important. The expert will choose trees which will set off or complement the architecture of nearby buildings.

In many locations, ground covers other than grass can be used. Many are hardy, their texture variations are interesting, and in some cases they require less care than grass. Some varieties are green throughout the year.

Figure 11



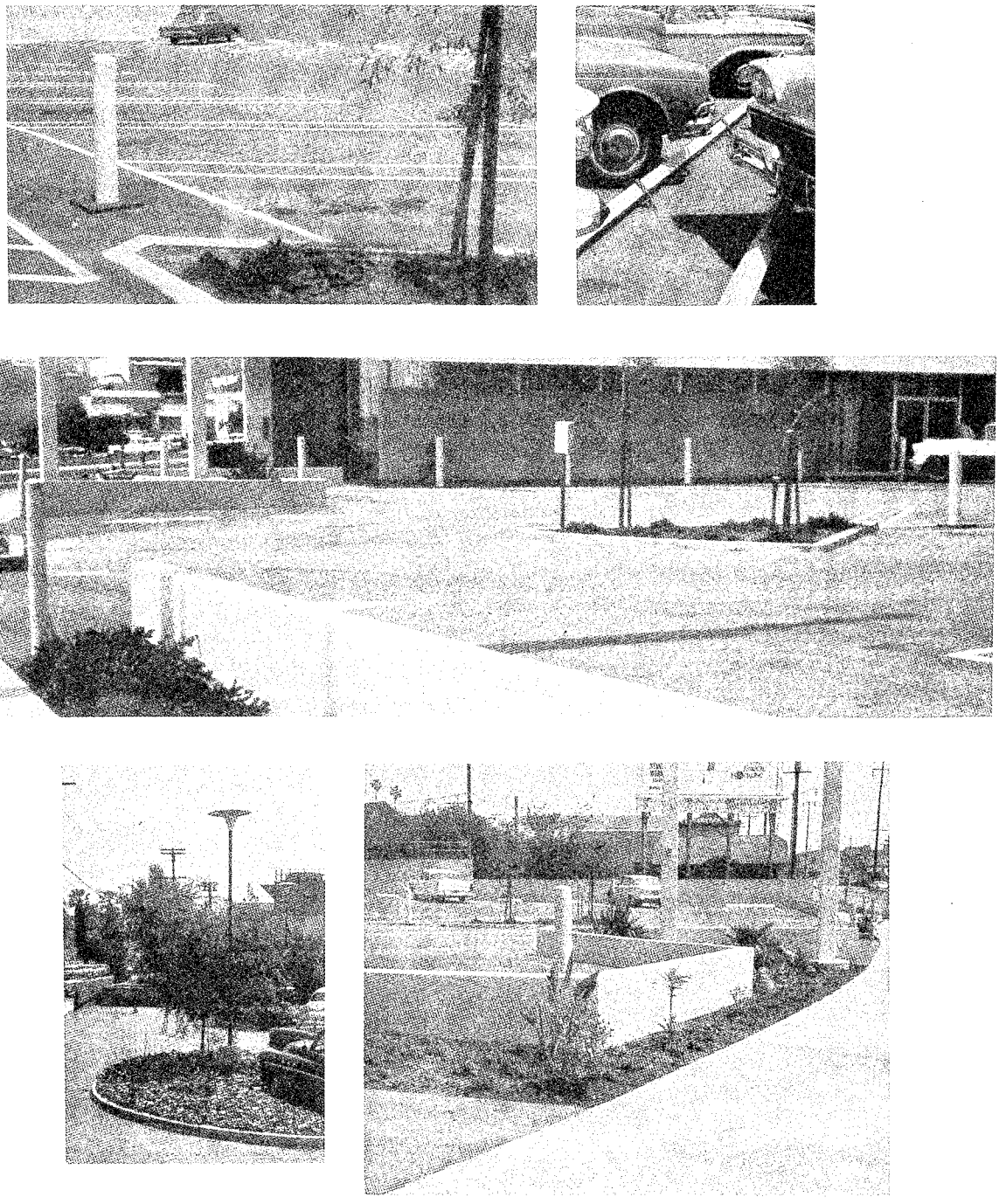
A well-landscaped industrial parking lot.

When vines are used on fences, they keep off the sun, provide visual screening, and cut down noise and glare.

Since flowers need more care than other greenery, they should be used only where there is sure to be adequate care available. A commercial lot in a competitive situation can call attention to itself by having a few well-tended beds or boxes of flowers near its entrance.

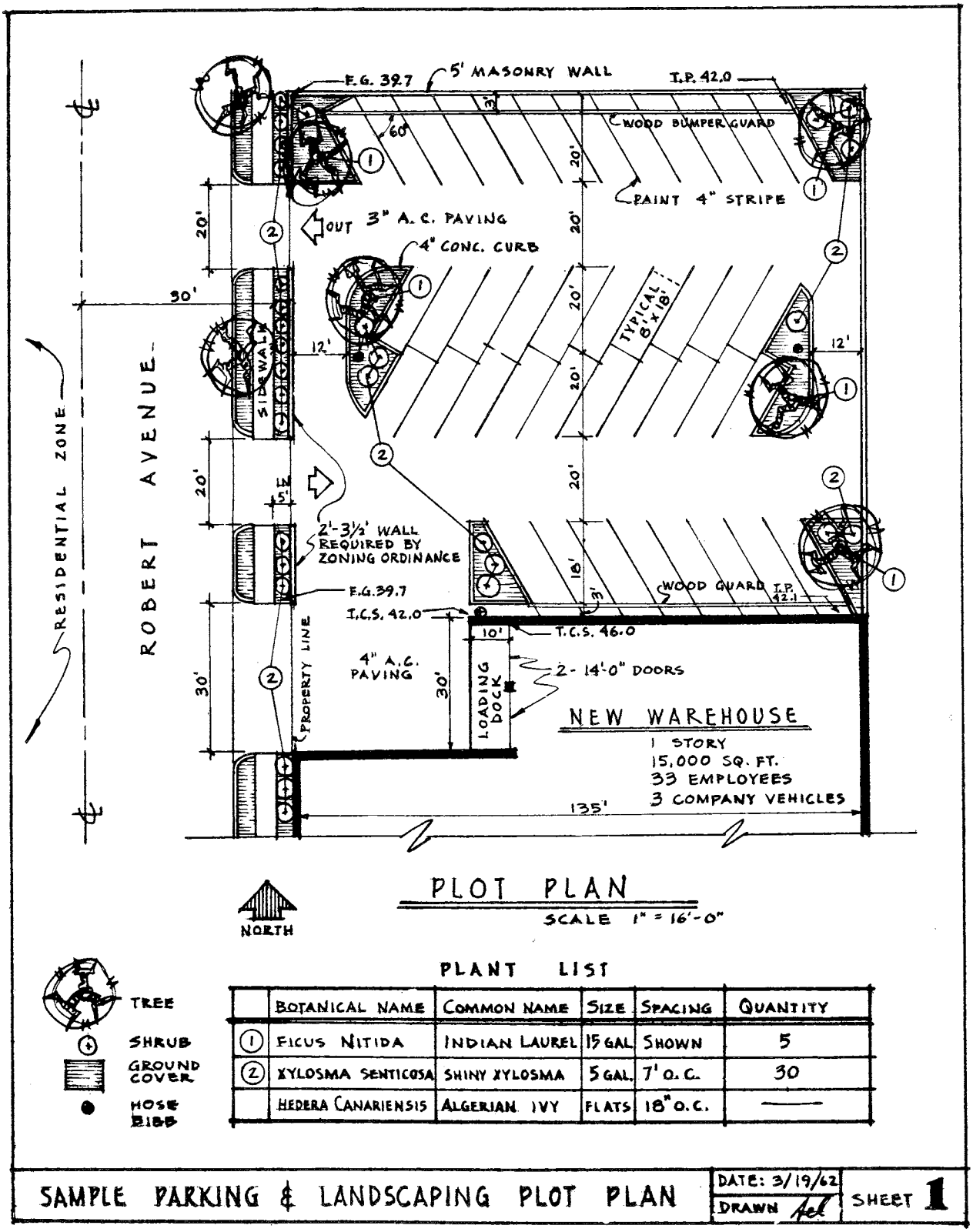
Closely related to landscaping is the aesthetic treatment of fences or barriers. The border around the parking lot should consist of planting, fencing, or a combination of each. Whatever the material used, the objectives are to control the entrance and exit of cars and pedestrians, protect the cars from vandalism, muffle sounds, and screen the cars from sight (Figure 12). Today, there is a greater variety of materials available for fencing than ever before. Brick and masonry walls are durable and can be quite attractive as well. Designers are also making greater use of new types of fences such as flexible curving wood strips, plastic panels, decorative aluminum and molded pierced tile. The

Figure 12



Examples of a variety of parking lot improvements.

Figure 13



PLOT PLAN

SCALE 1" = 16'-0"

TREE
SHRUB
GROUND COVER
HOSE BIBB

PLANT LIST

	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
(1)	FICUS NITIDA	INDIAN LAUREL	15 GAL	SHOWN	5
(2)	XYLOSMA SENTICOSA	SHINY XYLOSMA	5 GAL.	7' O.C.	30
	HEDERA CANARIENSIS	ALGERIAN IVY	FLATS	18" O.C.	—

SAMPLE PARKING & LANDSCAPING PLOT PLAN | DATE: 3/19/62 | DRAWN Ael | SHEET 1

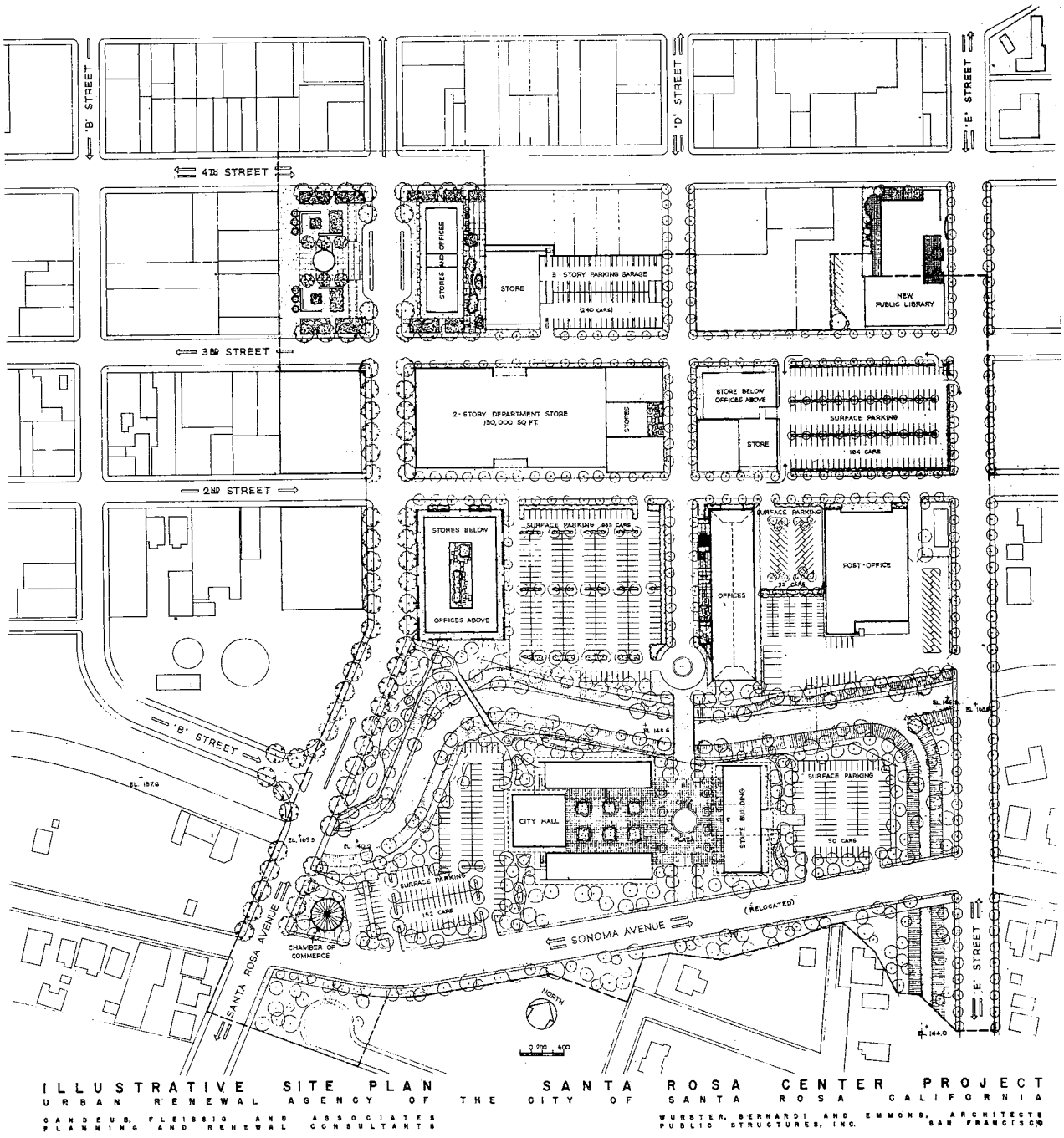
chain link fence, often used, takes little space, lasts well and requires little maintenance. It is not attractive however, and should be complemented with shrubs or vines. Another barrier frequently used is the metal bumper strip. Unless well screened, it too is unattractive. Wood bumper guards are usually more attractive, but may deteriorate more rapidly.

Closely related to landscaping and the general appearance of the parking lot is the type of pavement, lighting, and signs. The pavement, of course, should be a dust-free surface, preferably asphalt or concrete, and should be well-drained. While the parking lot should be well-illuminated, lighting should be directed away from adjacent buildings and should be extinguished after a certain hour if situated close to residences. Some of the attractive newer light standards may be particularly suitable for lots in residential areas. They are eight to 10 feet in height and are shaded to direct the light downward. Signs should be rigidly controlled. Only signs identifying the lot or providing directional controls should be permitted.

Zoning ordinance provisions controlling design and landscaping of parking lots are still relatively uncommon. Many ordinances have a short sentence or two that are more like general admonitions. One of the more detailed provisions is contained in the Seattle zoning ordinance:

> Parking areas for more than five vehicles -- B, C, M and I zones. In any Zone other than an R Zone a parking area for more than five (5) vehicles shall be developed in accordance with the following requirements:
>
> (a) Border Barricades. A rail, fence, wall or other continuous barricade of a height sufficient to retain all cars completely within the property shall be provided, except at exit or access driveways, provided however, that Screening shall be provided on each side of a parking area which abuts upon or faces across a Street, Alley, or Place any Lot in an R Zone, in accordance with the provisions of Section 26.46.140 (a).
>
> (b) Entrances and Exits. The location and design of all entrances and exits shall be subject to the approval of the City Engineer provided that no entrance or exit shall be closer than fifteen (15) feet to any Lot located in an RS or RD Zone.
>
> (c) Surface of Parking Area. Offstreet parking area shall be surfaced and maintained with a durable and dustless surface consisting of oiled crushed gravel, asphalt or concrete, and shall be so graded and drained as to dispose of all surface water. In no case shall drainage be allowed across sidewalks. In the case of a parking area for more than fifteen (15) cars, all surface water shall be discharged directly into a sewer. Surfacing and drainage shall be subject to approval by the City Engineer.
>
> (d) Lighting. Any lighting used to illuminate any required offstreet parking area shall be so arranged as to reflect the light away from adjoining premises in any R Zone.

Figure 14



ILLUSTRATIVE SITE PLAN
URBAN RENEWAL AGENCY OF THE CITY OF SANTA ROSA CALIFORNIA

SANTA ROSA CENTER PROJECT

CANDEUB, FLEISSIG AND ASSOCIATES
PLANNING AND RENEWAL CONSULTANTS

WURSTER, BERNARDI AND EMMONS, ARCHITECTS
PUBLIC STRUCTURES, INC. SAN FRANCISCO

(e) Signs. No sign of any kind, other than one designating entrances, exits or conditions of use, shall be maintained on a parking area on that side which abuts upon or faces any premises situated in any R Zone. Such signs shall not exceed eight (8) square feet in area, nor shall there be more than one such sign for each entrance or exit.

(f) Internal Landscaping for Large Parking Areas. In the case of a proposed parking area which exceeds twenty thousand (20,000) sq. ft. in area, and which abuts upon any premises in any R Zone, the Board may require the planting and maintenance of trees within and along the borders of such parking area.

Parking areas for more than five vehicles -- Accessory parking areas in R zones. In any R Zone, a parking area accessory to a permitted Use in that Zone and for more than five (5) vehicles shall be developed in accordance with the following requirements:

(a) Screening. Screening shall be provided on each side of such parking area which abuts upon or faces across a Street, Alley or Place any Lot in an R Zone, except that no Screening is required on any side of a parking area where the elevation of the Lot Line is six (6) or more feet higher than the finished elevation of the parking surface. A parking area Screening shall meet the following conditions:

(1) It shall be not less than four (4) and not more than six (6) feet in height above the grade of the parking lot surface, but in no case shall be permitted to constitute a traffic hazard. Such Screening shall be maintained in good condition.

(2) It shall not be located in any Required Yard which abuts upon a Street Lot Line and it shall be maintained in good condition.

(3) Slopes or other areas between the Screen or, where such Screening is not required, the area devoted to parking and a Lot Line shall be landscaped with grass, hardy shrubs or evergreen ground cover and shall be maintained in good condition.

(b) Entrances, exits, surfacing, lighting, signs and internal landscaping:

The requirements of Section 26.46.130 (b), (c), (d), (e) and (f) shall apply.

(c) Operation. Except for emergencies, no automobile repair or service of any kind shall be conducted on any such parking area. No charge for use of such parking area shall be made in any R Zone except on a weekly or monthly basis, provided that in an RMH Zone, hourly or daily charges may be made.

(d) Review by Board. Plans for any such parking area, when not located on same Lot with Principal Use shall be subject to the approval of the Board as a Conditional Use.

The proposed Pittsburgh provisions set forth even more precise standards for border landscaping:

Such border shall consist of ornamental fence, wall, screen planting or combination thereof, as follows:

(1) Other than in sub-item (2) below: (a) Compact evergreen planting designed to provide eighty (80) per cent or more continuing opacity beginning at least twelve (12) months after installation, when viewed horizontally from between two (2) and ten (10) feet above average ground level. Such plant material shall be maintained at maturity heights as specified below. Plant material shall be installed at maturity heights at least thirty (30) per cent of the length of the border area at a height not less than one-half (1/2) the required maturity height and the remainder shall be installed at not less than one-third (1/3) the required maturity height, or;

(b) a combination of evergreen plant material with an ornamental fence or wall designed to provide the opaque screening specified above, with planting installed to specifications of this item, and the fence or wall located at such position within the border area and in relation to the ground elevation as to secure the maximum visual protection for adjacent property, erected to height specifications below:

Where area is within fifteen (15) feet of another lot in an "R" or "I" District or another lot in an "A1" District used for living quarters, the compact planting specified in item (1) (a) above, shall be maintained to a maturity height or not less than six and one-half (6½) feet above the surface of the parking or sales area and not less than four (4) feet above the other abutting property; when used in combination as allowed in item (1) (b) above, the combination shall consist of evergreen plant material and an ornamental masonry wall six and one-half (6½) foot in height; located not closer than five (5) feet to any existing structure used for living quarters; and

Where area is not within fifteen (15) feet of another lot in an "R" or "I" District or another lot in an "A1" District used for living quarters, the compact planting specified in item (1) (a) above, shall be maintained to a maturity height of not less than three and one-half (3½) feet above the surface of the parking area and not less than two (2) feet above the other abutting property; when used in combination as allowed in item (1) (b) above, the combination shall consist of evergreen plant material and ornamental fence or wall.

(2) Along lot line dividing a major parking area or an auto-

mobile and trailer sales area from another lot in an "R" or "I" District, or another lot in an "A1" District used for living quarters:

(a) A combination of evergreen plant material and an ornamental masonry wall six and one-half (6½) feet in height located not closer than five (5) feet from such abutting lot, not closer to any street than the buildable area of the lot and in such position within the border area and in relation to the ground elevation to secure the minimum visual protection for adjacent property, the whole designed to provide the opaque screening specified in item (1) (a) above.

Where 21 or more automobile spaces are proposed, the Los Angeles zoning ordinance requires a detailed site plan of the parking area showing the layout of the stalls and locations of fences, bumper guards, and planting materials, together with names of plants. Plat plans of proposed parking areas showing layout, landscaping, paving, and grading are also required by the Sacramento, California, zoning and parking ordinances. The Fort Lauderdale, Florida, zoning ordinance requires that parking areas be designed by "an architect, landscape architect or engineer," and that the final landscape plan be approved by the city superintendent of parks.

Detailed design and landscaping provisions will, of course, require competent personnel to review site plans. For example, a story is told about a case in England where town planning authorities rejected an industrial site plan because the developer had not indicated on the plans the specific kinds of plants that would be used for landscaping. The developer took his plans back to the drawing boards prepared a detailed landscaping plan designating all planting materials and resubmitted his proposal. Only after the plan was approved did authorities discover it contained only the most offensive types of weeds!

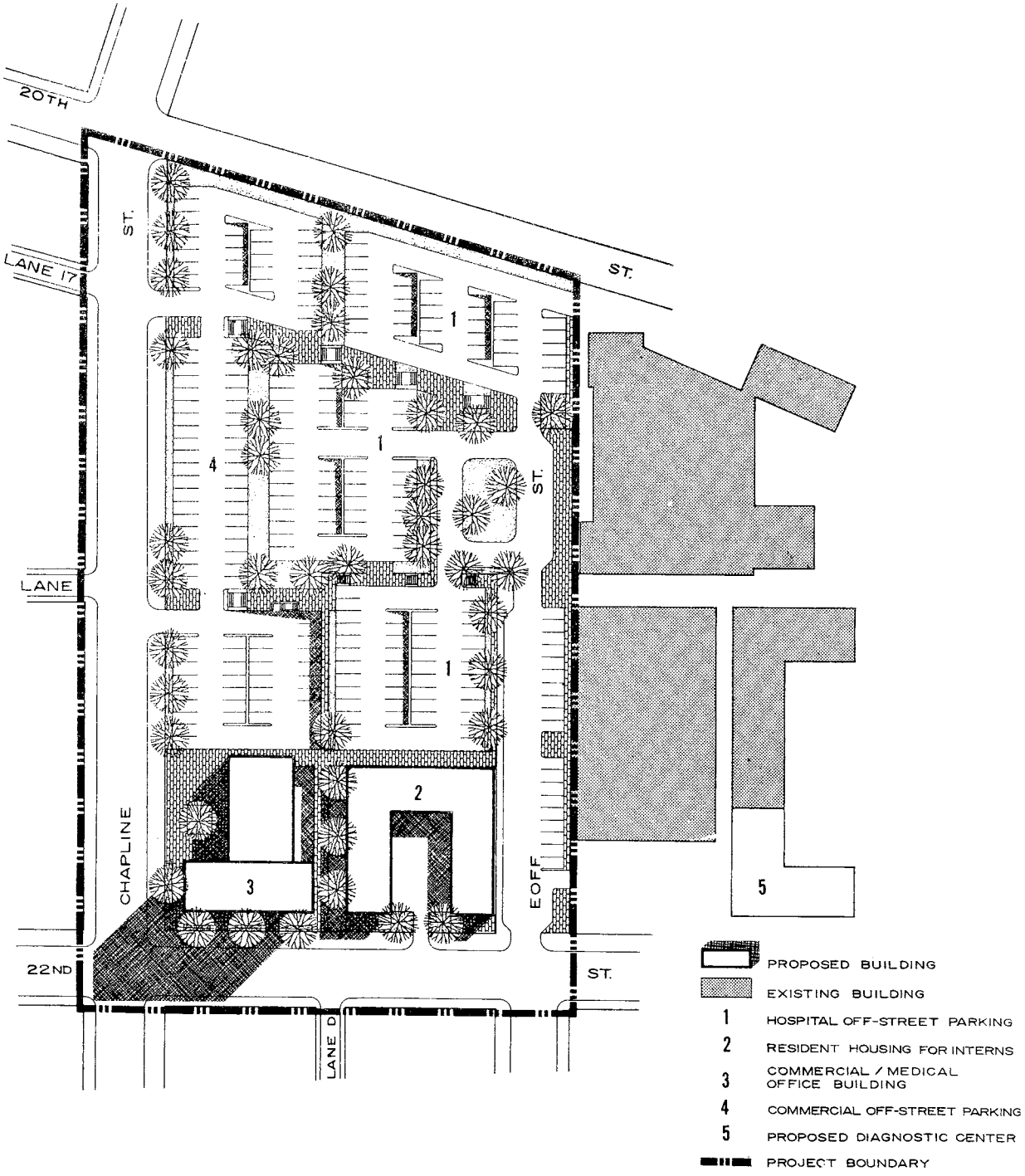
Finally, a number of urban renewal plans are now including design requirements related to parking lots. The East Arterial Industrial Project in Utica, New York, has already been cited. Another project that includes extensive landscraping treatment is the Santa Rosa Center Project as shown in the photograph of the model of the project. Still another is the General Hospital Urban Renewal Area Project in Wheeling, West Virginia (Figure 15). The site plan gives some idea of the landscaping envisaged; however, an additional document that will govern the execution of the renewal plan is quite explicit in detailing parking design objectives.

a. Parking areas shall be designed with careful regard given to orderly arrangement, topography, amenity of view, ease of access, and as an integral part of the overall site design.

b. For reasons of use and appearance, it is desirable that parking areas be level or on terraces formed with the slope of the land. Changes in level between such terraces should be formed by retaining walls or landscaped banks.

c. Parking areas shall be subdivided into lots containing not more than 60 cars by landscaped dividing strips or landscaped walks.

Figure 15



Illustrative site plan for a hospital.

Conclusions

Space for the outdoor storage of the car will increase. Neither hopes nor restrictive ordinances can make the parking lot disappear. There are, however, certain ways to make the parking lot a less unpleasant feature by concealment or reducing its apparent size. This report has shown how a number of cities have attacked the problem by using appropriate zoning. Several urban renewal plans aimed at better parking lot design have also been discussed. These examples may, it is hoped, encourage others to take more vigorous action in using land use controls for aesthetic ends.

REFERENCES

1. Geoffrey Baker and Bruno Funaro, Parking. (New York: Reinhold Publishing Corporation, 1958). P. 192.

2. The first part of this section, is adapted from Suggestions for Designing Urban Parking Lots, prepared by the Committee on Community Appearance of the Hyde Park-Kenwood Community Conference, Chicago, 1961. Pp. 2-5.

SOURCES OF ILLUSTRATIONS

Figure 1: House & Home, January 1964, page 98.

Figure 2: House & Home, August 1963, page 89.

Figures 3 and 4: Western City Magazine, March 1961, page 43.

Figures 5, 6, 7 and 8: Architectural Forum, July 1960, page 109.

Figure 9: House & Home, October 1963, page 98.

Figure 10: Supplied by Chicago Plan Commission.

Figures 11, 12 and 13: A Guide to Parking Lot Standards, The Regional Planning Commission of Los Angeles County, California.

Figure 14: Supplied by the Santa Rosa Center Project.

Figure 15: Supplied by the Urban Renewal Authority of Wheeling, West Virginia.