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DEPARTMENT OF
PUBLIC WORKS

OFFICE OF THE DIRECTOR

CITY OF SACRAMENTO
CALIFORNIA

CITY HALL
ROOM 207
915 I STREET
SACRAMENTO, CA
95814-2673

916-449-5283

ADMINISTRATION
916-449-8747

November 13, 1990

Budget and Finance Committee/Transportation
and Community Development Committee
Sacramento, California

Honorable Members in Session:

SUBJECT: **PROPOSED STREET MEDIAN LANDSCAPING PRIORITIES AND TEN-YEAR FUNDING PROGRAM**

SUMMARY

The attached report outlines a ten-year, prioritized construction program for median landscaping projects, identifies funding alternatives, and recommends adoption of specific policies governing median landscaping. Staff recommends that the Joint Committee approve the ten-year prioritized plan, approve the Landscaping and Lighting District and Proposition 111 Gas Tax revenues as the preferred funding sources for construction of median landscaping, and designate $250,000 of the new Proposition 111 Gas Tax monies the City will receive in FY 1990-91 to fund median projects. (A resolution allocating the Proposition 111 funds is included in a companion report.)

BACKGROUND

The adopted "Median Strip Master Plan and Criteria" sets forth policy for future planning and development of landscaped medians. When the Master Plan was adopted in 1987, the City Council directed staff to develop plans for implementation and financing of median landscaping projects. This report, developed jointly by the Public Works and Parks and Community Services Departments, represents the culmination of that effort.

The report inventories existing landscaped medians within the City and identifies deficiencies. Approximately 31,500 lineal feet of unlandscaped medians now exist. The cost of improving these medians with landscaping is estimated at $2.965 million. Staff has also identified selected locations where new landscaped medians can contribute significantly to the aesthetic appeal of neighborhoods and the City as a whole. These streets lead into community areas from major transportation facilities, but do not have existing unlandscaped medians. It is recommended that new landscaped medians be constructed at these locations, known as "gateways." This report identifies 14,400 lineal feet of medians to be constructed at designated gateway locations at a cost of approximately $1.9 million.

These retrofit and gateway projects have been prioritized for construction over a ten-year period (see Exhibit E of the report). The report also addresses the increasing maintenance requirements which will result from additional median landscaping. Based upon estimated maintenance costs of $1.50 per lineal foot per year, construction of the median landscaping projects proposed in each year of the ten-year program will increase annual maintenance costs by $8,100.

FINANCIAL DATA

Construction of the projects included in the proposed ten-year program will require an annual allocation of $500,000. Maintenance efforts will require an additional $8,100 per year. The report discusses funding alternatives and identifies the Landscaping and Lighting District as the appropriate source for maintenance funds. The report proposes that the required $500,000 allocation for construction be shared equally between the Landscaping and Lighting District and Proposition 111 Gas Tax revenues.

In order to proceed with the program during the current fiscal year, staff recommends allocating $250,000 from the new Proposition 111 Gas Tax revenues to fund the Franklin Boulevard median landscaping project and design of those projects scheduled for construction in FY 1991/92. A separate report regarding the Proposition 111 Expenditure Plan includes this proposed allocation.

POLICY CONSIDERATIONS

The adopted Median Strip Master Plan and Criteria established policy for future planning and consistent development of landscaped areas. This report reaffirms that policy. In addition, the report recommends that the City Council adopt the following policies regarding construction of median landscaping.

- Existing unlandscaped street medians in developed areas within the City will be upgraded with landscaping according to a prioritized plan.
- Landscaped medians within important "gateway" streets or intersections within communities will be constructed according to a prioritized plan.
- Existing unlandscaped and gateway street medians will be prioritized such that the projects are distributed throughout the City in proportion to need and deficiency.
- New City street widening and construction projects shall include median landscaping or sidescaping as an integral part of the project.
- Median construction shall be included in the construction of new streets as a condition of development approval.
- As new medians are constructed, the annual maintenance costs shall be included in the Landscaping and Lighting District.

MBE/WBE

There are no goods or services being purchased at this time.

November 13, 1990
Budget and Finance/Transportation
and Community Development Committee

RECOMMENDATION

Staff recommends that the Joint Committee recommend that the City Council take the following actions:

1. Adopt the attached resolution approving the street median landscaping policies, priorities, and ten-year funding program and establishing funding goals of $500,000 per year for landscaping of medians within already developed areas, and an additional $8,100 each year (cumulative) for maintenance of newly landscaped medians within already developed areas.

2. Approve the Landscaping and Lighting District and Proposition 111 Gas Tax revenues as the preferred funding sources for median landscape construction.

3. Designate $250,000 of the new Proposition 111 Gas Tax monies the City will receive in FY 1990-91 to fund the Franklin Boulevard median landscaping project and design of the median landscaping projects proposed for construction during FY 1991-92.

Respectfully submitted,

Melvin H. Johnson
Director of Public Works

RECOMMENDATION APPROVED:

JACK R. CRIST
DEPUTY CITY MANAGER

Respectfully submitted,

Robert P. Thomas
Director of Parks and Community Services

Contact Person
Roberta Larson, Administrative Services Officer
449-6281

November 13, 1990
All Districts

RESOLUTION NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

A RESOLUTION APPROVING THE STREET MEDIAN LANDSCAPING POLICIES AND TEN-YEAR FUNDING PROGRAM

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SACRAMENTO THAT:

1. The street median landscaping policies, priorities, and the ten-year funding program enumerated in the attached report are hereby approved.

2. A funding goal of $500,000 per year for landscaping of medians, within already developed areas, is hereby established.

3. A funding goal of an additional $8,100 each year (cumulative) for maintenance of newly landscaped medians within already developed areas is hereby established to be funded from the Landscaping and Lighting District.

4. The Landscaping and Lighting District and Proposition 111 Gas Tax revenues shall be the funding sources for median landscape construction.

_____
MAYOR

ATTEST:

_____
CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: 4

DATE ADOPTED: _____

CITY OF SACRAMENTO

STREET MEDIAN LANDSCAPING
POLICIES, PRIORITIES, AND TEN-YEAR FUNDING PROGRAM

PREPARED BY

THE DEPARTMENT OF PUBLIC WORKS

AND

THE DEPARTMENT OF PARKS AND COMMUNITY SERVICES

NOVEMBER 1, 1990

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EXECUTIVE SUMMARY

The adopted "Median Strip Master Plan and Criteria" sets forth policy for future planning and development of landscaped medians. When the Master Plan was adopted in 1987, the City Council directed staff to develop plans for implementation and financing of median landscaping projects. This report, developed jointly by the Public Works and Parks and Community Services Departments, represents the culmination of that effort.

The report inventories the existing landscaped medians within the City and identifies current deficiencies. The following policies for median landscape construction are recommended:

- Existing unlandscaped street medians in developed areas within the City will be upgraded with landscaping according to a prioritized plan.
- Landscaped medians within important "gateway" streets or intersections within communities will be constructed according to a prioritized plan.
- Existing unlandscaped and gateway street medians will be prioritized such that the projects are distributed throughout the City in proportion to need and deficiency.
- New City street widening and construction projects shall include median landscaping or sidescaping as an integral part of the project.
- Median construction shall be included in the construction of new streets as a condition of development approval.
- As new medians are constructed, the annual maintenance costs will be included in the Landscaping and Lighting District.

A ten-year prioritized construction program is recommended for landscaping existing raised medians and new "gateway" medians which lead into communities from major transportation facilities. The program calls for an annual allocation of $500,000 for construction and an additional $8,100 per year for maintenance. The report also addresses funding alternatives. The Landscaping and Lighting District and Proposition 111 Gas Tax are the preferred funding sources for median landscaping construction. To expedite implementation of the ten-year program, the report also recommends allocating $250,000 from new Proposition 111 Gas Tax revenues in the current fiscal year to fund the Franklin Boulevard median landscaping project and design of those projects scheduled for construction in FY 1991-92.

STREET MEDIAN LANDSCAPING
PRIORITIES AND TEN-YEAR FUNDING PROGRAM

1. Introduction

In May 1987, the City Council approved the *"Median Strip Master Plan (MSMP) and Criteria,"* developed jointly by the Department of Public Works and the Department of Parks and Community Services (see Exhibit F). This Master Plan assessed the current state of existing medians, park strips, and landscaped subdivision walls, and concluded that quality landscaping along street rights-of-way significantly enhances the overall aesthetic quality and visual appeal of each street and the community in general. The Master Plan also analyzed development and maintenance costs of various types of landscape design. Based on this analysis, the plan specified the most cost-effective landscaping in terms of development and maintenance over a 50-year period, considering aesthetic qualities and surrounding geographic area. The Master Plan criteria set forth policy for future planning and consistent development of the landscaped areas.

In order to conserve water, reduce maintenance costs, and prevent street deterioration due to runoff and overspray, the adopted Master Plan approved the elimination of turf grass and substitution of concrete or textured paving in combination with drought tolerant native plants. (The Sacramento County Board of Supervisors recently adopted comprehensive landscape guidelines, which are consistent with the City's Master Plan.) Reducing the amount of water required to irrigate medians is also cost-effective. New medians are metered, and the lower the water use, the smaller the impact on the City budget. In addition, conserving water saves energy and thereby reduces the cost of pumping water.

Since the Master Plan was adopted in 1987, California has experienced four consecutive drought years. Water conservation has become an increasingly high priority for the City Council. City facilities, such as community centers, parks, and medians have become the focus of public attention throughout the City's mandatory 1990 water conservation program. It is important that the City lead the way through responsible water usage. The current policy, as contained in the Master Plan, provides a framework to ensure that median landscaping is both attractive and water efficient.

When the MSMP and criteria were approved, the City Council directed staff to develop an implementation plan and a financing plan. This report is the culmination of that effort and recommends approval of the Street Median Landscaping Priorities and Ten-Year Funding Program. Developed by the Department of Public Works and the Department of Parks and Community Services, the report includes a current inventory of unlandscaped street medians and presents a prioritized Ten-Year Construction and Maintenance Plan. Also included within the report is an inventory of existing streets which currently have median landscaping or streetscaping, together with the total maintenance costs (see Exhibit A). Future roadway construction projects, which are to include median landscaping, are also identified, as are certain "gateway" streets, which are defined further within the body of the report.

This report includes only street median landscaping and defers to a later report the still unresolved policies and issues regarding park strip or street landscaping and subdivision walls.

2. Definition of Street Median

For purposes of this report, the term "street median" refers to center-of-street medians at least ten feet wide. Due to the potentially unsafe conditions posed for maintenance and construction personnel, medians less than ten feet in width are not recommended for landscaping. In indicating the length of street medians referenced in this report, staff has included lengths of left turn pockets less than ten feet wide and/or lengths across intersections. This is because the costs associated with boring and jacking of irrigation and electrical lines across these lengths is approximately the same as for installing full landscaping improvements.

3. Cost Estimate Criteria

The estimated costs used in this report were prepared for three conditions, including (1) existing medians with raised curbs, filled with either concrete or asphalt; (2) existing medians with raised curbs, filled with soil; or (3) new gateway medians with construction of new planter curbs and the removal of the existing street pavement.

Estimated costs are based on a median of 14 feet average width and include an allowance of approximately 30% for construction administration, engineering, environmental processing, and construction contingencies.

4. Problem Statement

4.1 Existing Unlandscaped Medians

There are several roadway medians within the City which are either unfinished or are filled with asphalt, concrete, or soil. These medians lower the aesthetic quality of the neighboring communities and the City as a whole. Exhibit B provides an inventory of the existing unlandscaped street medians. This inventory was obtained through a combination of field reconnaissance and the use of recent aerial photographs. Excluded from this list are concrete left turn pockets that are not associated with other continuous median landscaping, existing medians less than ten feet in width, and other short isolated medians. Also excluded are the North Natomas streets in the vicinity of Arco Arena; it is recommended that street median landscaping in this area be funded through the proposed North Natomas Financing Plan.

Current inventories indicate that the City has approximately 31,550 lineal feet of existing unlandscaped street medians. The preliminary estimated cost to improve these medians is $2,965,000, using 1990 cost factors.

4.2 Gateway Streets

Appropriate median landscaping can enhance the visual appeal of neighborhoods and contribute to an aesthetically-pleasing environment. Many areas within the City do not have existing, raised medians, but offer an opportunity to create a landscaped "gateway" effect. Those streets which lead into a community area from a major transportation facility, but do not have existing unlandscaped medians, are candidates for gateway projects. Major transportation facilities can include freeway interchanges, major streets, or major arterials.

Staff is recommending that several miles of major streets within the City, which have existing two-way left turn lanes, be designed gateway streets and improved with median landscaping. Some potential gateway streets cannot include landscaped medians, as required left-turn storage pockets would leave an insufficient length to be landscaped.

It is not recommended that the entire length of a gateway street be landscaped. Rather, sufficient median landscaping should be constructed to provide an aesthetic and pleasing entrance into the community. Staff recommends that the construction of landscaped medians for gateway streets be limited to a length of approximately 1,000 feet. Exhibit C provides a listing of the proposed gateway streets, together with associated costs for the construction and maintenance of landscaped medians. At this time, approximately 14,400 lineal feet of medians at gateway locations have been identified. The cost for constructing these medians is estimated to be $1,905,000.

4.3 Median Landscaping for Future Roadway Projects

It is staff's recommendation that median landscaping be included as an integral component of future roadway projects with center medians. For those new streets which are to be constructed as part of the Capital Improvement Program, the Public Works Department is including median landscaping as part of the project in cases where center medians are to be constructed and "streetscaping" where there will be no center median.

For construction of new major streets, or existing major streets to be upgraded by developers, staff recommends requiring that the center median landscaping be installed at the time the street is constructed or upgraded. The developer would install the appropriate landscaping improvements and then may be reimbursed from the City's Major Street Fund (or other source, as agreed). This policy would apply only to construction of streets long enough to warrant landscaping (i.e. the developer may not be required to install landscaping if the length of street construction required is too short to maintain continuity and meet safety standards).

Exhibit D is a listing of the proposed major streets which will include median or street landscaping.

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4.4 Summary of Proposed Policies

In summary, staff recommends that the following policies for landscaped median construction be established.

- Existing unlandscaped street medians in developed areas within the City will be upgraded with landscaping according to a prioritized plan.

- Landscaped medians within important "gateway" streets or intersections within communities will be constructed according to a prioritized plan.

- Existing unlandscaped and gateway street medians will be prioritized such that the projects are distributed throughout the City in proportion to need and deficiency.

- New City street widening and construction projects shall include median landscaping or sidescaping as an integral part of the project.

- Median construction shall be included in the construction of new streets as a condition of development approval.

- As new medians are construction, the annual maintenance costs will be included in the Landscaping and Lighting District.

5.0 10-Year Prioritized Construction Plan -- (1991-92 Through 2001-02)

Exhibit F lists the various median landscaping projects in priority order. Priorities were established based on the following factors:

- Condition of the existing unlandscaped median.

- Location of the proposed project in relationship to existing landscaped medians and other proposed projects.

- Community-wide needs.

- Estimated project costs.

Projects to landscape an existing median are ranked highest in priority. Within this category, projects were prioritized based on the physical conditions of the existing medians. Those medians which are overgrown with weeds and littered with debris were given the highest priority for landscaping. Second in priority are existing medians filled with asphalt or concrete.

Projects were also ranked according to the location of the project in relation to existing landscaped medians. Projects in close proximity to existing landscaped medians, and those where construction will either fill in or extend the median landscaping, were given a higher priority.

Gateway projects are generally ranked below the improvements to the unlandscaped medians. Gateway projects were prioritized based upon the overall enhancement to the communities they will introduce. They are distributed geographically throughout the community to provi a balance of streetscape throughout the City.

Estimated cost was also a factor in establishing project priorities. Projects were prioritized based on the recommended funding levels for construction and maintenance expenditures. Funding alternatives and recommendations are discussed in the next section of the report.

6.0 Funding Alternatives and Recommendations

6.1 Alternatives

Several existing funding sources may be used to fund median landscape construction. Each of these sources is discussed briefly below. Legal restrictions on the expenditure of the funds, as well as existing obligations and unmet needs, are addressed.

Landscaping and Lighting District

In August 1989, the City Council established a Citywide Landscaping and Lighting District pursuant to the Landscaping and Lighting Act of 1972. The district was established to fund median maintenance and construction, as well as the energy and maintenance costs associated with street lighting. In addition, monies have been allocated to park maintenance and development and tree trimming. Total district expenditures for FY 1990-91 are budgeted at $3.42 million.

No median construction monies were budgeted for either FY 1989-90 or FY 1990-91. The district currently provides for approximately 50% of the costs of maintaining the City's median landscaping and streetscaping, with the balance paid from the General Fund.

Gas Tax

The State collects a tax on gasoline sold in California and distributes these funds to state and local governments. The apportionment to cities and counties of Gas Tax Funds (§2106, §2107 of the Streets and Highways Code) is based on vehicle registration, assessed valuation, and population. These funds are to be used for specified purposes related to public streets, highways, and public mass transit. The City's Gas Tax funds fall into two major categories -- construction and maintenance. These funds have traditionally been the mainstay of the City's transportation program.

SB 300 (Kopp), which was passed during the 1989 legislative session, provided for an increase in the Gas Tax, from nine cents ($0.09) per gallon to $0.14, effective August 1, 1990, with additional increases in future years. These fuel tax increases were contingent upon the successful passage of Proposition 111 on the June ballot. It is estimated that this fiscal year, as a result of the passage of Proposition 111, the City of Sacramento will receive approximately $981,000 in additional Gas Tax revenues. Proposition 111 monies contain a maintenance of effort clause stating that the funds may not be used to replace existing transportation program expenditures.

These additional tax dollars, while greatly needed, will have little impact in bridging the ga between available funding and the City's existing transportation needs. An inventory unmet needs developed by staff identified a funding shortfall of over $100 million in traffic signal, bikeway, undulation, street maintenance, street reconstruction, and curb, gutter, and sidewalk programs.

Major Street Construction Tax

The City currently collects a special tax from developers as part of the building permit process to be used to construct major street improvements within the City. Funds are restricted to construction, replacement, or alteration of roadways, traffic control, and lighting. Monies generated through the Major Street Construction Tax may not be used for maintenance. The tax is currently 0.8% of the building permit valuation, as it has been since 1984. The Major Street Construction Tax is considered a special tax under the provisions of Proposition 62 and may not be increased without a two-thirds vote of the electorate. Total projected Major Street Tax revenue is estimated at $3.3 million for FY 1990-91.

Transportation Sales Tax (Measure A)

In November 1988, Sacramento County voters approved Measure A, increasing the local sales tax by one-half cent per dollar. The purpose of this measure is to finance the construction of transportation projects specifically identified in the Annual Measure A Expenditure Plan. In FY 1990-91, the City will receive approximately $5.6 million for new street construction and an additional $4.4 million for street maintenance. Similar to Proposition 111 Gas Tax, Measure A contains a "maintenance of effort" clause stating that "funds generated...be used to supplement and not replace existing local revenues used for transportation purposes." This means that Measure A funds may not be used for maintenance of existing medians.

Measure A construction funds may be used for median landscape projects. However, the Sacramento Transportation Authority has indicated that the highest priority for expenditure of sales tax funds are those projects which improve transportation capacity or increase transit ridership.

The Transportation Sales Tax has provided approximately $10 million per year to the City during its first two years. The five-year Measure A expenditure plan identifies a funding shortfall of approximately $40 million in street construction and widening needs.

Special Assessment Districts

The City has the authority to form special assessment districts and to collect an annual assessment from properties within the districts. Typically these districts are formed to finance the costs of street, utility, light, and other local improvements that provide specific benefit to the district area. In accordance with State law, the assessments must be spread in direct proportion to the benefit derived from the improvements.

In general, special assessment districts are not used to finance median landscaping improvements. The majority of medians are located within major street thoroughfares; thus, the landscaping provides benefit to a much broader and diverse geographical area than the typical special assessment district. In some cases, it may not be possible to apply traditional benefit formulas in determining the assessments. In other cases, it may be impractical to assess all properties benefitting from the landscaping. In consideration of these factors, the City has established a practice of using regional funding for median landscaping.

Grants

The City receives certain grants for the purposes of park and landscape improvements. The most recent example is the per capita allotment from Proposition 70, which passed in 1989. The City is also eligible to apply for special purpose grants through the State and Federal governments. These grants are awarded on a competitive basis. The Environmental Enhancement and Mitigation Demonstration Program, funded as a result of passage of AB 471, offers grants for highway landscaping and urban forestry projects. Monies from this program may be used for planting trees to offset vehicular emissions and improve air quality.

General Fund

General Fund revenues may also be used to fund median landscape construction and maintenance. However, there are significant competing priorities for General Fund expenditures.

6.2 Funding Recommendations

Existing Unlandscaped Raised Medians and Gateway Projects

The most appropriate source of funds for median construction and maintenance is the Landscaping and Lighting District. While other sources, such as park grants, Measure A, and General Fund could be used, these sources are intended primarily for other purposes. Further, these other possible funding sources face greater competing demands. Given the health/safety and transportation capacity nature of improvements planned for funding from Measure A, Gas Tax, and Major Street funds, the Landscaping and Lighting District is the preferred source of funding for median landscape construction. However, in order to comple the ten-year program outlined in Exhibit F, an annual allocation of $500,000 is needed. Thi would require an average increase of 14% in landscaping and lighting assessments for FY 1991-92. Rather than place the entire funding burden on the Landscaping and Lighting District, staff is recommending a funding goal of $250,000 per year from the district. The remaining $250,000 would be allocated from new Proposition 111 Gas Tax revenues for each year of the ten-year program. This would reduce the average additional landscape and lighting assessment needed to fund the program to 7%. For a single-family homeowner paying a FY 1990-91 annual assessment of $25.27, this would translate into an additional $1.85 per year. This impact could be reduced by absorbing all or a portion of the $250,000 from current rates by reducing other discretionary programs.

Median Landscaping for Future Roadway Projects

It is the policy of the City of Sacramento to include median landscaping as a part of any major street construction project. The funding source for the landscaping portion of the project would be the same as for the project as a whole. (Measure A, Gas Tax, Major Street Construction Tax, or other state or federal funding sources.) No changes to this policy are recommended.

Median Landscape Maintenance

As new median landscaping is completed, the workload for median maintenance increases. The burden of the additional resources needed to maintain new medians has typically fallen to the General Fund. The Landscaping and Lighting District provided $222,600 for landscape maintenance within the street right-of-way in 1989-90; approximately $165,840 of this amount is allocated to street median maintenance. This dollar amount remained fixed in 1990-91 and provides roughly 50% of the City's total median landscaping and streetscaping maintenance expenditures. Staff recommends that the maintenance costs of newly landscaped medians be borne by the Landscaping and Lighting District.

On an average, median landscaping maintenance costs are estimated at $1.50 per lineal foot per year. At the culmination of the ten-year program, annual maintenance costs will have increased a total of $128,000. Construction of the projects proposed in each year of the proposed ten-year program will increase annual maintenance costs by $8,100. To fund the maintenance costs, landscaping and lighting assessments would need to be increased by an additional 0.2%, roughly $.06 per single-family parcel per year.

Proposed Expenditures in 1990-91

As the landscaping and lighting assessments for the current fiscal year have already been established, staff does not recommend funding construction of median landscaping projects from this source until FY 1991-92. However, in order to proceed with the program this fiscal year, staff recommends allocating $250,000 from the new Proposition 111 Gas Tax monies to fund landscaping of the Franklin Boulevard median project ($200,000) and design of those projects slated for construction in FY 1991-92 ($50,000).

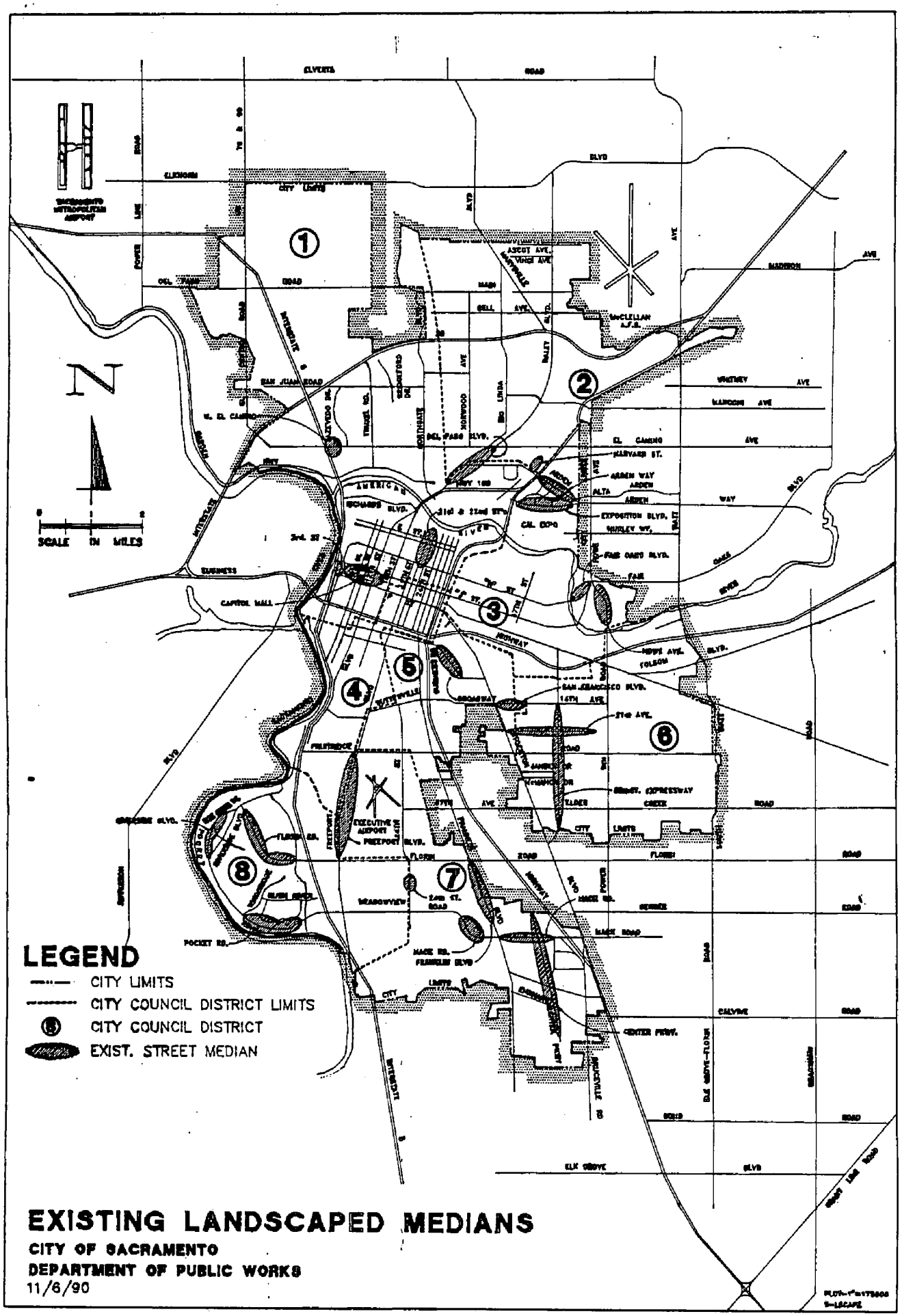
7.0 Recommendations

It is recommended that the City Council:

- Adopt the median landscaping policies enumerated in Section 4.4 of this report.
- Approve the Street Median Landscaping Ten-Year Prioritized Construction Plan for the upgrade and new construction of street medians and establish a funding goal $500,000 per year for landscaping of medians within already developed areas.
- Approve the Landscaping and Lighting District and Proposition 111 Gas Tax revenues as the preferred funding sources for median landscape construction, and identify the Landscaping and Lighting District as the source for maintenance.
- Designate $250,000 of the new Proposition 111 Gas Tax monies the City will receive in FY 1990-91 to fund the Franklin Boulevard median project and design of the median landscaping projects proposed for construction during FY 1991-92.

EXHIBIT A- STREETS WITH EXISTING LANDSCAPED MEDIANS

ITEM	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	MAINT. COST
1	21st Ave.	Perry Ave. to 79th St.	5	100	11616	$28,200
2	21st St.	B St. to H St.	1	100	2218	$3,000
3	22nd St.	B St. to H St.	1	100	2218	$3,000
4	24th St. Bypass	66th Ave. to 24th St.	11	40	581	$1,800
5	3rd St.	J. St. to Capital Ave.	1	80	1162	$1,200
6	65th St. Expressway	Stockton Blvd. to 14th Ave.	4,5	100	9610	$7,200
7	Arden Way	Bus. 80 to Exposition Blvd.	8	120	3115	$4,800
8	Center Parkway	City Line to Calvine Rd.	4	100	10507	$9,600
9	Del Paso Blvd.	Globe Ave. to El Camino Ave.	8	100	5280	$4,800
10	Exposition Blvd.	I-80 to Arden Way	8	160	8923	$19,000
11	Florin Rd.	Riverside Blvd.to I-5	3	110	7867	$7,200
12	Freeport Blvd.	Sutterville Rd. to Florin Rd.	2,3,11	80	8026	$6,000
13	Harvard St.	Harvard St. & Arden Way	8	80	422	$1,020
14	Howe Ave.	Fair Oaks Blvd. to College Town Dr.	7	110	7022	$13,200
15	Mack Rd.	Brookfield Dr. to Hwy. 99	4	119	13939	$8,400
16	Riverside Blvd.	Park Riviera Way to Pocket Rd.	3	80	4805	$4,800
17	San Francisco Blvd.	Stockton Blvd. to 55th Street	5	100	3221	$7,200
18	West El Camino Blvd.	I-5 to Azevedo Ave.	9	100	1848	$2,400
19	Broadway	Alhambra Blvd. to Martin Luther King Blvd.	5	100	3800	$14,400
20	Franklin Blvd.	Florin Rd. to Elder Creek	4	100	5000	$3,120
21	Pocket Rd.	Greenhaven Dr. to West Shore Dr.	3	110	6000	$14,000
22	Fair Oaks Blvd.	Cadillac Dr. to Howe Ave.	6	110	1200	$1,500
23	Heritage Lane	Exposition Blvd. to Arden Way	8	100	2400	$2,600
					118379	$165,840



EXISTING LANDSCAPED MEDIANS

CITY OF SACRAMENTO
DEPARTMENT OF PUBLIC WORKS
11/6/90

EXHIBIT B -INVENTORY OF UNLANDSCAPED ROADWAY MEDIANS

ITEM	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST	EXIST. MEDIAN
1	West El Camino Ave.	Azevedo Ave. to Truxel Rd.	9	122	2950	$250,000	$5,000	soil, conc.
2	Florin Rd.	Tamoshanter Way to I-5	11	152	8000	$800,000	$12,000	asphalt
3	Pocket Rd.	I-5 to Freeport Blvd.	3	80	1500	$150,000	$2,500	asphalt
4	Valley Hi Dr.	Wyndham Dr. to Mack Road	4	100	2100	$210,000	$3,000	asphalt
5	Bruceville Rd.	Valley Hi Dr. to Alta Valley Dr.	4	100	1300	$130,000	$2,000	conc.
6	Alta Valley Way	Mack Rd. to Bruceville Rd	4	100	1100	$110,000	$1,700	conc.
7	Pocket Rd.	I-5 to Greenhaven Rd.	3	80	600	$45,000	$1,000	soil
8	Center Parkway	Calvine Rd. to 1000' W of Bruceville Rd.	4	100	400	$300,000	$5,600	soil
9	Riverside Blvd.	Park Riviera Way to Florin Rd.	3	90	1100	$110,000	$1,700	conc.
10	Greenhaven Dr.	Rush River Dr. to Pocket Rd.	3	80	1200	$90,000	$1,800	soil & trees
11	65th St. Expressway	Folsom Blvd. to 4th Ave.	5	90	1900	$190,000	$3,000	asphalt & conc.
12	Marysville Blvd.	South Ave. to Arcade Blvd.	8	70	2400	$240,000	$3,600	asphalt
13	Main Ave.	Austin St. to Norwood Ave.	8	120	1400	$140,000	$2,100	conc.
14	J Street	H St. Br. to Sacto. St. Univ.	6	100	1000	$100,000	$1,500	asphalt
15	Main Ave.	Main Ave at Kelton Way	8	120	1000	$100,000	$1,500	soil
				Totals	27550	$2,965,000	$48,000	

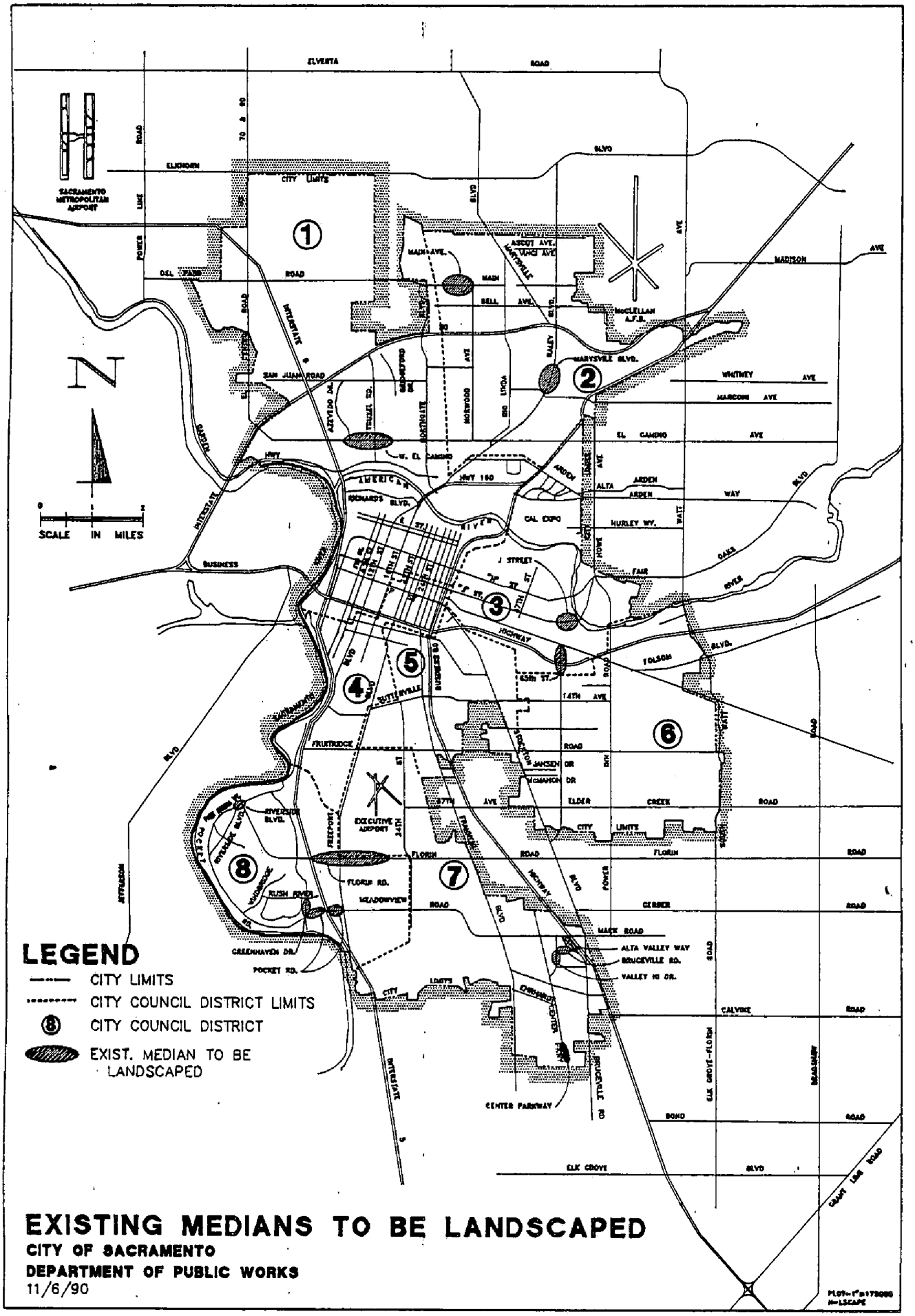
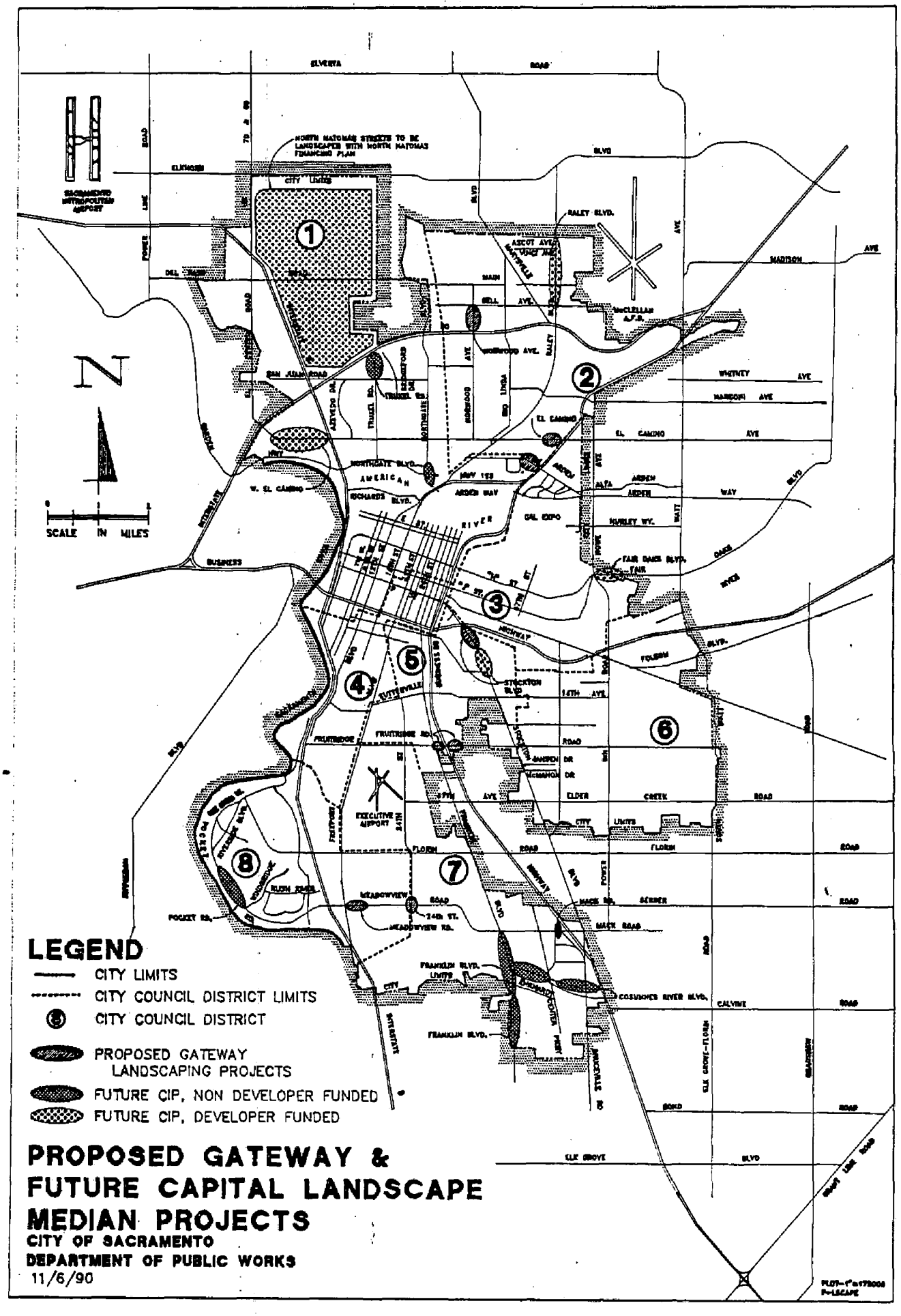

N
SCALE IN MILES
SACRAMENTO METROPOLITAN AIRPORT
LEGEND
CITY LIMITS
CITY COUNCIL DISTRICT LIMITS
CITY COUNCIL DISTRICT
EXIST. MEDIAN TO BE LANDSCAPED
EXISTING MEDIANS TO BE LANDSCAPED
CITY OF SACRAMENTO
DEPARTMENT OF PUBLIC WORKS
11/6/90

EXHIBIT C - POTENTIAL GATEWAY STREETS

STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST
Arden Way	SR51 to Harvard St.	8	100	700	$95,000	$1,200
El Camino Ave.	SR51 to Van Ness St.	7,8	74	1200	$162,000	$1,800
Fruitridge Rd.	Fruitridge Rd. & Martin Luther King	5	100	1800	$243,000	$2,700
Fruitridge Rd.	HWY 99 to Franklin Blvd.	2	100	1000	$135,000	$1,500
Marysville Blvd.	I-80 to Grand Ave.	8	70	1800	$243,000	$2,700
Meadowview Rd.	Freeport Blvd. to Amherst St.	11	80	1100	$150,000	$1,650
Norwood	I-80 to Bell Ave.	8	80	1800	$243,000	$2,700
Stockton Blvd.	I-50 to V St.	5	80	1400	$190,000	$2,100
Mack Rd.	HWY 99 to La Mancha Way	4	119	1200	$120,000	$1,800
Power Inn Rd.	Power Inn Rd. & Fruitridge Rd. Intx.	7	100	1200	$162,000	$1,800
Meadowview Rd.	Meadowview Rd. & 24th St. Intx.	4	80	1200	$162,000	$1,800
		Totals		14400	$1,905,000	$21,750

EXHIBIT D - CAPITAL IMPROVEMENT PROGRAM PROJECTS TO INCLUDE MEDIAN LANDSCAPING

RANK	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST
NON DEVELOPER FUNDED PROJECTS							
1	Cosumnes River Blvd.	Franklin Blvd. To Center Parkway	4	120	5500	$450,000	$8,000
2	Franklin Blvd.	Union House Creek to S. City Lmts	4	110	7800	$250,000	$12,000
6	Franklin Blvd.	Mack Rd. to Union House Creek	4	110	3800	$400,000	$5,700
7	Pocket Rd. A.D.	Garcia Bend Park to Alstan Ave.	3	80	5800	$450,000	$9,000
			NON DEVELOPER TOTALS:		22900	$1,550,000	$34,700
DEVELOPER FUNDED PROJECTS							
3	Raley Blvd.	Bell Ave. to Ascot Ave.	8	110	7800	$975,000	$12,000
4	Truxel Rd.	I-80 to San Juan Rd.	9	110	1800	$150,000	$2,500
5	West El Camino Ave.	I-80 to I-5	9	122	5000	$375,000	$7,500
9	Stockton Blvd.	Second Ave to V St.	5	100	2800	$375,000	$4,500
			DEVELOPER FUNDED TOTALS:		17400	$1,875,000	$26,500
			CAPITAL IMPROVEMENT PROGRAM TOTALS:		40300	$3,425,000	$61,200



PROPOSED GATEWAY & FUTURE CAPITAL LANDSCAPE MEDIAN PROJECTS

CITY OF SACRAMENTO

DEPARTMENT OF PUBLIC WORKS

11/6/90

EXHIBIT E - TEN YEAR PRIORITIZED CONSTRUCTION PLAN
FOR LANDSCAPING STREET MEDIANS

FY YEAR	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST	TYPE PROJECT
91-92	Project Design					$50,000		
				Total for 1990-91		$50,000	$0	
91-92	West El Camino Ave.	Azevedo Ave. to Truxel Rd.	9	122	2950	$250,000	$5,000	Retrofit
91-92	J Street	H St. Br. to Sacto. St. Col.	6	100	1000	$100,000	$1,500	Retrofit
91-92	Pocket Rd.	I-5 to Freeport Blvd.	3	80	1500	$150,000	$2,500	Retrofit
				Total for 1991-92		$500,000	$9,000	
92-93	Alta Valley Way	Mack Rd. to Bruceville Rd	4	100	1100	$110,000	$1,700	Retrofit
92-93	Bruceville Rd.	Valley Hi Dr. to Alta Valley Dr.	4	100	1300	$130,000	$2,000	Retrofit
92-93	Valley Hi Dr.	Wyndham Dr. to Mack Rd.	4	100	2100	$210,000	$3,000	Retrofit
92-93	Pocket Rd.	I-5 to Greenhaven Rd.	3	80	600	$45,000	$1,000	Retrofit
				Total for 1992-93		$495,000	$7,700	
93-94	65th St. Expressway	Folsom Blvd. to 4th Ave.	5	90	1900	$190,000	$3,000	Retrofit
93-94	Marysville Blvd.	South Ave. to Arcade Blvd.	8	70	2400	$240,000	$3,600	Retrofit
93-94	Greenhaven Dr.	Rush River Dr. to Pocket Rd.	3	80	1200	$90,000	$1,800	Retrofit
				Total for 1993-94		$520,000	$8,400	
94-95	Florin Rd., Phase I	Tamoshanter Way to I-5	11	152	2000	$200,000	$3,000	Retrofit
94-95	Center Parkway	Calvine Rd. to 1000' W of Bruceville Rd.	4	100	4000	$300,000	$5,600	Retrofit
				Total for 1994-95		$500,000	$8,600	

EXHIBIT E - TEN YEAR PRIORITIZED CONSTRUCTION PLAN
FOR LANDSCAPING STREET MEDIANS

FY YEAR	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST	TYPE PROJECT
95-96	Florin Rd., Phase 2	Tamoshanter Way to I-5	11	152	2000	$200,000	$3,100	Retrofit
95-96	Main Ave.	Austin St. to Norwood Ave.	8	120	1400	$140,000	$2,000	Retrofit
95-96	Stockton Blvd.	I-50 to V St.	5	80	1400	$190,000	$2,100	Gateway
				Total for 1995-96		$530,000	$7,200	
96-97	Florin Rd., Phase 3	Tamoshanter Way to I-5	11	152	2000	$200,000	$3,000	Retrofit
96-97	Main Ave.	Main Ave at Kelton Way	8	120	1000	$100,000	$1,500	Retrofit
96-97	Riverside Blvd.	Park Riviera Way to Florin Rd.	3	90	1100	$110,000	$1,700	Retrofit
96-97	Arden Way	SR51 to Harvard St.	8	100	700	$95,000	$1,200	Gateway
				Total for 1996-97		$505,000	$7,400	
96-97	Florin Rd., Phase 4	Tamoshanter Way to I-5	11	152	2000	$200,000	$3,000	Retrofit
97-98	Meadowview Rd.	Freeport Blvd. to Amherst St.	11	80	1100	$150,000	$1,650	Gateway
97-98	Norwood Ave.	I-80 to Bell Ave.	8	80	1800	$243,000	$2,700	Gateway
				Total for 1997-98		$593,000	$7,350	
98-99	Power Inn Rd.	Power Inne Rd. & Fruitridge Rd. Intx.	4	100	1200	$162,000	$1,800	Gateway
98-99	Mack Rd.	HWY 99 to La Mancha Way	4	119	1200	$120,000	$1,800	Gateway
98-99	Fruitridge Rd.	Fruitridge Rd. & Martin Luther King Intx.	5	100	1800	$243,000	$2,700	Gateway
				Total for 1998-99		$525,000	$6,300	
99-00	El Camino Ave.	SR51 to Van Ness St.	7		1200	$162,000	$1,800	Gateway
99-00	Meadowview Blvd.	Meadowview Rd. & 24th St. Intx.	11	80	1200	$162,000	$1,800	Gateway
99-00	Fruitridge Rd.	HWY 99 to Franklin Blvd.	2		1000	$135,000	$1,500	Gateway

EXHIBIT E- TEN YEAR PRIORITIZED CONSTRUCTION PLAN
FOR LANDSCAPING STREET MEDIANS

FY YEAR	STREET	LIMITS	PLAN. DIST.	R.O.W.	LIN. FT.	LANDSCAPE DEV. COST	ANNUAL MAINT. COST	TYPE PROJECT
99-00	Marysville Blvd.	I-80 to Grand Ave.	8		1800	$243,000	$2,700	Gateway
				Total for 1999-00		$702,000	$7,800	
				Total for all projects		$4,920,000	$69,750	

EXHIBIT F

MEDIAN STRIP MASTER PLAN

Introduction

Sacramento's street system is a network of circulation routes that delineate land uses and establish continuity throughout the urban area. Streets contribute to the overall visual attributes of any city, and when maintained for maximum effect, play a significant role in providing a positive image for residents and visitors alike. A passerby could easily form a positive or negative image of any community based entirely on a single trip down a street. The quality of street maintenance and cleanliness influences one's initial impression of the hardscape. Landscaping, however, is the most significant factor that increases the aesthetic quality and visual appeal of the street environment. Adjacent properties as well benefit from landscaping because their values increase. Plant materials, by nature of their color, texture and form, produce visual ntrasts and "cooling effects" in an otherwise barren street environment. ndscaping produces an association with nature, forming a picturesque concept of a pleasing and liveable space.

The purpose of this master plan is to specify criteria for public landscaping throughout Sacramento's arterial street right-of-way including median strips, park strips and subdivision walls. This plan will establish continuity of quality public landscaping through standardized development, ensuring the continuance of livable street environments in Sacramento.

Median Strips

The City of Sacramento is responsible for designing, constructing and maintaining median strips. Typically, median strips are found on divided major streets (Exhibit A). Staff recently compiled a survey of the various types of landscaped median strips found in Sacramento. Although many design variations currently exist, three basic design styles are predominant: (1) turf and trees; (2) groundcover and trees; and (3) concrete paving with large cut-outs for groundcover and trees. Typical examples of each style are Howe Avenue, Center Parkway, and 65th Street Expressway respectively. Turf and trees, however, has dominated both previous median development and medians currently in the design phase. In the past the choice of design style was based primarily on aesthetic preference, considering maintenance requirements. Exhibit B provides a list of medians that are currently being designed and those that were developed in the last five years.

Landscape Designs of Median Strips

Exhibit C illustrates the various types of landscape designs of median strips. Type A, shrub screens, is typically found along frontage roads parallel to divided major streets. Shrub screens consist of shrubbery at least 36" high which create a buffer zone that helps reduce headlight glare. Shrubs with a growth height greater than 24" should not be planted on center divider median strips because of sight clearance requirements. Types B, C, and D feature landscaping in large cut-outs, reducing the amount of landscaping but retaining a larger ratio of plants to paving. Types D, E and F, feature tree wells surrounded by paving, further reducing the landscaped area and represents the smallest amount of landscaping on medians. Type B and D medians are constructed with concrete paving. Type C and F medians are constructed using bomanite, a process which consists of a colored concrete being stamped, producing a patterned effect. Other appropriate patterned surfaces such as brick or exposed aggregate are acceptable substitutes. Type D and G medians are constructed with interlocking pavers. Type H, turf and trees and Type J, groundcover and trees are typically the most common median designs . Type I and K medians feature the same sort of landscaping as Types H and J, adding an 18" concrete edge to both sides of the median. This edge increases the safety of workers on the median.

Analysis of Development and Maintenance Costs

Exhibit D is a numerical analysis of the various costs related to the different types of median strips. Staff anticipates the average life expectancy of medians to be 50 years, barring changes in the road system; it is indicated by the shading on this exhibit. These costs were calculated per linear foot over this 50-year span. There are three costs associated with median strips: development, street maintenance and landscape maintenance. First, development or construction costs were calculated using the current rates available from general contractors. Second, street maintenance costs were based on a study done by the Public Works Department which examined the impact of irrigation infiltration and runoff and subsequent deterioration of the street paving. The findings indicate a significant increase in pavement deterioration of medians constructed with extruded curbs, curbs placed on top of the pavement in comparison to curbs poured in place. Extruded curbs allow irrigation water to seep under-neath them, thus damaging the pavement. The estimated cost of repairing the damage varies from $.02 to $.35 per linear foot per year for Type D, concrete with tree wells, and Type F, turf and trees, respectively. These estimated values are averages and will vary with each specific site. Medians, therefore, should be constructed with curbs and gutters including gutter drains to avoid irrigation infiltration and runoff. Third, landscape maintenance costs were based on averaging the bid prices for medians currently being maintained under contract with a 5% annual inflation factor added in for each year. The sum of the street and landscape maintenance costs represent the total annual maintenance cost for each type of median. The total cost includes all three cost factors.

Exhibit E illustrates in graphic form a comparison of the total development and annual maintenance costs over a period of 50 years. The intersection of any two lines on this graph indicates the point in time when the costs for certain medians reach an equal value. An analysis of Exhibit E follows:

1. Type A medians, shrub screens, cost the least to develop and maintain.

2. Initially, medians with groundcover and trees (Type J) cost slightly more when compared to turf and trees (Type H) because of higher maintenance required to establish the groundcover. Gradually, the costs equalize at the three-year mark (see Example 1 on Exhibit E). From that point in time, groundcover and trees become less expensive to maintain compared to turf and trees. At 20 years, there is a $4.21 per linear foot annual savings.

3. Concrete paved medians with landscaped cut-outs (Type B) cost $10.00 per linear foot more to develop than turf and trees (Type H) but cost 30% less annually to maintain. After 20 years, the costs equalize, demonstrated by the intersecting lines (see Example 2 on Exhibit E). Subsequently, the Type B median is less expensive to maintain; at the 30-, 40-, and 50-year marks, there are annual savings per linear foot of $5.08, $10.11 and $15.16 respectively.

4. Type I and K medians are both constructed with an 18" concrete curb on both sides of the median. It is felt that this added width provides a safer environment for workers. For both medians, this concrete edge increases the development costs but reduces the annual maintenance costs. In comparing median Types H and I, the costs equalize at the forty-two year mark (see Example 3 on Exhibit E). Presently, most medians without this buffer are being chemically edged, while those medians having this buffer are being mechanically edged. Mechanical edging next to a regular curb requires the closure of one lane of traffic adjacent the median at each edging. Mechanically edged turf is more attractive, so the concrete edges are desirable in highly visible areas.

5. Type C and F medians are both constructed using bomanite. Bomanite is a process which offers a wide range of color, pattern, and texture to a concrete surface. This process offers great versatility in design styles. Bomanite costs approximately $2.00 per linear foot more to install than plain concrete, however landscape and street maintenance costs are identical to the concrete designs, Types B and E. Other appropriate patterned surfaces such as brick or exposed aggregate are acceptable substitutes in lieu of bomanite.

6. Type D and G medians are both constructed with interlocking pavers, a type of brick paving. They are highly attractive and have a far greater visual appeal compared to concrete. By nature of their porous qualities and non-mortared installation, pavers allow the exchange of air and water from the subsurface soils through the pavers. This flexibility is desirable in certain locations due to an abundance of expansive clay soils in Sacramento. Pavers are expensive and appreciably raise the development costs of the medians. Maintenance costs are less on Type G because of the reduced area of landscaping as compared to Type D. Due to high cost of construction, Type D and G medians are the most costly.

Exhibit F illustrates the relationship of the annual maintenance costs only. This relationship is important because maintenance costs continue throughout the median's life span and thus represent future expenditures. Turf medians, Types H and I, are labor intensive and subsequently cost the most to maintain because of frequent mowing, edging and weeding. Groundcover medians, Types J and K, are the next most costly to maintain due to periodic weeding and edging. Medians with large cut-outs, Types B, C and D fall in the middle range of maintenance requriements and costs. Shrub screens, Type A, are the fourth least expensive median to maintain due to infrequent maintenance requirements. Medians with tree wells, Types E, F, and G have the smallest amount of landscaping and therefore are the least expensive to maintain. Medians constructed with interlocking pavers, Types D and G, cost slightly more to maintain than concrete or bomanite surfaces because the pavers are not mortared together resulting in increased weed abatement procedures.

Water Issues

Water, a necessary and valuable resource, has created controversies for centuries and continues to be a major issue in our society. Historically, water rights have played an important role in the evolution of our society. Initially, the frontier settlers adopted riparian rights which meant that those along a stream had the right to the water. This concept had historical precedent in English common law. The discovery and subsequent mining of gold dramatically changed water rights because it became necessary to divert water to nonriparian locations. The doctrine of prior appropriation was established which determined water rights as "first in time, first in right" and became part of mining claims. In 1851 one of the first actions the California State Legislature took was to sanction the local customs of water and mineral rights. It became necessary, however, for courts to render decisions on complicated water disputes. These decisions eventually led to constitutional and statutory laws dealing with water issues which formed the basis for public land use policies. As demands increase and water supplies diminish due to water rights' challenges, the cost of water increases and its availability decreases. Experts predict widespread water shortages by the year 2000. The quality, supply and cost of water is rising to the top of the list of concerns in landscaping.

Plant water requirements are met from two sources -- seasonal rainfall and supplemental irrigation. Research has shown that seasonal rainfall effectively meets about 25% of a plant's needs. Large amounts of precipitation occur when the plant's needs are low and losses occur from (1) excess runoff; (2) leaf surface evaporation; and (3) rainfall occurring after the soil has reached field capacity resulting in deep percolation losses. Supplemental irrigation is estimated to be 75% effective, this figure reflects losses from runoff, deep percolation, wind drift and overspray. The primary objective of an irrigation system is to provide the right amount of water whenever plant stress is about to occur and to supply just enough water at that time to replenish the amount of water used since the last irrigation. This objective is met through adequate design and proper application schedules. Irrigation designs should provide adequate coverage for healthy plant growth with a minimum of waste or overspray. There is unmeasurable negative impact from excess water running across a street. Moreover, this adds to street deterioration and subsequent maintenance costs.

urf, by nature of its shallow roots, requires frequent irrigation throughout ts growing cycle. Trees, shrubs, and to some extent groundcovers have deeper root systems which give them greater access to soil moisture. This quality allows these plants to endure much higher levels of moisture stress compared to turf. Turf irrigation systems are typically spray heads which, by nature of their application, result in a 40-60% loss of applied water in runoff, overspray and surface evaporation. Trees in turf areas often develop surface roots in response to frequent surface waterings and fertilizer applications. Surface watering lessens the drought tolerance of the trees because of their dependence on surface water. Overdevelopment of surface roots greatly increases the probability of wind damage to the trees, particularly in wet soil conditions. Surface rooting of trees on medians also causes significant street damage requiring costly street repairs.

Presently, Sacramento's water supply is non-metered. Although the cost of water can be a significant factor in landscaping, the issue is not addressed in this master plan. In light of unknown future water supplies and potential costs, it is desirable to reduce turf areas on medians, substituting landscapes that are low in water use. This not only conserves water but also reduces long-term maintenance costs. Selected plant materials must be compatible; i.e., drought tolerant. Drought tolerant plants are defined as ones which have:

(1) a deep and well developed root zone
(2) a waxy leaf surface
(3) leaf hairs present to reduce air flow
(4) light coloring to reflect light
(5) leaves that fold up or drop under stress conditions.

Many native and ornamental plants are drought tolerant or adaptable to arid conditions. Exhibit G is a representative list of various drought tolerant plant materials suitable to the Sacramento area. This list was compiled by the Southgate Recreation and Park District. Applicable plant species should be selected on the basis of this quality as well as their color, form, texture, mature height and other distinguishing characteristcs. Plant species not listed on Exhibit G may be specified. All selections are subject to the approval of the City Landscape Architect.

Park Strips

Park strips or maintenance strips are areas between curbs and sidewalks. Section 45.5 of the Sacramento City Code requires the adjacent property owner to maintain park strips. Park strips are subject to extensive pedestrian traffic. In the Central Business District park strips should be attractive, aesthetically pleasing and require minimum maintenance. In downtown areas with new landscaping interlocking pavers and cut-outs for trees with grates are recommended. The surface of the pavers must be treated with an impermeable glaze to prevent staining. In downtown areas with existing mature street trees, alternate and appropriate plantings are recommended to preserve the trees. In residential areas, turf is the most appropriate selection because of its ability to withstand foot traffic and its low initial installation cost.

Subdivision Walls

Subdivision walls or sound walls are private properties located between sidewalks and fencing on arterial streets. The City of Sacramento 1974 General Plan permitted the design of subdivisions with these walls. The walls range from wooden fences with no landscaping to masonry fences with complete landscaping. In some cases, the landscaping is privately maintained by subdivision association fees. An overwhelming majority of these areas are not maintained. In 1983, staff conducted an inventory of existing walls, identifying locations, types, and current conditions. The cost of developing these areas was estimated to be about $2 million while the annual maintenance cost was assessed at $65,000. In early 1984, a program was prepared for maintenance and weed abatement of these areas and also for paved (unplanted) medians as well. Additional staff and equipment was appropriated to the Parks Division. Currently, a two-person crew maintains these areas year-round.

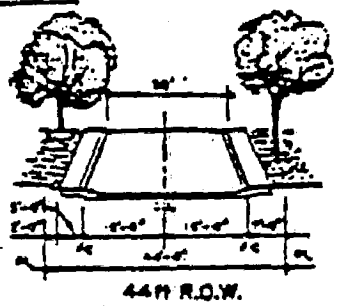
The existing spaces between sidewalks and the walls vary in width from zero to 55 feet. For purposes of this master plan areas with a space less than two feet wide should be paved. Only weed abatement and litter removal would be necessary. Larger spaces should be minimally landscaped with cut-outs for tree wells. It is possible to obtain funds for developing and maintaining these areas through the Landscaping and Lighting Act of 1972. This legislation permits government agencies to create assessment districts and levy a tax. This type of funding would decrease the city's general fund obligations. Staff will investigate the possible use of this act and subsequent implementation in a separate financing plan to be developed, pending City Council approval of this Master Plan.

EXHIBIT A

STREET SYSTEM STANDARDS

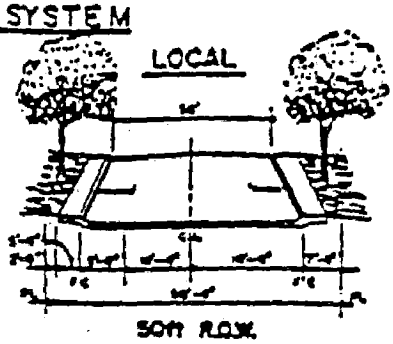
LOCAL STREET SYSTEM

MINOR LOCAL



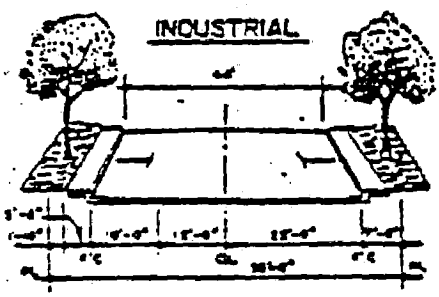
44ft R.O.W.

LOCAL



50ft R.O.W.

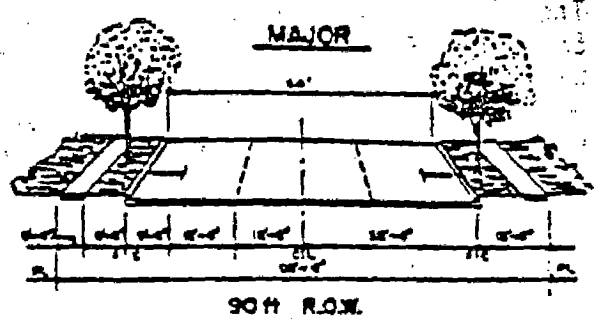
INDUSTRIAL



58ft R.O.W.

MAJOR STREET SYSTEM

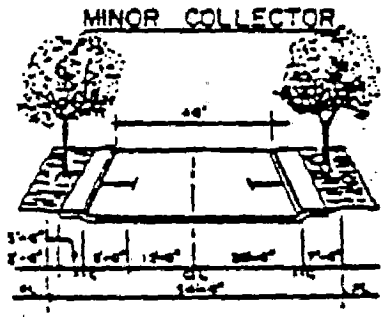
MAJOR



90ft R.O.W.

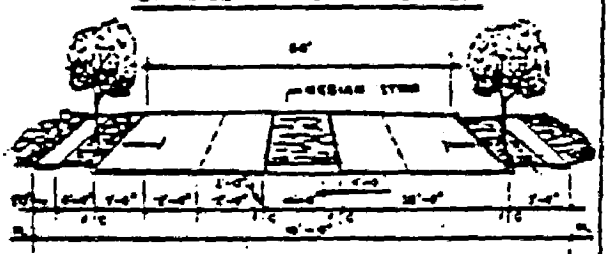
COLLECTOR STREET SYSTEM

MINOR COLLECTOR



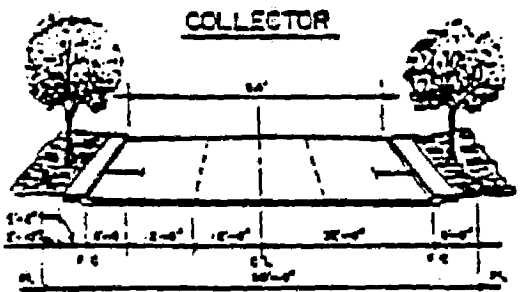
54ft R.O.W

DIVIDED MAJOR (4 LANE)



110ft R.O.W.

COLLECTOR



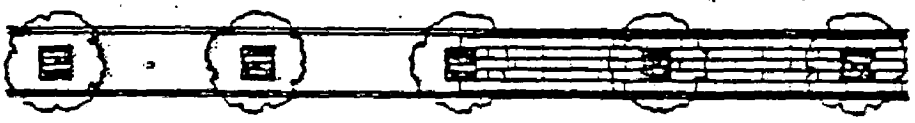
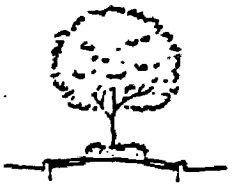
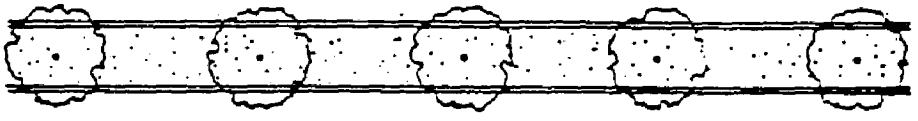
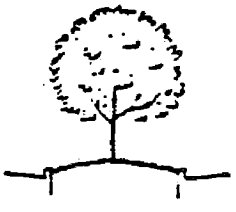
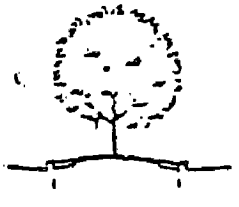
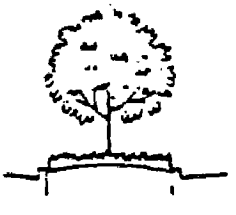
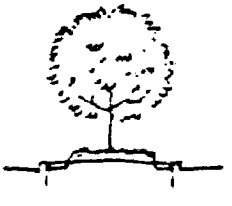
80ft R.O.W.

MEDIAN DEVELOPMENT

Medians Currently in Design Phase	Type Landscaping
- Mack Road (Brookfield to Valley Hi)	Turf/Trees
- Arden Way (Point West to Ethan)	Undecided
- Greenhaven Drive (Vicinity of Secret River)	Turf/Trees
- Florin Road (East of S. Land Park Drive)	Shrub Screen

Medians Developed In the Last Five Years	Type Landscaping	Year
- "R" St. Cutouts (3rd to 10th St.)	Groundcover/Trees	1982
- Florin Road (I-5 West to Gloria)	Groundcover/Trees	1983
- Harvard St. (Arden Way to Silica Ave.)	Groundcover/Trees	1983
- 21st Ave. Extension (West of Stockton Blvd.)	Turf/Trees	1983
- Riverside Blvd. (Florin Rd to Pocket Rd.)	Turf/Trees	1984
- W. El Camino Ave. (I-5 East to Azevedo)	Turf/Trees	1985

MEDIAN STRIP DIAGRAMS

TYPE	PLAN VIEW 1" 40'	SECTION 1" 20'
A		
	A - SHRUB SCREEN	
B,C,D		
	B - CONCRETE W/ CUT-OUTS C - BOMANITE W/ CUT-OUTS D - PAVERS W/ CUT-OUTS	
E,F,G		
	E - CONCRETE W/ TREE WELLS F - BOMANITE W/ TREE WELLS G - PAVERS W/ TREE WELLS	
H		
	H - LAWN & TREES	
I		
	I - LAWN &TREES W/ CONC. EDGE	
J		
	J - GROUNDCOVER &TREES	
K		
	K - GROUNDCOVER &TREES W/ CONC. EDGE	

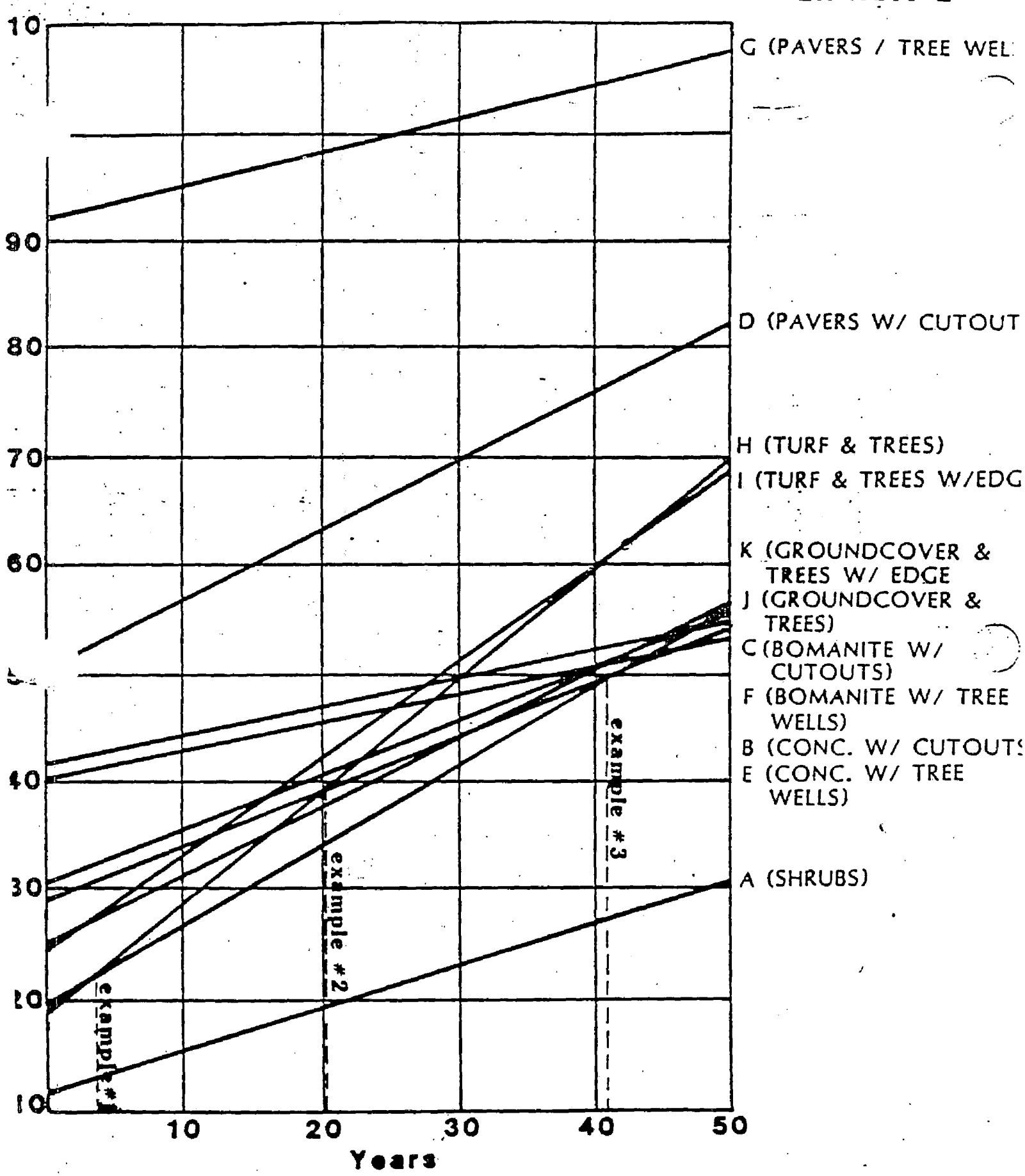
COST ANALYSIS

Type	Description	Const. Cost L.F.	Landscape Maint. Cost L.F./Yr.	Street Maint. Cost L.F./Yr.	Total Maint. Cost L.F./Yr.	Total Cost L.F./1Yr.	Total Cost L.F./10Yr.	Total Cost L.F./20Yr.	Total Cost L.F./30Yr.	Total Cost L.F./40Yr.	Total Cost L.F./50Yr.
A	Shrub Screen	$12.00	$0.26	$0.09	$0.35	$12.35	$15.66	$19.33	$ 22.99	$ 26.66	$ 30.34
B	Concrete with Cut-Outs	$28.00	$0.40	$0.11	$0.51	$28.51	$33.33	$38.68	$ 44.01	$ 49.37	$ 54.72
C	Bomanite with Cut-Outs	$30.00	$0.40	$0.11	$0.51	$30.51	$35.33	$40.68	$ 46.01	$ 51.37	$ 56.72
D	Pavers with Cut-Outs	$50.00	$0.43	$0.11	$0.54	$50.54	$55.64	$61.31	$ 66.96	$ 72.63	$ 78.30
E	Concrete with Tree Wells	$40.00	$0.24	$0.02	$0.26	$40.26	$42.72	$45.45	$ 48.16	$ 50.89	$ 53.62
F	Bomanite with Tree Wells	$42.00	$0.24	$0.02	$0.26	$42.26	$44.72	$47.45	$ 50.16	$ 52.89	$ 55.62
G	Pavers with Tree Wells	$92.00	$0.27	$0.02	$0.29	$92.29	$95.03	$98.08	$101.11	$104.15	$107.20
H	Turf and Trees	$18.00	$0.64	$0.35	$0.99	$18.99	$28.35	$38.74	$ 49.09	$ 59.48	$ 69.88
I	Turf and Trees with Conc. Edge	$24.00	$0.60	$0.25	$0.85	$24.85	$32.88	$41.81	$ 50.69	$ 59.61	$ 68.54
J	Groundcover and Trees (new)	$19.00	$0.66	$0.26	$0.92	$19.92	$27.07	$34.53	$ 41.98	$ 49.44	$ 56.89
K	Groundcover and Trees with Conc Edge (new)	$25.00	$0.60	$0.16	$0.76	$25.76	$31.77	$38.07	$ 44.37	$ 50.67	$ 56.97

ype	Description (Existing)	Const. Cost L.F.	Landscape Maint. Cost L.F./Yr.	Street Maint. Cost L.F./Yr.	Total Maint. Cost L.F./Yr.	Total Cost L.F./1Yr.	Total Cost L.F./2Yr.	Total Cost L.F./3Yr.
J	Groundcover and Trees	$19.00	$ 0.45	$ 0.26	$ 0.71	$19.71	$20.46	$21.20
K	Groun ver and Trees with . Edge	$25.00	$ 0.40	$ 0.18	.60	$25.60	$26.23	$26.86

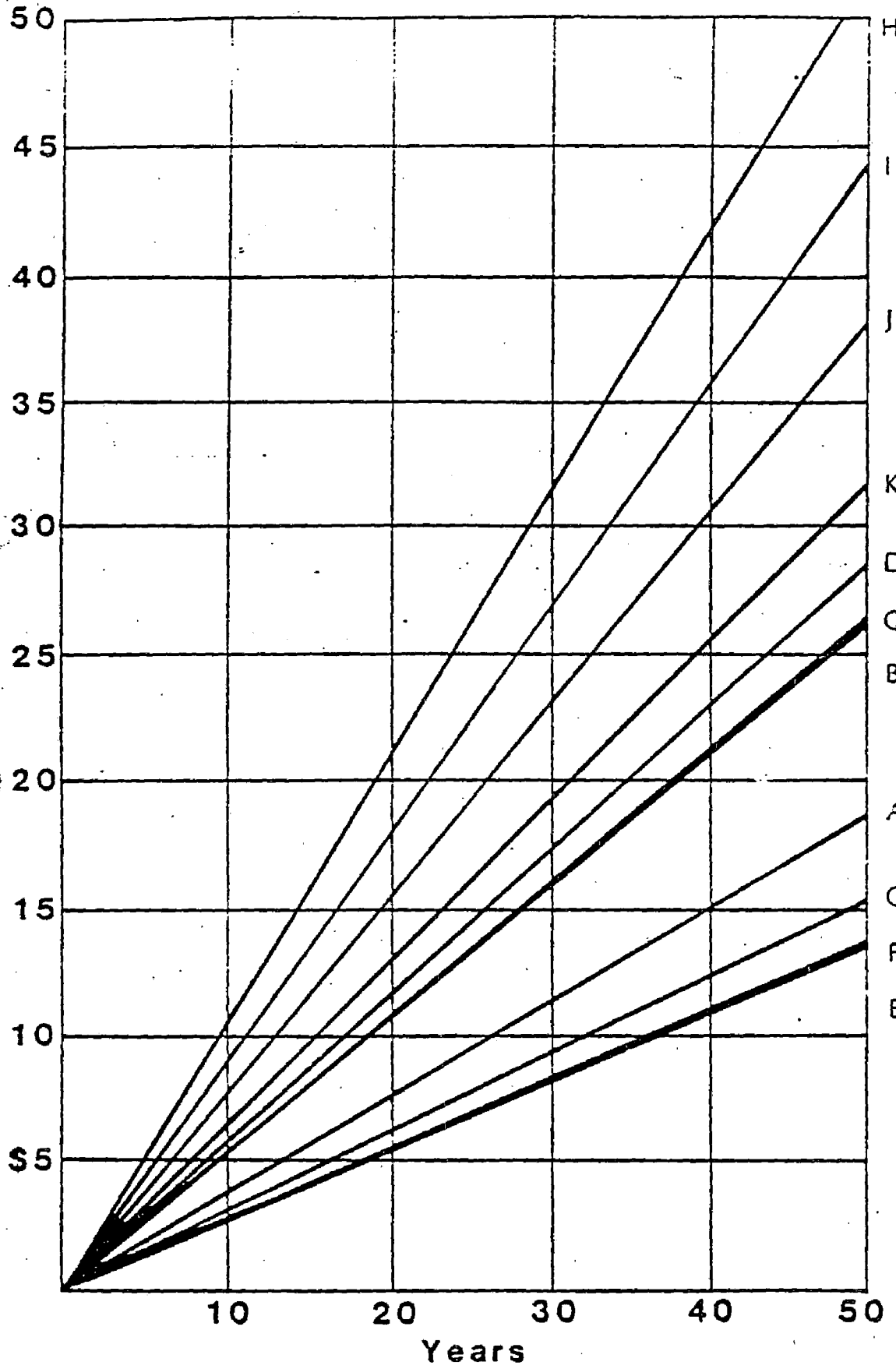
EXHIBIT

EXHIBIT E



TOTAL COSTS

EXHIBIT F



MAINTENANCE COSTS

DROUGHT TOLERANT LANDSCAPE PLANTS

The following list is a composite of California natives as well as ornamentals which are drought tolerant, will take full sun and adapt to Sacramento valley conditions after their establishment. Although not especially frail or delicate, most should have an infrequent watering (*better with occasional water), during the summer months and few will adapt to overwatering.

TREES - Scientific Name	Common Name	Evergreen	Deciduous
Aesculus californica	Calif. Buckeye		X
Acacia - many varieties		X	
Ailanthus altissima	Tree-of-Heaven		X
Albizia julibrissin	Silk tree		X
Casuarina	Beefwood	X	
Calocedrus decurrens	Incense Cedar	X	
Cedrus deodara	Deodar Cedar	X	
Celtis	Hackberry		X
Cerratonia siliqua*	St. John's Bread	X	
Cupressus glabra	Arizona Cypress	X	
Eriobotrya japonica*	Loquat	X	
Eucalyptus - many varities		X	
Fig, edible variety*			X
Fraxinus dipetala	Calif. Flowering Ash		X
Koelreuteria paniculata	Goldenrain Tree		X
Maclura pomifera	Osage orange		X
Olea europaea	Olive	X	
Pinus coulteri	Coulter Pine	X	
Pinus edulis	Pinon Pine	X	
Pinus sabiniana	Digger Pine	X	
Pinus torreyana	Torrey Pine	X	
Pistacia atlantica	Mt. Atlas Pistache		X
Populus fremontii	Fremont Cottonwood		X
Quercus douglasii	Blue Oak		X
Quercus engelmannii	Mesa Oak		
Quercus lobata	Valley Oak		X

DROUGHT TOLERANT LANDSCAPE PLANTS (Con't.)

TREES - Scientific Name	Common Name	Evergreen	Deciduous
Quercus wislizeni	Interior Live Oak		X
Rhus lancea*	African Sumac	X	
Robina	Black Locust		X
Schinus molle	California Pepper	X	
Schinus terebinthifolius	Brazilian Pepper	X	
Sequoiadendron giganteum	Giant Sequoia	X	
Tilia tomentosa	Silver Linden		X
Washingtonia filifera	Calif Fan Palm	X	
Zizyphus jujuba	Chinese Jujube		X

SHRUBS - Scientific Name	Common Name	Size I.	M	S	GC	Evgrn	Decds
Acacia - many yarities	Acacia	X	X			X	
Adenostomata fasciculatum	Chamise		X			X	
Arbutus unedo*	Strawberry tree	X				X	
Arctostaphylos - many varities		X	X	X	X	X	
Arctotheca calendula	Cape Weed				X	X	
Artemisia pycnocephala	Sandhill Sage			X		X	
Atriplex canescens	Four-wing Saltbush		X			X	
Atriplex semibaccata	Austrailian Saltbush				X	X	
Baccharis piluaris	Coyote Brush				X	X	
Calistemon* - many varities	Bottle Brush	X	X			X	
Carpobrotus edulis	Ice Plant				X	X	
Ceanothus - many varities		X	X	X	X	X	
Centranthus ruber	Jupiter's Beard				X		X
Cercis occidentalis	Western Redbud	X					X
Cercocarpus betuloides	Mountain Mahagony	X				X	
Chamelaucium uncinatum	Geraldtown Waxflower		X			X	
Chamaerops humilis	Mediterraean Fanpalm	X	X			X	
Cistus incanus	Rockrose			X		X	
Cistus salviifolius	Sageleaf Rockrose				X	X	

DROUGHT TOLERANT LANDSCAPE PLANTS (Con't.)

SHRUBS - Scientific Name	Common Name	Size L	M	S	GC	Evgrn	Decds.
Coprosma kirkii	Coprosma			X		X	
Correa pulchella	Austrialia Fuchsia				X	X	
Cotinus coggygria	Smoke Tree	X					X
Cotoneaster - many varities		X	X	X	X	X	X
Cytisus canariensis	Canary Is. Broom		X			X	
Cytisus racemosus	similar to canariensis		X			X	
Cytisus scoparius	Scotch Broom	X				X	
Dendromecon harfordii	Island Tree Poppy	X				X	
Dendromecon rigida	Brush Poppy		X			X	
Dodonaea viscosa	Hopseed Bush	X				X	
Drosanthemum floribundum	Rosea Ice Plant				X	X	
Eleagnus pungens	Silverberry	X				X	
Eriogonum fasciculatum	Calif. Buckwheat			X		X	
Fallugia paradoxa	Apache Plume		X			X	Partial
Festuca ovina v. glauca	Sheep Fescue				X	X	
Fremontodendron californicum	Common Flannel Bush		X			X	
Fremontodendron mexicanum	Southern Flannel "	X				X	
Garrya elliptica*	Coast Silktassel		X			X	
Garrya fremontii	Fremont Silktassel		X			X	
Genista aethnensis	Mt. Aetna Broom	X					X
Genista hispanica	Spanish Broom				X		X
Genista pilosa					X		X
Genista sagittalis					X		X
Grevillea 'Aromas'		X				X	
Grevillea rosmarinifolia	Rosemary Grevillea		X			X	
Grevillea tridentifera			X			X	
Hakea salinga	Willowleaf Hakea	X				X	
Hakea snaveolens	Sweet Hakea	X				X	
Haplopappus canus	Hazardia			X			X
Haplopappus parishii	Goldenbrush	X				X	
Helianthemum scopärium	Rush Rose		X		X	X	
Helianthemum nummularium	Sunrose				X	X	
Heteromeles arbutifolia*	Toyon	X				X	
Hypericum calycinum*	Aaron's Beard				X	X	

DROUGHT TOLERANT LANDSCAPE PLANTS (Con't.)

SHRUBS - Scientific Name	Common Name	Size L	M	S	GC	Evgrn	Decds.
Hypericum coris					X	X	
Isomeris arborea	Bladder pod			X			
Lagerstroemia indica*	Crape Myrtle	X					X
Lampranthus spectabilis	Training Ice Plt.				X	X	
Lantana montevidensis*	Trailing Lantana				X	X	
Larrea tridentata	Creosote Bush		X			X	
Lavandula* - several varities	Lavender			X		X	
Lavatera assurgentifolia	Tree Mallow	X				X	
Leptospermum - several varities	Tea Tree	X	X	X	X	X	
Leptodoctylon californicum	Prickly Phlox			X		X	
Leucophyllum frutescens	Texas Ranger		X			X	
Lithodora diffusa	Lithodora				X		X
Lupinus longifolius	Bush Lupine			X			X
Lysiloma thornberi	Feather Bush	X					X
Mahonia* - many varities			X	X	X	X	
Melaleuca - several varities		X	X			X	
Myoporum parvifolium*	Myoporum				X	X	
Myrica californica	Pacific Wax Myrtle	X				X	
Nerium oleander*	Oleander	X		X		X	
Osteospermum fruiticosum*	African Daisy				X	X	
Penstemon cordifolius	Beard Tongue		X			X	
Phlox subulata*	Moss pink				X		X
Phormium colensoi*	Flax		X			X	
Phormium tenax*	New Zealand Flax	X				X	
Photinia fraseri*	Photinia	X	X			X	
Photinia serrulata*	Chinese Photinia	X				X	
Pinus edulis	Pinon Pine	X				X	
Pittosporum phillyraeoides*	Willow Pittosporum	X				X	
Plumbago auriculata	Cape Plumbago			X	X	X	
Polygonum capitatum	Knotweed				X	X	
Potentilla tabernaemontanii*	Spring Cinquefoil				X	X	
Prunus caroliniana*	Carolina Laurel Ch.	X				X	
Prunus ilicifolia	Hollyleaf Cherry	X				X	

DROUGHT TOLERANT LANDSCAPE PLANTS (Con't.)

SHRUBS - Scientific Name	Common Name	L	M	S	GS	Evgrn.	Decds.
Pyracantha* - several varities		X	X	X	X	X	
Quercus dumosa	Calif. Scrub Oak		X			X	
Rhamnus alaternus*	Italian Buckthorn	X				X	
Rhamnus californica	Coffeeberry		X			X	
Rhamnus c. ilicifolia	Holly-leaf Redberry		X			X	
Rhus galbra	Smooth Sumac	X					X
Rhus laurina	Laurel Sumac	X				X	
Rhus ovata	Sugar Bush		X	X		X	
Ribes viburnifolium	Evergreen Currant			X	X	X	
Rosa rugosa	Ramanas Rose		X				X
Rosmarinus officinalis	Rosemary		X	X		X	
Salvia - several varities	Sage		X	X			X
Sedum* - many varities	Stonecrop				X	X	
Santolina chamaecyparissus	Lavender Cotton				X	X	
Senecio* - many varities				X	X	X	
Simmondsia chinensis	Jojoba		X			X	
Sphaeralcea ambigua	Desert Mallow		X				X
Stachys byzantina*	Lambs Ears				X	X	
Styrax officinalis californicus	Snowdrop Bush	X	X				X
Symphoricarpos mollis	Creeping Snowberry				X		X
Tamarix - several varities	Tamarisk	X				X	
Teucrium chamaedrys	Germander				X	X	
Teucrium fruticans	Bush Germander		X			X	
Thymus - several varities	Thyme				X		X
Trichostema lanatum	Wooly Blue Curls			X		X	
Xylosma congestum	Xylosma	X	X			X	
Verbena - several varities					X		X
Yucca - several varities		X	X			X	
Zauchneria californica	Calif. Fuchsia			X	X	X	

RLC/ph

(This list was compiled by the Southgate Recreation and Park District)

MEDIAN STRIP MASTER PLAN CRITERIA

The following criteria shall be implemented in the planning and development phases of median strips, park strips, and sound walls throughout Sacramento.

1. Median strips shall be developed only on divided major streets.

2. Median strips may be constructed on public streets in private developments as long as funding for construction and perpetual maintenance is obtained from private sources, including all corresponding street maintenance costs.

3. Shrub screens, Type A, shall consist of shrubbery at least 36" high. At least the first 80' on each side of an intersection shall be concrete/paving or landscaped with groundcover having a maximum growth height of 24".

4. All future median development shall be one of the following: concrete with cut-outs, Type B; bomanite with cut-outs, Type C; pavers with cut-outs, Type D; concrete with tree wells, Type E; bomanite with tree wells, Type F; pavers with tree wells, Type G. Concrete paving, Types B and E, is acceptable in residential, industrial and commercial areas. Bomanite paving, Types C and F, shall be used in retail business areas to increase the aesthetic qualities. Interlocking pavers, Type D and G, shall be used only in special situations due to the high cost of installation. Other appropriate surfacing such as brick or exposed aggregate may be substituted for bomanite. All selections shall be approved by the Director of Parks and Community Services and the Director of Public Works.

5. Irrigation designs shall provide adequate coverage and sufficient water for the healthy growth of all landscaped areas. Drainage shall be provided to eliminate surface runoff across the pavement.

6. Irrigation systems shall be designed with a minimum of waste and overspray and shall not throw water off the landscaped area onto non-planted areas. Drainage shall be an integral part of the irrigation system.

7. When practical, low precipitation irrigation systems shall be used to conserve water. Sprinkler heads and surface spray irrigation shall be avoided when possible.

8. Selected plant species shall be drought tolerant or adaptable to arid conditions. All selections are subject to approval of the City Landscape Architect.

9. Park strips in the Central Business District in areas of new landscaping shall consist of interlocking pavers and cut-outs for trees with grates. The surface of these pavers shall be treated with an impermeable glaze to prevent staining.

10. Park strips in the Central Business Districts with existing mature street trees shall consist of an acceptable alternate and appropriate landscaping, subject to the approval of the City Landscape Architect and City Arborist.

11. Park strips in residential areas shall be turf because of its aesthetic appeal, low installation cost and its ability to withstand high levels of foot traffic.

12. Subdivision walls that have a space between the sidewalk and wall less than two feet wide shall be paved.

13. Subdivision walls with an area more than two feet wide shall have minimal landscaping consisting of cut-outs for tree wells.