



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Consider Introduction of a Proposed Development Impact Fee Ordinance

MEETING DATE: August 21, 1991

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council:

- 1) review the draft development impact mitigation fee ordinance and take the appropriate action
- 2) continue the Public Hearing to the September 4, 1991 City Council meeting
- 3) appropriate \$10,000 from the Master Storm Drain Fund (123.1) for an appraisal of the property needed for the E-Basin (Westgate Park) expansion

BACKGROUND INFORMATION: With the direction provided by the City Council at its special meeting of June 21, staff has prepared the attached draft fee ordinance. The draft includes:

- 1) the necessary findings
- 2) definitions
- 3) establishment of separate, interest-bearing funds
- 4) payment of fees at final subdivision map (or building/grading permit if there is no final map) as directed by the Council
- 5) adoption of the impact fee study and capital improvement program as directed by the Council (the actual fees are to be adopted by separate resolution).
- 6) fee calculation procedure
- 7) Residential Acre Equivalent (RAE) factors for the various land use types
- 8) credit and reimbursement procedures
- 9) reference to other authority the City has with regard to development
- 10) findings regarding use and refund of fees
- 11) exemptions including City and impact fee projects and additions to single-family dwellings
- 12) fee adjustment and waiver procedure
- 13) appeal procedure
- 14) a severability clause
- 15) miscellaneous charges to other code sections to comply with this new ordinance
- 16) an effective date of sixty days as provided by law with a cut off for building permits based on completed applications
- 17) standard publication requirements

One issue that was left somewhat unresolved was the acquisition cost of land for basins, parks and other purposes. The value used in the fee study was \$190,000 per acre. Some members of the development community maintained this value was excessive and the Council requested additional information. Unfortunately, accurate

APPROVED: _____

Thomas A. Peterson

THOMAS A. PETERSON



information is not available. With various "options", partnership arrangements and other purchase agreements, a true market value is not easily obtainable.

To answer this question, staff recommends that the Council authorize the hiring of an MAI appraiser for the acquisition of the additional acreage needed for the expansion of E-8 Basin (Westgate Park). With an appraised value, we can quickly adjust the fee accordingly during the coming year.

Another item of significant discussion was the timing of payment. Staff recommended, and the Council approved, that the fees be collected at final subdivision map, or, if no map, at building permit. City staff met with members of the development community on Tuesday, August 13, at their request to discuss this issue again. They again requested that the fees, or a portion, be paid at building permit. Since the Council has already directed otherwise, we could not accommodate their request. However, staff did suggest an alternative that would maintain the integrity of the fee program and provide some help to the developers, although there are some drawbacks.

The alternative was to collect the fee at acceptance of the subdivision improvements, subject to the following:

- 1) that the payment amount be guaranteed (bond, instrument of credit, etc.). This could be included in the normal subdivision improvement guaranty.
- 2) that interest be paid.
The recommended rate to use would be same as the latest quarterly rate earned on City investments in the Local Agency Investment Fund.
- 3) that if credits for improvements made by the developer are provided, then that amount of fees could not be deferred.
The program and ordinance recognizes that the developer may construct improvements that are the responsibility of the fee program, thus credits toward fees would be provided for this work. If a credit was provided and the fees deferred, then the City might not have the funds in the program to pay the credit.
- 4) that an administrative charge be made.
A charge for the additional paperwork, including administrative overhead, should be made since such a deferral arrangement will require more work. A flat charge would be reasonable since the amount of work is the same for the various size projects we envision. A relatively high charge covering all pertinent costs will also discourage deferrals on small mounts.
- 5) that appropriate wording covering the above be included in the subdivision agreement

In addition to the above, the ordinance should provide the ability to deny a deferral if the funds are needed for an impact fee project that is to be built by the City within the time frame of the subdivision improvements.

The drawback to this, aside from the additional staff time involved, is that the City would be in the money lending business, a position which we have always avoided in the past. Council should consider the implications of this decision.

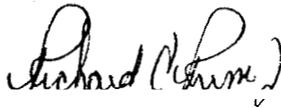
Consider Introduction of a Proposed Development Impact Fee Ordinance
August 21, 1991
Page 3

Finally, the development impact mitigation fee ordinance is ready to introduce unless Council wishes to incorporate the changes described above or any other changes. The attached draft is the same as the one distributed at the Council meeting on August 7 meeting with the following minor changes:

- references to state law were added to the Findings and Purpose section
- a provision for the fees to be updated more frequently than annually was added to Section 15.64.050

The ordinance could then be adopted at the September 4 Council meeting along with the fee resolution which actually sets the fees. Since the final impact fee study and the actual amount of the fees was not available fourteen days prior to the Public Hearing scheduled for August 21 (as required by law), the hearing should be continued until September 4. Staff is expecting to receive the final report the week of August 21 and will distribute copies as soon as it is received.

FUNDING: Not applicable.


for Jack L. Ronsko
Public Works Director

Prepared by Richard C. Prima, Assistant City Engineer

JLR/RCP/lm

Attachment

cc: Finance Director
City Attorney
Nolte
McDonald
Mailing list

ORDINANCE NO. 1518

AN ORDINANCE OF THE LODI CITY COUNCIL ADDING CHAPTER **15.64** TO TITLE **15**, "BUILDINGS AND CONSTRUCTION", OF THE LODI MUNICIPAL CODE, TO ESTABLISH CITY-WIDE DEVELOPMENT IMPACT MITIGATION FEES; REPEALING SECTION **13.12.225**, "STORM DRAINAGE IMPACT FEE"; AND AMENDING SECTION **15.44.090**, "FEES"

BE IT ORDAINED BY THE LODI CITY COUNCIL AS FOLLOWS:

SECTION 1. Chapter **15.64** is added to Title **15**, "Buildings and Constructicn", of the Lodi Municipal Code to read as follows:

"CHAPTER **15.64**
DEVELOPMENT IMPACT MITIGATION FEES

Section 15.64.010	Findings and Purpose.
Section 15.64.020	Definitions.
Section 15.64.030	Development Impact Funds.
Section 15.64.040	Payment of Fees.
Section 15.64.050	Adoption of Study, Capital Improvement Program and Fees.
Section 15.64.060	Calculation of Fees.
Section 15.64.070	Residential Acre Equivalent Factor.
Section 15.64.080	Credit and Reimbursement for Construction of Facilities.
Section 15.64.090	Other Authority.
Section 15.64.100	Findings Regarding Use of Fees.
Section 15.64.110	Fee Exemptions.
Section 15.64.120	Fee Adjustment or Waiver.
Section 15.64.130	Appeal Procedure.
Section 15.64.140	Severability

15.64.010 Findings and Purpose.

The Council hereby finds and declares as follows:

- A. In order to implement the goals of the City of Lodi's General Plan and to mitigate the impacts caused by new development in the City of Lodi, certain **public** improvements must be or had to be constructed. The City Council hereby determines that Development Impact Mitigation Fees are needed to finance these public improvements and to pay for new developments' fair share of the construction costs of these improvements. In establishing the fees described in this chapter, the City Council finds the fees to be consistent with its General Plan and, pursuant to Government Code Section **65913.2**, has considered the effects of the fees with respect to the City's housing needs as established in the Housing Element of the General Plan.
6. The purpose of this chapter is to implement the General Plan requirements set forth in subdivisions A and B of this section and to impose mitigation fees to fund the cost of certain facilities and services, the demand for which is directly or indirectly generated by the type of new development proposed in the City of Lodi General Plan, under the authority of:
 - ° the police power of the City granted under Article XI, Section 7, of the California Constitution;

- the provisions of the California Environmental Quality Act, Public Resources Code, Section 21000 et. seq. which in general requires that all developments mitigate environmental impacts.
 - the provisions of the California Government Code regarding General Plans at Section 65300 et. seq. including but not limited to the provisions of Government Code Section 65400.
- C. It is the further purpose of this chapter to require that adequate provisions are made for developer-financed facilities and services within the City of Lodi city limits as a condition to the approval of new development.
- D. Development Impact Mitigation Fees are hereby established on development in the City of Lodi. Development Impact Mitigation Fees shall consist of separate fees as described in Section 15.64.030 of this Code. The City Council shall, by resolution, set forth the specific amount of the fees; describe the benefit and impact area on which the fee is imposed; refer to the specific improvements to be financed, their estimated cost and reasonable relationship between this fee and the various types of new developments; and set forth time for payment. Adoption of such fee resolutions shall be done in compliance with Government Code Sections 66016 et. seq..
- E. The specific improvements to be financed by the fee are described in City of Lodi Development impact Fee Study prepared for the City of Lodi by Nolte and Associates and Angus McDonald & Associates, dated August, 1991, a copy of which is on file with the City Clerk. The calculation of the fee is based upon the findings in the referenced Study.
- F. New development will generate new demand for facilities which must be accommodated by construction of new or expanded facilities. The amount of demand generated and, therefore, the benefit gained, varies according to kind of use. Therefore, a "residential acre equivalent" (RAE) factor was developed to convert the service demand for each General Plan land use into a ratio of the particular use's rate to the rate associated with a low-density, single-family dwelling gross acre. The Council finds that the fee per unit of development is directly proportional to the RAE associated with each particular use.

15.64.020 Definitions.

- A. "Acreage" means the gross acreage for fee calculation purposes of any property within the City of **Lodi** General Plan area not including the acreage of dedicated street right-of-way existing prior to development, except that the area of new dedicated street right-of-way in excess of 34 feet on one side of a street shall not be included in the gross acreage.
- B. "Building Permit" means the permit issued or required for the construction, improvement or remodeling of any structure pursuant to and as defined by the City of Lodi Building Code.
- C. "Costs" means amounts spent, or authorized to be spent, in connection with the planning, financing, acquisition and development of a facility or service including, without limitation, the costs of land, construction, engineering, administration, and consulting fees.
- D. "Development" means any of the following:
1. For water, sewer and storm drainage impact fees: any new connection to the City system or increase in service demand.

2. For streets impact fees: any project that increases traffic.
 3. For police, fire, parks and recreation **and** general City facilities impact fees: any project generating new or increased service demand.
- E. "Facilities" means those public facilities designated in the City of Lodi Development Impact Fee Study and as subsequently designated by the City Council.
- F. "Land Use" means the planned use as shown on the General Plan Land Use Map defined **by** the following categories based on the designations in the Lodi General Plan:
1. Low-Density Residential - Single-family detached and attached homes, secondary residential units, and similar uses not exceeding 7.0 units per gross acre.
 2. Medium-Density Residential - Single Family and Multi-family residential units and similar uses between 7.1 and 20.0 units per gross acre.
 3. High-Density Residential - Multi-family residential units, group quarters, and similar uses between 20.1 and 30.0 units per gross acre.
 4. East Side Residential - This designation reflects the Lodi City Council's adoption of Ordinance No. 1409. This designation provides for single-family detached and attached homes, secondary residential units, and similar uses not exceeding 7.0 units per gross acre.
 5. Planned Residential - Single-family detached and attached homes, secondary residential units, multi-family residential units, and similar uses and is applied to largely undeveloped areas in the unincorporated area of the General Plan. All development under this designation shall be approved pursuant to a specific development plan. **As** specific development plans are approved, the planned residential designation shall be replaced with a low, medium, or high density residential designation, or a public/quasi-public designation based on its approved use and density.
 6. Neighborhood Commercial - Neighborhood and locally-oriented retail and service uses, public and quasi-public uses, and similar uses with a floor/area ratio not exceeding 0.40.
 7. General Commercial - Land-intensive retail and wholesale commercial uses, public and quasi-public uses, and similar uses with a floor/area ratio not exceeding 0.40.
 8. Downtown Commercial - Restaurants, retail, service, professional and administrative offices, hotel and motel uses, and similar uses in the downtown area of Lodi. For purposes of this chapter, development standards and demands are comparable to Neighborhood Commercial land use.
 9. Office - Professional and administrative offices, medical and dental clinics, laboratories, financial institutions, and similar uses with a floor/area ratio not exceeding 0.50.
 10. Light Industrial - Industrial parks, warehouses, distribution centers, light manufacturing, and similar uses with a floor/area ratio not exceeding 0.50.

11. Heavy Industrial - Manufacturing, processing, assembling, research, wholesale and storage uses, trucking terminals, railroad facilities, and similar uses with a floor/area ratio not exceeding 0.50.

12. Public/Quasi-Public - Government-owned facilities, public and private schools, and quasi-public **uses** such as hospitals and churches with a floor/area ratio not exceeding 0.50. The appropriate Residential Acre Equivalent (RAE) factor for these uses shall **be** determined on a case-by-case basis by the Public Works Director.

- G. "Program Fee Per Residential Acre Equivalent" means **the** total program costs, for a particular category of facility divided by the total number of residential acre equivalents and adjusted for price changes up to the year of construction and for the cost of financing, as identified in the City of Lodi Development Impact Fee Study or subsequent update for that particular category.
- H. "Residential Acre Equivalent Factor" (RAE) is a conversion factor used to reflect the service demand for each land use, with respect to the same characteristics for a low-density, single-family detached dwelling unit zoned in a residential zoning category ("R-10" low-density) based on the City of Lodi General Plan.

15.64.030 Development Impact Funds.

The City Finance Director shall create in the City treasury the following special interest-bearing trust funds into which all amounts collected under this chapter shall be deposited.

- A. Water Facilities
- B. Sewer Facilities
 - 1. General Sewer Facilities
 - 2. Kettleman Lane Lift Station
 - 3. Harney Lane Lift Station
 - 4. Ciuff Avenue Lift Station
- C. Storm Drainage Facilities
- D. Street Improvements
- E. Police Facilities
- F. Fire Facilities
- G. Parks **and** Recreation Facilities
- H. General City Facilities and Program Administration

The fees shall be expended solely to pay the costs of facilities (including interest on interfund loans) or to reimburse developers entitled to reimbursement under this chapter. The funds for the categories listed above shall **be kept** separate. For

purposes of this chapter, they are referred to in aggregate as the "Development Impact Fee Fund".

The City Manager shall have the authority to make loans among the Development Impact Fee Funds to assure adequate cash flow. Interest charged on each loan shall be the same as the rate earned on other City funds.

15.64.040 Payment of Fees.

- A. The property owner shall pay all Development Impact Mitigation Fees imposed under this chapter in an amount calculated under Section 15.64.060 and established by City Council resolution. The fees shall be paid before the approval of a final subdivision map, building permit or grading permit, whichever occurs first.
- B. No final subdivision map, building permit or grading permit shall be approved for property within the City of Lodi unless the Development Impact Mitigation Fees for that property are paid as required by this chapter.
- C. If a final subdivision map has been issued before the effective date of this Ordinance, then the fees shall be paid before the issuance of a building permit or grading permit, whichever comes first.

15.64.050 Adoption of Study, Capital Improvement Program and Fees.

- A. The City Council hereby adopts the City of Lodi Development Impact Fee Study dated August, 1991 and establishes a future Capital Improvement Program consisting of the projects shown in said study. The City Council shall review that Study annually, or more often if it deems it appropriate, and may amend it by resolution at its discretion.
- B. The City Council shall include in the City's annual Capital Improvement Program appropriations from the Development Impact Fee Funds for appropriate projects.
- C. Except for facilities approved by the Public Works Director for construction by a property owner under Section 15.64.080 or as shown in the annual Capital Improvement Program, all facilities shall be constructed in accordance with the schedule established in the Development Impact Fee Study.
- D. The Program Fee per Residential Acre Equivalent (RAE) shall be adopted by resolution and shall be updated annually, or more frequently if directed by the City Council, by resolution after a noticed public hearing. The annual update shall be based on a report by the Public Works Director including the estimated cost of the public improvements, the continued need for those improvements, and the reasonable relationship between such need and the impacts of the various types of development pending or anticipated and for which this fee is charged. In the absence of substantial changes in the projects or unit prices, the change in project cost shall be estimated by the change in the Engineering News Record 20 Cities Construction Cost Index.

15.64.060 Calculation of Fees.

The Development Impact Mitigation Fees required under Section 15.64.040 are calculated as follows:

$$F = P \times RAE$$

$$T = A \times F$$

where:

A = acreage, computed to the nearest 0.01 acre;

F = fee per acre per land use category as shown on the General Plan Land Use Map, rounded to the nearest \$10;

P = program fee per residential acre equivalent; and

RAE = the residential acre equivalent (RAE) factor for the appropriate land use category (see Section 15.64.070);

T = the total mitigation fee for each category of public facility.

The calculated fees are subject to adjustment per section 15.64.120 of this Code.

15.64.070 Residential Acre Equivalent Factor.

- A. The residential acre equivalent factor is based on the Development Impact Fee Study.
- B. The residential acre equivalent (RAE) factors are as follows:

Land Use categories	Water RAE	Sewer RAE	Storm Drainage RAE	Streets RAE	Police RAE	Fire RAE	Parks & Recreation RAE	General City Facilities RAE
RESIDENTIAL								
Low Density	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Medium Density	1.96	1.96	1.00	1.96	1.77	1.96	1.43	1.43
High Density	3.49	3.49	1.00	3.05	4.72	4.32	2.80	2.80
East Side Residential	1.00	1.00	1.00	1.00	1.09	1.10	1.10	1.10
PLANNED RESIDENTIAL								
Low Density	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Medium Density	1.96	1.96	1.00	1.96	1.77	1.96	1.43	1.43
High Density	3.49	3.39	1.00	3.05	4.72	4.32	2.80	2.80
COMMERCIAL								
Neighborhood Commercial	0.64	0.94	1.33	1.90	4.28	2.77	0.32	0.89
General Commercial	0.64	0.94	1.33	3.82	2.59	1.93	0.32	0.89
Downtown Commercial	0.64	0.94	1.33	1.90	4.28	2.77	0.32	0.89
Office Commercial	0.64	0.94	1.33	3.27	3.72	2.46	0.54	1.53
INDUSTRIAL								
Light Industrial	0.26	0.42	1.33	2.00	0.30	0.64	0.23	0.64
Heavy Industrial	0.26	0.42	1.33	1.27	0.19	0.61	0.33	0.93

15.64.080 Credit and Reimbursement for Construction of Facilities

- A. Construction of facilities in Program Year

1. The Public Works Director may direct or authorize the owner to construct certain facilities specified in the Development Impact Fee Study, or portions thereof, at the time and as designated in the Study, in lieu of all, or a portion of, the fee required by this chapter. The owner is entitled to a credit if the owner: (1) constructs the improvements, (2) finances an improvement by cash or other means approved by the Council, or (3) a combination of the above. The credit to be provided to the property owner shall be determined by the Public Works Director based on prevailing construction costs plus 10% for engineering and administration and shall be approved by the Council. The construction of a facility authorized by this section must consist of a usable facility or segment and be approved by the City and constructed in accordance with the City of Lodi's Public Improvement Design Standards. The property owner must post a bond or other security in a form acceptable to the Director for the complete performance of the construction before credit is given.

2. If the amount of the credit is less than the amount of the otherwise applicable fee, the property owner shall pay the amount which, when added to the credit received for the construction of facilities, equals the fee obligation.

3. If the amount of the credit is greater than the amount of the otherwise applicable mitigation fee, the property owner shall be paid the difference only from the appropriate Development Impact Fee Fund, after the project is accepted by the City, and at the end of the year in which the project is planned to be completed under the Study.

B. Construction of Facilities Prior to Program Year

1. If the construction described in subsection A occurs before the fiscal year for which construction is scheduled under the Study, the property owner shall receive no immediate credit against the applicable fee. The property owner shall be reimbursed from the appropriate Development Impact Fee fund at the end of the year in which the project is planned under the Study Program Year. The reimbursable amount shall be the estimated cost of the facility as determined in sub-section A.1. With specific approval of the Council, reimbursement may occur after the year in which the project is planned, if in the opinion of the Public Works Director, the delay is necessary to assure the orderly implementation of the City Capital Improvement Program,

2. To implement this subsection 8.1, the property owner and the City shall first enter into a reimbursement agreement. In addition to its other terms, the agreement shall provide that:

- (a) the general fund of the City is not liable for payment of any obligations arising from the agreement;
- (b) the credit or taxing power of the City is not pledged for the payment of any obligations arising from the agreement;
- (c) the land owner shall not compel the exercise of the City taxing power or the forfeiture of any of its property to satisfy any obligations arising from the agreement;
- (d) the obligation arising from the agreement is not a debt of the City, nor a legal or equitable pledge, charge, lien, or encumbrance, upon any of its property, or upon any of its income, receipts, or revenues, and is payable only from the fees deposited in the appropriate City of Lodi Development Impact Fee Fund;
- (e) the reimbursable amount shall be increased annually to include an amount attributable to interest. This amount shall be based on the change in the Engineering News Record 20 Cities Construction Cost Index from the

January 1 index of the year of construction to the January 1 index of the year of reimbursement.

15.64.090 Other Authority.

- A. This chapter is intended to establish a supplemental method for funding the cost of certain facilities and services, the demand for which will be generated by the level and type of development proposed in the Lodi General Plan. The provisions of this chapter shall not be construed to limit the power of the City Council to impose any other fees or exactions or to continue to impose existing ones on development within the City of Lodi, but shall be in addition to any other requirements which the City Council is authorized to impose, or has previously imposed, as a condition of approving a plan, rezoning or other entitlement within the City of Lodi. In particular, individual property owners shall remain obligated to fund, construct, and/or dedicate the improvements, public facilities and other exactions required by, but not limited to, the City of Lodi Municipal Code, Public Improvement Design Standards and other applicable documents. Any credits or reimbursements under Section 15.64.080 shall not include the funding, construction, or dedications described in this subsection.

15.64.100 Findings Regarding Use of Fees.

- A. As required under Government Code Section 66001(d), the City shall make findings once each fiscal year with respect to any portion of the fee remaining unexpended or uncommitted in its account five or more years after deposit of the fee, to identify the purpose to which the fee is to be put and demonstrate a reasonable relationship between the fee and the purpose for which it was charged,
- B. As required under Government Code Section 66001(e), the City shall refund to the current record owner on a prorated basis the unexpended or uncommitted portion of the fee, and any interest accrued thereon, for which need cannot be established.

15.64.110 Fee Exemptions.

The following developments are exempt from payment of fees described in this chapter:

- A. City of Lodi projects;
- B. Projects constructed or financed under this chapter;
- C. Reconstruction of, or residential additions to single-family dwellings, but not including additional dwelling units;
- D. Property which has paid a Master Storm Drain fee pursuant to Resolution 3618 or Ordinance 1440 is exempt from payment of the Storm Drainage Impact Fee except for changes in land use as described in the Fee resolution.

15.64.120 Fee Adjustment or Waiver.

- A. The owner of a project subject to a fee under this chapter may apply to the Public Works Director for an adjustment to or waiver of that fee. The waiver of this fee shall be based upon the absence of any reasonable relationship between the impact on public facilities of that development and either the amount of fee charged or the type of facilities to be financed.

B. The application for adjustment or waiver shall be made in writing and filed with the City Clerk no later than ten days after formal notification of the fee to be charged. The application shall state in detail the factual basis and legal theory for the claim of adjustment or waiver.

C. It is the intent of this chapter that:

1. The land use categories are based on General Plan designations which are an average of a wide range of specific land uses; thus substantial variation must be shown in order to justify a fee adjustment,
2. The Public Works Director may calculate a fee and/or require additional improvements where the service demand of a particular land use exceeds the standards shown in the definitions or used in determining the improvements needed under the fee program,
3. The fee categories shall be considered individually; thus it may occur that a fee adjustment or waiver is made in one category and not another, and
4. Where improvements providing capacity for the subject parcel have already been constructed, a downward adjustment of the fee is not appropriate.

D. The Public Works Director shall consider the application at an informal hearing held within 60 days after the filing of the fee adjustment or waiver application. The decision of the Public Works Director is appealable pursuant to Section 15.64.130.

E. The applicant bears the burden of proof in presenting substantial evidence to support the application. The Public Works Director shall consider the following factors in its determination whether or not to approve a fee adjustment or waiver:

1. The factors identified in Government Code Section 66001:
 - The purpose and proposed uses of the fee;
 - The type of development;
 - The relationship between the fee's use and type of development;
 - The need for the improvements and the type of development; and
 - The amount of the fee and the portion of it attributable to the development; and
2. The substance and nature of the evidence including the Development Impact Fee Study and the applicant's technical data supporting its request. The applicant must present comparable technical information to show that the fee is inappropriate for the particular development.

15.64.130 Appeal Procedure.

A. The Public Works Director is responsible for administering, collecting, crediting, adjusting, and refunding development fees. A decision by the Public Works Director regarding a fee imposed under this chapter is appealable in accordance with this section. A person seeking judicial review shall first seek an appeal hearing under this section.

- B. A person appealing a decision under this chapter shall file a request with the Public Works Director who is responsible for processing the appeal. The appeal shall be in writing, stating the factual and legal grounds, and shall be filed within ten calendar days following the decision of the Public Works Director being appealed.
- C. The Public Works Director shall notify the City Manager of the appeal. The City Manager shall set the matter for hearing before the City Council and notify the person appealing in writing of the time and place.
- D. The City Council shall conduct the hearing, prepare written findings of fact and a written decision on the matter, and shall preserve the complete administrative record of the proceeding. The Council shall consider all relevant evidence presented by the appellant, the Public Works Director or other interested party.
- E. The decision of the City Council is final; it is reviewable by a court under Code of Civil Procedure Section 1094.5.
- F. The City of Lodi hereby adopts Code of Civil Procedure Section 1094.6 for the purposes of judicial review under this section. A petition seeking review of a decision under this Chapter shall be filed not later than the 90th day following the date on which the decision of the hearing officer becomes final."

15.64.140 SEVERABILITY

If any provision or clause of this Ordinance or the application thereof to any person or circumstances is held to be unconstitutional or to be otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other Ordinance provisions or clauses or applications thereof which can be implemented without the invalid provision or clause or application, and to this end the provisions and clauses of this Ordinance are declared to be severable.

SECTION 2. Repeal. Section 13.12.225 "Storm Drainage Impact Fee" is repealed.

SECTION 3. Amendment. Section 15.44.090 "Fees" is amended to read:

"The then-current applicable development fees must be paid prior to the issuance of a building permit, or allowing the development to proceed, including:

- A. Development Impact Mitigation Fees
- B. Wastewater Connection Fee
- C. Engineering Fee
- D. Other established development fees and fees for service."

SECTION 4. Effective Date. This ordinance takes effect 60 days after its adoption. For purposes of this Chapter, building permit applications accepted and deemed complete prior to the effective date shall not be subject to the Ordinance.

SECTION 5. Publication. The City Clerk shall either: (a) have this ordinance published once within 15 days after adoption in a newspaper of general circulation, or (b) have a summary of this ordinance published twice in a newspaper of general circulation, once 5 days before its adoption and again within 15 days after its adoption.

The foregoing ordinance was introduced at a meeting of the City Council of the City of Lodi held on _____, 1991, and was adopted and ordered published at a meeting of the City Council held on _____, 1991, by the following vote:

AYES :

NOES :

ABSENT:

ATTEST :

ALICE M. REIMCHE
City Clerk



CITY OF LODI

CARNEGIE FORUM
305 West Pine Street, Lodi

NOTICE OF PUBLIC HEARING

Date: August 21, 1991

Time: 7:30 p.m.

For information regarding this Public Hearing
Please Contact:

Alice M. Reimche
City Clerk
Telephone: 333-6702

NOTICE OF PUBLIC HEARING

August 21, 1991

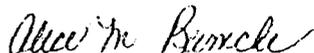
NOTICE IS HEREBY GIVEN that on Wednesday, at the hour of 7:30 p.m., or as soon thereafter as the matter may be heard, the City Council will conduct a public hearing to consider the following matter:

- a) Introduction of a proposed Development Impact Fee Ordinance entitled, "An Ordinance of the Lodi City Council Adding Chapter 15.64 to Title 15, 'Buildings and Construction', of the Lodi Municipal Code, to Establish City-Wide Development Impact Mitigation Fees; Repealing Section 13.12.225, 'Storm Drainage Impact Fee'; and Amending Section 15.44.090, 'Fees'".

Information regarding this item may be obtained in the office of the Community Development Director at 221 West Pine Street, Lodi, California. All interested persons are invited to present their views and comments on this matter. Written statements may be filed with the City Clerk at any time prior to the hearing scheduled herein, and oral statements may be made at said hearing.

If you challenge the subject matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice or in written correspondence delivered to the City Clerk, 221 West Pine Street, at or prior to the Public Hearing.

By Order Of the Lodi City Council:


Alice M. Reimche
City Clerk

Dated: August 7, 1991

Approved as to form:


Bobby W. McNatt
City Attorney

CITY COUNCIL

DAVID M. HINCHMAN, Mayor
JAMES W. PINKERTON, Jr.
Mayor Pro Tempore
PHILLIP A. FENNINO
JACK A. SIEGLOCK
JOHN R. (Randy) SNIDER

CITY OF LODI

CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 334-5634
FAX (209) 333-6795

August 15, 1991

THOMAS A. PETERSON
City Manager

ALICE M. REIMCHE
City Clerk

BOB McNATT
City Attorney

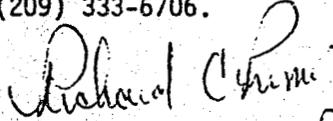
SUBJECT: Consider Introduction of a Proposed Development Impact Fee Ordinance

Dear Property Owner/Resident:

Enclosed is a copy of background information on an item that will be discussed at the City Council meeting on Wednesday, August 21, 1991, at 7:30 p.m. The meeting will be held in the City Council Chamber, Carnegie Forum, 305 West Pine Street. You are welcome to attend.

If you wish to communicate with the City Council, please contact Alice Reimche, City Clerk, at (209) 333-6702.

If you have any questions about the item, please call me at (209) 333-6706.



Richard C. Duims
Assistant City Engineer

RCP/lm

Enclosure

cc: City Clerk ✓

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

AUGUST 1991

PREPARED BY:

**NOLTE AND ASSOCIATES
ANGUS MCDONALD AND ASSOCIATES**



D R A F T (8/21/91)

RESOLUTION NO. 91-_____

A RESOLUTION OF THE LODI CITY COUNCIL
ESTABLISHING DEVELOPMENT IMPACT MITIGATION FEES
FOR ALL DEVELOPMENTS WITHIN THE CITY OF LODI

WHEREAS, the Lodi City Council has adopted Ordinance No. 1518, creating and establishing the authority for imposing and charging Development Impact Mitigation Fees in the City of Lodi; and

WHEREAS, studies have been made and data gathered on the impact of contemplated future development on existing public facilities in the City of Lodi, along with an analysis of the need for new public facilities and improvements required by new development; and

WHEREAS, the relationship between new development, the needed facilities, and the estimated cost(s) of these improvements is included in the study entitled "Development Impact Fee Study" prepared by Nolte and Associates and Angus McDonald & Associates dated August 1991; and

WHEREAS, such information was available for public inspection and review 14 days prior to the public hearing; and

WHEREAS, the City Council finds that:

1. The purpose of these fees is to finance Water, Sewer, Storm Drainage, Streets, Police, Fire, Parks and Recreation, and General City facilities and to reduce the facility service impacts and related problems caused by new development within the City of Lodi;
2. The fees collected pursuant to this resolution shall be used to finance only the public facilities described or identified in said study;
3. After considering available information and data, and the testimony received at the public hearing, the Council approves said study and incorporates such study herein, and further finds that new development within the City of Lodi will generate additional impacts within the General Plan area and will contribute to the degradation of the existing facilities and the overall quality of life in that area;
4. There is a demand in this described impact area for such facilities which have not been constructed or have been constructed, but new development has not contributed its fair share toward these facility costs and said facilities have been called for in or are consistent with the City of Lodi's General Plan, and or appropriate Master Plans.
5. The facts and evidence presented establish that there is a reasonable relationship between the need for the described public facilities and the impacts of the types of development for which the corresponding fee is charged,

and, also there is a reasonable relationship between the fee's use and the type of development for which the fee is charged, as these reasonable relationships or nexus are in more detail described in the studies and data referenced above;

6. It is appropriate to establish the fees on a city-wide basis in order to construct facilities in a timely and cost-effective manner and reduce the demand for replacement of existing facilities in order to accommodate new development; except for those sewer lift stations needed to serve a specific area;
7. The cost estimates set forth in the Study are reasonable cost estimates for constructing these facilities, and the fees expected to be generated by new development will not exceed the total of such costs plus a finance charge where interfund borrowing is necessary to fund improvements in a timely manner;
8. The City has appropriated funds and established a Capital Improvement Program which includes the projects shown in the Study;

NOW, THEREFORE, IT IS RESOLVED by the Lodi City Council that:

1. DEFINITIONS.

The definitions contained in Ordinance 1518, Lodi Municipal Code Section 15.64.020, are hereby incorporated by reference as if fully set forth.

2. FEES.

The City Council hereby repeals Resolution 88-165 "Storm Drainage Fee", adopted December 21, 1988, and Resolution 89-186 "Amending Storm Drainage Fees", adopted December 20, 1989, and herein provides for a fee structure for public facilities as follows:

<u>FEE CATEGORY</u>	<u>FEE PER RESIDENTIAL ACRE EQUIVALENT (RAE)</u>
<u>City-Wide Fees</u>	
1. Water	\$ 5,710.00
2. Sewer	\$ 1,090.00
3. Storm Drainage	\$ 7,910.00
4. Streets	\$ 5,470.00
5. Police	\$ 1,110.00
6. Fire	\$ 520.00
7. Parks and Recreation	\$11,980.00
8. General City Facilities	\$ 6,380.00
 <u>Supplemental Specific Area Fees</u>	
A. Kettleman Lane Lift Station	\$ 1,610.00
B. Harney Lane Lift Station	\$ 830.00
C. Cluff Avenue Lift Station	\$ 1,170.00

The Kettleman Lane Lift Station area consists of approximately 102 acres bounded on the south by the north right-of way of Kettleman lane (State Highway 12); on the east by the west line of the Woodbridge Irrigation District Canal right-of-way; on the north by the south line of the Woodbridge Irrigation District Canal right-of-way

and the quarter-quarter Section Line north of Kettleman Lane and on the west by the property line located approximately 1185 feet east of the centerline of Lower Sacramento Road, plus the area of Tract No. 2378, Sunwest Unit No. 12 as filed for record in Book 30, Maps and Plats at page 52, San Joaquin County records, all as shown on Exhibit A.

The Harney Lane Lift Station area consists of approximately 292 acres bounded on the south by the north right-of-way of Harney Lane; on the east by the west line of the Woodbridge Irrigation District; on the north, east of Lower Sacramento Road by the quarter-quarter Section Line north of Harney Lane, and west of Lower Sacramento Road by the property line located approximately 2300 feet north of the center line of Harney Lane; and on the west by the General Plan Boundary, approximately 1/2 mile west of Lower Sacramento Road as shown on Exhibit B.

The Cluff Avenue Lift Station area consists of approximately 158 acres bounded on the south by the right-of-way of the Southern Pacific Transportation Company (SPT) tracks along Victor Road (State Highway 12); on the east by the right-of-way of the Central California Traction Company (CCT); on the north by the Mokelumne River and on the west by the property lines approximately one-eighth mile west of the centerline of Guild Avenue; plus the 7.7 acre parcel located east of the CCT and north of the SPT shown as Parcel A per the Parcel Map filed for record in Book 11 of Parcel Maps at page 73 San Joaquin County Records.

3. CALCULATION OF FEE.

Development Impact Mitigation Fees shall be calculated by the Public Works Director in accordance with Chapter 15.64 of the Lodi Municipal Code and this resolution.

The project acreage shall exclude portions of property left vacant and not to be used for storage, parking, or other uses related to the project. Where the project adds to or incorporates existing buildings or improvements, the acreage shall be adjusted by the Public Works Director to account for this existing use. For purposes of this section, "existing" shall mean any building or improvement which is in existence or for which a permit has been obtained upon the effective date of this resolution.

Where projects include a change in land use categories, the appropriate difference in RAE factors shall be computed by the Public Works Director. Where the project results in a less intensive land use involving a lower RAE factor, a fee credit in lieu of a refund shall be made. Record of the previous higher RAE factor shall be maintained by the Public Works Director for that parcel for a period of time not to exceed ten years and shall, during that time, be applied toward future improvements on that parcel.

4. EFFECTIVE DATE

The Development Impact Fees adopted in this Resolution shall take effect immediately upon the effective date of Ordinance No. 1518. For projects in which an agreement and memorandum of understanding for public improvement fees has been executed and a final map or building permit has been approved, such fees shall be due and payable thirty days after the above effective date or thirty days after billing by the City, whichever is later.

I hereby certify that Resolution No. 91-___ was passed and adopted by the City Council of the City of Lodi in a regular meeting held _____, by the following vote:

Ayes : Councilmembers

Noes: Councilmembers

Absent: Councilmembers

Alice M. Reimche
City Clerk

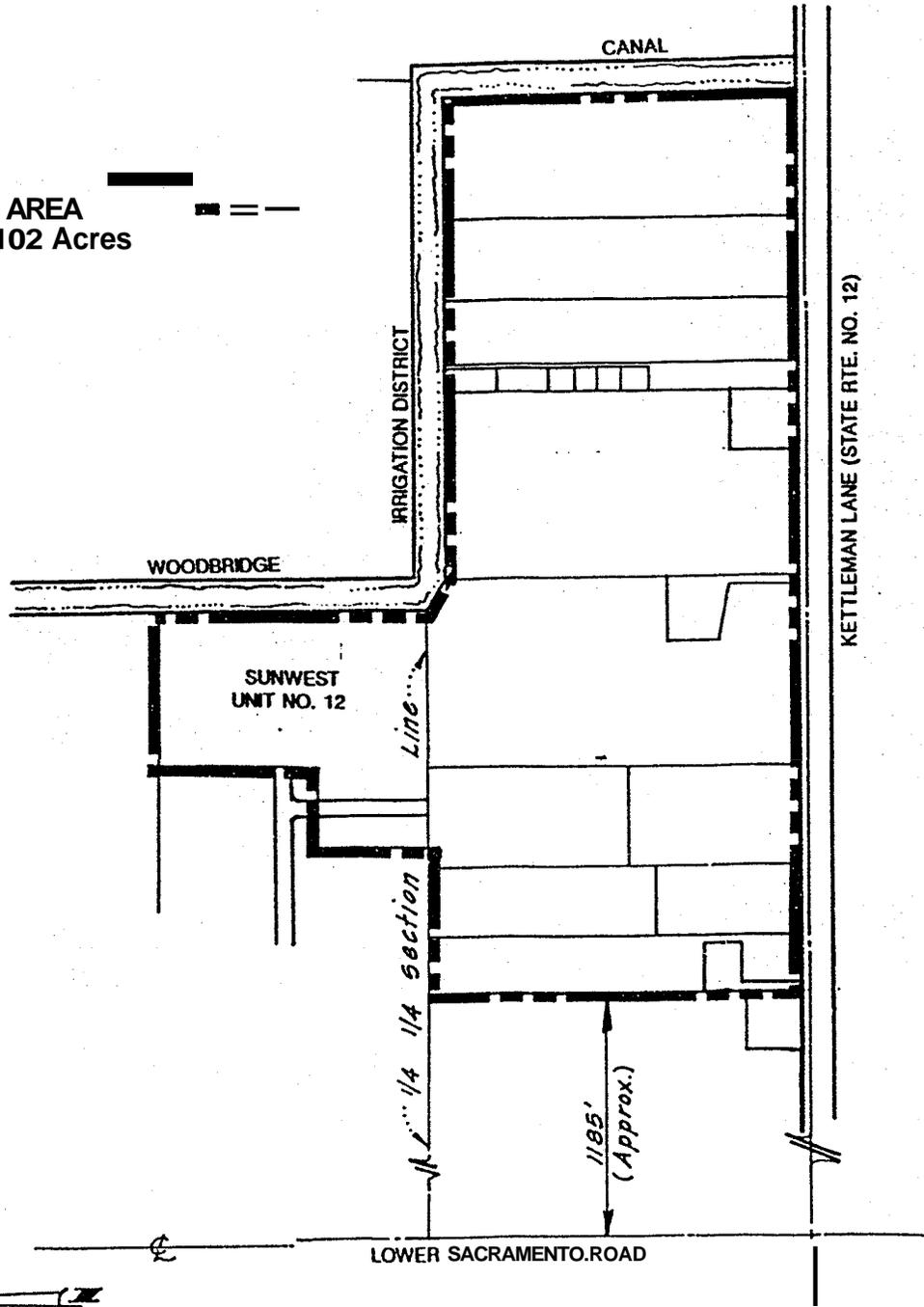


CITY OF LODI

PUBLIC WORKS DEPARTMENT

KETTLEMAN LANE LIFT STATION SERVICE AREA

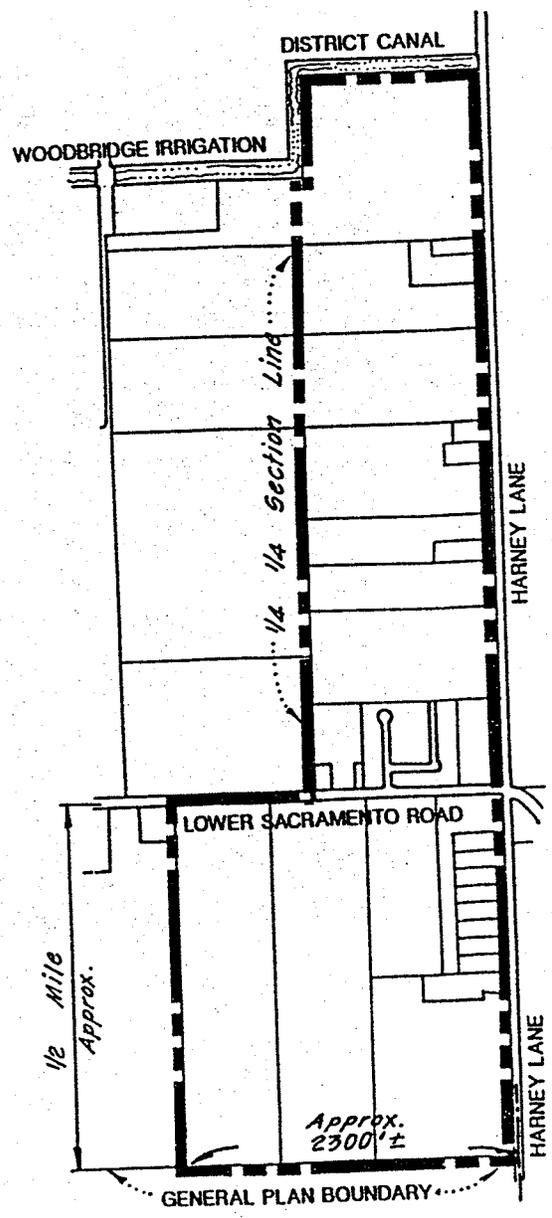
SERVICE AREA
Approx. 102 Acres



N.T.S.

Dr	No.	Date	Revision	Appr.
JM				
Ch				
Date				
8/91				

EXHIBIT A



SERVICE AREA ———— ■■■
 Approx. 292 Acres

N.T.S.

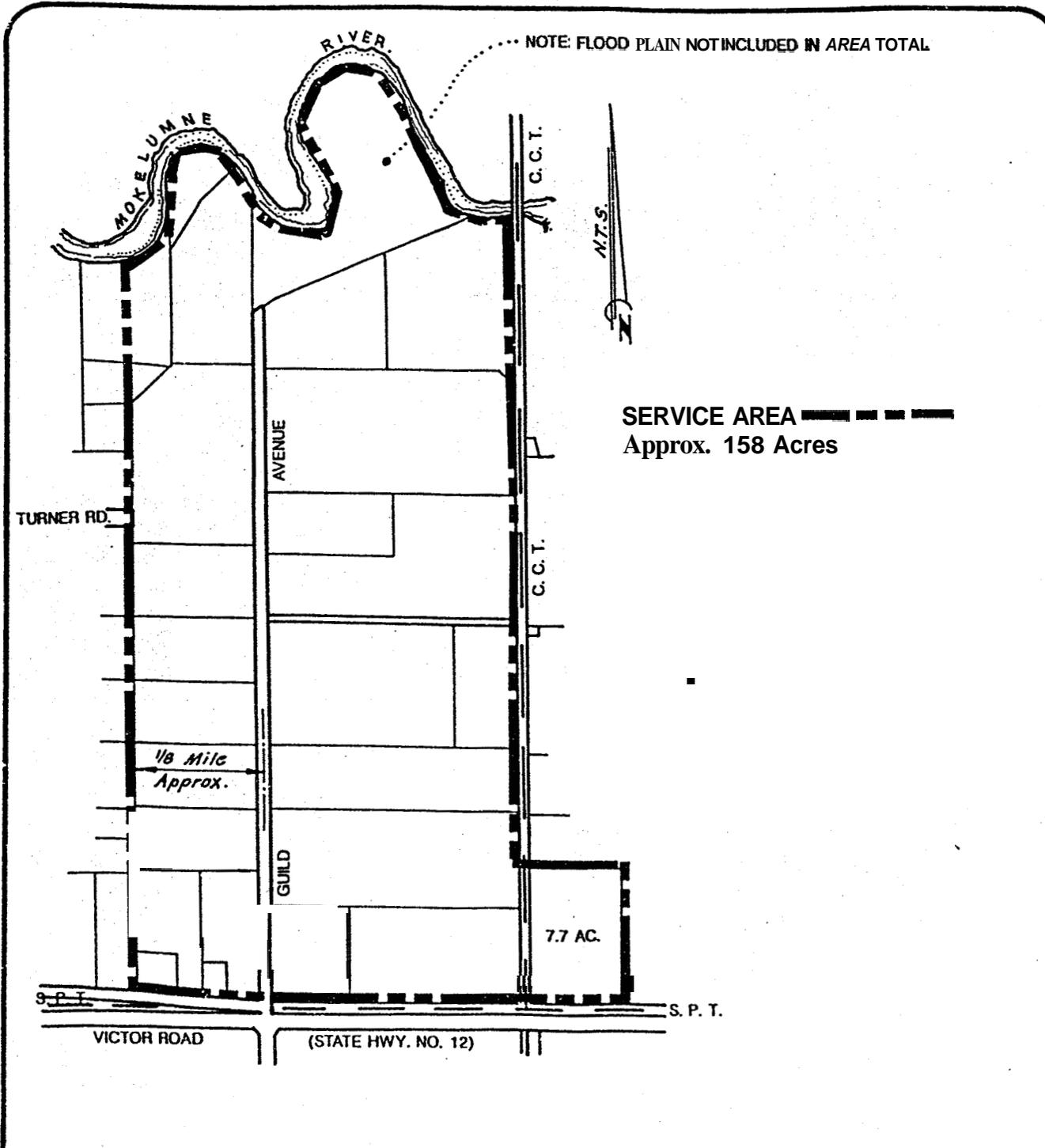
Dr.	No	Date	Revision	Appr.
JM				
Ch.				
Date				
8/31				

EXHIBIT B



CITY OF LODOLI
PUBLIC WORKS DEPARTMENT

**CLUFF AVENUE
LIFT STATION
SERVICE AREA**



Dr.	No.	Date	Revision	Appr.
JM				
Ch.				
Date				
8/21				

EXHIBIT C



Manteca

August 20, 1991
2529-88-00

Mr Jack Ronsko
Director of Public Works
City of Lodi
221 W. Pine Street
Lodi, CA 95240

SUBJECT : DEVELOPMENT IMPACT FEE STUDY FINAL REPORT

Dear Mr. Ronsko:

This report has been prepared for the City of Lodi to evaluate the capital improvements required to serve expanding areas of the City identified in the General Plan. The primary objectives of the study were to identify capital improvements, prepare estimates of probable construction cost, forecast the timing of capital improvements, and develop a financing plan to fund the construction of the capital improvements.

The principal results of the study are summarized in Chapter 2, Methodology and Results. All comments received from the City and others on the draft report have been incorporated into this final version.

We appreciate the assistance and cooperation we received from City staff during the course of the study. Richard Prima deserves special recognition for his tireless efforts on the project.

It has been our pleasure to serve the City of Lodi on this important project and we look forward to again serving the City on future projects.

Very truly yours,

NOLTE AND ASSOCIATES

Wally Sandelin

F. Wally Sandelin
Group Manager

FWS/1er (CL1223-B)

Enclosure



NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

123 North Sycamore Avenue, Suite 101, Manteca, CA 95336 Tel: (209)239-9080

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

Prepared for:

CITY OF LODI

Prepared by:

NOLTE AND ASSOCIATES
1750 Creekside Oaks Drive, Suite 200
Sacramento, California 95835
(916) 641-1500

NOLTE AND ASSOCIATES
123 N. Sycamore Avenue, Suite 101
Manteca, California 95336
(209) 239-9080

and

ANGUS MCDONALD AND ASSOCIATES
1950 Addison Street, Suite 107
Berkeley, California 94704
(415) 548-5831

August 1991

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
CHAPTER 1 INTRODUCTION	1
INTRODUCTION	1
Purpose of the Fee	1
Planning Period	1
Basis of Costs	1
Background - Development Forecast	2
Residential Acre Equivalents	2
CHAPTER 2 METHODOLOGY AND RESULTS	4
SUMMARY OF FUNDING SOURCES	4
Phasing of Improvements for Maximum Efficiency	4
Assumptions/Concepts	4
Procedure for Staging Public Improvements	6
Comments on Specific Projects and Services	7
Streets and Raads	7
Parks and Recreation	8
Police, Fire and General Facilities	8
Identifying Projects Curing Existing Deficiencies	8
Interfund Borrowing	8
Detailed Methodology	9
Summary of Fees	10
Changes In Land Use Entitlements	10
CHAPTER 3 WATER SERVICE	14
OVERVIEW	14
Supply	14
Distribution System	14
Water Master Plan	15
Water Reimbursement Policy	15
Existing Deficiencies	16
PLANNED WATER FACILITIES	16
Supply	27
Distribution System	27
Treatment	27
ESTIMATED COSTS AND PHASING	28
DEVELOPMENT IMPACT FEE	28
Relationship of Water Projects to New Development	28
Relationship of Water Projects to Land Uses	29

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
Recommended Fees	29
CHAPTER 4 SEWER SERVICE	31
OVERVIEW	31
Collection System	31
Treatment and Disposal	31
Master Sewerage Plan	31
Sewer Reimbursement Policy	32
Existing Deficiencies	32
PLANNED SEWERAGE FACILITIES	33
Collection System	33
Treatment and Disposal	33
ESTIMATED COSTS AND PHASING	33
Relationship of Sewer Projects to New Development	37
Relationship of Sewer Projects to Land Uses	37
Recommended Fees	39
BURDEN ANALYSIS FOR SEWER SUB-ZONES	39
CHAPTER 5 STORM DRAINAGE	42
OVERVIEW	42
Collection System	42
Detention Basins	43
Master Storm Drainage Plan	43
Master Storm Drainage Fee	43
PLANNED STORM DRAINAGE IMPROVEMENTS	43
Collection System	44
Detention Basins	44
ESTIMATED COSTS AND PHASING	44
Relationship of Storm Drainage Projects to New Development	49
Relationship of Storm Drainage Projects to Land Uses	49
Recommended Fees	49
CHAPTER 6 STREETS AND ROADS	51
OVERVIEW	51
Existing Traffic Conditions	51
Circulation Plan	51
Existing Deficiencies	51

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
PLANNED CIRCULATION IMPROVEMENTS	52
Developer Required Improvements	52
Street and Road Improvements	62
Freeway Improvements	62
ESTIMATED COSTS AND PHASING	65
Relationship of Streets and Roads Projects to New Development	65
Relationship of Streets and Roads Projects to Land Uses	66
Recommended Fees	66
Regional Facilities	66
CHAPTER 7 POLICE	68
OVERVIEW	68
Level of Service	68
Existing Police Facilities	68
Existing Deficiencies	69
PLANNED POLICE FACILITIES	69
ESTIMATED COST AND PHASING	69
DEVELOPMENT IMPACT FEE	72
Relationship of Police Projects to New Development	72
Relationship of Police Projects to Land Uses	72
Recommended Fees	72
CHAPTER 8 FIRE	74
OVERVIEW	74
Level of Service	74
Existing Fire Facilities	74
Existing Deficiencies	74
PLANNED FIRE FACILITIES	74
ESTIMATED COST AND PHASING	76
DEVELOPMENT IMPACT FEE	76
Relationship of Fire Projects to New Development	76
Relationship of Fire Projects to Land Uses	76
Recommended Fees	76

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
CHAPTER 9 PARKS AND RECREATION	78
OVERVIEW	78
- Level of Service	78
Existing Park and Recreation Facilities	78
Existing Deficiencies	80
PLANNED PARK AND RECREATION FACILITIES	80
ESTIMATED COSTS AND PHASING	87
DEVELOPMENT IMPACT FEE	87
Relationship of Park and Recreation Projects to New Development	87-
Relationship of Park and Recreation Projects to Land Uses	87
Recommended Fees	87
CHAPTER 10 GENERAL CITY FACILITIES	89
OVERVIEW	89
Level of Service	89
Existing Deficiencies	89
PLANNED GENERAL CITY FACILITIES	89
ESTIMATED COST AND PHASING	89
DEVELOPMENT IMPACT FEE	93
Relationship of General City Projects to New Development	93
Relationship of General City Projects to Land Uses	93
Recommended Fees	93
APPENDIX A	95

LIST OF FIGURES

<u>Figure Number</u>	<u>Title</u>	<u>Page No.</u>
3-1	Water System Improvements	26
4-1	Sanitary Sewer System Improvements	36
5-1	Storm Drainage Improvements	48
6-1	Typical Street Section	63
6-2	Street Improvements	64-
9-1	Parks and Recreation Improvements	86

LIST OF TABLES

<u>Table Number</u>	<u>Title</u>	<u>Page No.</u>
2-1	Summary of Estimated Major Capital Improvement Program Costs and Funding Services	5
2-2	Summary of Development Impact Fees - All Fees	11
3-1	Development Related Capital Costs and Phasing - Water	17
3-2	Summary of Development Impact Fees - Water	30
4-1	Development Related Capital Costs and Phasing - Sewer	34
4-2	Summary of Development Impact Fees - Sewer	38
4-3	Sewer Sub-Zone Fee Calculations	40
5-1	Development Related Capital Costs and Phasing - Storm Drainage	45
5-2	Summary of Development Impact Fees - Storm Drainage	50
6-1	Development Related Capital Costs and Phasing - Streets and Roads	53
6-2	Summary of Development Impact Fees - Streets and Roads	67
7-1	Existing Deficiencies Analysis - Police	70
7-2	Development Related Capital Costs and Phasing - Police	71
7-3	Summary of Development Impact Fees - Police	73
8-1	Development Related Capital Costs and Phasing - Fire	75
8-2	Summary of Development Impact Fees - Fire	77
9-1	Inventory of Existing Park and Recreation Acreage	79
9-2	Inventory of Existing Park and Recreation Facilities	81
9-3	Existing Deficiencies Analysis - Parks and Recreation	82
9-4	Development Related Capital Costs and Phasing - Parks and Recreations	83

Table Number

Title

Page No.

9-5	Summary of Development Impact Fees - Parks and Recreation	88
10-1	Existing Deficiencies Analysis - City Hall Facilities	90
10-2	Development Related Capital Costs and Phasing - General City Facilities	93
10-3	Summary of Development Impact Fees - General City Facilities	94
	APPENDIX A	96

CHAPTER 1

INTRODUCTION

INTRODUCTION

The enactment of AB 1600 (Government Code §66000 et. seq.) has generated formal and stringent requirements for documenting the basis for valid development impact fees. In response to the changing legal climate, as well as the desire to have a comprehensive financing plan for the various public and numerous new facilities in Lodi, the current fees must be updated and new numerous fees need to be implemented.

The goal of the Development Impact Fee Study is to prepare development impact fees which will provide funds to construct various types of improvements such that the City of Lodi's adopted level of service is maintained throughout the planning period. This goal will be attained consistent with the requirements of AB 1600.

Purpose of the Fee

The purpose of development impact fees is to provide adequate financing for the various public facility projects that are required to implement the City's General Plan. The fee is imposed such that new development will bear its fair share of providing adequate infrastructure.

The fees collected will be used to finance the design, construction, and inspection of streets and roads, Water, Sewer, Drainage, Parks and Recreation, Police, Fire, and General City facilities. The fee revenue will also be used for a major update of the fee program, which is to be performed every 5 years.

Planning Period

The proposed General Plan before the City of Lodi covers a planning period of April 1987 to 2007. For the purposes of the fee study, the planning period was broken down into fiscal year increments: 1991/92, 1992/93, 1993/94, 1994/95, 1995/96, 1996/97, 1997 - 2002, and 2002 - 2007. The planning increments are the basis for projecting fee collections, capital improvement expenditures and cash flow analyses.

Basis of Costs

Capital improvement schedules have been prepared for the Proposed General Plan that cover Water, Sewer collection (but not the wastewater treatment facility), Storm Drainage, Streets and Roads, Police, Fire, and General City facilities. Capital costs included in the General City facilities category are, for example, city hall expansion, library expansion, fee program monitoring, parking lot construction, and miscellaneous projects not falling

into other infrastructure categories. Project descriptions for each project were developed with the assistance of City staff, other City-retained consultants, and the authors. For each major project, estimates of cost have been prepared utilizing current cost data from the City, recent bids for similar projects, contractors and suppliers. Estimates of cost are based upon January 1, 1990 dollars throughout this report. The Engineering News Record 20-Cities Average Construction Cost Index for January 1990 was, at that time, 4673. The cash flow model inflates the actual expenditures for public improvements (for both land and construction costs using the above index) to the midpoint of each fiscal year.

Background - Development Forecast

The first step in calculating a valid development impact fee is to prepare a forecast of the timing and rate at which the City will develop. This forecast must be consistent with Lodi's General Plan and Growth Management Ordinance.

The development forecast serves two purposes:

- The development forecast provides the basis for determining when the required infrastructure must be completed to maintain the targeted level of service set forth by the City.
- The development forecast plays a significant role in forecasting cash flow. The amount of development that occurs throughout the planning period determines the amount of the fee and the development in any particular year determines the total dollars that are available to fund improvement projects.

The forecast of final mapping was prepared per gross acre by the City of Lodi and is presented in Appendix A. Because the City will collect development impact fees at the time of the final subdivision map is recorded, a forecast of final mapping was used to estimate the inflow of cash. The construction capital outlay forecast was based upon the City's proposed Growth Management Plan which provided the probable location of development.

The annual update of the fee program will include an assessment of the extent to which development in Lodi has been occurring as forecasted. If rates of development begin to depart substantially from expectations, the development forecast and fee program will be updated based on a forecast that reflects then-current expectations.

Residential Acre Equivalents

After the amount of development was forecast for each land use category, a conversion was made into the number of Residential Acre Equivalents (RAE's) that would be developed, for each category of public improvements. An RAE factor measures the use or burden a land use places on a category of public improvements (e.g., water supply or roadway improvements) relative to the use

or burden placed on those improvements by an acre of single family dwellings in the low-density residential category.

As one simple example, the water service RAE factors reflect relative water consumption. Since the Low Density residential category is selected as the use from which all other land uses are measured, this land use category has a RAE factor for all services equal 1.0 RAE per acre. All other RAE factors for the category of public services being considered are scaled relative to this "base" RAE factor for the Low Density Residential land use category.

For this example, the RAE factors for water are calculated in the following manner for low density and medium density residential land use categories. Assume a population and unit density as shown below.

<u>Land Use</u>	<u>Population</u>	<u>Unit Density</u>
Low Density	2.75/unit	5/acre
Medium Density	2.25/unit	12/acre

Also, assume a per capita average water consumption of 285 gallons per day. Therefore, the water demand per acre can be calculated as follows:

Low Density: Demand = $2.75 \times 5 \times 285 = 3,919$ gal/day/acre

Medium Density: Demand = $2.25 \times 12 \times 285 = 7,695$ gal/day/acre

By this method, the results indicate that the demand of medium density residential land exerts a 2 times ($7695/3919 = 1.96$) greater demand upon water supply and transmission facilities than does low density residential. Therefore, a RAE factor of 1.96 is assigned to medium density residential for water remembering, of course, that low density residential is the baseline having a RAE factor of 1.0.

CHAPTER 2

METHODOLOGY AND RESULTS

SUMMARY OF FUNDING SOURCES

Capital improvement projects to support the Proposed General Plan and other City improvements are to be funded through a number of sources. In the course of identifying Proposed General Plan capital improvements, a number of existing deficiencies were identified in each of the service areas that are not to be funded by development impact fees. City staff has projected, where possible, the sources of funds to finance those projects and/or portions of projects that are not development related as summarized in Table 2-1.

During the course of assembling the information included in this report and summarized in Table 2-1, a number of capital improvement plans, old and new, were reviewed. Information has been taken from these capital improvement plans and has been included in the table. Because the planning horizon for the capital improvement plans provided by the City are not synchronized with the General Plan period, the totals for capital improvements in Table 2-1 are not comparable to past City plans.

Phasing of Improvements for Maximum Efficiency

The matching of required public improvement projects to revenues from the development impact fee program was an iterative process that included close coordination with the Growth Management Plan. Two objectives were served:

- The location and timing of new public improvements in Lodi were planned to help assure an orderly and cost-efficient pattern of development.
- Public improvements were timed to assure that Level of Service (LOS) targets for each service were reasonably maintained.

Insofar as practical, the growth rates that are part of the Growth Management Plan can be accommodated throughout the City. Development can occur simultaneously in several areas of the City, rather than be concentrated in one area at a time. A temporary quasi-monopoly on supply of developable land is avoided.

The following paragraphs describe some of the basic assumptions and concepts that were used in arriving at project phasing. Additional information concerning specific facilities is included at the end.

Assumptions/Concepts

The following assumptions and concepts guided the process of preparing the development forecast and staging of public improvements to meet LOS targets.

TABLE 2-1
SUMMARY OF ESTIMATED MAJOR CAPITAL IMPROVEMENT PROGRAM COSTS AND FUNDING SOURCES

21-Aug-92

DESCRIPTION	PROGRAM COSTS (1)	GENERAL FUND	WATER FUND	SEWER FUND	STORM DRAIN FUND	SAN JOAQUIN COUNTY	STATE AND FEDERAL FUND	GAS TAX FUND6 T.D.A.	MEASUREK FUNDS	OTHER	DEVELOPMENT IMPACT FEE FUND (2)
1. Water Service	\$10,931,525	to	\$1,628,000	to	\$0	to	to	to	\$0	to	\$9,303,525
2. Sewer Service (3)	\$3,013,920	to	to	\$1,005,500	\$0	to	to	to	\$0	\$639,500 (4)	\$1,368,920
3. Storm Drainage	\$17,285,707	\$930,000	to	to	\$121,000	to	to	to	to	to	\$16,234,707
4. Streets and Roads	\$45,100,837	\$13,800,000	to	\$0	\$0	\$176,000	\$831,000	\$13,552,500	\$1,450,750	to	\$15,290,887
5. Police	\$2,576,000	\$74,000	to	to	\$0	\$0	to	to	to	\$0	\$2,502,000
6. Fire	\$2,155,000	\$1,090,000	to	to	to	to	\$0	to	\$0	\$0	\$1,065,000
7. Parks and Recreation	\$30,191,000	\$5,531,555	to	\$0	\$0	to	\$0	to	\$0	\$8,353,000 (5)	\$18,306,445
8. General City Facilities	\$12,884,309	\$1,159,125	to	to	to	to	to	\$0	to	to	\$11,725,184
TOTAL:	\$124,138,398	\$22,584,680	\$1,628,000	\$1,005,500	\$121,000	\$176,000	\$831,000	\$13,552,500	\$1,450,750	\$6,992,500	\$75,796,460

NOTES:

1. Costs do not include streets and utilities within development projects typically constructed by the developer as normal improvements
2. "Development Impact Fee Fund" will consist of eight separate funds, one for each category of facility.
3. Sewer service does not include the wastewater plant expansion which is funded by the existing wastewater connection fee.
4. Lift station area of benefit fees.
5. Hutchins Street Square Fund
6. Fee amounts shown are for fiscal year 1991/1992.

- Development of new residential land will be limited such that the population will grow at 2% based on the September 1989 population. This allows more units (acres) in the early years than in middle years due to "catch up" after the wastewater moratorium.
- Commercial development will tend to follow residential development, except where one major development is currently being processed (Lodi Shopping Center, also called Sunwest Plaza, at the SE corner of Lower Sacramento Road and Kettleman Lane).
- Industrial development was assumed to grow uniformly.
- The implementation of the Growth Management Plan will discourage new developments that require extraordinary extension of utilities or other improvements, such as trunk lines through agricultural property. This will help lower the cost of development and reduce disruption of agricultural activities.

Procedure for Staging Public Improvements

The specific steps that led to the staged Capital Improvements Program are described in the following paragraphs.

- The annual number of units to be allowed was converted to acres based on an average of seven units per acre per the Draft General Plan.
- Sub-areas surrounding the City were identified based on available storm drain basins, utility trunk lines, major streets, General Plan limits, and natural boundaries.
- The acreages were matched with the sub-areas and broken into three phases: one 6 year block followed by two 5 year blocks.
- The above two steps were repeated until the acreage provided in each phase matched the number of units in the first step.

The majority of the projects were then placed in the appropriate phase coinciding with development of the adjacent area. This would include projects in which the impact fee fund would be used in conjunction with frontage improvements by a developer such as for oversized lines and major street crossings. As noted in the assumptions, there should be few cases in which a utility must be extended outside the development. (Exceptions and clarifications are noted below.)

Careful attention was paid to the timing of construction of public improvements, compared to increases in development and demand for services. Each improvement was staged to insure that it would be completed and in place

before the actual level of service had declined below the City's Level Of Service target.

In support of the objective of avoiding degradation of service level, the City of Lodi intends to collect development impact fees in advance of the date of final inspection or the date a Certificate of Occupancy is issued. Delaying residential fees to the time of occupancy would assure that completion of public improvements would considerably lag the residential development that is creating a significant percentage of the demand for the improvements. To avoid this situation, the City's fee ordinances will provide that development impact fees are due at the time that a final subdivision map is filed. Public capital improvements can then be constructed in parallel with the process of readying parcels for development and constructing residences. The service capacity provided by the public improvements can be in place at the time that increased demand actually occurs.

It is possible that developed parcels within the existing General Plan will undergo redevelopment or a change in the land use resulting in assessment of additional fees. In such instances, fees would be collected upon issuance of the building permit. In addition, parcels that are permitted to develop without a final subdivision map (which happens often for commercial and industrial development) will also pay the fees at building permit.

The present document constitutes a "...proposed construction schedule or plan.. ." for seventeen years. The various fee ordinances will ensure that "...an account has been established and funds appropriated..." Accordingly, the quoted requirements of Government Code Section 66007 have been met. Lodi can collect residential impact fees in advance of final inspection or occupancy.

Comments on Specific Projects and Services

The following paragraphs explain the reasons for the staging of certain key projects.

Streets and Roads

- The Highway 12 (Kettleman Lane) Project Study Report was placed early in the program. This Report will take some time to do and the results will affect the scope and cost of subsequent projects.
- Street capacity improvements were phased based on examination of the present and future volumes, capacity of existing improvements and the capacity after the new improvement.

Parks and Recreation

- The Master Plan Study was placed early since it will take some time to do and the results will affect the scope and cost of subsequent projects.
- Parks would be completed by the end of the phase in which adjacent development occurred.

Police, Fire and General Facilities

- Projects were phased based on discussions with the Police and Fire Chiefs and other department heads.
- The west side fire house was placed in the first phase since it is located in the corresponding area.

Identifying Projects Curing Existing Deficiencies

The entire list of capital improvements was reviewed to identify projects which primarily cured existing deficiencies. Projects that were excluded from the fee program based on this evaluation are any type of replacement, repair or renovation of an existing facility which provides for little or no added capacity.

In addition, large projects, or groups of projects, in Parks and Recreation, Police and General City Facilities were evaluated on an individual basis. The results of this level of analysis is that certain projects were split between new development (fee program funded) and existing development (other financing source).

Interfund Borrowing

The staging of capital improvements frequently produces cash flow deficits in one or several of the fee funds. This is the result of large projects that, once completed, provide capacity beyond the year of construction - and beyond the time in which the funds are required to construct the project. One approach to deal with cash flow deficits is through interfund borrowing.

Interfund borrowing is predicated on the creation of a "Pooled Money Fee Account" into which the annual surplus from each fee account flows and from which borrowing to cure cash flow deficits occurs. Each fee (i.e. Water, Sewer, etc.) is calculated and accounted for separately. Positive fund balances earn interest revenue and negative fund balances accrue interest to be paid. Under this approach the development impact fee has two parts.

1. Portion Of The Fee From Construction Of Improvements: This part of the fee is equivalent to the average cost of the programmed improvements per RAE.

2. Portion Of The Fee From Finance Charge: The finance charge is set such that the ending balance in the particular fee fund is as close to zero as possible, In cases where the cash flow is relatively smooth such that no borrowing will take place, it is entirely possible that the "Finance Charge" will be negative. This is the result of interest earnings over the course of the program.

On the other hand, when funds must be borrowed a positive finance charge, and thus higher fee, is required to pay the interest cost involved in borrowing among funds.

The test of whether or not interfund borrowing is successful in compensating for the cash flow deficits is the ending fund balance in the Pooled Money Fee Account. If this figure is positive throughout the program then interfund borrowing has served its purpose and cured the cash flow problems. If any of these figures are negative, interfund borrowing has not fully alleviated the cash flow deficits. Adjustments to the project staging, or borrowing from an outside source would be necessary to fund the program using the interfund borrowing approach.

The cash flow analysis indicates that almost every fee has cash flow problems. These issues have been resolved through inter-fee-fund borrowing such that the program of capital improvements are funded in the year required. The inter-fee-fund borrowing mechanism is such that funds borrowing money pay interest, 2nd funds lending money receive interest. As a result, the fee in a fund which lends money to other fee funds is not any higher than it otherwise would be to fund the public improvements.

Alternatives to this approach include borrowing from other City funds, which would also entail repayment with interest, and "borrowing" from developments early in the program. This would entail charging a higher fee to the initial development projects and repaying it in later years with fees from subsequent development. Both alternatives require additional administrative effort and result in a higher fee.

Detailed Methodology

A project phasing schedule is prepared, as determined by the development forecast and the adopted service standard, showing the timing of the expenditures required for each improvement. A forecast of Residential Acre Equivalents is prepared, then converted into a forecast of revenues collected from the fee in each period. The fee and cost of capital improvements are inflated, for purposes of analysis, at the same rate. However, it was assumed that the inflation effects on the fee are lagged one year due to the fact that the fee is only updated at the end of each year. Because the General Plan was not completed in the 1990-91 fiscal year, all capital costs were inflated to January 1991 dollars and the fees' then calculated.

The amount of the finance charge is manipulated until:

- All projects have been constructed at their then actual year cost;
- Only a nominal surplus remains in the Development Impact Fee account at the end of the planning period.

Summary of Fees

A summary of the development impact fees is presented by major land use category in Table 2-2. This summary presents the summation of the impact fee imposed for each of the relevant facility categories in the development impact fee plan. The fee for each particular category of public improvement is presented in the applicable chapter (e.g. Streets and Roads - Chapter 6). Each fee, except portions of the sewer impact fee is imposed citywide throughout the entire planning period.

Each fee will be fine-tuned annually to reflect inflation and other minor adjustments. Annual updates of the fee should be based upon the increase in construction costs for the year as determined by comparing the ENR 20 Cities Average Construction Cost Index for the beginning and end of the year. The first two annual fee updates (1989-90 to 1990-91 and 1990-91 to 1991-92) is reflected throughout the report. Fee calculations for this report were done to the nearest \$1.00 and have been rounded to the nearest \$10.00.

Changes In Land Use Entitlements

Parcels may undergo redevelopment or a change to a more intensive land use. The development impact fees that will be due reflect the difference between the fee appropriate to the more intense use and the fee that would have been appropriate to the previous use. In concept, the various classes of infrastructure had the capacity to meet the demand placed by the original land use. The intensification of use will create additional demand. Additional capacity must be purchased through the incremental development impact fee.

For the case when a proposed development would result in a more intense demand upon infrastructure than planned, it may be appropriate to assess a special fee. Purpose of such a special fee would solely be to insure that services/benefits provided by the City are fairly paid for by the user. Of course, by the nature of setting fees based upon a service standard, the focus is upon the City and neighborhood averages. Therefore, demand deviation above and below the average is assumed. Defining the maximum permitted demand deviation before assessing a special fee should be up to the Public Works Director.

**TABLE 2-2
SUMMARY OF DEVELOPMENT IMPACT FEES
ALL SERVICES**

21-Aug-91

Land Use Categories	Total Fees	Water		Storm Drainage		Streets & Roads		Police		Fire		Parks and Recreation		General City Facilities			
		RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee		
RESIDENTIAL																	
Low Density	\$40,170	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.00	\$1,110	1.00	\$520	1.00	\$11,980	1.00	\$6,380
Medium Density	\$81,190	1.98	\$11,190	1.98	\$2,140	1.00	\$7,910	1.90	\$10,720	1.77	\$1,960	1.98	\$1,020	1.43	\$17,130	1.43	\$9,120
High Density	\$107,210	3.49	\$19,930	3.49	\$3,800	1.00	\$7,910	3.05	\$16,680	4.72	\$5,240	4.32	\$2,250	2.80	\$33,540	2.80	\$17,860
East Side Residential	\$42,180	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.09	\$1,210	1.10	\$570	1.10	\$13,180	1.10	\$7,020
PLANNED RESIDENTIAL																	
Low Density	\$40,170	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.00	\$1,110	1.00	\$520	1.00	\$11,980	1.00	\$6,380
Medium Density	\$81,190	1.98	\$11,190	1.98	\$2,140	1.00	\$7,910	1.98	\$10,720	1.77	\$1,960	1.98	\$1,020	1.43	\$17,130	1.43	\$9,120
High Density	\$107,210	3.49	\$19,930	3.49	\$3,800	1.00	\$7,910	3.05	\$16,680	4.72	\$5,240	4.32	\$2,250	2.80	\$33,540	2.80	\$17,860
COMMERCIAL																	
Neighborhood Commercial	\$41,280	0.64	\$3,650	0.04	\$1,020	1.33	\$10,520	1.80	\$10,390	4.28	\$4,750	2.77	\$1,440	0.32	\$3,830	0.89	\$5,680
General Commercial	\$49,470	0.64	\$3,650	0.04	\$1,020	1.33	\$10,520	3.82	\$20,900	2.59	\$2,870	1.93	\$1,000	0.32	\$3,830	0.89	\$5,680
Downtown Commercial	\$41,280	0.64	\$3,650	0.04	\$1,020	1.33	\$10,520	1.80	\$10,390	4.28	\$4,750	2.77	\$1,440	0.32	\$3,830	0.89	\$5,680
Office Commercial	\$54,720	0.64	\$3,650	0.04	\$1,020	1.33	\$10,520	3.27	\$17,890	3.72	\$4,130	2.40	\$1,280	0.54	\$6,470	1.63	\$9,760
INDUSTRIAL																	
Light Industrial	\$30,900	0.26	\$1,480	0.42	\$460	1.33	\$10,520	2.00	\$10,940	0.30	\$330	0.64	\$330	0.23	\$2,760	0.64	\$4,080
Heavy Industrial	\$29,820	0.26	\$1,480	0.42	\$460	1.33	\$10,520	1.27	\$6,950	0.19	\$210	0.61	\$320	0.33	\$3,950	0.93	\$5,930

Source: Nolte & Associates and Angus McDonald & Associates

NOTES:

(1) Residential Acre Equivalents

(2) Fee amounts shown are for fiscal year 1991/1992.

An example of more intense demand for service than provided for in the fee structure is a shopping center that is located in a neighborhood commercial land use. The specific use (shopping center) is allowed in the land use (Neighborhood Commercial). In the case of the Streets and Roads Fee, a net trip rate of 10.5 peak hour trips is assumed for Neighborhood Commercial but the City Circulation Plan assumes 30 peak hour trips for shopping center uses. In this case, the deviation above the service standard provided by the fee is approximately 200%. Therefore, a special fee is recommended.

The opposite example to an intensification of use would be a parcel that develops at a use that is less intense than its land use entitlement. The various fee ordinances should provide for a "exception procedure" to deal with instances that simply were not contemplated at the time that the ordinance was adopted. As a generalization, exceptions should be granted sparingly. Facilities were sized based on the expected land uses and in many cases capacity will be provided in advance of total demand because of the inability to build certain classes of projects in stages. If exceptions are granted easily, particularly in the later years of the planning period, sufficient development impact fees will not be available to complete the Capital Improvements Program.

An additional consideration is that although a parcel may be developed initially in a less intense use, it may undergo redevelopment in future years. The full fee would be due. If, subsequently the parcel was redeveloped, it would receive credit for the fact that the full fee had been paid. Only if the future use was more intense than the original land use category would a higher fee be due.

The development forecast on which the fees were based includes new development and an estimate of redevelopment. If proposals for significant amounts of redevelopment or reuse are forthcoming in future years, the effect of this can be considered during the annual update of the fee ordinances.

Successfully implementing a 16 year, \$124,000,000 Capital Improvements Program. is a major undertaking. It will require a very serious effort at program management and monitoring of actual performance as compared to plan.

The Capital Improvements Program contains specific line items to provide the cost of staff or consultant services for Program Management for the fee program. A budget is also provided for a major General Plan Update/Capital Improvements Program and Development Impact Fee Update every fifth year.

The program management function should include the responsibility of monitoring actual performance compared to that planned. This monitoring function can be combined with any environmental impact monitoring program as

is recommended either in an Environmental Impact Report (EIR) which are a part of revisions to the City's update of the General Plan or in the EIR's for major projects or Capitol Improvement Projects.

The City is required to make findings each fiscal year regarding any fees unexpended or uncommitted in its account five or more years after deposit. If the findings indicate that there is not a reasonable relationship between the fee and the purpose for which it was charged it must be refunded to the then current property owners. Additionally, the City must, each year, prepare an accounting of each fee account. This is to include the beginning and ending balances, interest and other income, and expenditures and refunds made from the account. The annual accounting of each fee account is to be prepared and the account. The annual accounting of each fee account is to be prepared within 60 days of the close of each fiscal year and must be made available to the public.

CHAPTER 3
WATER SERVICE

OVERVIEW

Water service to Lodi residents is provided by the City. Major components of the water system include wells, distribution piping and a single elevated storage tank. The following sections will describe the City's existing supply and distribution facilities, current planning for expansion of the system, policy relating to cost sharing for major facilities, and existing water service deficiencies.

Supply

Water for the City of Lodi is pumped directly from wells located within the City limits. At present, wells discharge directly into the distribution system. Of the 25 wells needed to serve the existing City, 20 are currently producing. Three wells are not producing due to contamination. Funds have been appropriated to construct two new wells and to construct two replacement wells. Also, funds have been appropriated to design treatment facilities for the removal of DBCP.

Water quality in the aquifers tapped by City wells is generally good. Recently adopted Department of Health Service (DHS) standards for dibromochloropropane (DBCP) will impact the City because the DBCP concentration at 11 well sites exceeds the new State standard. Presently, the City is preparing to conduct pilot studies of granular activated carbon filtration units to remove the DBCP from the water. With respect to DBCP, the better wells are located in the northeast sector of the General Plan area-

Groundwater levels within the basin have steadily dropped over the last years. Concerns for salt water intrusion is a regional concern but may not be a threat to Lodi due to influence of the Mokelumne River as a major contributor to replenishment of the groundwater basin.

Well yields in Lodi are good. Individual wells produce an average of 1,600 gallons per minute. Pumping levels vary across the well field by approximately 80 feet, with the shallowest water in the northeast area and the deepest water in the southwest area. The City operates a Supervisory Control and Data Acquisition (SCADA) system to assist in operating the well field, maintaining pressures in the system, and recording operating data.

Distribution System

Existing distribution piping within the City ranges in size from 2 to 14 inch. By current standards, any distribution piping smaller than 6 inches is

substandard. Smaller pipe was primarily used in the older portions of town and it has, in many cases, been constructed in backyards and alleys.

Backbone of the City distribution system consists of a network of 10 and 14 inch pipe laid on an intersecting grid. Grid intersections are typically separated by a distance of 1/4 to 1/2 mile.

Pressures within the distribution system are maintained using an elevated tank and with assistance from the SCAOA system. Water elevations in the tank are consistently 165 to 180 feet, resulting in a 49 to 55 pound per square inch pressure at the tank.

Water Master Plan

Current planning for the expansion of water supply and distribution facilities to serve the City through the period of the General Plan is embodied in the "Water Master Plan" prepared in 1990. Based upon the General Plan projected population and average water demands of 285 gallons per capita per day, total average day water demand at 2007 will be 22.1 million gallons per day. Existing (1987) average day demand is 12.58 million gallons per day.

A number of planning and design recommendations were presented in the Water Master Plan. Those recommendations that affected the information presented in this report are summarized below.

1. Design for future wells should conform to that for recently constructed wells: 21, 22, and 23.
2. Well and distribution system should be capable of meeting maximum day demands with 20% of the wells out of service.
3. For each 2,000 equivalent persons added to the system, a new well should be constructed.
4. One of every three wells should be equipped with standby power.
5. Re-evaluate the Water Master Plan at least every 5 years.

Water Reimbursement Policy

Under the City's Water Main Extension policy, applicants are reimbursed a portion of the construction cost of oversize mains and major crossings. Commonly, city's and agencies share in the cost of constructing special items of infrastructure, especially, since these special items are typically part of the backbone of the system.

For oversize mains, the reimbursement policy applies to water mains larger than 8 inches in diameter. Major crossings covered by this policy are Woodbridge Irrigation District canals, Southern Pacific Transportation

Company, Central California Traction Company, Highway 99, Highway 12 west of Highway 99, Lower Sacramento Road, and Hutchins Street south of Kettleman Lane. For major crossings, the City will reimburse one half the cost of construction.

City water reimbursement policy is reasonable for the facilities to which it applies. In developing the fee program for water service, the existing policy has been applied to oversizing of water mains and construction of major crossings. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administrative, engineering and inspection. Administrative and engineering reimbursement is limited to 10% by City ordinance.

Existing Deficiencies

The Water Master Plan identified a number of existing deficiencies in the water distribution system. These deficiencies generally include replacement of older pipe and construction of additional mains to reinforce the distribution network in older areas of the City. The work on main replacement will continue to be an ongoing program throughout the City. Funds to provide capacity (wells) for existing City development(s) have previously been appropriated. Significant water quality (DBCP) deficiencies exist at 12 of the 20 producing wells. Estimated cost to correct the pipeline and water quality deficiencies is \$8.2 million. Pipeline reconstruction will be funded through the City water fund. DBCP facilities for existing wells will be constructed using borrowed State funds that will be repaid with water service rates.

Specific listings of the projects earmarked to correct existing deficiencies are not included in this report. Estimates of probable construction cost have been developed for the existing deficiency projects identified by the City. Total estimated cost to construct these projects is \$1,628,000. Funds to construct these projects will come primarily from the Water Fund.

PLANNED WATER FACILITIES

Water facilities to serve buildout of the General Plan were identified in the Water Master Plan. As part of the public facilities financing effort of the General Plan, specific project descriptions were generated for those improvements identified by the Water Master Plan. Generally this effort included defining the length and size of pipe and appurtenant facilities; defining the additional equipment to be provided at the wells; and identifying the canal, street and railroad crossing that involve cost sharing by the City. A summary of these facilities is presented below and described in Table 3-1. Project numbers listed in Table 3-1 are used to identify the project locations on Figure 3-1. Minor projects, (mainly water main extensions) are shown separately for administrative purposes; they are subtotaled as one "project" under the fee program. This will allow greater flexibility in providing

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
WATER MAIN EXTENSIONS											
MWSI001	Turner Rd. transmission main consisting of 2,050 ft 10-inch water main west from the Central Calif. traction Co. (oversized main)	\$16,000	\$16,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,613	\$13,387
MWSX010	Turner Road transmission main (MWSI001) includes construction of the main under the Central Calif. Traction Co. (cost sharing)	\$20,000	\$20,000	\$0	to	\$0	\$0	\$0	\$0	\$0	\$20,000
MWSI002	Lodi Avenue transmission main consisting of 1,200 ft 10-inch water main easterly from Guild Ave. to Central Calif. Traction Company (oversized main)	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,470	\$7,530
MWSI003	1,350 ft 10-inch water main southerly from Lodi Avenue. (oversized main) (Cluff Ave extension)	\$11,000	\$11,000	\$5,500	\$0	to	to	\$5,500	\$0	\$0	\$0
MWSI004	Guild Avenue transmission main consisting of 6,600 ft 10-inch water main along future Guild Avenue between Pine and Kettleman. (oversized main)	\$36,000	\$36,000	to	\$0	\$0	\$0	\$0	\$0	\$36,000	\$0
MWSX011	Guild Avenue Main (MSWI004) also includes construction of the main under the Central Calif. Traction Co. RR Tracks. (cost sharing)	\$20,000	\$20,000	to	\$0	\$0	\$0	to	\$0	\$20,000	\$0

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS1005	Transmission main parallel to and adjacent to Central M I . Traction Co. RA tracks, consisting of approx. 6,600 lf of 10-inch water line between Pine and Kettleman, (oversized main)	\$51,000	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,000
MWS1012	Transmission Main (MSW1005) also includes construction of the main under the Central Calif. Traction Co. RR Tracks, (cost sharing)	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000
10 MWS1006	Industrial Way transmission main consisting of 900 lf 10-inch water main to the west of Cliff Avenue, (oversized main already constructed)	\$7,000	\$7,000	\$7,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MWS1007	Industrial Way transmission main consisting of 1,180 lf 10-inch water main to the east of Cliff Avenue extending MWS1006, (oversized main)	\$9,000	\$9,000	\$0	\$0	\$0	\$9,000	\$0	\$0	\$0	\$0
MWS1008	Bockman Road transmission main consisting of 1,300 lf 10-inch water main to the north of Kettleman Lane, (oversized main)	\$10,000	\$10,000	\$0	\$10,000	\$0	W	\$0	W	\$0	\$0
MWS1009	Cliff Avenue transmission main consisting of 2,600 lf 10-inch water main along future street between Kettleman and Vine, (oversized main)	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI010	Kettleman Lane transmission main consisting of 3,680 ft 12-inch water main easterly from Beckman Road. (oversize main)	\$57,000	\$57,000	to	\$0	to	\$0	\$17,000	\$0	\$0	\$40,000
MWSI011	Turner Road transmission main consisting of 2,600 ft 10-inch water main from Lower Sacramento Road. (oversized main)	\$20,000	\$20,000	\$9,714	\$3,007	\$3,065	\$3,130	\$1,084	\$0	to	\$0
MWSI012	Applewood Drive transmission main consisting of 1,300 ft 10-inch water main southerly from Turner Road to the existing main. (oversize main)	\$10,000	\$10,000	\$4,857	\$1,503	\$1,532	\$1,565	\$542	to	to	\$0
MWSI013	Lower Sacramento Road transmission main consisting of 550 ft 10-inch water main northerly from Yosemite Avenue. (oversize main)	\$4,000	\$4,000	\$0	to	\$0	\$0	\$0	to	\$0	to
MWSI014	Applewood Drive transmission main consisting of 13,480 ft 10-inch water main southerly from existing Applewood to Harney Lane. (oversized main)	\$105,000	\$105,000	\$0	\$7,000	\$0	to	\$0	\$0	\$0	\$98,000
MWSX001	Applewood Drive transmission main MWSI014 also includes construction of a 10-inch water line under the W.I.D. Canal (cost sharing)	\$9,000	\$9,000	\$0	to	\$0	to	\$0	to	\$9,000	to

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI002	Applewood Drive transmission main (MWSI014) also includes construction of a 10-inch water line across Kettleman Lane (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500	\$0
MWSI015	Evergreen Drive transmission main consisting of 3,260 ft 10-inch water south, westerly and easterly from existing Evergreen Drive to Lower Sacramento (oversize main)	\$25,000	\$25,000	\$12,143	\$3,759	\$3,831	\$3,912	\$1,355	\$0	\$0	\$0
MWSI008	Evergreen Drive main (MWSI015) includes construction of the main under Lower Sacramento Road (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$9,500	\$0	\$0	\$0	\$0	\$0
MWSI016	Lodi Avenue transmission main consisting of 2,800 ft 10-inch water main westerly from Lower Sacramento Road to General Plan Boundary. (oversized main)	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,266	\$16,734
MWSI017	Vine Street transmission main consisting of 2,250 ft 10-inch water main westerly of Lower Sacramento Road along a future street alignment. (oversized main)	\$18,000	\$18,000	\$0	\$0	\$0	\$0	\$0	\$0	\$18,000	\$0
MWSI018	Kettleman Lane transmission main consisting of 4,350 ft 10-inch water main from 1/2 mi. west of Lower Sacramento Road to Sylvan Way. (oversized main)	\$34,000	\$34,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$22,000	\$0

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS1019	Lower Sacramento Road transmission main consisting of 5,200 ft 10-inch water main northerly to Kettleman Lane to the W.I.D. Canal. (oversized main)	\$41,000	\$41,000	\$0	\$0	\$0	\$0	\$21,000	\$0	\$3,266	\$16,734
MWSX003	Kettleman/Lower Sacramento Road transmission mains (MWS1018 and MWS1019) also includes boring under the two existing roads. (cost sharing)	\$13,000	\$13,000	\$0	\$0	\$0	\$0	\$0	\$0	\$13,000	\$0
MWS1020	Mills Avenue transmission main consisting of 1,400 ft 10-inch water main northerly from Kettleman Lane to W.I.D. Canal (oversized main)	\$11,000	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$11,000	\$0
MWSX004	Mills Avenue transmission main (MWS1020) also includes construction of the main under the W.I.D. Canal. (cost sharing)	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$9,000	\$0
MWSX005	Mills Avenue transmission main (MWS1020) also includes construction of the main under Kettleman Lane (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500	\$0
MWS1021	Century Blvd transmission main consisting of 1,300 ft 10-inch water main westerly from Sage Way along future Century Blvd. alignment to join the existing main. (oversized main)	\$5,000	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI022	Century Blvd. transmission main consisting of 2,760 lf 10-inch water main along future alignment from Lower Sacramento Road to general plan boundary. (oversized main)	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,592	\$18,408
MWSX007	Century Blvd. transmission main (MWSI021) and MWSI022) also includes construction of the main under Lower Sacramento Road. (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500
MWSI023	Future transmission main consisting of 2,800 lf 10-inch aligned between and parallel to Century and Harney, thence southerly from the canal to Harney. (oversize main)	\$51,000	\$51,000	\$0	\$0	\$0	\$0	\$0	\$10,000	\$41,000	\$0
MWSI024	Harney Lane transmission main consisting of 7,900 lf 10-inch water main westerly from Ham Lane to the western boundary of the general plan area. (oversized main)	\$33,000	\$33,000	\$0	\$0	\$0	\$0	\$0	\$0	\$21,000	\$12,000
MWSX006	Harney Lane transmission (MWSX024) includes construction of a 10-inch water line under the W.I.D. Canal. (cost sharing)	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$9,000	\$0
MWSX008	Harney Lane transmission main (MWSI024) includes construction of the main under Lower Sacramento Road. (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS1025	Century Blvd. transmission main consisting of 1,080 ft 10-inch water main easterly from Stockton St. to Chickadee Lane. (oversized main)	\$8,000	\$8,000	\$3,886	\$1,203	\$1,225	\$1,252	\$434	\$0	\$0	\$0
MWS1026	Cherokee/Harney transmission main consisting of 4,700 ft 10-inch water main easterly from SP railroad along Harney, thence, Northerly along Cherokee to Century Blvd. (oversized main)	\$73,000	\$73,000	\$35,458	\$10,975	\$11,186	\$11,424	\$3,957	\$0	\$0	\$0
SUBTOTAL - WATER MAIN:		\$853,500	\$853,500	\$94,559	\$37,447	\$30,339	\$30,283	\$75,873	\$10,000	\$242,206	\$332,794
WATER WELLS											
MWW1001	Installation of Water Well "A" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	to	to	to	\$723,000	to	to
MWW1002	Installation of Water Well "B" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	to	to	\$0	\$0	to	\$723,000
MWW1003	Installation of Water Well "C" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	\$773,000	\$773,000	\$0	to	to	to	\$0	\$0	\$0	\$773,000

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-81

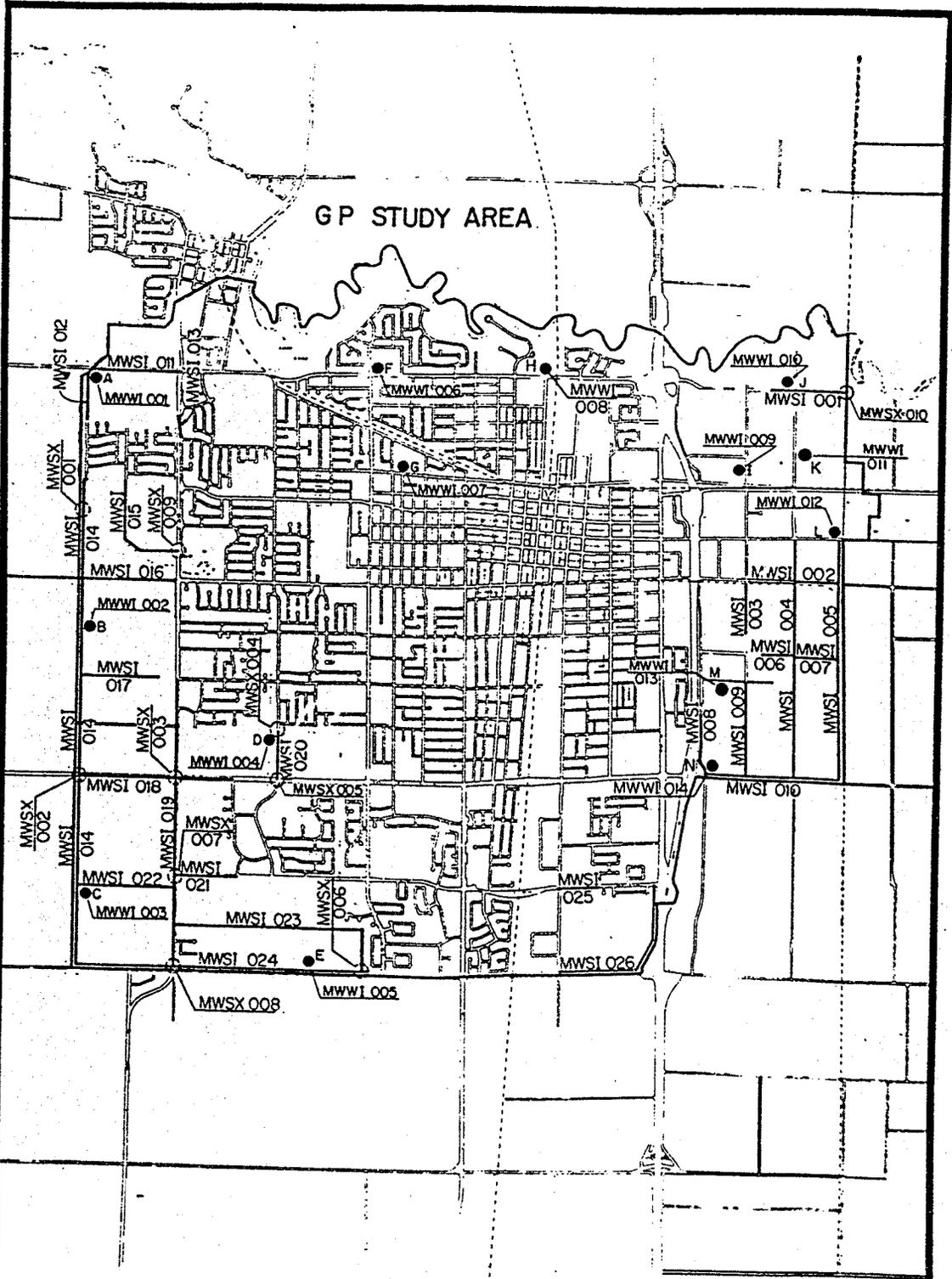
Project Number	Description	Program Cost	Impact Fee Fund	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987-2002	2002-2007
				\$	\$	\$	\$	\$	\$	\$	\$
MWW1004	Installation of Water Well "D" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW1005	Installation of Water Well "E" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW1006	Installation of Water Well "F" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$0	\$0	\$0	\$0	\$0	\$345,000	\$0
MWW1007	Installation of Water Well "G" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$295,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MWW1008	Installation of Water Well "H" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$345,000	\$0	\$0	\$0	\$0	\$0	\$0
MWW1009	Installation of Water Well "I" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$0	\$0	\$345,000	\$0	\$0	\$0	\$0
MWW1010	Installation of Water Well "J" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MWW1011	Installation of Water Well "K" with pumping capacity of 1,600 GPM.	\$345,000	\$345,000	\$0	\$0	\$0	\$0	\$345,000	\$0	\$0	\$0

24

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-hug-01

Project Number	Description	Program Cost	Impact Fee Fund	Phasing								
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MWW012	Installation of Water Well "L" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW013	Installation of Water Well "M" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	\$773,000	\$773,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$773,000
MWW014	Installation of Water Well "N" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$295,000
MWSO	MWSO001 Water Master Plan-1990	\$57,369	\$57,369	\$57,369	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	MWSO002 Water Master Plan and C.I.P. Update-1997	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0
	MWSO003 Water Master Plan and C.I.P. Update-2002	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0
	MWSO004 Public Works Admin. Bldg. Exp. (50%)	\$341,500	\$341,500	\$0	\$341,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	MWSO005 Public Works Storage Facility (50%)	\$235,000	\$235,000	\$0	\$0	\$235,000	\$0	\$0	\$0	\$0	\$0	\$0
	MWSO006 Public Works Garage/Wash Facil.(33%)	\$166,667	\$166,667	\$166,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Upgrades to Existing Facilities	\$1,628,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	New Development Share of Existing Water Tank (31%)	\$183,489	\$183,489	\$11,468	\$11,468	\$11,468	\$11,468	\$11,468	\$11,468	\$11,468	\$57,340	\$57,341
TOTAL WATER COST		\$10,931,525	\$9,303,525	\$625,063	\$735,415	\$571,807	\$386,751	\$432,341	\$764,468	\$2,833,546	\$2,954,135	



GP STUDY AREA

- LEGEND**
- Future Well
 - Future Pipe
 - MWWI 005 Water System Improvement Project Number

NOTE
Approximate Locations
See Project Description

WATER AND WASTE SERVICES
Lodi, California
1998

FIGURE 3-1 WATER SYSTEM IMPROVEMENTS

LODI GENERAL PLAN


developer credits should actual development costs deviate from the program schedule.

In Table 3-1, two columns are shown, Program Cost and Impact Fee Fund. Program Cost is defined as project costs to be provided through the City Water Fund. The Program Costs do not include costs borne by the developer. Costs listed in the Impact Fee Fund column represent those costs for specific projects allocated to future development identified in the General Plan. Where the cost in the Program Cost and Impact Fee Fund columns are the same, the entire project cost has been allocated to future development. The usefulness of differentiating the costs will be evident in latter sections when Program Costs are to be funded by other sources or include costs to correct existing deficiencies.

At the end of Table 3-1, an item is listed as "New Development Share of Existing Facilities". This item summarizes already incurred City costs to construct projects with capacity reserved to serve future development. Depending on the project, a percentage of the actual construction cost has been allocated to future development as shown in parenthesis.

In the case of water service, the new water tank falls into the category of existing facilities serving future development. As indicated in Table 3-1, 31 percent of the actual construction cost adjusted to January 1990 dollars has been allocated.

Supply

Through buildout of the General Plan, the City will continue to rely upon groundwater as the sole water supply. Project average day demand at buildout is 22.1 million gallons per day. A total of 14 new wells will be required to supply water to the General Plan area. Proposed locations of the new wells marked on Figure 3-1. Five of the new wells will be equipped with standby power generators.

Distribution System

Additional water mains will be required to distribute water to the area. With regard to funding water main extensions, the City is responsible only for water mains 10 inches and larger in diameter. Approximate location and limits of these water mains are shown on Figure 3-1. Actual location and alignment of the water mains may slightly change when site specific planning is completed.

Treatment

Two types of treatment are assumed to be provided at the wells sites: emergency chlorination and granular activated carbon filtration. Chlorination of the water is not routinely required, however, permanent chlorination facilities will be constructed at selected well sites. The cost of

chlorination facilities (approximately \$7,500 per well) is small compared to the cost of a well and is not listed separately. The totals for all wells include sufficient contingency to cover this expense at selected wells. It is assumed, granular activated carbon filtration units will be constructed at 5 of the 15 new wells.

ESTIMATED COSTS AND PHASING

In Table 3-1, a summary of the water projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4,673. Water main extension costs represent only the City's funding responsibility per the City Reimbursement Policy. In actual fact, the developer will be constructing the improvement and will receive back from the City a portion to cover the cost of oversizing the pipelines and the City's share (50%) of major crossings.

Phasing of the improvements is presented in Table 3-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 3-1, the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for projects serving General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects have been adjusted to the January 1, 1990 dollars.

Many of the projects listed in Table 3-1 are oversizing projects wherein the City's participation is limited to reimbursement to the developer for oversizing costs. It is not intended that the Program Cost shown in the table reflect the total cost of construction. Similarly, for projects such as the Public Works building expansion, the costs have been divided between the water and sewer impact fee funds and the costs shown are the portion allocated to the water impact fee fund. Also, where a project partially serves the existing community and partially the general plan expansion areas, only the cost allocated to the general plan areas are shown.

DEVELOPMENT IMPACT FEE

Relationship of Water Projects to New Development

A reasonable relationship must be established between (1) a fee's use and (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Because of the logical growth patterns conceived in the Proposed General Plan and because of the planning effort set down in the Water Master Plan, the City ensures that all water facility improvements will primarily benefit the residential, commercial, industrial and quasi-public land uses within the General Plan area. Each and every water project to be financed by the fee

program will provide the same level of service to the Proposed General Plan area as currently provided to the existing community of Lodi. Although other projects have been identified that will correct existing deficiencies, these project costs will not be included in the fee program.

Relationship of Water Projects to Land Uses

On the basis that all land uses will benefit from the facilities to be constructed, the burden of financing will be distributed to each land use in proportion to their use of, or benefit from, the improvements.

This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category. A summary of the RAE factors for water is presented in Table 3-2. The RAE schedule shows a reasonable relationship between the cost of the required water projects and financing burden placed on each land use.

Recommended Fees

A summary of water fees for each land use benefitting from the water projects is provided in Table 3-2. The total fee for low density residential use is \$5,504 per acre.

TABLE 3-2
SUMMARY OF DEVELOPMENT IMPACT FEES
WATER

21-Aug-91

Land Use Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,710
Medium Density	Acre	1.96	\$11,190
High Density	Acre	3.49	\$19,930
East Side Residential	Acre	1.00	\$5,710
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,710
Medium Density	Acre	1.96	\$11,190
High Density	Acre	3.49	\$19,930
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.64	\$3,650
General Commercial	Acre	0.64	\$3,650
Downtown Commercial	Acre	0.64	\$3,650
Office Commercial	Acre	0.64	\$3,650
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.26	\$1,480
Heavy Industrial	Acre	0.26	\$1,480

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 4
SEWER SERVICE

OVERVIEW

The City of Lodi has provided sewerage services to its residents since the early 1920's. Major facilities owned and operated by the City include a city-wide collection system, sewer trunks to the treatment plant, and the White Slough Water Pollution Control Facility located approximately 6 miles southwest of the City.

Collection System

The sanitary sewer collection system within the City includes more than 155 miles of pipeline. Sizes of the main sewers range from 4 to 48 inches in diameter, with 6 inches being the most common. Domestic and limited industrial wastewater flows (mainly the PCP Cannery and other industries along Sacramento Street) are kept separate. The separate industrial system is not addressed in this study.

Five sewer lift stations provide sewerage service to outlying areas of the City where conditions prohibit gravity systems. These existing lift stations are: Cluff Avenue Station, Mokelumne Village, Rivergate, Woodlake, and Park West.

Treatment and Disposal

White Slough Water Pollution Control Facility is owned and operated by the City. Currently, the plant is operating at the design capacity of 6.2 million gallons per day (MGD). Expansion of the plant to a capacity of 8.5 MGD is currently under construction. Future expansion to 10.3 MGD is planned.

Facility costs and financing for wastewater treatment and disposal are not addressed in this report. These issues have been addressed in separate studies and a financing mechanism, the Wastewater Connection Fee, has been established.

Master Sewerage Plan

Planning for sewerage collection facilities to serve the expanded General Plan area are addressed in the report by Black and Veatch, "Sanitary Sewer System, Technical Report for the 1990 General Plan Update." Included in the report are results of a comprehensive hydraulic evaluation of the existing collection system and proposed expansions of the collection system to serve an expanded city.

The Master Plan presents recommendations for gravity and pressure sewer design, sewer lift station design, and collection system maintenance. Recommendations for sizing and location of new facilities are presented that will serve the General Plan expansion areas as discussed in the section "Planned Sewerage Facilities". In addition, Master Plan identifies a number of collection system deficiencies that are described in the subsection, "Existing Deficiencies".

Sewer Reimbursement Policy

Commonly, developers are required to construct sewer trunk lines with greater capacity than needed in order to provide service to expanding areas of a community. It is not very common that a City or agency is able to get property owners to pay in advance for sewer capacity that they do not plan to use in the near future and, as a result, cities and agencies pay for the oversizing of sewer trunks. Policies for reimbursing for oversizing costs vary from community to community.

Under the City's Sewer Trunk Extension policy, applicants are reimbursed a portion of the estimated construction cost of oversize trunk sewers. For oversize trunks, the reimbursement policy applies to trunk sewers larger than 10 inches in diameter. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administration, engineering and inspection. Administrative and engineering reimbursement is limited by City ordinance to 10%.

City reimbursement policy as it relates to oversizing of sewer trunk lines is reasonable. Historically, the oversize cost of gravity sewer lines has been spread throughout the City. In preparing this report, the existing policy and historic practice are assumed to continue in force during the General Plan period.

Existing Deficiencies

A number of existing sewers within the City are operating above design capacity as determined by the methods presented in the Master Sewerage Plan. Correction of the problem requires the construction of parallel sewers to relieve the surcharge condition. Listing of these sewers is presented in the Master Plan. Maintenance deficiencies within the collection system were also identified consisting primarily of sewer cleaning that had not regularly been performed in the past.

Based upon construction costs referenced to January 1, 1990 dollars, the estimated cost to construct those parallel relief sewers is \$1,305,500. Estimated cost to clean the existing sewers is 5165,000. Source of funding for these deficiencies has been identified by the City to be the Sewer Fund.

PLANNED SEWERAGE FACILITIES

Sewerage collection facilities to serve the expanded City have been identified in the Master Sewer Plan. A summary of these facilities is presented below and in Table 4-1. Project numbers listed in Table 4-1 are used to identify the project locations as shown on Figure 4-1.

Collection System

Expansion of the existing collection system to serve new areas will require construction of new gravity sewers and lift stations as described in Table 4-1 and shown on Figure 4-1. Two new lift stations and expansion of an existing lift station are planned; one near Kettleman Lane (Highway 12), a second near Harney Lane, and expansion of the existing Cluff Avenue Lift Station. Additional gravity sewer trunks will be required to serve the General Plan areas. Only those trunk lines that are larger than 10 inches in diameter are considered in this report and are listed in Table 4-1.

Sewer collection facilities can be divided into two categories: gravity facilities and pressure facilities. As previously mentioned, City policy has historically provided for reimbursement of oversize gravity facilities and for payment of oversizing costs from the Sewer Fund, thereby, spreading the costs City-wide. Pressure facilities costs (i.e. lift stations and force mains) have been spread over areas of benefit. For each lift station in the City a specific area of benefit is defined. In this report, it is assumed that lift station and force main costs would be spread over individual special fee areas corresponding to the areas of benefit. Also, it is assumed that gravity facilities costs would be spread City-wide and oversizing costs for facilities serving future growth would be paid from development impact fee funds.

Treatment and Disposal

Expansion of the White Slough Water Pollution Control Facility is currently under construction. Costs of the expansion and future planned expansions are not considered in this report. Funding for these improvements has been arranged by the City and reimbursement will come from rates and the City Wastewater Connection Fees collected at the time of building permit issuance.

ESTIMATED COSTS AND PHASING

In Table 4-1, a summary of the sewer projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Sewer trunk extension costs reflect only the City's funding responsibility per the City Reimbursement Policy and do not reflect the total estimated construction cost.

Phasing of the improvements is based upon the Forecast of Acres Mapped Over the General Plan Period (Appendix A) provided by the City. In Table 4-1,

TABLE 4 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
SEWER

21-Aug-01

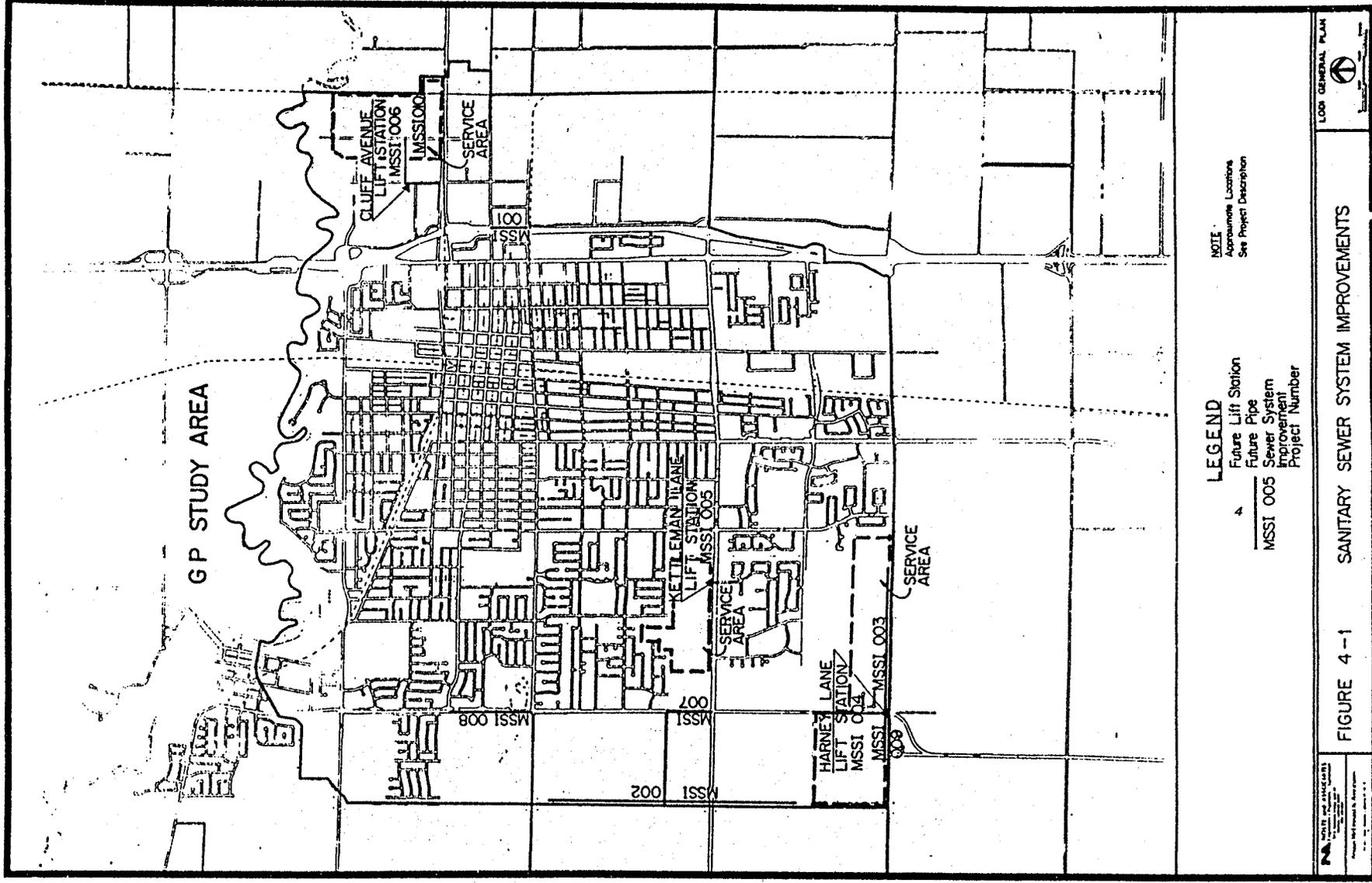
Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI001	Beckman Road sewer trunk comprising 1,100 lf of 10-inch sanitary sewer pipe and manholes from Pine Street to Lodi Avenue.	\$49,000	\$49,000	\$0	\$0	\$ 0	\$ 0	\$0	\$0	\$0	\$49,000
MSSI002	Western boundary sewer trunk consisting of 500 lf, 12-inch, 500 lf 15-inch, 2,000 lf of 18-inch, 2,000 lf of 21-inch, and 2,500 lf of 24-inch sewer pipe connecting to the existing 48 inch sewer trunk to the treatment plant. (oversize)	\$300,000	\$300,000	\$0	\$0	\$ 0	\$ 0	\$0	\$0	\$0	\$300,000
MSSI003	3 4 Oversize gravity sewer to Harney Lane lift station comprising 2,700 lf of 12-inch and 1,000 lf of 15-inch sewer trunk.	\$48,000	\$48,000	\$0	\$0	\$0	\$0	\$0	\$0	\$48,000	\$0
MSSI004	Harney Lane lift station and force main comprising 3-ten horsepower pumps having a combined 1,000 GPM capacity and 2,600 lf of 8-inch pipe.	\$262,500	\$0 (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSI005	Kettleman Lane lift station and force main with 2-five horsepower pumps and 450 GPM capacity and short force main under Kettleman Lane.	\$192,000	\$0 (2)	\$0	\$0	\$ 0	\$ 0	\$0	\$0	\$0	\$0
MSSI006	Cluff Avenue lift station upgrade and parallel force main with 2 fifteen horsepower pumps and a 1,500 GPM capacity	\$185,000	\$0 (3)	\$0	\$0	\$ 0	\$ 0	\$0	\$0	\$0	\$0
MSSI007	1,400 lf of 18-inch parallel trunk line in Lower Sacramento Rd. from Taylor Rd. to Kettleman Lane.	\$42,000	\$42,000	\$0	\$0	\$ 0	\$ 0	\$0	\$0	\$42,000	\$0

TABLE 4 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI008	2,500 ft of 15-inch parallel trunkline in Lower Sacramento Rd. from Lodi Avenue to Elm Street.	\$49,000	\$49,000	\$0	\$0	\$0	\$0	\$49,000	\$0	\$0	\$0
MSSI009	Enlarge gravity sewer in Harney Lane to lift station, consisting of 1,400 ft of 12-inch pipe west from Lower Sacramento Road. (oversize)	\$15,000	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0
SUBTOTAL - SEWER MAIN PARTICIPATION:		\$1,142,500	\$503,000	\$0	to	\$0	\$0	\$49,000	\$0	\$105,000	\$349,000
GCFI006	Public Works Administration Bldg. Expansion. (50%)	\$341,500	\$341,500	\$0	\$341,500	\$0	\$0	\$0	\$0	\$0	\$0
GCFI007	Public Works Storage Facility (50%)	\$235,000	\$235,000	\$0	\$0	\$235,000	\$0	\$0	\$0	\$0	\$0
GCFI008	Pub. Works Garage/Wash Facil. (33%)	\$166,667	\$166,667	\$166,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSO00	Sewer Master Plan - 1990	\$82,753	\$82,753	\$82,753	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSO00	Sewer Master Plan and C.I.P. Update - 1997	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$20,000	0	\$0
MSSO00	Sewer Master Plan and C.I.P. Update - 2002	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0
	Upgrades to Existing Facilities	\$1,005,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL		\$3,913,920	\$1,368,920	\$249,420	\$341,500	\$235,000	\$0	\$49,000	\$20,000	\$125,000	\$349,000

Notes:

1. Harney Lane lift Station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1997-2002 period.
2. Kettleman Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1992-1993 period.
3. Cluff Avenue lift Station modification costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 2002-2007 period.



the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Some projects listed in Table 4-1 are not included in the overall development impact fee program. These include projects related to serving the Cluff Avenue Lift Station Service Area, the Harney Lane Lift Station Service Area and the Kettleman Lane Lift Station Service Area. Since lift stations are unusually large and expensive facilities and, the service area is specific, a separate supplemental fee is calculated for each area. A separate calculation for these sub-zones is presented in the section, BURDEN ANALYSIS FOR SEWER SUB-ZONES.

Relationship of Sewer Projects to New Development

A reasonable relationship must be established between: (1) the fee's use and; (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Sewer collection facilities are used by residential, commercial, industrial and quasi-public land uses. Benefit to each land use is based upon peak wastewater generation rates as set forth in the Sewer Master Plan. Because each land use mentioned above benefits from the sewer projects in the capital improvements program, each land use is also a part of the fee program.

Relationship of Sewer Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

According to the definition of RAE's an acre of low density single family residential land use has an RAE factor of 1.0. All other land use categories have RAE factors that relate their demand for sewerage facilities relative to one acre of low density single family land use. Based upon wastewater flow projections presented in the City's Sewer Master Plan for each land use in the General Plan, an RAE schedule has been developed. The RAE schedule shows a reasonable relationship between the cost of required Sewer Facilities projects and the burden placed on each land use. The RAE schedule that has been developed for the Sewer Facilities is presented in Table 4-2.

TABLE 4-2
SUMMARY OF DEVELOPMENT IMPACT FEES
SEWER

21-Aug-91

Land Use Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,090
Medium Density	Acre	1.96	\$2,140
High Density	Acre	3.49	\$3,800
East Side Residential	Acre	1.00	\$1,090
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,090
Medium Density	Acre	1.96	\$2,140
High Density	Acre	3.49	\$3,800
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.94	\$1,020
General Commercial	Acre	0.94	\$1,020
Downtown Commercial	Acre	0.94	\$1,020
Office Commercial	Acre	0.94	\$1,020
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.42	\$460
Heavy Industrial	Acre	0.42	\$460

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

Recommended Fees

The Sewer Facilities Fees for each land use are summarized in Table 4-2. The total fee is \$1,090 per low density residential acre.

BURDEN ANALYSIS FOR SEWER SUB-ZONES

There are three sewer sub-zones which are not served by the improvements in the fee program and cannot be funded by the sewer development impact fee. These areas require lift stations and other improvements that will benefit only a specific area of undeveloped land. The sub-zones are the Kettleman Lift Station Area, Harney Lane Lift Station Area, and the Cluff Avenue Lift Station Area. Each area has only one land use type within its boundaries. Since the improvements will have to be constructed prior to any development taking place, development impact fees do not provide a viable means to finance these projects.

The total cost of lift station facilities equals \$639,500. In practice, this amount would best be obtained by borrowing from another City of Todi fund. A special sub-area Impact Fee could then be collected in the three sewer sub-zones sufficient to repay the borrowing plus an appropriate rate of interest.

The alternative, three sub-area financing districts (Special Assessment Districts or Mello-Roos Community Facilities Districts) would not be economic. The cost of processing would be excessive compared to the funds required.

Other alternatives include financing by the "first" development in the area with establishment of a reimbursement program from future development, or the installation of temporary facilities plus payment of the fee. Each case should be evaluated separately as development is proposed.

A series of analyses presenting the burden of financing the improvements in each of these sub-zones is provided in Table 4-3. The calculations indicate the approximate amount each acre of land in each sub-zone will need to contribute in order to finance the needed improvements. It should be noted that the cost of financing has not been included.

In the case of the Harney Lane lift station service area, existing development has been included in the sizing of the facilities. At the time of annexation, it is expected that this area will be required to pay the supplemental fee and, therefore, it has been included in the supplemental fee calculation.

TABLE 4-3

SEWER SUB-ZONE FEE CALCULATIONS

Kettleman Lift Station Sub-Zone

Total Planned Residential Acres: 80
 Total Planned Commercial Acres: 22
 Total Cost of Improvements: \$192,000
 Cost Per RAE: \$ 1,610

Description	Units	Total Developed	RAE Factor	Total	Total Burden Per Acre
PR - Low Density	Acres	69.9	1.00	69.9	\$ 1,610
PR - Medium Density	Acres	4.5	1.96	8.8	\$ 3,160
				19.5	\$ 5,620
				<u>20.7</u>	<u>\$ 1,510</u>
Office Commercial	Acres	<u>122.0</u>	0.94	116.4	

Harney Lane Lift Station Sub-Zone

Total Planned Residential Acres: 292
 Less Basin and Park Acres: 35
 Net Planned Residential Acres: 257
 Total Cost of Improvements: \$262,500
 Average Cost Per RAE: \$ 830

Description	Units	Total Developed	RAE factor	Total RAEs	Total Burden Per Acre
PR - Low Density	Acres	225.0	1.00	225.0	\$ 830
PR - Medium Density	Acres	14.1	1.21	28.0	\$ 1,630
PR - High Density	Acres	<u>18.0</u>	3.45	<u>63.0</u>	<u>\$ 2,900</u>
		257.0		315.0	

Cluff Avenue Lift Station Sub-Zone

Total Industrial Reserve Acres: 158
Total Cost of Improvements: \$185,000
Average Cost Per RAE: \$ 1,170

<u>Description</u>	<u>Units</u>	<u>Total Develoned</u>	<u>Factor</u>	<u>RAE's</u>	<u>Total Burden Per Acre</u>
tight Industrial	Acres	93.0	0.42	39.1	\$ 1,170
Heavy Industrial	Acres	<u>65.0</u>	0.42	<u>27.3</u>	\$ 1,170
		158.0		66.4	

Note: Dollar amounts shown are for fiscal year 1991/92.

Source: Nolte and Associates and Angus McDonald and Associates, 1991.

CHAPTER 5
STORM DRAINAGE

OVERVIEW

Storm drainage services are provided by the City of Yuba. Major features of the storm drainage system include collection system, runoff storage/detention facilities, and pumping plants. Terminal drainage for the City is provided by the Mokelumne River and the Woodbridge Irrigation District (WID) canal. Characteristics of these facilities are described below.

Collection System

Storm drainage services are provided to an area encompassing approximately 7,700 acres. For facility planning purposes, the drainage area has been divided into planning areas. Storm drainage facilities for these planning areas are incorporated into a City wide storm drainage facilities plan. Approximately 1,340 acres directly discharge to the Mokelumne River via gravity pipelines, Approximately another 2,290 acres is pumped to the river. The remaining approximately 4,070 is pumped to the WID canal from two pump stations.

Discharges to the WID canal are controlled by the flow capacity of the canal system. By agreement, the City is limited to a combined total discharge of 80 cubic feet per second at the two existing pumping stations. Additional discharge locations are not currently permitted by the agreement. The City operates a series of interconnected detention basins within this area to store runoff prior to pumping to the canal. The City utilizes detention basins in other areas also to store runoff prior to pumping to the Mokelumne River.

Existing facilities for the collection of storm runoff include surface improvements like alleys, ditches and gutters, and underground pipelines. Present design standards for storm drainage collection facilities only allow gutter and underground piping. The use of ditches and alleys for conveyance of storm runoff is currently substandard and not allowed.

New development in the City is required to construct all storm pipeline smaller than 30 inches in diameter. Pipelines 30 inches and larger are considered to be part of the Master Storm Drain Plan improvements and are currently funded by Storm Drainage Fees collected by the City.

A number of relatively minor deficiencies exist within the collection system. For the most part, these consist of substandard surface drainage facilities (for example, ditches and alleys), deteriorated curb and gutter, and undersized pipelines and catch basins. Many of the system deficiencies can be found in the older central and eastern parts of the City.

Large scale replacement of deficient facilities, if it occurs, will be part of major street reconstruction projects. As part of the East Side Residential Study (1987), a number of Storm Drainage deficiencies were identified. Estimated total cost to correct the deficiencies was \$854,000 in 1987 dollars and \$930,000 in 1990 dollars. Small scale projects have been performed by the City to repair sections of curb and gutter. Replacement of the alley systems is not expected due to high cost and grade conditions.

Detention Basins

As mentioned above, the City operates a system of interconnected detention basins that store runoff prior to pumping to the WID canal or the Mokelumne River. These basins also function as park-like areas when not utilized for storage of storm runoff.

A total of eight basins exist within the City's drainage service area. Basins in subareas C (Pixley Park), B (Glaves Park), and E (Westgate Park) store runoff prior to discharge to the Mokelumne River. Basins in subareas A-1 (Kofu Park), A-2 (Beckman Park), B-1 (Vinewood School), D (Salas Park), and G (along with the future F and I basins) store runoff prior to discharge to the WID canal from pumping stations located on Cabrillo Circle and at Beckman Park.

Current design standards for the detention basins require storage capacity for the 100-year 48-hour storm. Changes in hydrologic design data over the past years may have resulted in some earlier basins being undersized. Future updates of the Master Storm Drainage Plan will address this issue.

Master Storm Drainage Plan

City of Lodi Engineering Division updated the Master Storm Drainage Plan in 1988. This plan forms the principal basis for future expansions of the drainage service area to serve the General Plan area. Major collection system improvements and detention basin improvements are identified in the plan that have been included in this report.

Master Storm Drainage Fee

The City has adopted a capital improvement program and fee-based financing mechanisms for storm drainage facilities. Recently, this program was revised to comply with AB 1600 regulations. This study updates the program and fee to serve the General Plan Area. Also, additional fee categories have been created from the former drainage fee to establish general conformance with the other fee categories.

PLANNED STORM DRAINAGE IMPROVEMENTS

Storm drainage improvements to serve buildout of the General Plan were, for the most part, identified in the Master Storm Drainage Plan. A summary of

those facilities is presented below and summarized in Table 5-1. Project numbers listed in Table 5-1 are used to identify the location of projects shown on Figure 5-1. Two existing reimbursement agreements, which are an obligation of the costs for storm drain fund, are included.

Collection System

Drainage subareas established during planning for storm drainage improvements within the existing City limits had already incorporated much of the land in the expanded General Plan area. Subareas C, D, E, F and G were already planned for expansion of service to the west, east and south. New subarea I will be established to provide drainage services to areas west of Lower Sacramento Road, south of Kettleman Lane.

Major storm drainage trunk pipes are planned to serve the expanded General Plan area. Locations of these trunk improvements are shown on Figure 5-1.

Detention Basins

Expansion of existing detention basins in subareas C, E, and G are identified in the Master Plan. New detention basins are planned for subareas F and I.

ESTIMATED COSTS AND PHASING

In Table 5-1, a summary of the storm drainage projects and estimated construction costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Average Construction Cost Index for January 1, 1990 of 4673. In the table, reference is made to Program Cost and Impact Fee Fund. Program Costs are defined for Storm Drainage Facilities to be the total probable construction cost for the facilities described. In other words, the private developer is not expected to pay any portion of the cost to construct Master Storm Drainage Facilities. Impact Fee Fund costs represent the portion of Program Costs allocated to serve future growth or otherwise not funded from other sources. In the case of Storm Drainage, all Master Planned Facilities are wholly serving future growth and no funding other than development impact fees is expected. Therefore, the amount in the Program Cost column generally equals the amount in the Impact Fee Fund column. The exception is the item labeled "Deficiencies". Storm drainage trunk lines represent the total estimated cost of construction.

Phasing of the storm drainage improvements presented in Table 5-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. Costs for projects serving General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these project have been adjusted to the base dollar of January 1, 1990.

TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

21-Aug-91

Project Number	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MSDI001	Pixley Park drainage basin. Expansion and development of Basin "C" according to plan adopted in 1988 (Dwg 88E003)	\$93,000	\$83,000	\$0	\$177,000	\$0	\$0	\$0	\$222,000	\$294,000	\$0
MSDI003	Turner Road storm drain. 650 lf of 80", 800 lf of 54", and 1,150 lf of 42" storm drains in Turner Road and Guild Avenue.	\$213,000	\$213,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$213,000
MSDI004	Pine Street storm drain consisting of 800 lf of 30" storm drain and manholes.	\$42,000	\$42,000	\$0	\$0	\$0	\$0	\$0	\$0	\$42,000	\$0
MSDI005	Thurman Street storm drain consisting of 1,250 lf 36" storm drain and manholes.	\$70,000	\$70,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$40,000	\$0
MSDI007	Basin "C" storm drain collection facilities consisting of 42" and 30" pipes, extending south and east. Expands service area to Kettleman and Guild.	\$172,000	\$172,000	\$0	\$0	\$0	\$0	\$0	\$0	\$86,000	\$86,000
MSDI008	Evergreen Drive storm drain collection facilities extending service area north to Turner Road. Improvements include pipes that will carry runoff to Basin "E".	\$129,000	\$129,000	\$0	\$0	\$0	\$43,000	\$43,000	\$43,000	\$0	W
MSDI009	Evergreen Drive storm drain collection facilities extending service south of E-basin. Improvements include 30" and 36" pipes that will carry runoff to Basin "E".	\$63,000	\$63,000	\$0	\$21,000	\$21,000	\$21,000	\$0	\$0	\$0	\$0

TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

21-Aug-91

Project Number	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MSD1010	Westgate Park expansion and development. Park improvements are not included.	\$1,934,000	\$1,934,000	\$0	\$1,343,000	\$157,000	\$157,000	\$277,000	\$0	\$0	
MSD1011	Development of new Basin "F", located north of Kettleman Lane and west of Lower Sacramento Road. Service area includes land west of Lower Sacramento Road, north of Kettleman, and south of the WID canal. Park improvements are not included.	\$3,519,000	\$3,519,000	\$0	\$0	\$0	W	\$0	\$0	\$2,532,000	\$987,000
MSD1012	Basin "F" storm drain collection facilities extending north of Basin "F" including 54", 48", and 30" pipes.	\$367,000	\$367,000	\$0	\$0	\$0	\$0	W	\$0	\$0	\$367,000
MSD1013	Storm drain consisting of 36" and 30" pipes extending easterly from the existing 54" trunk line north of Kettleman Lane. Exact location not yet determined.	\$149,000	\$149,000	\$0	\$0	W	W	\$0	\$0	\$149,000	\$0
MSD1014	Basin "F" outfall storm drain consisting of 30" pipes extending easterly from the basin to the existing 54" trunk line.	\$184,000	\$184,000	\$0	\$0	\$0	\$0	\$0	\$0	\$184,000	W
MSD1015	Basin "G" storm drain collection facilities consisting of 48" and 36" pipes extending westerly and easterly from Basin "G". Exact location not yet determined.	\$261,000	\$261,000	\$0	\$0	W	\$0	\$0	\$0	\$261,000	\$0

TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

21-Aug-81

Project Number	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSD016	Basin "G" collection facilities consisting of 30" and 36" pipes extending westerly and northerly from the existing 36" trunk in Orchis Way. Exact Location not yet determined.	\$64,000	\$64,000	\$64,000 (1)	\$0	\$0	\$0	\$0	\$0	\$0
MSD017	Expansion and development of Basin "G". Golf course improvements are not included.	\$3,744,000	\$3,744,000	\$108,600 (1)	\$0	\$2,000,000	\$50,000	\$0	\$817,000	\$769,000
MSD018	Master Plan/Updates	\$50,000	\$50,000	\$10,000 (1)	\$0	\$0	\$0	\$0	\$20,000	\$20,000
MSD020	Development of Basin "I" located south of Kettleman Lane and west of Lower Sacramento Road.	\$3,619,000	\$3,619,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,619,000
MDS021	Basin "I" collection facilities consisting of 30, 36, 42, and 48 inch pipes extended north of the basin.	\$265,000	\$265,000	\$0	\$0	\$0	\$0	\$0	\$0	\$265,000
MDS022	Basin "I" discharge consisting of 42" inch pipe extending north and east to Basin "G".	\$275,000	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$275,000
	Upgrades to Existing Facilities	\$1,051,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Parkwest (E - area) Reimbursement Agreement	\$268,838	\$268,838	\$0	\$0	\$0	\$0	\$0	\$268,838	\$0
	Sunwest (G - area) Reimbursement Agreement	\$154,869	\$154,869	\$0	\$0	\$0	\$0	\$0	\$154,869	\$0
TOTAL STORM DRAINAGE COST:		\$17,285,707	\$16,234,707	\$212,000	\$1,541,000	\$2,178,000	\$271,000	\$320,000	\$1,523,707	\$4,377,000

NOTE:

(1) Previously Appropriated from Drainage Fees

Relationship of Storm Drainage Projects to New Development

A reasonable relationship must be established between the projects and improvements funded by the fee and the type of development upon which the fee is imposed. Essentially, it is incumbent upon the City to show that the development is served by and/or benefits from the public facilities to be financed by the fee revenue.

City of Lodi Storm Drainage Master Plan presents a soundly conceived and comprehensive plan for providing storm drainage services to all areas of the General Plan. Only those improvement costs benefitting the areas included in the fee program are included in the fee program.

Relationship of Storm Drainage Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

The concept of RAE is based upon defining a base demand that, in this case, is selected to be an acre of low density single family detached dwelling units. The base acre has an assigned RAE of 1.0. All other land use categories have RAE factors that show their relative demand for Storm Drainage Facilities compared to the base acre of low density single family housing.

Based upon the cost of facilities to provide comparable levels of service to residential and commercial/industrial areas, the City has adopted a commercial/industrial fee that is 1.33 times the residential fee. Following a review of the methodology employed by the City, it is concluded the methodology is reasonable and fairly compares the demand for storm drainage facilities by the various land uses. Therefore, the City adopted (and defacto) RAE schedule is incorporated into this study.

Recommended Fees

The Storm Drainage Facilities Fee is shown in Table 5-2. The total fee is \$7,910 per low density residential acre.

TABLE 5-2
SUMMARY OF DEVELOPMENT IMPACT FEES
STORM DRAINAGE

21-Aug-91

Land Use Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$7,910
Medium Density	Acre	1.00	\$7,910
High Density	Acre	1.00	\$7,910
East Side Residential	Acre	1.00	\$7,910.
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$7,910
Medium Density	Acre	1.00	\$7,910
High Density	Acre	1.00	\$7,910
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	1.33	\$1 0,520
General Commercial	Acre	1.33	\$1 0,520
Downtown Commercial	Acre	1.33	\$1 0,520
Office Commercial	Acre	1.33	\$1 0,520
<u>INDUSTRIAL</u>			
Light Industrial	Acre	1.33	\$1 0,520
Heavy Industrial	Acre	1.33	\$1 0,520.

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 6

STREETS AND ROADS

OVERVIEW

For as long as the City of Lodi has been in existence, streets and roads have been the primary system used in intercity travel. With the change in City-wide growth, there welcome a need to improve the streets and roads in the community. The Draft General Plan will expand the City and additional traffic will be generated within the community. As a result new streets will be needed and existing streets will need to be improved. The following sections will describe these improvements, the City obligation for funding, and the fees calculated to reimburse the City costs.

Existing Traffic Conditions

Existing traffic counts were collected by the City of Lodi Public Works Department in 1987 at numerous locations throughout the City by the City and their traffic consultant. The data were used to establish the current Level of Service (LOS) within the project study area. Currently, roadways and intersections throughout the City are operating at a LOS of C or better with the exception of Hutchins Street/Kettleman Lane intersection, which operates at a LOS D. The City of Lodi considers C to be the standard level of service with anything less considered to be substandard.

Circulation Plan

In December of 1989, a City-wide circulation study was prepared by the Traffic Consultant, TJKM, that identified the impacts associated with the envisioned General Plan. As mentioned earlier, the existing traffic counts were done by the City's staff. Incorporating this information along with using a computer based travel demand model, TJKM was able to forecast future traffic conditions throughout the project study area. Based upon these forecasts, road sections of future streets and improvements to existing streets were identified.

A listing of general street, intersection, signalization, and interchange improvements was submitted to the City along with the circulation study. Working with City staff and the City improvement standards, cross-sections were prepared for future streets and improvements to existing streets. These are discussed in the following section.

Existing Deficiencies

Existing deficiencies are relatively minor and mainly consist of deteriorated pavement, and curb and gutter and drainage facilities on some streets. Project costs to correct existing deficiencies are not funded by development impact fees unless the correction is incidental to providing higher capacity

to serve future growth. For example, Lockeford Street between the Southern Pacific Railroad and Cherokee Lane needs to be widened to four lanes and this project is included in the fee program. Incidental to widening Lockeford Street, curb and gutter will be reconstructed along the widened stretch.

Reconstruction, overlays and other maintenance activities are not included in the fee program. Funding for these activities is derived from the general fund, gas taxes, TDA, Proposition 111 gas tax, Measure K sales tax, and other sources. Typically, general fund allocations are strictly used for operations and maintenance (O & M) activities. Funds from other sources are allocated to O and M, capital and reconstruction activities.

Based upon the current budget for capital maintenance and reconstruction of \$1.66 million, a forecast was prepared for the program cost for similar work during the General Plan period. The total is shown in Table 6-1 as Enhancements to Existing Facilities in the amount of \$26.56 million. Funding for these program costs is anticipated to come primarily from General Fund, Gas Tax and Transportation Development Act (TDA) sources in proportion to existing funding levels of 52%, 26%, and 22%, respectively.

PLANNED CIRCULATION IMPROVEMENTS

Presently, the City policy toward funding street and road improvements applies only to limited access expressways such as Lower Sacramento Road and South Hutchins Street and widenings to existing streets. Based upon current State law and common practice in other agencies regarding impact fees and developers' requirements, it is recommended that present policy be changed. The following section describes the recommended policy and how it is implemented in this fee program.

Developer Required Improvements

For all projects within the City, the developer is required to build streets to serve the project. Relative to street improvements, the developer is required to provide all improvements and dedicate all right-of-way for one half width street consisting of curb, gutter, sidewalk, one travel lane and a shoulder or parking lane. Maximum right-of-way dedication is 34 feet and is dependent upon existing right-of-way at the improvement location. Improvements required of the developer include 5.5 feet of curb and sidewalk, 2 feet of gutter, and 24 feet of paving that corresponds to those designated as a major collector. Typical section for a major collector is provided in Figure 6-1. In the case where development occurs on one side of a major collector, the developer typically is required to construct only one-half of the street. In the case where development occurs along a street having a greater designated capacity than a major collector, the development impact fee funds or other funds will be used to construct the more extensive improvements. Examples of these streets include: Kettleman Lane, Harney Lane, Century Boulevard, and Lower Sacramento Road.

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	Phasing								
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-20.7	
MTSI001	Restriping of Kettleman Lane (6 - Lanes, Divided) from Lower Sacramento Road to Ham Lane.	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,000	\$0
MTSI002	Restriping of Kettleman Lane (6 - Lanes, Divided) from Ham Lane to Stockton Street.	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$22,000	\$0	\$0	\$0
MTSI003	Restriping of Kettleman Lane (6 - Lanes, Divided) from Stockton Street to Cherokee Lane.	\$12,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$12,000	\$0	\$0	\$0
MTSI004	Design, construction, and engineering associated with widening Kettleman Lane (Highway 12) @ State Route 99. (Measure "K" Funding = \$700,000, State Funding = \$831,000)	\$5,106,000	\$3,575,000	\$0	\$0	\$0	\$0	\$0	\$1,787,500	\$1,787,500	\$0	\$0
MTSI005	Widening of Kettleman Lane (4 - Lanes, Divided) from Beckman Road to Guild Avenue.	\$519,000	\$519,000	\$0	\$0	\$0	\$259,500	\$0	\$0	\$0	\$0	\$259,500
MTSI006	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Turner Road to Lodi Avenue. (Measure "K" Funding = \$185,250)	\$463,250	\$278,000	\$0	\$0	\$0	\$0	\$30,580	\$47,260	\$200,160	\$0	\$0
MTSI007	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Elm Street to Taylor Road. (Measure "K" Funding = \$130,000)	\$325,000	\$195,000	\$0	\$0	\$0	\$0	\$21,450	\$33,150	\$140,400	\$0	\$0
MTSI008	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Taylor Road to Kettleman Lane. (Measure "K" Funding = \$91,000)	\$228,000	\$137,000	\$0	\$0	\$0	\$0	\$0	\$0	\$137,000	\$0	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	Phasing							
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS009	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kettleman Lane to Orchis Drive. (Measure "K" Funding = \$94,250)	\$235,250	\$141,000	\$0	\$0	\$0	\$0	\$0	\$0	\$141,000	\$0
MTS010	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Orchis Drive to Century Blvd. (Measure "K" Funding = \$78,000)	\$195,000	\$117,000	\$0	\$0	\$0	\$0	\$0	\$0	\$117,000	\$0
MTS011	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Century Blvd. to Kristen Court. (Measure "K" Funding = \$120,250)	\$300,250	\$180,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180,000
MTS012	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kristen Court to Harney Lane. (Measure "K" Funding = \$52,000)	\$130,000	\$78,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$78,000
MTS013	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road East 2,650 feet.	\$173,000	\$173,000	\$0	\$0	\$0	\$0	\$0	\$0	\$173,000	\$0
MTS014	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing West 2,650 feet.	\$173,000	\$173,000	\$0	\$0	\$0	\$0	\$0	\$0	\$173,000	\$0
MTS015	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing East 2,250 feet.	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$120,000	\$0
MTS016	Widening of Harney Lane (4 - Lanes) from Hutchins Street to Stockton Street.	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$120,000	\$0
MTS017	Widening of Harney Lane (4 - Lanes) from Stockton Street to Cherokee Lane.	\$147,000	\$147,000	\$0	\$0	\$0	\$0	\$0	\$0	\$147,000	\$0

21-Aug-91

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS1018	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road to the General Plan Boundary.	\$179,000	\$179,000	\$0	to	\$0	\$0	\$0	\$0	to	\$179,000
MTS1019	Highway 12 Project Study Report	\$90,000	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$0	to	\$0
MTS1020	Design, construction, and engineering associated with widening of Turner Road over State Route 99.	\$1,500,000	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	to	\$1,500,000
MTS1021	Restriping of Lodi Avenue (4 - Lanes) from Cherokee East 3,000 feet.	\$13,000	\$13,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,000
MTS1022	Reconstruction of Lodi Avenue (4 - Lanes) from Guild Avenue West 700 feet.	\$33,000	\$33,000	\$0	\$0	\$0	\$0	\$0	\$0	\$33,000	\$0
MTS1023	Restriping of Turner Road (4 - Lanes) from Beckman Road East 2,500 feet.	\$11,000	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,000
MTS1024	Widening of Turner Road (4 - Lanes) from Guild Avenue West 700 feet.	\$22,000	\$22,000	\$0	to	\$0	\$0	\$0	\$0	\$0	\$22,000
MTS1025	Widening of Century Blvd. (4 - Lanes) from Lower Sacramento Road east 4,100 feet.	\$240,000	\$240,000	\$0	\$0	\$0	\$0	\$0	\$240,000	\$0	\$0
MTS1026	Widening of Century Blvd. (4 - Lanes) from Stockton Street to Chickadee Lane.	\$31,000	\$31,000	\$0	\$0	\$31,000	\$0	\$0	\$0	\$0	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTSIO27	Widening of Stockton Street (4 - Lanes) from Kettleman Lane to Harney Lane.	\$81,000	\$81,000	\$40,500	\$0	\$40,500	\$0	\$0	\$0	\$0	\$0
MTSIO28	Widening of Guild Avenue (4 - Lanes) from Lodi Avenue to Kettleman Lane.	\$168,000	\$168,000	\$20,160	\$10,080	\$10,080	\$10,080	\$10,080	\$10,080	\$48,720	\$48,720
MTSIO29	Widening of Turner Road (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$84,000	\$84,000	\$0	\$0	\$0	\$0	\$42,000	\$42,000	\$0	\$0
MTSIO30	Widening of Lodi Avenue (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$84,000	\$84,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,000
MTSIO31	Widening of Kettleman Lane (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$178,000	\$178,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$178,000
MTSIO32	Widening of Lockeford Street (4 - Lanes) from Sacramento Street to Cherokee Lane.	\$1,267,000	\$1,267,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,267,000
MTSIO33	Widening of Victor Rd. (Hwy 12) to 4 lanes	\$342,000	\$342,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$342,000
MTSO001	Master Plan 1987	\$76,187	\$76,187	\$76,187	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTSO002	Master Plan and C.I.P. Update - 1997	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0
MTSO003	5 Year Master Plan and C.I.P. Update - 2002	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	Phasing								
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MTS001	Installation of traffic signal located at the int. of Lower Sacramento Road and Turner Road.	\$95,000	\$95,000	\$0	\$0	\$95,000	\$0	\$0	\$0	\$0	\$0	\$0
MTS002	Installation of traffic signal located at the int. of Turner Road and the State Route 99 Southbound Ramp.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95,000
MTS003	Installation of traffic signal located at the int. of Victor Road and Cluff Avenue. (50%)	\$95,000	\$47,500	\$47,500	\$0	\$0	\$0	to	\$0	\$0	\$0	\$0
MTS004	Installation of traffic signal located at the int. of Lodi Avenue and Lower Sacramento Road. (50%)	\$95,000	\$47,500	\$47,500	to	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS005	Installation of traffic signal located at the int. of Lodi Avenue and Mills Avenue. (50%)	\$95,000	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,500	\$0
MTS006	Installation of traffic signal located at the int. of Lower Sacramento Road and Vine Street. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0
MTS007	Installation of traffic signal located at the int. of Kettleman Lane and Mills Avenue. (50%)	\$95,000	\$47,500	\$47,500	\$0	\$0	\$0	to	\$0	\$0	\$0	\$0
MTS008	Installation of traffic signal located at the int. of Kettleman Lane and the State Route 99 Southbound Ramp.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$95,000	\$0	\$0	\$0	\$0

57

TABLE 6-1

21-Aug-91

**DNELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS**

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	Phasing							
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS009	Installation of traffic signal located at the int. of Kettleman Lane and Beckman Road.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$0	\$95,000	\$0	\$0
MTS010	Installation of traffic signal located at the int. of Lower Sacramento Road and Harney Lane.	\$95,000	\$95,000	\$0	\$0	to	\$0	\$95,000	\$0	\$0	\$0
MTS011	Installation of traffic signal located at the int. of Harney Lane and Mills Avenue.	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$0	\$0	\$90,000	\$0
MTS012	Installation of traffic signal located at the int. of Harney Lane and Ham Lane.	\$90,000	\$90,000	\$0	to	\$0	\$0	\$0	\$0	\$0	\$90,000
MTS013	Installation of traffic signal located at the int. of Harney Lane and Stockton Street. (50%)	\$90,000	\$45,000	\$0	\$45,000	to	\$0	to	\$0	\$0	\$0
MTS014	Installation of traffic signal located at the int. of Elm Street and Lower Sacramento Road. (50%)	\$90,000	\$45,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS015	Installation of traffic signal located at the int. of Lockeford Street and Stockton Street. (50%)	\$90,000	\$45,000	\$0	to	to	\$45,000	\$0	\$0	\$0	\$0
MTS016	Installation of traffic signal located at the int. of Turner Road and Stockton Street. (50%)	\$90,000	\$45,000	\$45,000	to	\$0	\$0	\$0	\$0	\$0	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS017	Installation of traffic signal located at the int. of Pine St. and Stockton Street. (50%)	\$90,000	\$45,000	\$0	\$0	\$45,000	\$0	\$0	\$0	\$0	\$0
MTS018	Installation of traffic signal located at the int. of Turner Road and Mills Avenue. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$45,000	\$0	\$0	\$0
MTS019	Installation of traffic signal located at the int. of Turner Road and Edgewood. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0	\$0
MTS020	Installation of traffic signal located at the int. of Kettleman Lane and Central Avenue. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0	\$0
MTS021	Installation of traffic signal located at the int. of Elm Street and Mills Avenue. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0	\$0
MTS022	Installation of traffic signal located at the int. of Cherokee Lane and Vine Street. (50%)	\$105,000	\$52,500	\$0	\$0	\$0	\$0	\$0	\$0	\$52,500	\$0
MTS023	Installation of traffic signal located at the int. of Ham Lane and Century Blvd. (50%)	\$95,000	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$47,500	\$0
MTS024	Installation of traffic signal located at the int. of Cherokee Lane and Elm Street. (50%)	\$105,000	\$52,500	\$0	\$0	\$0	\$0	\$0	\$0	\$52,500	\$0
MBC001	Widening of WID Box Culvert along Lower Sacramento Road approx. 1,380 feet South of Lodi Avenue.	\$298,000	\$298,000	\$0	\$0	\$0	\$0	\$0	\$298,000	\$0	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-81

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MBC002	Widening of WID Box Culvert along Turner Road approx. 2,400 feet West of Lower Sacramento Road. (50% S.J. Co.)	\$150,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0
MBC003	Widening of WID Box Culvert along Mills Avenue approx. 100 feet South of Royal Crest Drive.	\$141,000	\$141,000	\$0	\$0	\$0	\$0	\$0	\$0	\$141,000	\$0
MBC004	Widening of WID Box Culvert along Harney Lane approx. 3,300 feet West of Hutchins Street.	\$216,000	\$216,000	\$0	\$0	\$0	\$0	\$0	\$0	\$216,000	\$0
MRRX001	Widening of S.P. railroad crossing on Lower Sacramento Road 1,400 ft. North of Turner Road. (50% S.J. Co.)	\$202,000	\$101,000	\$0	\$0	\$0	\$0	\$0	\$0	\$101,000	\$0
MRRX004	Widening and upgrade of protection devices of the railroad crossing at the int. of Lockeford Street and Guild Avenue.	\$202,000	\$202,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202,000
MRRX005	Widening of Central California Traction Co. crossing on Victor Rd. (Hwy 12) 1,350 ft. East of Guild Avenue.	\$222,000	\$222,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$222,000
MRRX006	Widening and upgrade of protection devices of the railroad crossing at the intersection of Beckman Road and Lodi Avenue.	\$227,000	\$227,000	\$0	\$0	\$0	\$0	\$0	\$0	\$227,000	\$0
MRRX007	Construction of railroad crossing at int. of Lodi Avenue and Guild Ave.	\$215,000	\$215,000	\$0	\$0	\$0	\$0	\$0	\$0	\$215,000	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	Phasing								
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MRRX008	Construction of railroad crossing at int. of Cluff Avenue and Thurman Street	\$189,000	\$189,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$189,000	\$0
MRRX009	Widening and upgrade of protection devices of Central Calif. Traction Co. X-ing on Kettleman Ln. 1,350 ft. East of Guild Ave.	\$215,000	\$215,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$215,000
MRRX010	Widening of SP railroad crossing on Harney Ln. 1,380 ft. East of Hutchins Street.	\$202,000	\$202,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202,000	\$0
	Upgrades to Existing Facilities	\$28,580,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	New Development Share of Existing Facilities											
	a. Hutchins St. Widening-Tokay to Lodi (93%)	\$41,826										
	b. Hutchins St. Widening-Rimby to Vine (58%)	\$151,458										
	c. Lockeford St. Widening-Pleasant to SPRR (80%)	\$59,838										
	d. Cherokee/Century Intersection Widening (100%)	\$48,373										
	e. Century/WID Box Culvert (88%)	\$109,551										
	f. Stockton St. Widening-Kettleman to Vine (100%)	\$483,597										
	g. Stockton St. Widening-Vine to Tokay (100%)	\$82,235										
	h. Turner/Cluff Intersection Widening (100%)	\$138,835										
NEW DEVELOPMENT SHARE SUBTOTAL:		\$1,094,000	\$1,094,000	\$68,375	\$68,375	\$68,375	\$68,375	\$68,375	\$68,375	\$68,375	\$341,875	\$341,875
STREETS AND ROADWAY COST		\$45,100,937	\$15,290,687	\$527,722	\$123,455	\$289,955	\$382,955	\$407,485	\$2,608,365	\$5,422,655	\$5,328,095	

Signal lights, bridge crossings, and freeway interchanges are not privately constructed facilities and are completely funded by the City through development impact fees and other funding sources such as Federal, State, County and Measure K.

Street and Road Improvements

A listing of the street and road improvement projects included in the development impact fee program is provided in Table 6-1. Location of these projects is shown on Figure 6-2. For the most part, the improvement projects consist of new construction and modification of routes.

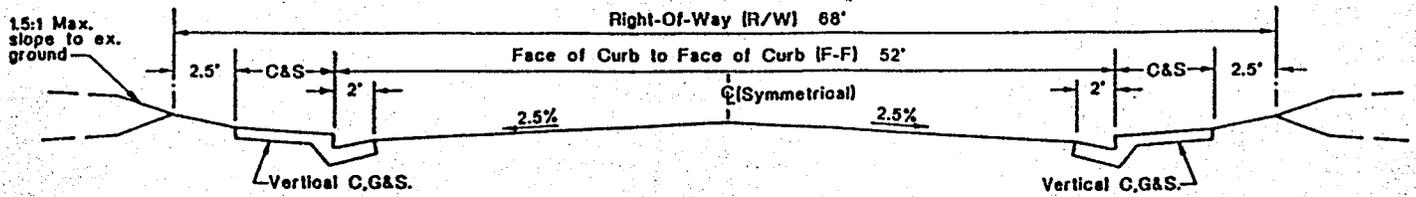
For the purpose of identifying the portion of each major route that will be funded by the City, the typical sections described above have been assumed. The developer obligation, as described in the previous section, is limited to right-of-way and improvements to construct a major collector (68 feet).

In the circulation study prepared for the City, the need for new traffic signals was identified. Costs of these signals have been included in the development impact fee program. At locations where minimum CalTrans signal warrants have already been met, 50 percent of the improvement cost has been allocated to the Impact Fee Fund.

Freeway Improvements

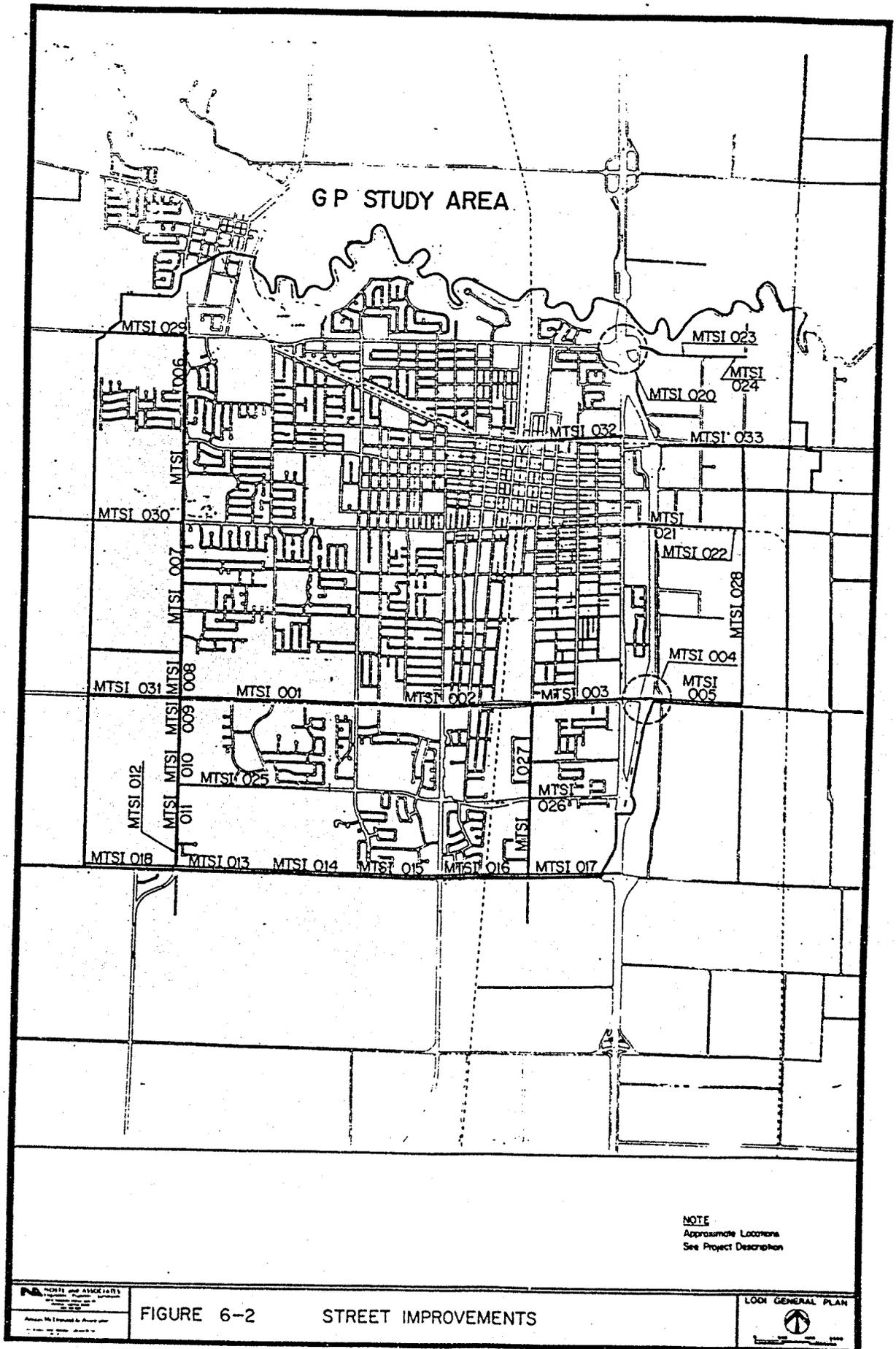
As recommended by TJKM, interchange improvements for Kettleman Lane/State Route 99 and Turner Road/State Route 99 will be necessary to maintain a LOS C or better. Proposed interchange improvements at Kettleman Lane/State Route 99 call for the realignment of Beckman Road. Currently, Beckman Road is located about 225 feet east of the northbound ramp onto State Route 99, a distance that is considered too close for two signalized intersections. Realignment of Beckman is proposed in the environmental impact report for Kettleman Properties located at the northeast corner of Kettleman Lane and Beckman Road. The proposed design constitutes a realignment of both Beckman Road and the northbound offramp, but is still subject to review by Caltrans and approval by the California Transportation Commission. As part of the Kettleman interchange work, a route study will be prepared that will address traffic and circulation at the interchange.

Measure K identified the SR 99/12 interchange as a funded project in the amount of \$700,000. For the purposes of this study, it is assumed that 30 percent of the interchange costs will be derived from sources outside this fee program. A portion of the 30 percent will be Measure K funds and the other could be State funds or possibly additional growth in Lodi not covered by this study.



MAJOR COLLECTOR
TWO LANE
 MAXIMUM CONSTRUCTION BY DEVELOPER

FIGURE 6-1 TYPICAL STREET SECTION



MONTI and ASSOCIATES
 ENGINEERS, ARCHITECTS, PLANNERS
 1000 15th Street, N.W.
 Washington, D.C. 20004
 Telephone: (202) 462-1000
 Telex: 410000 MONTI
 FAX: (202) 462-1000

FIGURE 6-2 STREET IMPROVEMENTS

LOCAL GENERAL PLAN


ESTIMATED COSTS AND PHASING

In Table 6-1, a summary of the street projects and development impact fee funding is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Roadway improvement costs reflect only the City's funding responsibility per the proposed City Reimbursement Policy and do not reflect the total estimated construction cost.

In preparing the estimates of construction cost, the developer obligation, City obligation and development impact fee funding for the projects, the following factors were considered. The City obligation for funding of projects includes everything not required of the developer including special medians, landscaping, and right-of-way.

Phasing of the improvements is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 6-1, the phasing is divided by year for the first seven years followed by two five-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Lower Sacramento Road is also included in the list of projects funded, in part, by Measure K. Based upon discussion with the City, the funding of Lower Sacramento Road improvements are divided amongst the City fee program, developer and Measure K. Obligations of the developer have been discussed. For the purposes of this study, it is assumed that Measure K funds will pay for 2 lanes (one each direction). Therefore, the obligation of the City Fee Program is for 2 lanes and the center median and curbs.

Relationship of Streets and Roads Projects to New Development

A reasonable relationship must be established between the fees use and the type of development on which the fee is imposed. In order to establish this relationship, we must first demonstrate that the type of development upon which the fee is to be charged will, in fact, use, be served by, or benefit from the public facilities to be financed.

Each and every land use will benefit from the streets and road facilities within the community. Residents use the streets to get to and from work, shopping, and entertainment. Commerce and industry use the streets for deliveries, customers, and employees. Each and every land use in the Proposed General Plan will benefit from the facilities constructed as part of the capital improvements program and, therefore, is appropriately part of the fee program.

Relationship of Streets and Roads Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

Trip generation factors developed and used in the Circulation Study form the basis for calculating an RAE schedule for streets and road facilities. Based upon recommendation of the City Transportation Consultant, trip generation factors for commercial categories were reduced by 30 percent to compensate for pass-by trips. As a result, net trip generation factors were calculated for each land use and compared to the base RAE factor of 1.0 for single family detached residential. The RAE schedule shows a reasonable relationship between the cost of streets and roads projects and the financing burden placed on each land use as based upon their relative generation and demand for streets and road facilities. RAE schedule for streets and roads is shown in Table 6-2.

Recommended Fees

The Streets and Road Facilities Fee is shown in Table 6-2. The total fee is \$5,470 per low density residential acre.

Regional Facilities

The fee program presented in this report does not include funding for improvements to roads outside the City of Lodi General Plan boundaries. The $\frac{1}{2}$ cent sales tax override for transportation (Measure K) recently approved by San Joaquin County voters, includes a provision for Regional Traffic Mitigation fees to be adopted by January 1, 1993. This fee program will need to be modified in coordination with San Joaquin County and the Council of Governments (the local transportation authority) to include a regional element.

TABLE 6-2
SUMMARY OF DEVELOPMENT IMPACT FEES
STREETS AND ROADS

21-Aug-91

<u>(Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,470
Medium Density	Acre	1.96	\$1 0,720
High Density	Acre	3.05	\$1 6,680
East Side Res	Acre	1.00	\$5,470
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,470
Medium Density	Acre	1.96	\$1 0,720
High Density	Acre	3.05	\$1 6,680
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	1.90	\$1 0,390
General Commercial	Acre	3.82	\$20,900
Downtown Commercial	Acre	1.90	\$1 0,390
Office Commercial	Acre	3.27	\$1 7,890
<u>INDUSTRIAL</u>			
Light Industrial	Acre	2.00	\$1 0,940
Heavy Industrial	Acre	1.27	\$6,950

Note: Fee amounts shown are for fiscal year 1991-1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 7

POLICE

OVERVIEW

Level of Service

Target for emergency response time is 3 minutes anywhere in the City. Currently, emergency response times are under this goal. There were a total of 65 sworn personnel and 33 non-sworn personnel authorized in 1988/89. These figures reveal a service standard of 0.95 sworn personnel and 0.47 non-sworn personnel per 1,000 persons served. Currently, the department is understaffed relative to the standard described above by 11 sworn and 5 non-sworn personnel.

The service level that is typically espoused for Police is so-many officers per 1,000 residents. This service standard does not account for employees, shoppers, tourists and other persons present in the service area during the day who may use or require assistance from the Police Department. Developing a standard in terms of "Persons Served" considers all persons who may use these services so that the service standard also captures the burden these other participants will place on the facilities. This is done through estimating the demand or use of the facilities by persons associated with each land use type.

Instead of determining the use from each unit of land developed, as is the procedure with RAEs, the use of each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new development.

Existing Police Facilities

The Lodi Police Department provides police protection services to all areas within the city limits. The Police Department serves a 9.4 square mile area with an estimated population of 50,300 in 1990. The Police Department, located at 230 W. Elm Street, has an estimated 21,571 square feet of building space. The current employee standard based 98 total employees is 1.3 employees per 1,000 persons served. The current space standard is 220 square feet of building space per employee.

Existing Deficiencies

Existing deficiencies are calculated based on what is currently provided in the way of staff and facilities and what staff and facilities are planned to be provided at the end of the planning period. Further, the existing deficiency calculation is prepared to identify the portion of the facilities, if any, which should be serving existing development based upon a current staffing or facility deficiency relative to the future standard for police staffing and space.

Table 7-1 presents the calculation of the existing deficiency for the Police Station Expansion. Based upon forecasts provided by the City for building space and police staffing in the future, the space standard and the staffing standard increase slightly. This produces only a very minor existing deficiency such that 7.3% of the Police Station Expansion is not funded from the development impact fees.

PLANNED POLICE FACILITIES

Police facilities to serve at buildout of the Proposed General Plan were identified by City staff and the Police Department. A summary of the facilities is presented in Table 7-2. With the exception of the Police Station expansion and the jail expansion, the major facilities are self explanatory.

Currently, alternatives for police and jail facilities are being considered by the City and the Police Department. Specific locations for the facilities have not been identified. Alternatives being considered include renovation and expansion of the existing Police Station.

ESTIMATED COST AND PHASING

In Table 7-2, a summary of the Police facility and estimated costs to serve the future City of Lodi is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Phasing of the improvements is based upon forecasts of facility needs by the City over the planning period.

For the purposes of fee study, the police station expansion costs are not wholly attributable to the development provided for under the Proposed General Plan. A portion of the building expansion (7.3%) will serve existing development. The cost in Table 7-2 reflects the reduced estimated cost. The jail expansion and the other facility costs listed in Table 7-2 are not subject to the existing deficiency reduction.

**TABLE 7-1
EXISTING DEFICIENCIES ANALYSIS
POLICE**

21-Aug-91

Description of Item	Existing Service Population	Future Additions	Future Total
GENERAL GOV. PERSONS SERVED	81,478	35,796	117,274
<u>SERVICE CAPACITY</u>			
Police Employees ^{es}	98.0	43.0	141.0
Police Facilities (Sq. Ft.)	21,571	10,000	31,571
<u>SERVICE STANDARD</u>			
Current Service Standard:			
Police Employees Per 1,000 Persons Served	1.20		
Building Sq. Ft. Per Employee	220.1		
Target Service Standard			
Police Employees Per 1,000 Persons Served			1.20
Building Sq. Ft. Per Employee			223.9
<u>ADDITIONAL SERVICE CAPACITY REQUIRED</u>			
Additional Employees	0.0	43.0	43.0
Additional Building Area (Sq. Ft.)			
For Existing Employees	372		372
For New Employees	0	9,618	9,618
Total	372	9,618	9,990
Burden on New and Existing Development	3.7%	96.3%	100.00%
Cost of New Facilities	\$74,000	\$1,926,000	\$2,000,000

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates

**TABLE 7- 2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
POLICE**

21-Aug-91

Project Number	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
LPD001	Police Station expansion to add 10,000 square feet of space.	\$2,000,000	\$1,926,000	to	to	\$0	\$0	\$0	\$92,900	\$1,833,100	\$0
LPD002	Jail expansion to add 10 new cells	\$275,000	\$275,000	\$0	\$0	to	\$0	\$0	\$27,500	\$247,500	to
LPD003	Miscellaneous safety equipment for 29 officers.	\$44,000	\$44,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$13,000	\$13,000
LPD004	Animal control truck and equipment	\$23,000	\$23,000	\$0	\$0	\$0	to	\$0	\$0	\$0	\$23,000
LPD005	2 pickup trucks equipped with radios and other equipment.	\$36,000	\$36,000	to	\$0	to	\$0	\$0	\$0	\$36,000	\$0
LPD006	Eight patrol cars and equipment.	\$144,000	\$144,000	\$18,000	\$0	\$18,000	\$0	\$18,000	\$0	\$36,000	\$54,000
LPD007	Ten portable radios.	\$26,000	\$26,000	\$0	\$3,000	\$0	\$3,000	\$0	\$3,000	\$9,000	\$8,000
LPD008	Five work stations.	\$20,000	\$20,000	to	\$4,000	to	\$0	\$4,000	\$0	\$4,000	\$8,000
LPD009	Five computer terminals.	\$8,000	\$8,000	\$0	\$1,500	\$0	\$1,500	\$0	\$0	\$2,500	\$2,500
TOTAL POLICE DEPARTMENT		\$2,576,000	\$2,502,000	\$21,000	\$11,500	\$21,000	\$7,500	\$25,000	\$126,400	\$2,181,100	\$108,500

DEVELOPMENT IMPACT FEE

Relationship of Police Projects to New Development

The relationship between existing deficiencies, improved service standards and capacity for new development was summarized in Table 7-1. Only the portion of the police facilities whose demand was generated by new development was included in the Development Impact Fee program.

Relationship of Police Projects to Land Uses

The RAE schedule for police facilities that is shown in Table 7-2 was developed from data supplied by the Lodi Police Department. The schedule is based on the relative number of calls for service from each land use category.

Recommended Fees

The Police Facilities fee is shown in Table 7-3. The total fee is \$1,110 per low density residential acre.

TABLE 7-3

1-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
POLICE**

(LandUse Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,110
Medium Density	Acre	1.77	\$1,960
High Density	Acre	4.72	\$5,240
East Side Residential	Acre	1.09	\$1,210
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,110
Medium Density	Acre	1.77	\$1,960
High Density	Acre	4.72	\$5,240
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	4.28	\$4,750
General Commercial	Acre	2.59	\$2,870
Downtown Commercial	Acre	4.28	\$4,750
Office Commercial	Acre	3.72	\$4,130
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.30	\$330
Heavy Industrial	Acre	0.19	\$210

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 8

FIRE

OVERVIEW

Level of Service

The level of service that guides the requirement for and placement of a new fire station is to provide a maximum of a three minute driving time to all areas within the City limits and the Limit of Utilities Planning.

Existing Fire Facilities

The City of Lodi Fire Department currently serves the City from three fire stations. Station #1 is located at 210 W. Elm Street, Station #2 is located at 705 E. Lodi Avenue and Station #3 is located at 2141 South Ham Lane. When these stations were constructed, they provided the desired service levels to the City and additional service capacity to the east, south and southwest areas. With new development occurring West of the existing City, additional fire protection capacity is required.

Existing Deficiencies

Currently, no major deficiencies exist in the Fire Facilities relative to the level and service standard for the City. Response times to some areas in the northwest are below the City standard. In a strict sense, correcting the existing deficiency in the northwest area should not be a cost allocated to the fee program. However, in the west side area, excess fire service capacity exists that will be used to serve future growth. Future growth should be required to purchase from the City excess capacity in the existing facilities. Considering that the existing deficiency is relatively minor compared to the excess capacity, and since the City has traditionally treated fire service on a city-wide basis, it is recommended that the fee be based solely on new capital expenditures. This serves to simplify the fee program and eliminates the need for zone fees and minor deficiency adjustments.

PLANNED FIRE FACILITIES

Fire Facilities to serve buildout of the Proposed General Plan were identified in the Fire Station Location Master Plan and by City and staff during preparation of this report. Major facilities projects are listed in Table 8-1. The new Fire Station (#4) will be located on lower Sacramento Road near Park West Drive. Other facilities listed in Table 8-1 will equip Station #4 and expand capabilities at the other stations.

During the preparation of the fee study, a number of fire facility capital improvement projects were identified by the City. The nature of these

TABLE 8 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
FIRE

21-Aug-91

GENERAL CITY PROJECT PHASING

Project Number	Description	Estimate Construction Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LFD001	New westside station construction (#), furnishings and equipment.	\$475,000	\$475,000	\$0	\$45,000	\$430,000	\$0	\$0	\$0	\$0	\$0
LFD002	New 100' ladder truck and equipment.	\$475,000	\$475,000	\$0	\$0	\$0	\$475,000	\$0	\$0	\$0	\$0
LFD003	Two sedans.	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000	\$10,000
LFD004	Two mini-vans.	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0	\$15,000
LFD005	Five computers.	\$16,000	\$16,000	\$0	\$0	\$0	\$0	\$0	\$3,000	\$6,000	\$7,000
LFD006	Fire fighting Safety gear for 23 employees.	\$13,000	\$13,000	\$0	\$0	\$0	\$0	\$0	\$13,000	\$0	\$0
LFD007	12 self-contained breathing apparatus.	\$18,000	\$18,000	\$0	\$0	\$0	\$0	\$0	\$18,000	\$0	\$0
LFD008	Station #1, Construction/remodel.	\$18,000	\$18,000	\$0	\$0	\$0	\$0	\$0	\$0	\$18,000	\$0
	Equipment Replacement	\$1,090,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL FIRE		\$2,155,000	\$1,065,000	\$0	\$45,000	\$430,000	\$475,000	\$0	\$49,000	\$34,000	\$32,000

projects can be characterized as upgrading of existing facilities and purchase of equipment. As a result, only those costs directly related to extending the existing level of service to new development are included in the fee program. These costs (such as radios, fire engines and equipment replacement) are estimated to be \$1,065,000. No personnel are included.

ESTIMATED COST AND PHASING

A summary of the Fire Facility projects and estimated costs and phasing is presented in Table-8-1. Estimated costs are based upon the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673.

DEVELOPMENT IMPACT FEE

Relationship of Fire Projects to New Development

As noted previously, existing deficiencies were not included in the Development Impact Fee program. Only those projects, or portions of projects, that serve new development were financed from Development Impact Fees.

Relationship of Fire Projects to Land Uses

The RAE schedule for fire facilities that is shown in Table 8-2 was developed from data supplied by the Lodi Fire Department. The RAE schedule considers relative number of fire calls and Emergency Medical Service (EMS) calls generated by each land use category. Calls involving automobile accidents and fires were spread back to the land use categories based on the streets and roads RAE factors.

Recommended Fees

The summary Fire Facilities fee is shown in Table 8-2. The total fee is \$520 per low density residential acre.

TABLE 8-2
SUMMARY OF DEVELOPMENT IMPACT FEES
FIRE

21-Aug-91

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$520
Medium Density	Acre	1.96	\$1,020
High Density	Acre	4.32	\$2,250
East Side Residential	Acre	1.10	\$570
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$520
Medium Density	Acre	1.96	\$1,020
High Density	Acre	4.32	\$2,250
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	2.77	\$1,440
General Commercial	Acre	1.93	\$1,000
Downtown Commercial	Acre	2.77	\$1,440
Office Commercial	Acre	2.46	\$1,280
<u>INDUSTRIAL</u>			
Light industrial	Acre	0.64	\$330
Heavy Industrial	Acre	0.61	\$320

Note: Fee amounts shown are for fiscal year 1991/1992.
Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 9

PARKS AND RECREATION

OVERVIEW

This chapter of the report presents the cost estimates and the proposed phasing for each Park and Recreation improvements that are to be financed from development impact fee revenues. Government Code §66000 specifies certain findings are necessary for a valid development impact fee. This chapter presents the required findings and presents the calculation of the Parks and Recreation fee.

Level of Service

The current level service for standard parks (not including school parks or drainage basins) is 3.3 acres per 1,000 Park and Recreation Persons Served and the current level of service for community center building space is approximately 1,765 square feet per 1,000 Park and Recreation Persons Served. The City has adopted standards of 3.4 acres per 1,000 persons served and 1,800 square feet of community center space per 1,000 persons served.

Existing Park and Recreation Facilities

Table 9-1 provides a summary of the existing park acreage in the City of Lodi. In the table, the most important number is the 177.8 acres of Standard Park area. It is this acreage that is used to compute the existing standard for park acreage. Based upon an estimated current usage of 53,713 park and recreation persons served, the existing standard for parks and recreation acreage is 3.3 acres per 1,000 persons served. Based upon an estimated current building space inventory of 94,800 square feet in community center buildings, the existing space standard is 1,765 square feet per 1,000 persons served. A summary of existing park facilities provided by the City and is presented in Table 9-2.

The adopted standards are slightly higher than what the City is currently providing. As a result, a small percentage of the new facilities will be paid for from funds generated outside of the fee program. This calculation is shown in Table 9-3.

The level of Parks and Recreation services is often expressed in terms of acres per 1,000 population. This service standard must be interpreted carefully. Employees, shoppers, tourists and other persons present during the day may use the park and recreation facilities in addition to residents of Lodi. The concept "Persons Served" considers all persons who may use these facilities so that the service standard also captures the burden these other participants will place on the facilities. A weighting factor is estimated that accounts for various categories of persons served in accordance with the

TABLE 9-1

INVENTORY OF EXISTING PARK AND RECREATION ACREAGE

1	Description	Existing Park Facilities				Future Parks
		Total Acres	Standard Park	Basin	School	Total Acres
1.	Armory	3.2	3.2			
2.	Beckman	16.6	0.8	15.8		
3.	Blakely	9.0	9.0			
4.	Kandy Kane	0.2	0.2			
5.	Century (1)	2.5	2.5			
6.	Emerson	2.0	2.0			
7.	English Oaks Commons	3.7	3.7			
8.	G-Basin	0.0				
9.	Henry Graves	12.6	3.0	9.6		
10.	Grape Bowl	15.0	15.0			
11.	Hale	2.6	2.6			
12.	Hutchins Street Square	10.0	10.0			
13.	Kofu	10.0		10.0		
14.	Lawrence/Zupo Hardball	18.0	10.0		8.0	
15.	Legion	5.6	5.6			
16.	Lodi Lake	101.0	101.0			
17.	Maple Square	1.0	1.0			
18.	Pixley Park (C-1 Basin)	17.0		17.0		
19.	Salas Park	21.0	1.0	20.0		
20.	Softball Complex	7.6	7.6			
21.	Van Buskirk	1.0	1.0			
22.	Vinewood	14.0	0.8	11.2	2.0	
23.	Westgate	6.0	0.3	5.7		
24.	Washington School	5.1			5.1	
25.	Lakewood School	5.0			5.0	
26.	Reese School	6.0			6.0	
27.	Nichols School	5.8			5.8	
28.	Heritage School	2.0			2.0	
29.	Woodbridge School	5.0			5.0	
30.	Sr. Elementary	12.0			12.0	
31.	Lodi High School	25.0			25.0	
32.	Tokay High School	21.0			21.0	
33.	Needham School	2.0			2.0	
	Westgate Expansion			13.4		0.6
	6-Basin			50.0		1.0
	F-Basin			24.0		1.0
	I-Basin			24.0		1.0
	C-Basin Expansion			8.0		1.0
	Park Area 11					3.0
	Park Area 13					3.0
	Park Area #6					10.0
	Park Area 14					10.0
	Park Area 15					8.0
	Park Area 17					10.0
	Eastside Park					2.0
	East Side Softball Complex					19.4
	Lodi Lake " Expansion					13.0
	Total Acreage	368.5	180.3	208.7	98.9	83.0
	Total Acreage for Standard (1)		177.8			

Source: City of Lodi.

(1) Century Park is a temporary park and is not included in standards.

relative frequency with which they are expected to use park and recreation facilities.

Existing Deficiencies

Calculation of existing deficiencies is based upon the current standard relative to the future standard for parks and recreation acreage and community building space. In Table 9-3, results of the existing deficiency analysis are presented.

The findings indicate the following. First, the added park acreage in the Proposed Fee Program matches the acreage standard from 3.3/1,000 persons served. As a result the added park acreage can be allocated to new development. Second, the added community building space will match the existing space standard of 1,800/1,000 person served.

Existing deficiencies are not funded through the development impact fee program. In this fee study, alternative funding sources are not specifically identified that would cover parks and recreation existing facilities deficiencies.

TABLE 9-2

INVENTORY OF EXISTING PARK AND RECREATION FACILITIES

<u>PARK FACILITY</u>	<u>EXISTING STANDARD</u>
Park Acreage	3.3/1,000 persons served
Community Building Area persons	1,765 sq ft/1,000 served
Restrooms	1/park over 3.0 acres
Lighted Baseball Diamonds	11 Total
Tot lot	1/park
Lighted Tennis Courts	11 Total
Swimming Pools	4 Total

Source: Nolte and Associates and Angus McDonald & Associates

PLANNED PARK AND RECREATION FACILITIES

A summary of the Parks and Recreation Facility Projects is presented in Table 9-4. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673. Project descriptions played an important role in preparing the project estimates and were developed in

TABLE 9-3

21-Aug-91

**EXISTING DEFICIENCIES ANALYSIS
PARKS AND RECREATION**

Description of Item	Existing Conditions	Future Additions	Future Total
<u>PARK PERSONS SERVED</u>	53,713	24,020	77,733
<u>SERVICE CAPACITY</u>			
Park Acreage	177.8	83.0	260.8
Community Center Buildings (Sq. Ft)			
1. Hutchins Street Square Cafeteria	6,400		
2. Camp Hutchins Room	6,000		
3. Hutchins Street Square N. Complex	19,600		
4. Hutchins Street Square Pool Area	5,400		
5. Hutchins Street Square Fine Arts Bldg.	8,700		
6. Recreation Annex, N. Stockton St.	3,500		
7. Kofu Park Building	1,800		
8. Lee Jones Building (@ Leigion Park)	900		
9. Grape Festival Pavilion	32,000		
10. Grape Festival Chablis Hall	9,600		
11. Recreation Office Meeting Room	900		
Total All Buildings:	94,800	45,100	139,900
<u>SERVICE STANDARD</u>			
Current Service Standard:			
Park Acres Per 1,000 Persons Served	3.3		
Community Center Sq. Ft. Per 1,000 Persons Served	1,765		
Target Service Standard			
Park Acres Per 1,000 Persons Served			3.4
Community Center Sq. Ft. Per 1,000 Persons Served			1,800
<u>ADDITIONAL SERVICE CAPACITY REQUIRED</u>			
Additional Park Acres	2.4	80.6	83.0
Additional Community Center SqFt	1,870	43,230	45,100
<u>BURDEN ON NEW AND EXISTING DEVELOPMENT</u>			
Additional Park Acres	3.0%	97.0%	100.0%
Additional Community Center SqFt	4.0%	96.0%	100.0%

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPP001	Parks and Recreation Master Plan.	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP002	Administration building expansion at corporation yard.	\$2,864,000	\$1,289,000	\$0	\$0	\$0	\$128,900	\$1,160,100	\$0	\$0	\$0
MPP003	Underground tank replacement	\$37,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP004	Lodi Lake Central Park improvements.	\$868,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP005	Lodi Lake peninsula improvements.	\$375,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP006	Lodi Lake expansion to 13 acre westside area.	\$1,816,000	\$1,816,000	\$0	\$0	\$0	\$0	\$0	\$181,600	\$1,634,400	\$0
MPP007	Lodi Lake silt removal.	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP008	Lodi Lake Turner Road Retaining Wall.	\$158,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP009	Lodi Lake Utility Extension (Water).	\$133,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP010	Softball complex Concession.	\$79,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP011	Softball Complex replacement of concession stand.	\$107,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP012	Softball Complex shade structure.	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP013	Softball Complex paving.	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP014	Softball Complex upgrade sports lighting.	\$61,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPP015	Stadium Electrical & Sports Lighting.	\$122,000	SO	SO	SO	SO	SO	SO	SO	to	\$0
MPP016	Stadium Press Box	\$44,300	SO	SO	SO	SO	SO	SO	SO	SO	\$0
MPP017	Stadium Parking Lot Landscape & Lighting	\$81,000	SO	SO	SO	SO	\$0	SO	SO	SO	\$0
MPP018	Stadium Returf & Drainage Improvements	\$138,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPP019	Stadium Additional Seating	\$2,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPP020	Kofu Park Enlarge Bleacher Area	\$25,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPP021	Kofu Park New Playground Equipment	\$25,000	W	SO	SO						
MPP022	Kofu Park Permanent Backstop	\$8,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPP023	Kofu Park Group Picnic Facilities	\$7,000	SO	\$0	SO	SO	\$0	SO	SO	SO	\$0
MPP024	Kofu Park Entrance Improvements	\$13,000	SO	SO	\$0	\$0	SO	SO	\$0	SO	SO
MPP025	Armory Park Parking Lot	\$126,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPP026	Armory Park Press Box & Bleacher Wall	\$27,000	SO	SO	SO	SO	SO	W	SO	to	SO
MPP027	Armory Park Upgrade Electrical	\$20,000	SO	to	SO	SO	SO	SO	SO	SO	SO
MPP028	Zupo Field Replacement of wood seats.	\$28,000	to	SO	SO	SO	SO	SO	to	SO	SO

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program ProCost	Impact Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPP029	ZSports Lighting, Electrical & Sports Lighting	\$81,000	\$81,000	SO	SO	SO	SO	SO	SO	SO	SO
MPP031	Hale Park General Improvements	\$296,000		SO	\$0	SO	\$0	\$0	\$0	\$0	\$0
MPP033	Community Buildings (City-Wide)	\$4,510,000	\$4,329,000	\$0	\$288,640	\$288,640	\$288,640	\$288,640	\$288,640	\$1,443,200	\$1,443,200
MPP034	Blakely Park Upgrade Lighting	\$22,000		SO	SO	SO	\$0	\$0	\$0	\$0	\$0
MPP035	Salas Park Protective Shade Structures	\$51,000		SO	SO	SO					
MPP036	Salas Park Fenced Diamond Area	\$9,000		SO	SO	SO	SO	SO	SO	SO	SO
MPP037	Emeraon Park Restroom Replacement	\$178,000		SO	SO	SO	\$0	\$0	SO	SO	SO
MPP038	Pixely Park (C - Basin) General Improvements	\$465,000	\$465,000	SO	SO	SO	SO	SO	SO	\$0	\$465,000
MPP039	Westgate Park Improvements	\$353,000	\$353,000	\$0	SO	SO	SO	SO	\$353,000	SO	SO
MPP040	Area #1 Park (3ac.)	\$459,000	\$459,000	SO	\$0	\$0	SO	SO	SO	\$459,000	SO
MPP041	Area #3 Park & Pool (3ac.)	\$712,000	\$712,000	SO	SO	SO	\$0	SO	SO	SO	\$712,000
MPP042	Area #4 Park	\$1,462,000	\$1,462,000	SO	SO	SO	SO	SO	SO	\$0	\$1,462,000
MPP043	Area #6 Park Improvements	\$1,377,000	\$1,377,000	SO	SO	SO	SO	SO	\$0	\$888,500	\$888,500
MPP044	Area #5 Park Improvements	\$1,148,000	\$1,148,000	SO	SO	SO	\$400,000	\$400,000	\$35,000	\$313,000	\$0
MPP045	Area #7 Park Improvements	\$1,660,000	\$1,660,000	SO	\$0	\$166,000	\$0	\$1,494,000	SO	SO	SO
MPP048	Eastside Park General Park	\$307,000	\$307,000	SO	SO	SO	SO	SO	SO	\$307,000	\$0

TABLE 94
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR046A	East Side Softball Complex	\$2,669,000	\$2,338,845	SO	SO	SO	SO	SO	SO	SO	\$2,338,845
MPR047	F-Basin Improvements Park	\$120,000	\$120,000	SO	SO	SO	SO	SO	SO	SO	\$120,000
MPR048	I-Basin Improvements Park	\$120,000	\$120,000	SO	SO	SO	SO	SO	SO	SO	\$120,000
MPR052	G-Basin Park Improvements	\$300,000	\$300,000	SO	SO	SO	SO	SO	SO	\$300,000	SO
MPR053	Hutchins Square Catering Kitchen	\$35,000	to	SO	SO	SO	SO	SO	SO	SO	SO
CO CT MPR054	Hutchins Square Multi-Purpose	\$750,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPR055	Hutchins Square Child Care Center	\$568,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPR056	Hutchins Square Connectors/ Walkways	\$1,000,000	SO	SO	SO	SO	SO	SO	SO	SO	SO
MPR057	Hutchins Square Auditorium Remodel	\$4,000,000	to	SO	SO	SO	SO	SO	SO	SO	SO
TOTAL PARKS AND REC.		\$30,191,000	\$18,306,445	\$50,000	\$288,640	\$454,640	\$817,540	\$3,342,740	\$858,240	\$5,145,100	\$7,349,545

concert with City staff. Project numbers listed in Table 9-4 are used to identify project locations in Figure 9-1. The Parks and Recreation Master Plan is scheduled early in the program to refine details and costs of the new parks.

ESTIMATED COSTS AND PHASING

Improvement and land acquisition costs for parks and recreation facilities are based upon information provided by City staff and the City Capital Improvement Plan. Land costs were determined to be \$100,000 per acre. In cases where land for parks expansion is already owned by the City, the proposed fee program does not pay or reimburse the City for land costs. The fee calculation methodology did not consider different cost increase factors for land acquisition versus construction.

A number of the projects identified by the City are not attributable to new development and more accurately fall into the category of maintenance and repair. These projects are easily identified because no cost has been allocated to the impact fee fund.

In Table 9-4, the phasing of construction costs is presented only for those Parks projects to be funded through the fee program. Phasing of the projects is based upon forecasts provided by the City. The Parks and Recreation Master Plan is scheduled early in the program to refine details and cost of the program.

Analysis of the existing and planned facilities for the corporation yard identified that only a portion of the facilities will serve future growth. Based upon building footage, 45 percent of the planned corporation yard improvements costs are allocated to future growth.

DEVELOPMENT IMPACT FEE

Relationship of Park and Recreation Projects to New Development

The additional park acres to be added throughout the program serve only new development. The existing deficiency analysis presented in Table 9-3 also shows that the added community center space is serving only new development.

Relationship of Park and Recreation Projects to Land Uses

The RAE schedule for parks and recreation that is shown in Table 9-5 recognized explicitly that, while demand is primarily generated by the residential population, parks and recreation facilities also serve employees. Examples of non-residential demand include lunch time use, company picnics and company team participation in sports leagues.

The RAE schedule was based on the relative amount of time available to residents and to employees to make use of park and recreational facilities.

Recommended Fees

The summary Parks and Recreation fee is shown in Table 9-5. The total fee is \$11,980 per low density residential acre.

TABLE 9-5
SUMMARY OF DEVELOPMENT IMPACT FEES
PARKS AND RECREATION

21-Aug-91

<u>Land Use categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fees</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$11,980
Medium Density	Acre	1.43	\$17,130
High Density	Acre	2.80	\$33,540
East Side Residential	Acre	1.10	\$13,180
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$11,980
Medium Density	Acre	1.43	\$17,130
High Density	Acre	2.80	\$33,540
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.32	\$3,830
General Commercial	Acre	0.32	\$3,830
Downtown Commercial	Acre	0.32	\$3,830
Office Commercial	Acre	0.54	\$6,470
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.23	\$2,760
Heavy Industrial	Acre	0.33	\$3,950

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 10
GENERAL CITY FACILITIES

OVERVIEW

Level of Service

The current staffing level of service provided by the City of Lodi for general city services (e.g. City manager, finance department) is 1.25 Full Time Equivalents (FTEs) per 1,000 persons served. The current space standard is 229 square feet per FTE. These standards were used as the basis for calculating the percentage of additions to City Hall that would be appropriately charged to either new or existing development.

While there is not a stated level of service for general city facilities there is an implied standard based on the current level of city employees and building space per city employee. The service standard used to examine the existing deficiencies for General City Facilities includes demands for general city services generated by business as well as demand by residents.

A "Persons Served" standard is calculated by estimating the demand or use of general city services by persons associated with each land use type. Instead of determining the use by each unit of land developed, as is the procedure with RAE factors, the use for each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "per person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new developments.

Existing Deficiencies

Table 10-1 presents the results of the existing deficiency analysis. In the case of the City Hall addition, both the staffing standard and the space standard are increased over the planning period. As a result, a portion (27.8%) of the addition can not be funded from development impact fees.

PLANNED GENERAL CITY FACILITIES

In Table 10-2, a listing of General City Facilities Projects is provided. Included in the listing are those capital improvements and expenditures identified by City Department heads in their budget forecasts for 2006/7.

ESTIMATED COST AND PHASING

A summary of the phasing of projects funded by the fee program is provided in Table 10-2. Phasing of the projects is based upon the forecast of units constructed over the General Plan period.

**TABLE 10-1
EXISTING DEFICIENCIES ANALYSIS
CITY HALL FACILITIES**

21-Aug-91

Personnel	Units	Current 1989/90	Change 1989/90- 2007/08	End State 2007/08
Administration	Persons	13	8	21
Finance(w/o Purchasing)	Persons	28	14	42
Purchasing (FT)	Persons	5	3	8
Purchasing (PT)	Persons	1	-1	0
Data Processing	Persons	5	13	18
Building (CDD)	Persons	6	5	11
Planning (CDD)	Persons	5	4	9
Public Works	Persons	19	9	28
Totals:		82	55	137

Personnel	Units (1)	FTE Conversion Factor	Current 1989/90	Change 1989/90 2007/08	End State 2007/08
Administration	FTE	100YO	13.0	8.0	21.0
Finance(w/o Purchasing)	FTE	100YO	28.0	14.0	42.0
Purchasing (FT)	FTE	100%	5.0	3.0	8.0
Purchasing (PT)	FTE	50%	0.5	-0.5	0.0
Data Processing	FTE	100YO	5.0	13.0	18.0
Building (CDD)	FTE	100%	6.0	5.0	11.0
Planning (CDD)	FTE	100YO	5.0	4.0	9.0
Public Works	FTE	100%	19.0	9.0	28.0
Total Units			81.5	55.5	137.0
Building Area Square Feet			18,657	14,448	33,105
Total Persons Served			64,906	30,064	94,970
Staffing Standard:					
FTE's per 1,000 Person's Served			1.26	0.19	1.44
Space Standard:					
Area Per Employee (FTE)			228.92	12.72	241.64

TABLE 10-1

21-Aug-91

(Cont.)

**SUMMARY OF DEVELOPMENT IMPACT FEES
CITY HALL FACILITIES**

Description of Item	Existing Population	Future Additions	Future Total
GENERAL GOVERNMENT PERSONS SERVED	64,906	30,064	94,970
<u>SERVICE CAPACITY</u>			
General Government Employees (Full Time Equivalent (FTEs))	81.5	55.5	137.0
General Government Buildings (Sq. Ft.)	18,657	14,448	33,105
<u>SERVICE STANDARD</u>			
Current Service Standard:			
General Government Employees Per 1,000 Persons Served	1.3		
Building Sq. Ft. Per Employee	228.9		
Target Service Standard			
General Government Employees Per 1,000 Persons Served			1.4
Building Sq. Ft. Per Employee			241.6
<u>ADDITIONAL SERVICE CAPACITY REQUIRED</u>			
Additional Employees (Full Time Equivalent (FTE))	12.1	43.4	55.5
Additional Building Area (Sq. Ft.)			
For Existing Employees	1,037		1,057
For New Employees	2,931	10,480	13,411
Total	3,968	10,480	14,448
Burden on New and Existing Development	27.5%	72.5%	100.0%
Cost of New Facilities	\$1,159,125	\$3,055,875	\$4,215,000

Source: Nolte & Associates and Angus McDonald & Associates

**TABLE 10 - 2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
GENERAL CITY FACILITIES**

21/08/91

Project Number	Location	Program Costs	Impact Fee	Phasing							
				1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
GCFI001	City Hall Remodel and Addition	\$4,215,000	\$3,055,875	\$0	\$700,000	\$700,000	\$0	\$0	\$0	\$1,655,875	\$0
GCFI002	Civic Center Parking Lot Expansion 13N. Church.	\$141,000	\$141,000	\$0	\$0	\$0	\$0	\$0	\$141,000	\$0	\$0
GCFI008	Property acquisition, 217 E. Lockeford.	\$213,000	\$213,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$213,000
GCFI009	Parking Lot Improvements, NE corner of Lockeford and Stockton.	\$70,000	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,000
GCFI010	Library Expansion	\$2,900,000	\$2,900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,900,000	\$0
GCFI011	Public Works - Trucks	\$750,000	\$750,000	\$46,875	\$46,875	\$46,875	\$46,875	\$46,875	\$46,875	\$234,375	\$234,376
GCFI012	Public Works - Pickups and Sedans	\$715,000	\$715,000	\$44,688	\$44,688	\$44,688	\$44,688	\$44,688	\$44,688	\$223,438	\$223,438
GCFI013	Public Works - Air Compressors	\$90,000	\$90,000	\$5,625	\$5,625	\$5,625	\$5,625	\$5,625	\$5,625	\$28,125	\$28,125
GCFI014	Public Works - Misc. Office Equipment	\$65,500	\$65,500	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094	\$20,469	\$20,460
GCFI015	Finance - Misc. Office Equipment	\$181,700	\$181,700	\$11,356	\$11,356	\$11,356	\$11,356	\$11,356	\$11,356	\$58,781	\$58,781
GCFI016	Finance Computer (AS 400 Upgrade)	\$72,000	\$72,000	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$22,500	\$22,500
GCFI017	Fee Program Monitoring	\$2,560,000	\$2,560,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$800,000	\$800,000
CODV001	General Plan Update 1987	\$411,109	\$411,109	\$411,109	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CODV002	General Plan Update 1997	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0
CODV003	General Plan Update 2002	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0
TOTAL CITY FACILITIES		\$12,884,309	\$11,725,184	\$688,247	\$977,138	\$977,138	\$277,138	\$277,138	\$668,138	\$6,191,563	\$1,668,688

DEVELOPMENT IMPACT FEE

Relationship of General City Projects to New Development

The relationship between existing deficiencies, changing service standards and demand created by new development was presented in Table 10-1. This exhibit was used to allocate responsibility for financing between Development Impact Fees and other sources of financing.

Relationship of General City Projects to Land Uses

The RAE schedule that has been developed for general City facilities is shown in Table 10-3. This schedule is based on an estimate of relative population and employment (measured in persons per household and in employees per thousand square feet, respectively) and on the judgment that employees place a relative burden on general City administrative facilities that is 50 percent of that imposed by residents.

Recommended Fees

The summary General City Facilities fee is shown in Table 10-3. The total fee is \$6,380 per low density residential acre.

TABLE 10-3
SUMMARY OF DEVELOPMENT IMPACT FEES
GENERAL CITY FACILITIES

21-Aug-91

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$6,380
Medium Density	Acre	1.43	\$9,120
High Density	Acre	2.80	\$17,860
East Side Residential	Acre	1.10	\$7,020
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$6,380
Medium Density	Acre	1.43	\$9,120
High Density	Acre	2.80	\$17,860
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.89	\$5,680
General Commercial	Acre	0.89	\$5,680
Downtown Commercial	Acre	0.89	\$5,680
Office Commercial	Acre	1.53	\$9,760
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.64	\$4,080
Heavy Industrial	Acre	0.93	\$5,930

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

APPENDIX A
FORECAST OF MAPPED ACREAGE FOR
PROPOSED GENERAL PLAN

TABLE A-I

GENERAL PLAN ACREAGE GROWTH FORECAST
CITY OF LODI PUBLIC FACILITIES FINANCING PLAN

Land Use Categories	Units	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997 /2002	2002 /2007	Total Forecast
RESIDENTIAL										
Low Density	Acres	3	2	2	2	2	2	2	2	17
Medium Density	Acres	1	0	1	1	1	1	1	1	7
High Density	Acres	0	1	0	1	0	1	1	1	5
East Side Residential	Acres	0	0	0	0	0	0	1	0	1
PLANNED RESIDENTIAL										
PR - Low Density	Acres	74	82	74	61	66	61	267	288	973
PR - Medium Density	Acres	5	5	5	4	4	4	17	18	62
PR - High Density	Acres	6	7	6	5	5	5	21	23	78
Total Residential		89	97	88	74	78	74	310	333	1,143
COMMERCIAL										
Neighborhood	Acres	15	15	6	6	6	6	25	26	105
General	Acres	0	1	1	1	1	1	3	3	11
Downtown	Acres	0	0	0	0	1	0	1	1	3
Office	Acres	2	2	2	2	2	2	11	11	34
Total Commercial		17	18	9	9	10	9	40	41	153
INDUSTRIAL										
Light Industrial	Acres	26	17	22	22	22	22	139	165	435
Heavy Industrial	Acres	10	7	9	9	9	9	56	66	175
Total Industrial		36	24	31	31	31	31	195	231	610

Source: City of Lodi Public Works Department.

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

AUGUST 1991

PREPARED BY:

**NOLTE AND ASSOCIATES
ANGUS MCDONALD AND ASSOCIATES**





August 20, 1991
2529-88-00

Mr Jack Ronsko
Director of Public Works
City of Lodi
221 W. Pine Street
Lodi, CA 95240

SUBJECT: DEVELOPMENT IMPACT FEE STUDY FINAL REPORT

Dear Mr. Ronsko:

This report has been prepared for the City of Lodi to evaluate the capital improvements required to serve expanding areas of the City identified in the General Plan. The primary objectives of the study were to identify capital improvements, prepare estimates of probable construction cost, forecast the timing of capital improvements, and develop a financing plan to fund the construction of the capital improvements.

The principal results of the study are summarized in Chapter 2, Methodology and Results. All comments received from the City and others on the draft report have been incorporated into this final version.

We appreciate the assistance and cooperation we received from City staff during the course of the study. Richard Prima deserves special recognition for his tireless efforts on the project.

It has been our pleasure to serve the City of Lodi on this important project and we look forward to again serving the City on future projects.

Very truly yours,

NOLTE AND ASSOCIATES

Wally Sandelin

F. Wally Sandelin
Group Manager

FWS/ler (CL1223-B)

Enclosure



NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

123 North Sycamore Avenue, Suite 101, Manteca, CA 95336 Tel: (209) 239-9080

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

Prepared for:

CIN OF LODI

Prepared by:

NOLTE AND ASSOCIATES
1750 Creekside Oaks Drive, Suite 200
Sacramento, California 95835
(916) 641-1500

NOLTE AND ASSOCIATES
123 N. Sycamore Avenue, Suite 101
Manteca, California 95336
(209) 239-9080

and

ANGUS MCDONALD AND ASSOCIATES
1950 Addison Street, Suite 107
Berkeley, California 94704
(415) 548-5831

August 1991

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
CHAPTER 1 INTRODUCTION	1
INTRODUCTION	1
- Purpose of the Fee	1
Planning Period	1
Basis of Costs	1
Background - Development Forecast	2
Residential Acre Equivalentents	2
CHAPTER 2 METHODOLOGY AND RESULTS	4
SUMMARY OF FUNDING SOURCES	4
Phasing of Improvements for Maximum Efficiency	4
Assumptions/Concepts	4
Procedure for Staging Public Improvements	6
Comments on Specific Projects and Services	7
Streets and Roads	7
Parks and Recreation	8
Police, Fire and General Facilities	8
Identifying Projects Curing Existing Deficiencies	8
Interfund Borrowing	8
Detailed Methodology	9
Summary of Fees	10
Changes In Land Use Entitlements	10
CHAPTER 3 WATER SERVICE	14
OVERVIEW	14
Supply	14
Distribution System	14
Water Master Plan	15
Water Reimbursement Policy	15
Existing Deficiencies	16
PLANNED WATER FACILITIES	16
Supply	27
Distribution System	27
Treatment	27
ESTIMATED COSTS AND PHASING	28
DEVELOPMENT IMPACT FEE	28
Relationship of Water Projects to New Development	28
Relationship of Water Projects to Land Uses	29

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
Recommended Fees	29
CHAPTER 4 SEWER SERVICE	31
OVERVIEW	31
Collection System	31
Treatment and Disposal	31
Master Sewerage Plan	31
Sewer Reimbursement Policy	32
Existing Deficiencies	32
 PLANNED SEWERAGE FACILITIES	 33
Collection System	33
Treatment and Disposal	33 -
 ESTIMATED COSTS AND PHASING	 33
Relationship of Sewer Projects to New Development	37
Relationship of Sewer Projects to Land Uses	37
Recommended Fees	39
 BURDEN ANALYSIS FOR SEWER SUB-ZONES	 39
CHAPTER 5 STORM DRAINAGE	42
OVERVIEW	42
Collection System	42
Detention Basins	43
Master Storm Drainage Plan	43
Master Storm Drainage Fee	43
 PLANNED STORM DRAINAGE IMPROVEMENTS	 43
Collection System	44
Detention Basins	44
 ESTIMATED COSTS AND PHASING	 44
Relationship of Storm Drainage Projects to New Development	49
Relationship of Storm Drainage Projects to Land Uses	49
Recommended Fees	49
 CHAPTER 6 STREETS AND ROADS	 51
OVERVIEW	51
Existing Traffic Conditions	51
Circulation Plan	51
Existing Deficiencies	51

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
PLANNED CIRCULATION IMPROVEMENTS	52
Developer Required Improvements	52
Street and Road Improvements	62
Freeway Improvements	62
ESTIMATED COSTS AND PHASING	65
Relationship of Streets and Roads Projects to New Development	65
Relationship of Streets and Roads Projects to Land Uses	66
Recommended Fees	66
Regional Facilities	66
CHAPTER 7 POLICE	68
OVERVIEW	68
Level of Service	68
Existing Police Facilities	68
Existing Deficiencies	69
PLANNED POLICE FACILITIES	69
ESTIMATED COST AND PHASING	69
DEVELOPMENT IMPACT FEE	72
Relationship of Police Projects to New Development	72
Relationship of Police Projects to Land Uses	72
Recommended Fees	72
CHAPTER 8 FIRE	74
OVERVIEW	74
Level of Service	74
Existing Fire Facilities	74
Existing Deficiencies	74
PLANNED FIRE FACILITIES	74
ESTIMATED COST AND PHASING	76
DEVELOPMENT IMPACT FEE	76
Relationship of Fire Projects to New Development	76
Relationship of Fire Projects to Land Uses	76
Recommended Fees	76

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
CHAPTER 9 PARKS AND RECREATION	78
OVERVIEW	78
Level of Service	78
Existing Park and Recreation Facilities	78
Existing Deficiencies	80
PLANNED PARK AND RECREATION FACILITIES	80
ESTIMATED COSTS AND PHASING	87
DEVELOPMENT IMPACT FEE	87
Relationship of Park and Recreation Projects to New Development	87
Relationship of Park and Recreation Projects to Land Uses	87
Recommended Fees	87
CHAPTER 10 GENERAL CITY FACILITIES	89
OVERVIEW	89
Level of Service	89
Existing Deficiencies	89
PLANNED GENERAL CITY FACILITIES	89
ESTIMATED COST AND PHASING	89
DEVELOPMENT IMPACT FEE	93
Relationship of General City Projects to New Development	93
Relationship of General City Projects to Land Uses	93
Recommended Fees	93
APPENDIX A	95

LIST OF FIGURES

<u>Figure Number</u>	<u>Title</u>	<u>Page No.</u>
3-1	Water System Improvements	26
4-1	Sanitary Sewer System Improvements	36
5-1	Storm Drainage Improvements	48
6-1	Typical Street Section	63
6-2	Street Improvements	64
9-1	Parks and Recreation Improvements	86

LIST OF TABLES

<u>Table Number</u>	<u>Title</u>	<u>Page No.</u>
2-1	Summary of Estimated Major Capital Improvement Program Costs and Funding Services	5
2-2	Summary of Development Impact Fees - All Fees	11
3-1	Development Related Capital Costs and Phasing - Water	17
3-2	Summary of Development Impact Fees - Water	30
4-1	Development Related Capital Costs and Phasing - Sewer	34
4-2	Summary of Development Impact Fees - Sewer	38 -
4-3	Sewer Sub-Zone Fee Calculations	40
5-1	Development Related Capital Costs and Phasing - Storm Drainage	45
5-2	Summary of Development Impact Fees - Storm Drainage	50
6-1	Development Related Capital Costs and Phasing - Streets and Roads	53
6-2	Summary of Development Impact Fees - Streets and Roads	67
7-1	Existing Deficiencies Analysis - Police	70
7-2	Development Related Capital Costs and Phasing - Police	71
7-3	Summary of Development Impact Fees - Police	73
8-1	Development Related Capital Costs and Phasing - Fire	75
8-2	Summary of Development Impact Fees - Fire	77
9-1	Inventory of Existing Park and Recreation Acreage	79
9-2	Inventory of Existing Park and Recreation Facilities	81
9-3	Existing Deficiencies Analysis - Parks and Recreation	82
9-4	Development Related Capital Costs and Phasing - Parks and Receptions	83

<u>Table Number</u>	<u>Title</u>	<u>Page No.</u>
9-5	Summary of Development Impact Fees - Parks and Recreation	88
10-1	Existing Deficiencies Analysis - City Hall Facilities	90
10-2	Development Related Capital Costs and Phasing - General City Facilities	93
10-3	Summary of Development Impact Fees - General City Facilities	94
	APPENDIX A	96

CHAPTER I
INTRODUCTION

INTRODUCTION

The enactment of AB 1600 (Government Code §66000 et. seq.) has generated formal and stringent requirements for documenting the basis for valid development impact fees. In response to the changing legal climate, as well as the desire to have a comprehensive financing plan for the various public and numerous new facilities in Lodi, the current fees must be updated and new numerous fees need to be implemented.

The goal of the Development Impact Fee Study is to prepare development impact fees which will provide funds to construct various types of improvements such that the City of Lodi's adopted level of service is maintained throughout the planning period. This goal will be attained consistent with the requirements of AB 1600.

Purpose of the Fee

The purpose of development impact fees is to provide adequate financing for the various public facility projects that are required to implement the City's General Plan. The fee is imposed such that new development will bear its fair share of providing adequate infrastructure.

The fees collected will be used to finance the design, construction, and inspection of streets and roads, Water, Sewer, Drainage, Parks and Recreation, Police, Fire, and General City facilities. The fee revenue will also be used for a major update of the fee program, which is to be performed every 5 years.

Planning Period

The proposed General Plan before the City of Lodi covers a planning period of April 1987 to 2007. For the purposes of the fee study, the planning period was broken down into fiscal year increments: 1991/92, 1992/93, 1993/94, 1994/95, 1995/96, 1996/97, 1997 - 2002, and 2002 - 2007. The planning increments are the basis for projecting fee collections, capital improvement expenditures and cash flow analyses.

Basis of Costs

Capital improvement schedules have been prepared for the Proposed General Plan that cover Water, Sewer collection (but not the wastewater treatment facility), Storm Drainage, Streets and Roads, Police, Fire, and General City facilities. Capital costs included in the General City facilities category are, for example, city hall expansion, library expansion, fee program monitoring, parking lot construction, and miscellaneous projects not falling

into other infrastructure categories. Project descriptions for each project were developed with the assistance of City staff, other City-retained consultants, and the authors. For each major project, estimates of cost have been prepared utilizing current cost data from the City, recent bids for similar projects, contractors and suppliers. Estimates of cost are based upon January 1, 1990 dollars throughout this report. The Engineering News Record PO-Cities Average Construction Cost Index for January 1990 was, at that time, 4673. The cash flow model inflates the actual expenditures for public improvements (for both land and construction costs using the above index) to the midpoint of each fiscal year.

Background - Development Forecast

The first step in calculating a valid development impact fee is to prepare a forecast of the timing and rate at which the City will develop. This forecast must be consistent with Lodi's General Plan and Growth Management Ordinance.

The development forecast serves two purposes:

- The development forecast provides the basis for determining when the required infrastructure **must** be completed to maintain the targeted level of service set forth by the City.
- **The development** forecast plays a significant role in forecasting cash flow. The amount of development that occurs throughout the planning period determines the amount of the fee and the development in any particular year determines the total dollars that are available to fund improvement projects.

The forecast of final mapping was prepared per gross acre by the City of Lodi and is presented in Appendix A. Because the City will collect development impact fees at the time of the final subdivision map is recorded, a forecast of final mapping was used to estimate the inflow of cash. The construction capital outlay forecast was based upon the City's proposed Growth Management Plan which provided the probable location of development.

The annual update of the fee program will include an assessment of the extent to which development in Lodi has been occurring as forecasted. If rates of development begin to depart substantially from expectations, the development forecast and fee program will be updated based on a forecast that reflects then-current expectations.

Residential Acre Equivalents

After the amount of development was forecast for each land use category, a conversion was made into the number of Residential Acre Equivalents (RAE's) that would be developed, for each category of public improvements. An RAE factor measures the use or burden a land use places on a category of public improvements (e.g., water supply or roadway improvements) relative to the use

or burden placed on those improvements by an acre of single family dwellings in the low-density residential category.

As one simple example, the water service RAE factors reflect relative water consumption. Since the Low Density residential category is selected as the use from which all other land uses are measured, this land use category has a RAE factor for all services equal 1.0 RAE per acre. All other RAE factors for the category of public services being considered are scaled relative to this "base" RAE factor for the Low Density Residential land use category.

For this example, the RAE factors for water are calculated in the following manner for low density and medium density residential land use categories. Assume a population and unit density as shown below.

Land Use	Population	Unit Density
Low Density	2.75/unit	5/acre
Medium Density	2.25/unit	12/acre

Also, assume a per capita average water consumption of 285 gallons per day. Therefore, the water demand can be calculated as follows:

Low Density: Demand = 2.75 x 5 x 285 = 3,919 gal/day/acre

Medium Density: Demand = 2.25 x 12 x 285 = 7,695 gal/day/acre

That the demand of medium density residential land exerts a 2 times (7695/3919 = 1.96) greater demand upon water supply and transmission facilities than does low density residential. Therefore, a RAE factor of 1.96 is assigned to medium density residential for water remembering, of course, that low density residential is the baseline having a RAE factor of 1.0.

CHAPTER 2

METHODOLOGY AND RESULTS

SUMMARY OF FUNDING SOURCES

Capital improvement projects to support the Proposed General Plan and other City improvements are to be funded through a number of sources. In the course of identifying Proposed General Plan capital improvements, a number of existing deficiencies were identified in each of the service areas that are not to be funded by development impact fees. City staff has projected, where possible, the sources of funds to finance those projects and/or portions of projects that are not development related as summarized in Table 2-1.

During the course of assembling the information included in this report and summarized in Table 2-1, a number of capital improvement plans, old and new, were reviewed. Information has been taken from these capital improvement plans and has been included in the table. Because the planning horizon for the capital improvement plans provided by the City are not synchronized with the General Plan period, the totals for capital improvements in Table 2-1 are not comparable to past City plans.

Phasing of Improvements for Maximum Efficiency

The matching of required public improvement projects to revenues from the development impact fee program was an iterative process that included close coordination with the Growth Management Plan. Two objectives were served:

- The location and timing of new public improvements in Lodi were planned to help assure an orderly and cost-efficient pattern of development.
- Public improvements were timed to assure that Level of Service (LOS) targets for each service were reasonably maintained.

Insofar as practical, the growth rates that are part of the Growth Management Plan can be accommodated throughout the City. Development can occur simultaneously in several areas of the City, rather than be concentrated in one area at a time. A temporary quasi-monopoly on supply of developable land is avoided.

The following paragraphs describe some of the basic assumptions and concepts that were used in arriving at project phasing. Additional information concerning specific facilities is included at the end:

Assumptions/Concepts

The following assumptions and concepts guided the process of preparing the development forecast and staging of public improvements to meet LOS targets.

TABLE 2-1
SUMMARY OF ESTIMATED MAJOR CAPITAL IMPROVEMENT PROGRAM COSTS AND FUNDING SOURCES

21-Aug-91

DESCRIPTION	PROGRAM COSTS (1)	GENERAL FUND	WATER FUND	SEWER FUND	STORM DRAIN FUND	SAN JOAQUIN COUNTY	STATE AND FEDERAL FUND	GAS TAX FUND & T.D.A.	MEASURE 'K' FUNDS	OTHER	DEVELOPMENT IMPACT FEE FUND (2)
1. Water Service	\$10,931,525	\$0	\$1,628,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,303,525
2. Sewer Service (3)	\$3,013,920	\$0	\$0	\$1,005,500	\$0	\$0	\$0	\$0	\$0	\$639,500 (4)	\$1,368,920
3. Storm Drainage	\$17,285,707	\$930,000	\$0	\$0	\$121,000	\$0	\$0	\$0	\$0	\$0	\$18,234,707
4. Streets and Roads	\$45,100,937	\$13,800,000	\$0	\$0	\$0	\$176,000	\$831,000	\$13,552,500	\$1,450,750	\$0	\$15,290,887
5. Police	\$2,578,000	\$74,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,502,000
6. Fire	\$2,165,000	\$1,090,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,065,000
7. Parks and Recreation	\$30,191,000	\$5,531,555	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,353,000 (5)	\$18,308,445
8. General City Facilities	\$12,884,309	\$1,159,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,725,184
TOTAL:	\$124,138,398	\$22,584,680	\$1,628,000	\$1,005,500	\$121,000	\$176,000	\$831,000	\$13,552,500	\$1,450,750	\$6,992,500	\$75,796,468

NOTES:

1. Costs do not include streets and utilities within development projects typically constructed by the developer as normal improvements
2. "Development Impact Fee Fund" will consist of eight separate funds, one for each category of facility.
3. Sewer service does not include the wastewater plant expansion which is funded by the existing wastewater connection fee.
4. Lift station area of benefit fees.
5. Hutchins Street Square Fund.
6. Fee amounts shown are for fiscal year 1991/1992

- o Development of new residential land will be limited such that the population will grow at 2% based on the September 1989 population. This allows more units (acres) in the early years than in middle years due to "catch up" after the wastewater moratorium.
- o Commercial development will tend to follow residential development, except where one major development is currently being processed (Lodi Shopping Center, also called Sunwest Plaza, at the SE corner of Lower Sacramento Road and Kettleman Lane).
- Industrial development was assumed to grow uniformly.
- o The implementation of the Growth Management Plan will discourage new developments that require extraordinary extension of utilities or other improvements, such as trunk lines through agricultural property. This will help lower the cost of development and reduce disruption of agricultural activities.

Procedure for Staging Public Improvements

The specific steps that led to the staged Capital Improvements Program are described in the following paragraphs.

- The annual number of units to be allowed was converted to acres based on an average of seven units per acre per the Draft General Plan.
- Subareas surrounding the City were identified based on available storm drain basins, utility trunk lines, major streets, General Plan limits, and natural boundaries.
- The acreages were matched with the sub-areas and broken into three phases: one 6 year block followed by two 5 year blocks.
- The above two steps were repeated until the acreage provided in each phase matched the number of units in the first step.

The majority of the projects were then placed in the appropriate phase coinciding with development of the adjacent area. This would include projects in which the impact fee fund would be used in conjunction with frontage improvements by a developer such as for oversized lines and major street crossings. As noted in the assumptions, there should be few cases in which a utility must be extended outside the development. (Exceptions and clarifications are noted below.)

Careful attention was paid to the timing of construction of public improvements, compared to increases in development and demand for services. Each improvement was staged to insure that it would be completed and in place

before the actual level of service had declined below the City's Level Of Service target.

In support of the objective of avoiding degradation of service level, the City of Lodi intends to collect development impact fees in advance of the date of final inspection or the date a Certificate of Occupancy is issued. Delaying residential fees to the time of occupancy would assure that completion of public improvements would considerably lag the residential development that is creating a significant percentage of the demand for the improvements. To avoid this situation, the City's fee ordinances will provide that development impact fees are due at the time that a final subdivision map is filed. Public capital improvements can then be constructed in parallel with the process of readying parcels for development and constructing residences. The service capacity provided by the public improvements can be in place at the time that increased demand actually occurs.

It is possible that developed parcels within the existing General Plan will undergo redevelopment or a change in the land use resulting in assessment of additional fees. In such instances, fee; would be collected upon issuance of the building permit. In addition, parcels that are permitted to develop without a final subdivision map (which happens often for commercial and industrial development) will also pay the fees at building permit.

The present document constitutes a "...proposed construction schedule or plan..." for seventeen years. The various fee ordinances will ensure that "...an account has been established and funds appropriated..." Accordingly, the quoted requirements of Government Code Section 66007 have been met. Lodi can collect residential impact fees in advance of final inspection or occupancy.

Comments on Specific Projects and Services

The following paragraphs explain the reasons for the staging of certain key projects.

Streets and Roads

- The Highway 12 (Kettleman Lane) Project Study Report was placed early in the program. This Report will take some time to do and the results will affect the scope and cost of subsequent projects.
- Street capacity improvements were phased based on examination of the present and future volumes, capacity of existing improvements and the capacity after the new improvement.

Parks and Recreation

- The Master Plan Study was placed early since it will take some time to do and the results will affect the scope and cost of subsequent projects.
- Parks would be completed by the end of the phase in which adjacent development occurred.

Police, Fire and General Facilities

- Projects were phased based on discussions with the Police and Fire Chiefs and other department heads.
- The west side fire house was placed in the first phase since it is located in the corresponding area.

Identifying Projects Curing Existing Deficiencies

The entire list of capital improvements was reviewed to identify projects which primarily cured existing deficiencies. Projects that were excluded from the fee program based on this evaluation are any type of replacement, repair or renovation of an existing facility which provides for little or no added capacity.

In addition, large projects, or groups of projects, in Parks and Recreation, Police and General City Facilities were evaluated on an individual basis. The results of this level of analysis is that certain projects were split between new development (fee program funded) and existing development (other financing source).

Interfund Borrowing

The staging of capital improvements frequently produces cash flow deficits in one or several of the fee funds. This is the result of large projects that, once completed, provide capacity beyond the year of construction - and beyond the time in which the funds are required to construct the project. One approach to deal with cash flow deficits is through interfund borrowing.

Interfund borrowing is predicated on the creation of a "Pooled Money Fee Account" into which the annual surplus from each fee account flows and from which borrowing to cure cash flow deficits occurs. Each fee (i.e. Water, Sewer, etc.) is calculated and accounted for separately. Positive fund balances earn interest revenue and negative fund balances accrue interest to be paid. Under this approach the development impact fee has two parts.

1. Portion Of The Fee From Construction Of Improvements: This part of the fee is equivalent to the average cost of the programmed improvements per RAE.

2. **Portion Of The Fee From Finance Charge:** The finance charge is set such that the ending balance in the particular fee fund is as close to zero as possible. In cases where the cash flow is relatively smooth such that no borrowing will take place, it is entirely possible that the "Finance Charge" will be negative. This is the result of interest earninss over the course of the program.

On the other hand, when funds must be borrowed a positive finance charge, and thus higher fee, is required to pay the interest cost involved in borrowing among funds.

The test of whether or not interfund borrowing is successful in compensating for the cash flow deficits is the ending fund balance in the Pooled Money Fee Account. If this figure is positive throughout the program then interfund borrowing has served its purpose and cured the cash flow problems. If any of these figures are negative, interfund borrowing has not fully alleviated the cash flow deficits. Adjustments to the project staging, or borrowing from an outside source would be necessary to fund the program using the interfund borrowing approach.

The cash flow analysis indicates that almost every fee has cash flow problems. These issues have been resolved through inter-fee-fund borrowing such that the program of capital improvements are funded in the year required. The inter-fee-fund borrowing mechanism is such that funds borrowing money pay interest, and funds lending money receive interest. As a result, the fee in a fund which lends money to other fee funds is not any higher than it otherwise would be to fund the public improvements.

Alternatives to this approach include borrowing from other City funds, which would also entail repayment with interest, and "borrowing" from developments early in the program. This would entail charging a higher fee to the initial development projects and repaying it in later years with fees from subsequent development. Both alternatives require additional administrative effort and result in a higher fee.

Detailed Methodology

A project phasing schedule is prepared, as determined by the development forecast and the adopted service standard, showing the timing of the expenditures required for each improvement. A forecast of Residential Acre Equivalents is prepared, then converted into a forecast of revenues collected from the fee in each period. The fee and cost of capital improvements are inflated, for purposes of analysis, at the same rate. However, it was assumed that the inflation effects on the fee are lagged one year due to the fact that the fee is only updated at the end of each year. Because the General Plan was not completed in the 1990-91 fiscal year, all capital costs were inflated to January 1991 dollars and the fees then calculated.

The amount of the finance charge is manipulated until:

- o All projects have been constructed at their then actual year cost;
- o Only a nominal surplus remains in the Development Impact Fee account at the end of the planning period.

Summary of Fees

A summary of the development impact fees is presented by major land use category in Table 2-2. This summary presents the summation of the impact fee imposed for each of the relevant facility categories in the development impact fee plan. The fee for each particular category of public improvement is presented in the applicable chapter (e.g. Streets and Roads - Chapter 5). Each fee, except portions of the sewer impact fee is imposed citywide throughout the entire planning period.

Each fee will be fine-tuned annually to reflect inflation and other minor adjustments. Annual updates of the fee should be based upon the increase in construction costs for the year as determined by comparing the ENR 20 Cities Average Construction Cost Index *for* the beginning and end of the year. The first two annual fee updates (1989-90 to 1990-91 and 1990-91 to 1991-92) is reflected throughout the report. Fee calculations for this report were done to the nearest \$1.00 and have been rounded to the nearest \$10.00.

Changes In Land Use Entitlements

Parcels may undergo redevelopment or a change to a more intensive land use. The development impact fees that will be due reflect the difference between the fee appropriate to the more intense use and the fee that would have been appropriate to the previous use. In concept, the various classes of infrastructure had the capacity to meet the demand placed by the original land use. The intensification of use will create additional demand. Additional capacity must be purchased through the incremental development impact fee.

For the case when a proposed development would result in a more intense demand' upon infrastructure than planned, it may be appropriate to assess a special fee. Purpose of such a special fee would solely be to insure that services/benefits provided by the City are fairly paid for by the user. Of course, by the nature of setting fees based upon a service standard, the focus is upon the City and neighborhood averages. Therefore, demand deviation above and below the average is assumed. Defining the maximum permitted demand deviation before assessing a special fee should be up to the Public Works Director.

D R A F T (8/21/91)

RESOLUTION NO. 91-___

A RESOLUTION OF THE LODI CITY COUNCIL
ESTABLISHING DEVELOPMENT IMPACT MITIGATION FEES
FOR ALL DEVELOPMENTS WITHIN THE CITY OF LODI

WHEREAS, the Lodi City Council has adopted Ordinance No. 1518, creating and establishing the authority for imposing and charging Development Impact Mitigation Fees in the City of Lodi; and

WHEREAS, studies have been made and data gathered on the impact of contemplated future development on existing public facilities in the City of Lodi, along with an analysis of the need for new public facilities and improvements required by new development; and

WHEREAS, the relationship between new development, the needed facilities, and the estimated cost(s) of these improvements is included in the study entitled "Development Impact Fee Study" prepared by Nolte and Associates and Angus McDonald & Associates dated August 1991; and

WHEREAS, such information was available for public inspection and review 14 days prior to the public hearing; and

WHEREAS, the City Council finds that:

1. The purpose of these fees is to finance Water, Sewer, Storm Drainage, Streets, Police, Fire, Parks and Recreation, and General City facilities and to reduce the facility service impacts and related problems caused by new development within the City of Lodi;
2. The fees collected pursuant to this resolution shall be used to finance only the public facilities described or identified in said study;
3. After considering available information and data, and the testimony received at the public hearing, the Council approves said study and incorporates such study herein, and further finds that new development within the City of Lodi will generate additional impacts within the General Plan area and will contribute to the degradation of the existing facilities and the overall quality of life in that area;
4. There is a demand in this described impact area for such facilities which have not been constructed or have been constructed, but new development has not contributed its fair share toward these facility costs and said facilities have been called for in or are consistent with the City of Lodi's General Plan, and or appropriate Master Plans.
5. The facts and evidence presented establish that there is a reasonable relationship between the need for the described public facilities and the impacts of the types of development for which the corresponding fee is charged,

and, also there is a reasonable relationship between the fee's use and the type of development for which the fee is charged, as these reasonable relationships or nexus are in more detail described in the studies and data referenced above;

6. It is appropriate to establish the fees on a city-wide basis in order to construct facilities in a timely and cost-effective manner and reduce the demand for replacement of existing facilities in order to accommodate new development; except for those sewer lift stations needed to serve a specific area;
7. The cost estimates set forth in the Study are reasonable cost estimates for constructing these facilities, and the fees expected to be generated by new development will not exceed the total of such costs plus a finance charge where interfund borrowing is necessary to fund improvements in a timely manner;
8. The City has appropriated funds and established a Capital Improvement Program which includes the projects shown in the Study;

NOW, THEREFORE, IT IS RESOLVED by the Lodi City Council that:

1. DEFINITIONS.

The definitions contained in Ordinance 1518, Lodi Municipal Code Section 15.64.020, are hereby incorporated by reference as if fully set forth.

2. FEES.

The City Council hereby repeals Resolution 88-165 "Storm Drainage Fee", adopted December 21, 1988, and Resolution 89-186 "Amending Storm Drainage Fees", adopted December 20, 1989, and herein provides for a fee structure for public facilities as follows:

<u>FEE CATEGORY</u>	<u>FEE PER RESIDENTIAL ACRE EQUIVALENT (RAE)</u>
<u>City-Wide Fees</u>	
1. Water	\$ 5,710.00
2. Sewer	\$ 1,090.00
3. Storm Drainage	\$ 7,910.00
4. Streets	\$ 5,470.00
5. Police	\$ 1,110.00
6. Fire	\$ 520.00
7. Parks and Recreation	\$ 11,980.00
8. General City Facilities	\$ 6,380.00
<u>Supplemental Specific Area Fees</u>	
A. Kettleman Lane Lift Station	\$ 1,610.00
B. Harney Lane Lift Station	\$ 830.00
C. Cluff Avenue Lift Station	\$ 1,170.00

The Kettleman Lane Lift Station area consists of approximately 102 acres bounded on the south by the north right-of way of Kettleman lane (State Highway 12); on the east by the west line of the Woodbridge Irrigation District Canal right-of-way; on the north by the south line of the Woodbridge Irrigation District Canal right-of-way

and the quarter-quarter Section Line north of Kettleman Lane and on the west by the property line located approximately 1185 feet east of the centerline of Lower Sacramento Road, plus the area of Tract No. 2378, Sunwest Unit No. 12 as filed for record in Book 30, Maps and Plats at page 52, San Joaquin County records, all as shown on Exhibit A.

The Harney Lane Lift Station area consists of approximately 292 acres bounded on the south by the north right-of-way of Harney Lane; on the east by the west line of the Woodbridge Irrigation District; on the north, east of Lower Sacramento Road by the quarter-quarter Section Line north of Harney Lane, and west of Lower Sacramento Road by the property line located approximately 2300 feet north of the center line of Harney Lane; and on the west by the General Plan Boundary, approximately 1/2 mile west of Lower Sacramento Road as shown on Exhibit B.

The Cluff Avenue Lift Station area consists of approximately 158 acres bounded on the south by the right-of-way of the Southern Pacific Transportation Company (SPT) tracks along Victor Road (State Highway 12); on the east by the right-of-way of the Central California Traction Company (CCT); on the north by the Mokelumne River and on the west by the property lines approximately one-eighth mile west of the centerline of Guild Avenue; plus the 7.7 acre parcel located east of the CCT and north of the SPT shown as Parcel A per the Parcel Map filed for record in Book 11 of Parcel Maps at page 73 San Joaquin County Records.

3. CALCULATION OF FEE.

Development Impact Mitigation Fees shall be calculated by the Public Works Director in accordance with Chapter 15.64 of the Lodi Municipal Code and this resolution.

The project acreage shall exclude portions of property left vacant and not to be used for storage, parking, or other uses related to the project. Where the project adds to or incorporates existing buildings or improvements, the acreage shall be adjusted by the Public Works Director to account for this existing use. For purposes of this section, "existing" shall mean any building or improvement which is in existence or for which a permit has been obtained upon the effective date of this resolution.

Where projects include a change in land use categories, the appropriate difference in RAE factors shall be computed by the Public Works Director. Where the project results in a less intensive land use involving a lower RAE factor, a fee credit in lieu of a refund shall be made. Record of the previous higher RAE factor shall be maintained by the Public Works Director for that parcel for a period of time not to exceed ten years and shall, during that time, be applied toward future improvements on that parcel.

4. EFFECTIVE DATE

The Development Impact Fees adopted in this Resolution shall take effect immediately upon the effective date of Ordinance No. 1518. For projects in which an agreement and memorandum of understanding for public improvement fees has been executed and a final map or building permit has been approved, such fees shall be due and payable thirty days after the above effective date or thirty days after billing by the City, whichever is later.

I hereby certify that Resolution No. 91-__ was passed and adopted by the City Council of the City of Lodi in a regular meeting held _____, by the following vote:

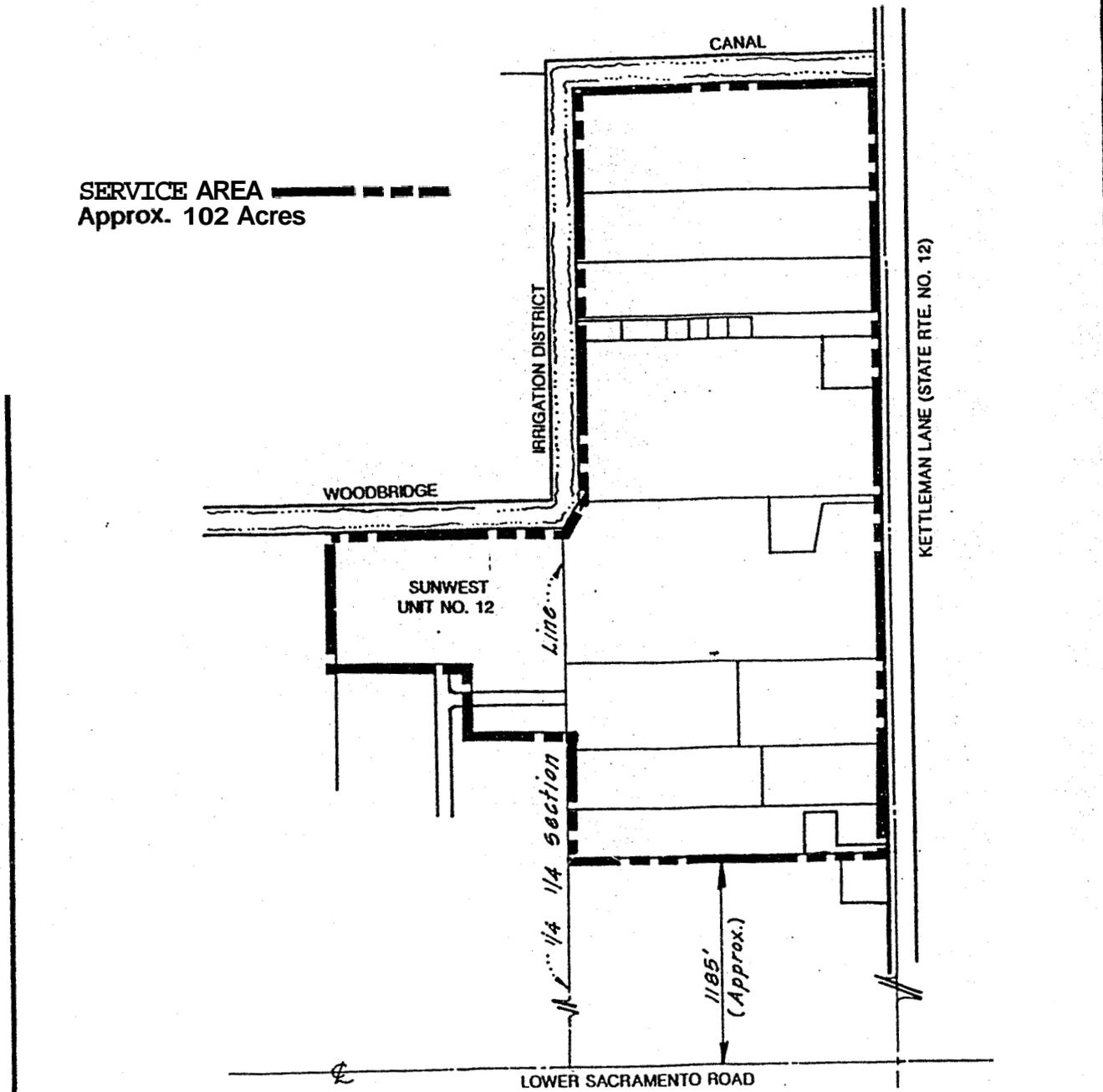
Ayes : Councilmembers

Noes: Councilmembers

Absent: Councilmembers

Alice M. Reimche
City Clerk

SERVICE AREA 
 Approx. 102 Acres



N. AS.

Dr.	No.	Date	Revision	Appr.
JM				
Ch.				
Date				
8/91				

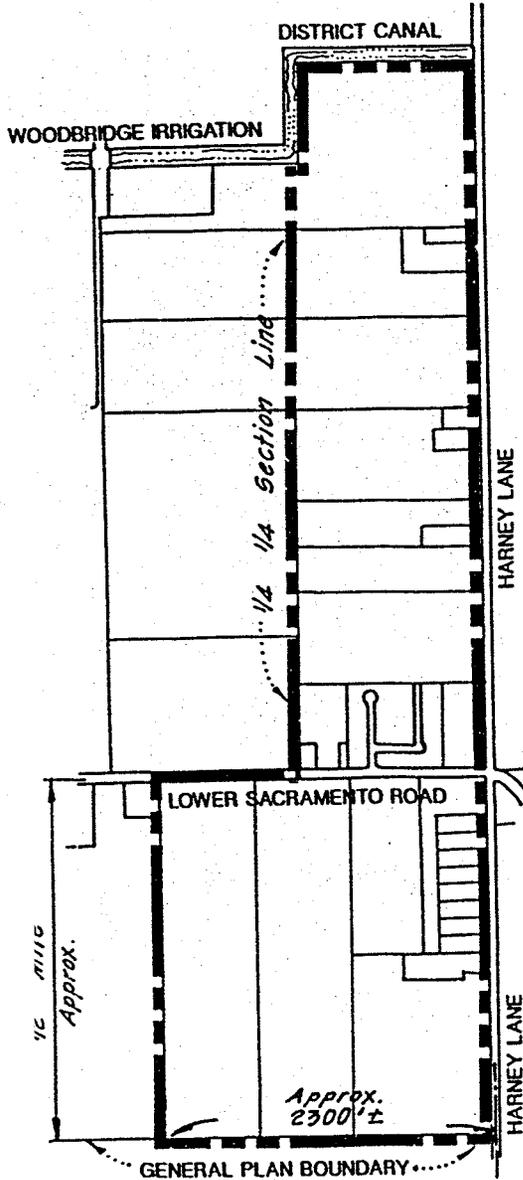
EXHIBIT A



CITY OF LODI

PUBLIC WORKS DEPARTMENT

HARNEY LANE LIFT STATION SERVICE AREA



SERVICE AREA ——— ■■■
Approx. 292 Acres



Dr. JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

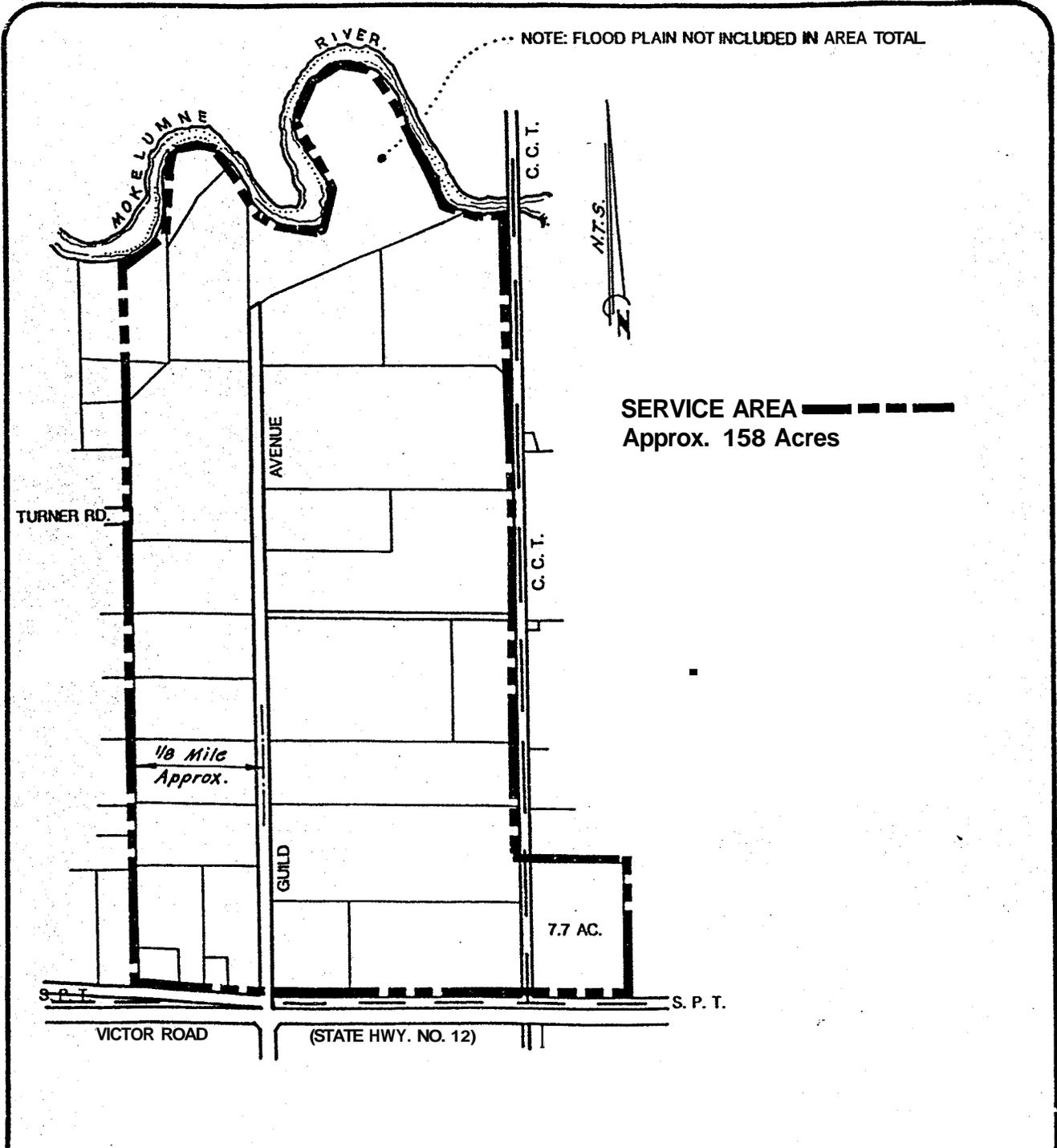
EXHIBIT B



CITY OF LODI

PUBLIC WORKS DEPARTMENT

CLUFF AVENUE LIFT STATION SERVICE AREA



Dr.	No.	Date	Revision	Appr.
JM				
Ch.				
Date				
8/91				

EXHIBIT C

**TABLE 2-2
SUMMARY OF DEVELOPMENT IMPACT FEES
ALL SERVICES**

21-Aug-91

Land Use Categories	Total Fees	Water		Sewer		Storm Drainage		Streets & Roads		Police		Fire		Parks and Recreation		General City Facilities	
		RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee	RAE(1)	Fee
RESIDENTIAL																	
Low Density	\$40,170	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.00	\$1,110	1.00	\$520	1.00	\$11,980	1.00	\$6,380
Medium Density	\$61,190	1.96	\$11,190	1.96	\$2,140	1.00	\$7,910	1.96	\$10,720	1.77	\$1,960	1.96	\$1,020	1.43	\$17,130	1.43	\$9,120
High Density	\$107,210	3.49	\$19,930	3.49	\$3,800	1.00	\$7,910	3.05	\$16,680	4.72	\$5,240	4.32	\$2,250	2.80	\$33,540	2.80	\$17,660
East Side Residential	\$42,160	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.09	\$1,210	1.10	\$570	1.10	\$13,180	1.10	\$7,020
PLANNED RESIDENTIAL																	
Low Density	\$40,170	1.00	\$5,710	1.00	\$1,090	1.00	\$7,910	1.00	\$5,470	1.00	\$1,110	1.00	\$520	1.00	\$11,980	1.00	\$6,380
Medium Density	\$61,190	1.96	\$11,190	1.96	\$2,140	1.00	\$7,910	1.96	\$10,720	1.77	\$1,960	1.96	\$1,020	1.43	\$17,130	1.43	\$9,120
High Density	\$107,210	3.49	\$19,930	3.49	\$3,800	1.00	\$7,910	3.05	\$16,680	4.72	\$5,240	4.32	\$2,250	2.80	\$33,540	2.80	\$17,660
COMMERCIAL																	
Neighborhood Commercial	\$41,280	0.64	\$3,650	0.94	\$1,020	1.33	\$10,520	1.90	\$10,390	4.28	\$4,750	2.77	\$1,440	0.32	\$3,830	0.89	\$5,680
General Commercial	\$49,470	0.64	\$3,650	0.94	\$1,020	1.33	\$10,520	3.82	\$20,900	2.59	\$2,870	1.93	\$1,000	0.32	\$3,830	0.89	\$5,680
Downtown Commercial	\$41,280	0.64	\$3,650	0.94	\$1,020	1.33	\$10,520	1.90	\$10,390	4.28	\$4,750	2.77	\$1,440	0.32	\$3,830	0.89	\$5,680
Office Commercial	\$54,720	0.64	\$3,650	0.94	\$1,020	1.33	\$10,520	3.27	\$17,890	3.72	\$4,130	2.46	\$1,280	0.54	\$6,470	1.53	\$9,760
INDUSTRIAL																	
Light Industrial	\$30,900	0.26	\$1,480	0.42	\$460	1.33	\$10,520	2.00	\$10,940	0.30	\$330	0.64	\$330	0.23	\$2,760	0.64	\$4,080
Heavy Industrial	\$29,820	0.26	\$1,480	0.42	\$460	1.33	\$10,520	1.27	\$6,950	0.19	\$210	0.61	\$320	0.33	\$3,950	0.93	\$5,930

Source: Nolte & Associates and Angus McDonald & Associates

NOTES:

(1) Residential Acre Equivalents

(2) Fee amounts shown are for fiscal year 1991/1992.

An example of more intense demand for service than provided for in the fee structure is a shopping center that is located in a neighborhood commercial land use. The specific use (shopping center) is allowed in the land use (Neighborhood Commercial). In the case of the Streets and Roads Fee, a net trip rate of 10.5 peak hour trips is assumed for Neighborhood Commercial but the City Circulation Plan assumes 30 peak hour trips for shopping center uses. In this case, the deviation above the service standard provided by the fee is approximately 200%. Therefore, a special fee is recommended.

The opposite example to an intensification of use would be a parcel that develops at a use that is less intense than its land use entitlement. The various fee ordinances should provide for a "exception procedure" to deal with instances that simply were not contemplated at the time that the ordinance was adopted. As a generalization, exceptions should be granted sparingly. Facilities were sized based on the expected land uses and in many cases capacity will be provided in advance of total demand because of the inability to build certain classes of projects in stages. If exceptions are granted easily, particularly in the later years of the planning period, sufficient development impact fees will not be available to complete the Capital Improvements Program.

An additional consideration is that although a parcel may be developed initially in a less intense use, it may undergo redevelopment in future years. The full fee would be due. If, subsequently the parcel was redeveloped, it would receive credit for the fact that the full fee had been paid. Only if the future use was more intense than the original land use category would a higher fee be due.

The development forecast on which the fees were based includes new development and an estimate of redevelopment. If proposals for significant amounts of redevelopment or reuse are forthcoming in future years, the effect of this can be considered during the annual update of the fee ordinances.

Successfully implementing a 16 year, \$124,000,000 Capital Improvements Program is a major undertaking. It will require a very serious effort at program management and monitoring of actual performance as compared to plan.

The Capital Improvements Program contains specific line items to provide the cost of Staff or consultant services for Program Management for the fee program. A budget is also provided for a major General Plan Update/Capital Improvements Program and Development Impact Fee Update every fifth year.

The program management function should include the responsibility of monitoring actual performance compared to that planned. This monitoring function can be combined with any environmental impact monitoring program as

is recommended either in an Environmental Impact Report (EIR) which are a part of revisions to the City's update of the General Plan or in the EIR's for major projects or Capitol Improvement Projects.

The City is required to make findings each fiscal year regarding any fees unexpended or uncommitted in its account five or more years after deposit. If the findings indicate that there is not a reasonable relationship between the fee and the purpose for which it was charged it must be refunded to the then current property owners. Additionally, the City must, each year, prepare an accounting of each fee account. This is to include the beginning and ending balances, interest and other income, and expenditures and refunds made from the account. The annual accounting of each fee account is to be prepared within 60 days of the close of each fiscal year and must be made available to the public.

CHAPTER 3

WATER SERVICE

OVERVIEW

Water service to Lodi resident is provided by the City. Major components of the water system include wells, distribution piping and a single elevated storage tank. The following sections will describe the City's existing supply and distribution facilities, current planning for expansion of the system, policy relating to cost sharing for major facilities, and existing water service deficiencies.

Supply

Water for the City of Lodi is pumped directly from wells located within the City limits. At present, wells discharge directly into the distribution system. Of the 25 wells needed to serve the existing City, 20 are currently producing. Three wells are not producing due to contamination. Funds have been appropriated to construct two new wells and to construct two replacement wells. Also, funds have been appropriated to design treatment facilities for the removal of DBCP.

Water quality in the aquifers tapped by City wells is generally good. Recently adopted Department of Health Service (DHS) standards for dibromochloropropane (DBCP) will impact the City because the DBCP concentration at 11 well sites exceeds the new State standard. Presently, the City is preparing to conduct pilot studies of granular activated carbon filtration units to remove the DBCP from the water. With respect to DBCP, the better wells are located in the northeast sector of the General Plan area

Groundwater levels within the basin have steadily dropped over the last years. Concerns for salt water intrusion is a regional concern but may not be a threat to Lodi due to influence of the Mokelumne River as a major contributor to replenishment of the groundwater basin.

Well yields in Lodi are good. Individual wells produce an average of 1,600 gallons per minute. Pumping levels vary across the well field by approximately 80 feet, with the shallowest water in the northeast area and the deepest water in the southwest area. The City operates a Supervisory Control and Data Acquisition (SCADA) system to assist in operating the well field, maintaining 'pressures' in the system and recording operating data.

Distribution System

Existing distribution piping within the City ranges in size from 2 to 14 inch. By current standards, any distribution piping smaller than 6 inches is

substandard. Smaller pipe was primarily used in the older portions of town and it has, in many cases, been constructed in backyards and alleys.

Backbone of the City distribution system consists of a network of 10 and 14 inch pipe laid on an intersecting grid. Grid intersections are typically separated by a distance of 1/4 to 1/2 mile.

Pressures within the distribution system are maintained using an elevated tank and with assistance from the SCADA system. Water elevations in the tank are consistently 165 to 180 feet, resulting in a 49 to 55 pound per square inch pressure at the tank.

Water Master Plan

Current planning for the expansion of water supply and distribution facilities to serve the City through the period of the General Plan is embodied in the "Water Master Plan" prepared in 1990. Based upon the General Plan projected population and average water demands of 285 gallons per capita per day, total average day water demand at 2007 will be 22.1 million gallons per day. Existing (1987) average day demand is 12.58 million gallons per day.

A number of planning and design recommendations were presented in the Water Master Plan. Those recommendations that affected the information presented in this report are summarized below.

1. Design for future wells should conform to that for recently constructed wells: 21, 22, and 23.
2. Well and distribution system should be capable of meeting maximum day demands with 20% of the wells out of service.
3. For each 2,000 equivalent persons added to the system, a new well should be constructed.
4. One of every three wells should be equipped with standby power.
5. Re-evaluate the Water blaster Plan at least every 5 years.

Water Reimbursement Policy

Under the City's Water Main Extension policy, applicants are reimbursed a portion of the construction cost of oversize mains and major crossings. Commonly, city's and agencies share in the cost of constructing special items of infrastructure, especially, since these special items are typically part of the backbone of the system.

For oversize mains, the reimbursement policy applies to water mains larger than 8 inches in diameter. Major crossings covered by this policy are Woodbridge Irrigation District canals, Southern Pacific Transportation

Company, Central California Traction Company, Highway 99, Highway 12 west of Highway 99, Lower Sacramento Road, and Hutchins Street south of Kettleman Lane. For major crossings, the City will reimburse one half the cost of construction.

City water reimbursement policy is reasonable for the facilities to which it applies. In developing the fee program for water service, the existing policy has been applied to oversizing of water mains and construction of major crossings. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administrative, engineering and inspection. Administrative and engineering reimbursement is limited to 10% by City ordinance.

Existing Deficiencies

The Water Master Plan identified a number of existing deficiencies in the water distribution system. These deficiencies generally include replacement of older pipe and construction of additional mains to reinforce the distribution network in older areas of the City. The work on main replacement will continue to be an ongoing program throughout the City. Funds to provide capacity (wells) for existing City development(s) have previously been appropriated. Significant water quality (DBCP) deficiencies exist at 12 of the 20 producing wells. Estimated cost to correct the pipeline and water quality deficiencies is \$8.2 million. Pipeline reconstruction will be funded through the City water fund. DBCP facilities for existing wells will be constructed using borrowed State funds that will be repaid with water service rates.

Specific listings of the projects earmarked to correct existing deficiencies are not included in this report. Estimates of probable construction cost have been developed for the existing deficiency projects identified by the City. Total estimated cost to construct these projects is \$1,628,000. Funds to construct these projects will come primarily from the Water Fund.

PLANNED WATER FACILITIES

Water facilities to serve buildout of the General Plan were identified in the Water Master Plan. As part of the public facilities financing effort of the General Plan, specific project descriptions were generated for those improvements identified by the Water Master Plan. Generally this effort included defining the length and size of pipe and appurtenant facilities; defining the additional equipment to be provided at the wells; and identifying the canal, street and railroad crossing that involve cost sharing by the City. A summary of these facilities is presented below and described in Table 3-1. Project numbers listed in Table 3-1 are used to identify the project locations on Figure 3-1. Minor projects, (mainly water main extensions) are shown separately for administrative purposes; they are subtotaled as one "project" under the fee program. This will allow greater flexibility in providing

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
WATER MAIN EXTENSIONS											
MWSX001	Turner Rd. transmission main consisting of 2,050 ft 10-inch water main west from the Central Calif. traction Co. (oversized main)	\$16,000	\$16,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,613	\$13,387
MWSX010	Turner Road transmission main (MWSX001) includes construction of the main under the Central Calif. Traction Co. (cost sharing)	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000
MWSX002	Lodi Avenue transmission main consisting of 1,200 ft 10-inch water main easterly from Guild Ave. to Central Calif. Traction Company (oversized main)	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	51,470	\$7,530
MWSX003	1,350 ft 10-inch water main southerly from Lodi Avenue. (oversized main) (Cliff Ave extension)	\$11,000	\$11,000	\$5,500	\$0	\$0	\$0	\$5,500	\$0	\$0	\$0
MWSX004	Guild Avenue transmission main consisting of 6,600 ft 10-inch water main along future Guild Avenue between Pine and Kettleman. (oversized main)	\$36,000	\$36,000	\$0	\$0	\$0	\$0	\$0	\$0	\$36,000	\$0
MWSX011	Guild Avenue Main (MSW004) also includes construction of the main under the Central Calif. Traction Co. RR Tracks. (cost sharing)	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0

TABLE3-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS1005	Transmission main parallel to an adjacent to Central Calif. Traction Co. RR tracks, consisting of approx. 6,600 lf of 10-inch water line between Pine and Kettleman. (oversized main)	\$51,000	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	to	\$51,000
MWS1012	Transmission Main (MWS1005) also includes construction of the main under the Central Calif. Traction Co. RR Tracks. (cost sharing)	\$20,000	\$20,000	to	\$0	\$0	\$0	\$0	\$0	to	\$20,000
MWS1006	Industrial Way transmission main consisting of 900 lf 10-inch water main to the west of Cluff Avenue. (oversized main already constructed)	\$7,000	\$7,000	\$7,000	\$0	\$0	to	\$0	\$0	\$0	to
MWS1007	Industrial Way transmission main consisting of 1,180 lf 10-inch water main to the east of Cluff Avenue extending MWS1006. (oversized main)	\$9,000	\$9,000	to	\$0	\$0	\$9,000	\$0	\$0	\$0	\$0
MWS1008	Beckman Road transmission main consisting of 1,300 lf 10-inch water main to the north of Kettlemann Lane. (oversized main)	\$10,000	\$10,000	\$0	\$10,000	to	to	to	\$0	to	\$0
MWS1009	Cluff Avenue transmission main consisting of 2,600 lf 10-inch water main along future street between Kettleman and Vine. (oversized main)	\$20,000	\$20,000	to	\$0	\$0	\$0	\$20,000	\$0	to	to

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI010	Kettleman Lane transmission main consisting of 3,680 lf 12-inch water main easterly from Beckman Road. (oversize main)	\$57,000	\$57,000	\$0	\$0	to	to	\$17,000	to	\$0	\$40,000
MWSI011	Turner Road transmission main consisting of 2,600 lf 10-inch water main from Lower Sacramento Road. (oversized main)	\$20,000		\$9,714	\$3,007	\$3,065	\$3,130	\$1,084	\$0	to	
MWSI012	Applewood Drive transmission main consisting of 1,300 lf 10-inch water main consisting of 1,300 lf 10-inch water main southerly from Turner Road to the existing main. (oversize main)	\$10,000	\$10,000	\$4,857	\$1,503	\$1,532	\$1,565	\$542	\$0	\$0	\$0
MWSI013	Lower Sacramento Road transmission main consisting of 550 lf 10-inch water main northerly from Yosemite Avenue. (oversize main)	\$4,000	\$4,000	\$4,000	to	to	to	to	to	\$0	\$0
MWSI014	Applewood Drive transmission main consisting of 13,480 lf 10-inch water main southerly from existing Applewood to Harney Lane. (oversized main)	\$105,000	\$105,000	to	\$7,000	to	\$0	\$0	\$0	to	\$98,000
MWSX001	Applewood Drive transmission main MWSI014 also includes construction of a 10-inch water line under the W.I.D. Canal (cost sharing)	\$9,000	\$9,000	to	to	to	to	to	\$0	\$9,000	to

10

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS0002	Applewood Drive transmission main (MWS1014) also includes construction of a 10-inch water line across Kettleman Lane (cost sharing).	\$9,500	\$9,500	to	to	to	\$0	to	to	\$9,500	to
MWS1015	Evergreen Drive transmission main consisting of 3,260 lf 10-inch water southerly and easterly from existing Evergreen Drive to Lower Sacramento (oversize main)	\$25,000	\$25,000	\$12,143	\$3,759	\$3,831	\$3,912	\$1,355	\$0	\$	\$0
MWS0009	Evergreen Drive main (MWS1015) includes construction of the main under Lower Sacramento Road (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$9,50	to	to	to	\$	to
MWS1016	Lodi Avenue transmission main consisting of 2,600 lf 10-inch water main westerly from Lower Sacramento Road to General Plan Boundary. (oversized main)	\$20,000	\$20,000	to	to	to	to	to	to	\$3,266	\$16,734
MWS1017	Vine Street transmission main consisting of 2,250 lf 10-inch water main westerly of Lower Sacramento Road along a future street alignment. (oversized main)	\$18,000	\$18,000	to	to	\$0	to	to	\$0	\$18,000	to
MWS1018	Kettleman Lane transmission main consisting of 4,350 lf 10-inch water main from 1/2 mi. west of Lower Sacramento Road to Sylvan Way. (oversized main)	\$34,000	\$34,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$22,000	to

TABLE 3 - 1

21-Aug-81

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987-2002	2002-2007
MWSI019	Lower Sacramento Road transmission main consisting of 5,200 ft 10-inch water main northerly to Kettleman Lane to the W.I.D. Canal. (oversized main)	\$41,000	\$41,000	00	00	\$0	\$0	\$21,000	to	\$2,266	\$16,734
MWSX003	Kettleman/Lower Sacramento Road transmission mains (MWSI018 and MWSI019) also includes boring under the two existing roads. (cost sharing)	\$13,000	\$13,000	00	00	to	\$0	\$0	\$0	\$13,000	\$0
MWSI020	Mills Avenue transmission main consisting of 1,400 ft 10-inch water main northerly from Kettleman Lane to W.I.D. Canal (oversized main)	\$11,000	\$11,000	00	00	to	\$0	\$0	to	\$11,000	\$0
MWSX004	Mills Avenue transmission main (MWSI020) also includes construction of the main under the W.I.D. Canal. (cost sharing)	\$9,000	\$9,000	00	00	\$0	\$0	\$0	to	\$9,000	\$0
MWSX005	Mills Avenue transmission main (MWSI020) also includes construction of the main under Kettleman Lane (cost sharing)	\$9,500	\$9,500	00	00	to	\$0	\$0	\$0	\$9,500	\$0
MWSI021	Century Blvd transmission main consisting of 1,300 ft 10-inch water main westerly from Sage Way along future Century Blvd. alignment to join the existing main. (oversized main)	\$5,000	\$5,000	00	00	\$0	\$0	\$5,000	to	to	to

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

21-Aug-91

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI022	Century Blvd. transmission main consisting of 2,700 ft 10-inch water main along future alignment from Lower Sacramento Road to general plan boundary. (oversized main)	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,592	\$18,408
MWSI007	Century Blvd. transmission main (MWSI021) and MWSI022) also includes construction of the main under Lower Sacramento Road. (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500
MWSI023	Future transmission main consisting of 2,800 ft 10-inch aligned between and parallel to Century and Harney, thence southerly from the canal to Harney. (oversize main)	\$51,000	\$51,000	\$0	\$0	\$0	\$0	\$0	\$10,000	\$41,000	\$0
MWSI024	Harney Lane transmission main consisting of 7,900 ft 10-inch water main westerly from Ham Lane to the western boundary of the general plan area. (oversized main)	\$33,000	\$33,000	\$0	\$0	\$0	\$0	\$0	\$0	\$21,000	\$12,000
MWSI006	Harney Lane transmission (MWSI024) includes construction of a 10-inch water line under the W.I.D. Canal. (cost sharing)	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$9,000	\$0
MWSI008	Harney Lane transmission main (MWSI024) includes construction of the main under Lower Sacramento Road. (cost sharing)	\$9,500	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,500

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

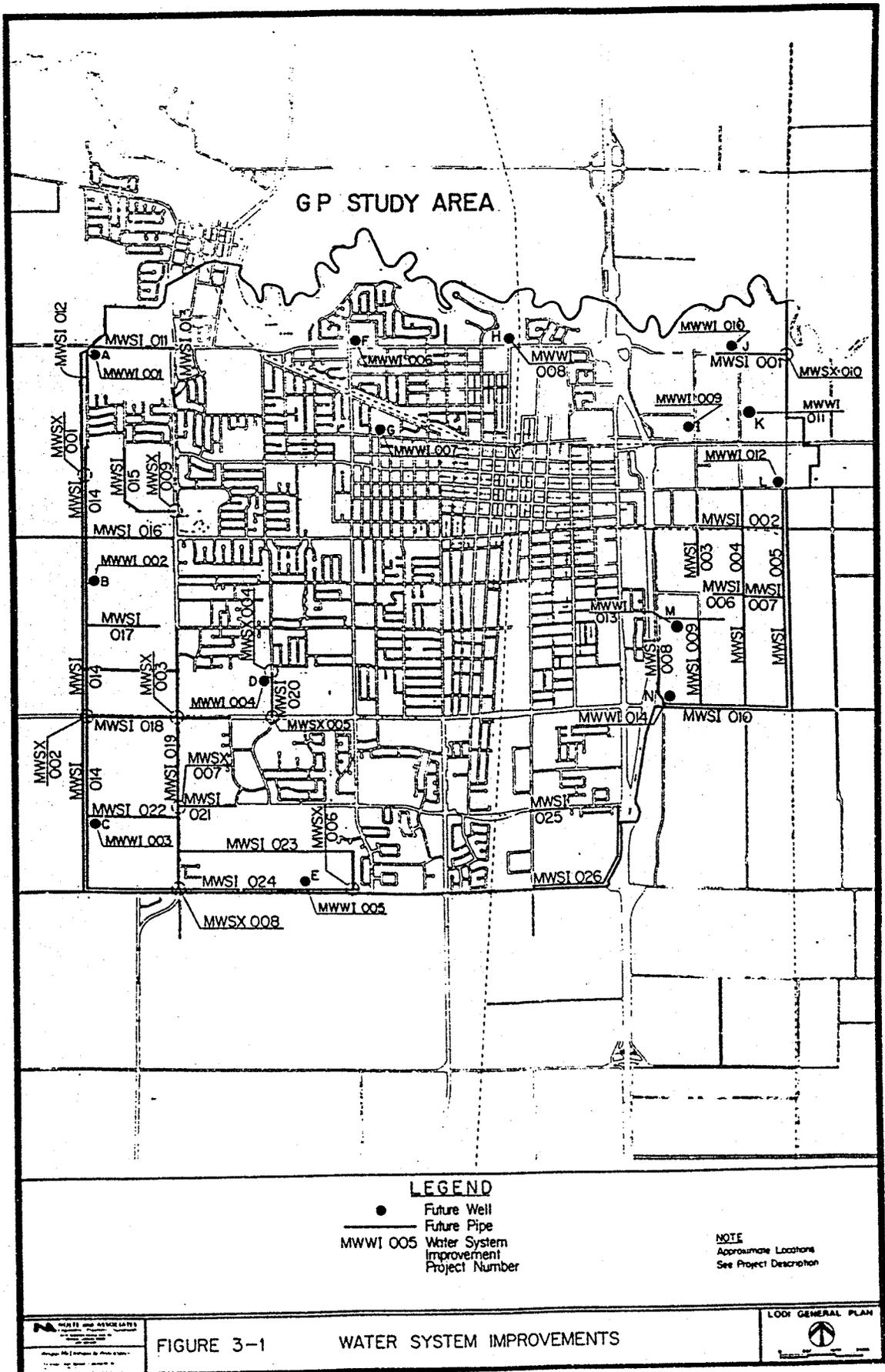
Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWS025	Century Blvd. transmission main consisting of 1,080 ft 10-inch water main easterly from Stockton St. to Chickadee Lane. (oversized main)	\$8,000	\$8,000	\$3,888	\$1,203	\$1,225	\$1,252	\$434	\$0	\$0	\$0
MWS028	Cherokee/Harney transmission main consisting of 4,700 ft 10-inch water main easterly from SP railroad along Harney, thence, northerly along Cherokee to Century Blvd. (oversized main)	\$73,000	\$73,000	\$35,458	\$10,975	\$11,186	\$11,424	\$3,957	\$0	\$0	\$0
23 SUBTOTAL - WATER MAIN:		\$853,500	\$853,500	\$94,558	\$37,447	\$30,339	\$30,283	\$75,873	\$10,000	\$242,208	\$332,794
WATER WELLS											
MWW001	Installation of Water Well "A" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0	\$0
MWW002	Installation of Water Well "B" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000
MWW003	Installation of Water Well "C" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	\$773,000	\$773,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$773,000

TABLE 3 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWW1004	Installation of Water Well "D" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW1005	Installation of Water Well "E" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW1006	Installation of Water Well "F" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$0	\$0	\$0	\$0	\$0	\$345,000	\$0
MWW1007	Installation of Water Well "G" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$295,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MWW1008	Installation of Water Well "H" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$345,000	\$0	\$0	\$0	\$0	\$0	\$0
MWW1009	Installation of Water Well "I" with pumping capacity of 1,600 GPM and Standby Power.	\$345,000	\$345,000	\$0	\$0	\$0	\$345,000	\$0	\$0	\$0	\$0
MWW1010	Installation of Water Well "J" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$0	\$0	\$295,000	\$0	\$0	\$0	\$0	\$0
MWW1011	Installation of Water Well "K" with pumping capacity of 1,600 GPM.	\$345,000	\$345,000	\$0	\$0	\$0	\$0	\$345,000	\$0	\$0	\$0

TABLE 3-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWW012	Installation of Water Well "L" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	\$723,000	\$723,000	\$0	\$0	\$0	\$0	\$0	\$0	\$723,000	\$0
MWW013	Installation of Water Well "M" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	\$773,000	\$773,000	to	to	to	50	to	to	to	m2000
MWW014	Installation of Water Well "N" with pumping capacity of 1,600 GPM.	\$295,000	\$295,000	\$0	to	to	\$0	\$0	to	\$0	\$295,000
MWSO001	Water Master Plan-1990	\$57,369	\$57,369	\$57,369	\$0	to	to	to	\$0	to	\$0
MWSO002	Water Master Plan and C.I.P. Update-1997	\$20,000	\$20,000	\$0	to	to	to	to	\$20,000	to	to
MWSO003	Water Master Plan and C.I.P. Update-2002	\$20,000	\$20,000	to	to	to	\$0	\$0	\$0	\$20,000	to
MWSO004	Public Works Admin. Bldg. Exp. (50%)	\$341,500	\$341,500	\$0	\$341,500	to	to	to	to	to	to
MWSO005	Public Works Storage Facility (50%)	\$235,000	\$235,000	to	to	\$235,000	\$0	to	\$0	to	to
MWSO006	Public Works Garage/Wash Facil.(33%)	\$166,667	\$166,667	\$166,667	\$0	to	to	\$0	\$0	to	\$0
	Upgrades to Existing Facilities	\$1,628,000	to	to	to	to	to	to	to	to	\$0
	New Development Share of Existing Water Tank (31%)	\$183,489	\$183,489	\$11,468	\$11,468	\$11,468	\$11,468	\$11,488	\$11,468	\$57,340	\$57,341
TOTAL WATER COST		\$10,931,525	\$9,303,525	\$625,063	\$735,415	\$571,807	\$386,751	\$432,341	\$764,468	\$2,833,546	\$2,954,135



developer credits should actual development costs deviate from the program schedule.

In Table 3-1, two columns are shown, Program Cost and Impact Fee Fund. Program Cost is defined as project costs to be provided through the City Water Fund. The Program Costs do not include costs borne by the developer. Costs listed in the Impact Fee Fund column represent those costs for specific projects allocated to future developed identified in the General Plan. Where the cost in the Program Cost and Impact Fee Fund columns are the same, the entire project cost has been allocated to future development. The usefulness of differentiating the costs will be evident in latter sections when Program Costs are to be funded by other sources or include costs to correct existing deficiencies.

At the end of Table 3-1, an item is listed as "New Development Share of Existing Facilities". This item summarizes already incurred City costs to construct Projects with capacity reserved to serve future development. Depending on the project, a percentage of the actual construction cost has been allocated to future development as shown in parenthesis.

In the case of water service, the new water tank falls into the category of existing facilities serving future development. As indicated in Table 3-1, 31 percent of the actual construction cost adjusted to January 1990 dollars has been allocated.

Supply

Through buildout of the General Plan, the City will continue to rely upon groundwater as the sole water supply. Project average day demand at buildout is 22.1 million gallons per day. A total of 14 new wells will be required to supply to water to the General Plan area. Proposed locations of the new wells marked on Figure 3-1. Five of the new wells will be equipped with standby power generators.

Distribution System

Additional water mains will be required to distribute water to the area. With regard to funding water main extensions, the City is responsible only for water mains 10 inches and larger in diameter. Approximate location and limits of these water mains are shown on Figure 3-1. Actual location and alignment of the water mains may slightly change when site specific planning is completed.

Treatment

Two types of treatment are assumed to be provided at the wells sites: emergency chlorination and granular activated carbon filtration. Chlorination of the water is not routinely required, however, permanent chlorination facilities will be constructed at selected well sites. The cost of

chlorination facilities (approximately \$7,500 per well) is small compared to the cost of a well and is not listed separately. The totals for all wells include sufficient contingency to cover this expense at selected wells. It is assumed, granular activated carbon filtration units will be constructed at 5 of the 15 new wells.

ESTIMATED COSTS AND PHASING

In Table 3-1, a summary of the water projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4,673. Water main extension costs represent only the City's funding responsibility per the City Reimbursement Policy. In actual fact, the developer will be constructing the improvement and will receive back from the City a portion to cover the cost of oversizing the pipelines and the City's share (50%) of major crossings.

Phasing of the improvements is presented in Table 3-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 3-1, the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for projects serving General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects have been adjusted to the January 1, 1990 dollars.

Many of the projects listed in Table 3-1 are oversizing projects wherein the City's participation is limited to reimbursement to the developer for oversizing costs. It is not intended that the Program Cost shown in the table reflect the total cost of construction. Similarly, for projects such as the Public Works building expansion, the costs have been divided between the water and sewer impact fee funds and the costs shown are the portion allocated to the water impact fee fund. Also, where a project partially serves the existing community and partially the general plan expansion areas, only the cost allocated to the general plan areas are shown.

DEVELOPMENT IMPACT FEE

Relationship of Water Projects to New Development

A reasonable relationship must be established between (1) a fee's use and (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Because of the logical growth patterns conceived in the Proposed General Plan and because of the planning effort set down in the Water Master Plan, the City ensures that all water facility improvements will primarily benefit the residential, commercial, industrial and quasi-public land uses within the General Plan area. Each and every water project to be financed by the fee

program will provide the same level of service to the Proposed General Plan area as currently provided to the existing community of Lodi. Although other projects have been identified that will correct existing deficiencies, these project costs will not be included in the fee program.

Relationship of Water Projects to Land Uses

On the basis that all land uses will benefit from the facilities to be constructed, the burden of financing will be distributed to each land use in proportion to their use of, or benefit from, the improvements.

This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category. A summary of the RAE factors for water is presented in Table 3-2. The RAE schedule shows a reasonable relationship between the cost of the required water projects and financing burden placed on each land use.

Recommended Fees

A summary of water fees for each land use benefitting from the water projects is provided in Table 3-2. The total fee for low density residential use is \$5,504 per acre.

TABLE 3-2

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
WATER**

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,710
Medium Density	Acre	1.96	\$11,190
High Density	Acre	3.49	\$19,930
East Side Residential	Acre	1.00	\$5,710.
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,710
Medium Density	Acre	1.96	\$11,190
High Density	Acre	3.49	\$19,930 .
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.64	\$3,650
General Commercial	Acre	0.64	\$3,650
Downtown Commercial	Acre	0.64	\$3,650
Office Commercial	Acre	0.64	\$3,650
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.26	\$1,480
Heavy Industrial	Acre	0.26	\$1,480

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 4

SEWER SERVICE

OVERVIEW

The City of Lodi has provided sewerage service³ to its residents since the early 1920's. Major facilities owned and operated by the City include a city-wide collection system, sewer trunks to the treatment plant, and the White Slough Water Pollution Control Facility located approximately 6 miles southwest of the City.

Collection System

The sanitary sewer collection system within the City includes more than 155 miles of pipeline. Sizes of the main sewers range from 4 to 48 inches in diameter, with 6 inches being the most common. Domestic and limited industrial wastewater flows (mainly the PCP Cannery and other industries along Sacramento Street) are kept separate. The separate industrial system is not addressed in this study.

Five sewer lift stations provide sewerage service to outlying areas of the City where conditions prohibit gravity systems. These existing lift stations are: Cluff Avenue Station, Mokelumne Village, Rivergate, Woodlake, and Park West.

Treatment and Disposal

White Slough Water Pollution Control Facility is owned and operated by the City. Currently, the plant is operating at the design capacity of 6.2 million gallons per day (MGD). Expansion of the plant to a capacity of 8.5 MGD is currently under construction. Future expansion to 10.3 MGD is planned.

Facility costs and financing for wastewater treatment and disposal are not addressed in this report. These issues have been addressed in separate studies and a financing mechanism, the Wastewater Connection Fee, has been established.

Master Sewerage Plan

Planning for sewerage collection facilities to serve the expanded General Plan area are addressed in the report by Black and Veatch, "Sanitary Sewer System, Technical Report for the 1990 General Plan Update." Included in the report are results of a comprehensive hydraulic evaluation of the existing collection system and proposed expansions of the collection system to serve an expanded city.

The Master Plan presents recommendations for gravity and pressure sewer design, sewer lift station design, and collection system maintenance. Recommendations for sizing and location of new facilities are presented that will serve the General Plan expansion areas as discussed in the section "Planned Sewerage Facilities". In addition, Master Plan identifies a number of collection system deficiencies that are described in the subsection, "Existing Deficiencies".

Sewer Reimbursement Policy

Commonly, developers are required to construct sewer trunk lines with greater capacity than needed in order to provide service to expanding areas of a community. It is not very common that a City or agency is able to get property owners to pay in advance for sewer capacity that they do not plan to use in the near future and, as a result, cities and agencies pay for the oversizing of sewer trunks. Policies for reimbursing for oversizing costs vary from community to community.

Under the City's Sewer Trunk Extension policy, applicants are reimbursed a portion of the estimated construction cost of oversize trunk sewers. For oversize trunks, the reimbursement policy applies to trunk sewers larger than 10 inches in diameter. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administration, engineering and inspection. Administrative and engineering reimbursement is limited by City ordinance to 10%.

City reimbursement policy as it relates to oversizing of sewer trunk lines is reasonable. Historically, the oversize cost of gravity sewer lines has been spread throughout the City. In preparing this report, the existing policy and historic practice are assumed to continue in force during the General Plan period.

Existing Deficiencies

A number of existing sewers within the City are operating above design capacity as determined by the methods presented in the Master Sewerage Plan. Correction of the problem requires the construction of parallel sewers to relieve the surcharge condition. Listing of these sewers is presented in the Master Plan. Maintenance deficiencies within the collection system were also identified consisting primarily of sewer cleaning that had not regularly been performed in the past.

Based upon construction costs referenced to January 1, 1990 dollars, the estimated cost to construct those parallel relief sewers is \$1,005,500. Estimated cost to clean the existing sewers is \$165,000. Source of funding for these deficiencies has been identified by the City to be the Sewer Fund.

PLANNED SEWERAGE FACILITIES

Sewerage collection facilities to serve the expanded City have been identified in the Master Sewer Plan. A summary of these facilities is presented below and in Table 4-1. Project numbers listed in Table 4-1 are used to identify the project locations as shown on Figure 4-1.

Collection System

Expansion of the existing collection system to serve new areas will require construction of new gravity sewers and lift stations as described in Table 4-1 and shown on Figure 4-1. Two new lift stations and expansion of an existing lift station are planned; one near Kettleman Lane (Highway 12), a second near Harney Lane, and expansion of the existing Cluff Avenue Lift Station. Additional gravity sewer trunks will be required to serve the General Plan areas. Only those trunk lines that are larger than 10 inches in diameter are considered in this report and are listed in Table 4-1.

Sewer collection facilities can be divided into two categories: gravity facilities and pressure facilities. As previously mentioned, City policy has historically provided for reimbursement of oversize gravity facilities and for payment of oversizing costs from the Sewer Fund, thereby, spreading the costs City-wide. Pressure facilities costs (i.e. lift stations and force mains) have been spread over areas of benefit. For each lift station in the City a specific area of benefit is defined. In this report, it is assumed that lift station and force main costs would be spread over individual special fee areas corresponding to the areas of benefit. Also, it is assumed that gravity facilities costs would be spread City-wide and oversizing costs for facilities serving future growth would be paid from development impact fee funds.

Treatment and Disposal

Expansion of the White Slough Water Pollution Control Facility is currently under construction. Costs of the expansion and future planned expansions are not considered in this report. Funding for these improvements has been arranged by the City and reimbursement will come from rates and the City Wastewater Connection Fees collected at the time of building permit issuance.

ESTIMATED COSTS AND PHASING

In Table 4-1, a summary of the sewer projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Sewer trunk extension costs reflect only the City's funding responsibility per the City Reimbursement Policy and do not reflect the total estimated construction cost.

Phasing of the improvements is based upon the Forecast of Acres Mapped Over the General Plan Period (Appendix A) provided by the City. In Table 4-1,

TABLE 4 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
SEWER

21-Aug-91

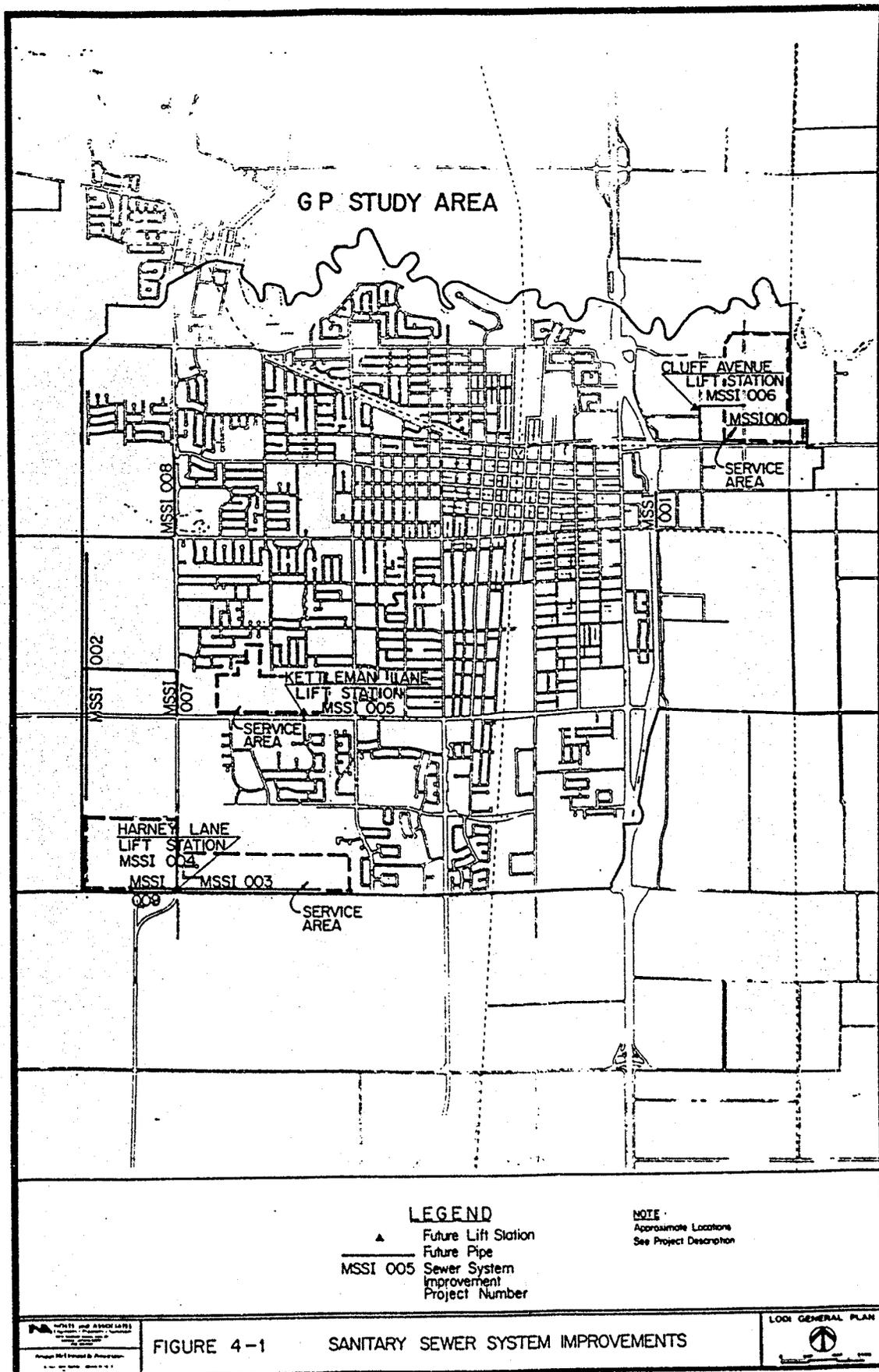
Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI001	Beckman Road sewer trunk comprising 1,100 lf of 10-inch sanitary sewer pipe and manholes from Pine Street to Lodi Avenue.	\$49,000	\$49,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,000
MSSI002	Western boundary sewer trunk consisting of 500 lf, 12-inch, 500 lf 15-inch, 2,000 lf of 18-inch, 2,000 lf of 21-inch, and 2,500 lf of 24-inch sewer pipe connecting to the existing 48 inch sewer trunk to the treatment plant. (oversize)	\$300,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000
MSSI003	Oversize gravity sewer to Harney Lane lift station comprising 2,700 lf of 12-inch and 1,000 lf of 15-inch sewer trunk.	\$48,000	\$48,000	\$0	\$0	\$0	\$0	\$0	\$0	\$48,000	\$0
MSSI004	Harney Lane lift station and force main comprising 3-ten horsepower pumps having a combined 1,000 GPM capacity and 2,600 lf of 8-inch pipe.	\$262,500	\$0 (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSI005	Kettleman Lane lift station and force main with 2-five horsepower pumps and 450 GPM capacity and short force main under Kettleman Lane.	\$192,000	\$0 (2)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSI006	Cluff Avenue lift station upgrade and parallel force main with 2 fifteen horsepower pumps and a 1,500 GPM capacity	\$185,000	\$0 (3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSSI007	1,400 lf of 18-inch parallel bank line in Lower Sacramento Rd. from Taylor Rd. to Kettleman Lane.	\$42,000	\$42,000	\$0	\$0	\$0	\$0	\$0	\$0	\$42,000	\$0

TABLE 4 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSS006	2,500 lf of 15-inch parallel trunkline in Lower Sacramento Rd. from Lodi Avenue to Elm Street.	\$49,000	\$49,000	SO	to	to	\$0	\$49,000	SO	to	W
MSS009	Enlarge gravity sewer in Harney Lane to lift station, consisting of 1,400 lf of 12-inch pipe west from Lower Sacramento Road. (oversize)	\$15,000	\$15,000	SO	to	\$0	\$0	\$0	SO	\$15,000	to
SU TOTAL - SEWER MAIN PARTICIPATION:		\$1,142,500	\$503,000	to	to	SO	\$0	\$49,000	SO	\$105,000	\$349,000
GCF003	Public Works Administration Bldg. Expansion. (50%)	\$341,500	\$341,500	SO	\$341,500	\$0	\$0	\$0	to	to	SO
GCF007	Public Works Storage Facility (50%)	\$235,000	\$235,000	SO	to	\$235,000	to	to	\$0	to	W
GCF008	Pub. Works Garage/Wash Facil. (33%)	\$166,667	\$166,667	\$166,667	to	\$0	\$0	SO	to	to	to
MSS000	Sewer Master Plan - 1990	\$82,753	\$82,753	\$82,753	to	to	to	SO	to	to	SO
MSS000	Sewer Master Plan and C.I.P. Update - 1997	\$20,000	\$20,000	SO	to	\$0	\$0	\$0	\$20,000	0	to
MSS000	Sewer Master Plan and C.I.P. Update - 2002	\$20,000	\$20,000	SO	to	\$0	\$0	to	\$0	\$20,000	\$0
	Upgr.de. Existing Facilities	\$1,005,500	to	SO	\$0	\$0	\$0	to	SO	\$0	to
TOTAL:		\$3,013,920	\$1,368,920	\$249,420	\$341,500	\$235,000	\$0	\$49,000	\$20,000	\$125,000	\$349,000

Notes:

- 1 Harney Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1997-2002 period.
- 2 Kettleman Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1992-1993 period.
- 3 Cluff Avenue lift station modification costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 2002-2007 period.



the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Some projects listed in Table 4-1 are not included in the overall development impact fee program. These include projects related to serving the Cluff Avenue Lift Station Service Area, the Harney Lane Lift Station Service Area and the Kettleman Lane Lift Station Service Area. Since lift stations are unusually large and expensive facilities and, the service area is specific, a separate supplemental fee is calculated for each area. A separate calculation for these sub-zones is presented in the section, BURDEN ANALYSIS FOR SEWER SUB-ZONES.

Relationship of Sewer Projects to New Development

A reasonable relationship must be established between: (1) the fee's use and; (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Sewer collection facilities are used by residential, commercial, industrial and quasi-public land uses. Benefit to each land use is based upon peak wastewater generation rates as set forth in the Sewer Master Plan. Because each land use mentioned above benefits from the sewer projects in the capital improvements program, each land use is also a part of the fee program.

Relationship of Sewer Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

According to the definition of RAE's an acre of low density single family residential land use has an RAE factor of 1.0. All other land use categories have RAE factors that relate their demand for sewerage facilities relative to one acre of low density single family land use. Based upon wastewater flow projections presented in the City's Sewer Master Plan for each land use in the General Plan, an RAE schedule has been developed. The RAE schedule shows a reasonable relationship between the cost of required Sewer Facilities projects and the burden placed on each land use. The RAE schedule that has been developed for the Sewer Facilities is presented in Table 4-2.

TABLE 4-2

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
SEWER**

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
RESIDENTIAL			
Low Density	Acre	1.00	\$1,090
Medium Density	Acre	1.96	\$2,140
High Density	Acre	3.49	\$3,800
East Side Residential	Acre	1.00	\$1,090
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	\$1,090
Medium Density	Acre	1.96	\$2,140
High Density	Acre	3.49	\$3,800
COMMERCIAL			
Neighborhood Commercial	Acre	0.94	\$1,020
General Commercial	Acre	0.94	\$1,020
Downtown Commercial	Acre	0.94	\$1,020
Office Commercial	Acre	0.94	\$1,020
INDUSTRIAL			
Light Industrial	Acre	0.42	\$460
Heavy Industrial	Acre	0.42	\$460

Note: Fee amounts shown are for fiscal year 1991/1992

Sources: Nolte & Associates and Angus McDonald & Associates.

Recommended Fees

The Sewer Facilities Fees for each land use are summarized in Table 4-2. The total fee is \$1,090 per low density residential acre.

BURDEN ANALYSIS FOR SEWER SUB-ZONES

There are three sewer sub-zones which are not served by the improvements in the fee program and cannot be funded by the sewer development impact fee. These areas require lift stations and other improvements that will benefit only a specific area of undeveloped land. The sub-zones are the Kettleman Lift Station Area, Harney Lane Lift Station Area, and the Cluff Avenue Lift Station Area. Each area has only one land use type within its boundaries. Since the improvements will have to be constructed prior to any development taking place, development impact fees do not provide a viable means to finance these projects.

The total cost of lift station facilities equals \$639,500. In practice, this amount would best be obtained by borrowing from another City of Lodi fund. A special sub-area Impact Fee could then be collected in the three sewer sub-zones sufficient to repay the borrowing plus an appropriate rate of interest.

The alternative, three sub-area financing districts (Special Assessment Districts or Mello-Roos Community Facilities Districts) would not be economic. The cost of processing would be excessive compared to the funds required.

Other alternatives include financing by the "first" development in the area with establishment of a reimbursement program from future development, or the installation of temporary facilities plus payment of the fee. Each case should be evaluated separately as development is proposed.

A series of analyses presenting the burden of financing the improvements in each of these sub-zones is provided in Table 4-3. The calculations indicate the approximate amount each acre of land in each sub-zone will need to contribute in order to finance the needed improvements. It should be noted that the cost of financing has not been included.

In the case of the Harney Lane lift station service area, existing development has been included in the sizing of the facilities. At the time of annexation, it is expected that this area will be required to pay the supplemental fee and, therefore, it has been included in the supplemental fee calculation.

TABLE 4-3

SEWER SUB-ZONE FEE CALCULATIONS

Kettleman Lift Station Sub-Zone

Total Planned Residential Acres: 80
 Total Planned Commercial Acres: 22
 Total Cost of Improvements: \$192,000
 Cost Per RAE: \$ 1,610

<u>Description</u>	<u>Units</u>	<u>Total Developed</u>	<u>RAE Factor</u>	<u>Total RAEs</u>	<u>Total Burden Per Acre</u>
PR - Low Density	Acres	69.9	1.00	69.9	\$ 1,610
PR - Medium Density	Acres	4.5	1.96	8.8	\$ 3,160
PR - High Density	Acres	5.6	3.49	19.5	\$ 5,620
Office Commercial	Acres	<u>22.0</u>	0.94	<u>20.7</u>	<u>\$ 1,510</u>
		102.0		116.4	

Harney Lane Lift Station Sub-Zone

Total Planned Residential Acres: 292
 Less Basin and Park Acres: 35
 Net Planned Residential Acres: 257
 Total Cost of Improvements: \$262,500
 Average Cost Per RAE: \$ 830

<u>Description</u>	<u>Units</u>	<u>Total Developed</u>	<u>RAE Factor</u>	<u>Total RAEs</u>	<u>Total Burden Per Acre</u>
PR - Low Density	Acres	225.0	1.00	225.0	\$ 830
PR - Medium Density	Acres	14.1	1.96	28.0	\$ 1,630
PR - High Density	Acres	<u>18.0</u>	3.49	<u>63.0</u>	<u>\$ 2,900</u>
		257.0		315.0	

Cluff Avenue Lift Station Sub-Zone

Total Industrial Reserve Acres: 158

Total Cost of Improvements: \$185,000

Average Cost Per RAE: \$ 1,170

Description	Units	Total Developed	Factor	RAE's	Total Burden Per Acre
Light Industrial	Acres	93.0	0.42	39.1	\$ 1,170
Heavy Industrial	Acres	<u>65.0</u>	0.42	<u>27.3</u>	\$ 1,170
		158.0		66.4	

Note: Dollar amounts shown are for fiscal year 1991/92.

Source: Nolte and Associates and Angus McDonald and Associates, 1991.

CHAPTER 5
STORM DRAINAGE

OVERVIEW

Storm drainage services are provided by the City of Lodi. Major features of the storm drainage system include collection system, runoff storage/detention facilities, and pumping plants. Terminal drainage for the City is provided by the Mokelumne River and the Woodbridge Irrigation District (WID) canal. Characteristics of these facilities are described below.

Collection System

Storm drainage services are provided to an area encompassing approximately 7,700 acres. For facility planning purposes, the drainage area has been divided into planning areas. Storm drainage facilities for these planning areas are incorporated into a City wide storm drainage facilities plan. Approximately 1,340 acres directly discharge to the Mokelumne River via gravity pipelines. Approximately another 2,290 acres is pumped to the river. The remaining approximately 4,070 is pumped to the WID canal from two pump stations.

Discharges to the WID canal are controlled by the flow capacity of the canal system. By agreement, the City is limited to a combined total discharge of 80 cubic feet per second at the two existing pumping stations. Additional discharge locations are not currently permitted by the agreement. The City operates a series of interconnected detention basins within this area to store runoff prior to pumping to the canal. The City utilizes detention basins in other areas also to store runoff prior to pumping to the Mokelumne River.

Existing facilities for the collection of storm runoff include surface improvements like alleys, ditches and gutters, and underground pipelines. Present design standards for storm drainage collection facilities only allow gutter and underground piping. The use of ditches and alleys for conveyance of storm runoff is currently substandard and not allowed.

New development in the City is required to construct all storm pipeline smaller than 30 inches in diameter. Pipelines 30 inches and larger are considered to be part of the Master Storm Drain Plan improvements and are currently funded by Storm Drainage Fees collected by the City.

A number of relatively minor deficiencies exist within the collection system. For the most part, these consist of substandard surface drainage facilities (for example, ditches and alleys), deteriorated curb and gutter, and undersized pipelines and catch basins. Many of the system deficiencies can be found in the older central and eastern parts of the City.

Large scale replacement of deficient facilities, if it occurs, will be part of major street reconstruction projects. As part of the East Side Residential Study (1987), a number of Storm Drainage deficiencies were identified. Estimated total cost to correct the deficiencies was 5854,000 in 1987 dollars and 6930,000 in 1990 dollars. Small scale projects have been performed by the City to repair sections of curb and gutter. Replacement of the alley systems is not expected due to high cost and grade conditions.

Detention Basins

As mentioned above, the City operates a system of interconnected detention basins that store runoff prior to pumping to the WID canal or the Mokelumne River. These basins also function as park-like areas when not utilized for storage of storm runoff.

A total of eight basins exist within the City's drainage service area. Basins in subareas C (Pixley Park), B (Glaves Park), and E (Westgate Park) store runoff prior to discharge to the Mokelumne River. Basins in subareas A-1 (Kofu Park), A-2 (Beckman Park), B-1 (Vinewood School), D (Salas Park), and G (along with the future F and I basins) store runoff prior to discharge to the WID canal from pumping stations located on Cabrillo Circle and at Beckman Park.

Current design standards for the detention basins require storage capacity for the 100-year 48-hour storm. Changes in hydrologic design data over the past years may have resulted in some earlier basins being undersized. Future updates of the Master Storm Drainage Plan will address this issue.

Master Storm Drainage Plan

City of Lodi Engineering Division updated the Master Storm Drainage Plan in 1988. This plan forms the principal basis for future expansions of the drainage service area to serve the General Plan area. Major collection system improvements and detention basin improvements are identified in the plan that have been included in this report.

Master Storm Drainage Fee

The City has adopted a capital improvement program and fee-based financing mechanisms for storm drainage facilities. Recently, this program was revised to comply with AB 1600 regulations. This study updates the program and fee to serve the General Plan Area. Also, additional fee categories have been created from the former drainage fee to establish general conformance with the other fee categories.

PLANNED STORM DRAINAGE IMPROVEMENTS

Storm drainage improvements to serve buildout of the General Plan were, for the most part, identified in the Master Storm Drainage Plan. A summary of

those facilities is presented below and summarized in Table 5-1. Project numbers listed in Table 5-1 are used to identify the location of projects shown on Figure 5-1. Two existing reimbursement agreements, which are an obligation of the costs for storm drain fund, are included.

Collection System

Drainage subareas established during planning for storm drainage improvements within the existing City limits had already incorporated much of the land in the expanded General Plan area. Subareas C, D, E, F and G were already planned for expansion of service to the west, east and south. New subarea I will be established to provide drainage services to areas west of Lower Sacramento Road, south of Kettleman Lane.

Major storm drainage trunk pipes are planned to serve the expanded General Plan area. Locations of these trunk improvements are shown on Figure 5-1.

Detention Basins

Expansion of existing detention basins in subareas C, E, and G are identified in the Master Plan. New detention basins are planned for subareas F and I.

ESTIMATED COSTS AND PHASING

In Table 5-1, a summary of the storm drainage projects and estimated construction costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Average Construction Cost Index for January 1, 1990 of 4673. In the table, reference is made to Program Cost and Impact Fee Fund. Program Costs are defined for Storm Drainage Facilities to be the total probable construction cost for the facilities described. In other words, the private developer is not expected to pay any portion of the cost to construct Master Storm Drainage Facilities. Impact Fee Fund costs represent the portion of Program Costs allocated to serve future growth or otherwise not funded from other sources. In the case of Storm Drainage, all Master Planned Facilities are wholly serving future growth and no funding other than development impact fees is expected. Therefore, the amount in the Program Cost column generally equals the amount in the Impact Fee Fund column. The exception is the item labeled "Deficiencies". Storm drainage trunk lines represent the total estimated cost of construction.

Phasing of the storm drainage improvements presented in Table 5-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. Costs for projects serving General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the base dollar of January 1, 1990.

TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

21-Aug-91

Project Number	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MSDI001	Pixley Park drainage basin. Expansion and development of Basin "C" according to plan adopted in 1988 (Dwg 88E003)	\$693,000	\$693,000	\$0	\$177,000	\$0	\$0	\$0	\$222,000	\$294,000	\$0
MSDI003	Turner Road storm drain. 650 lf of 60", 800 lf of 54", and 1,150 lf of 42" storm drains in Turner Road and Guild Avenue.	\$213,000	\$213,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$213,000
MSDI004	Pine Street storm drain consisting of 800 lf of 30" storm drain and manholes.	\$42,000	\$42,000	\$0	\$0	\$0	\$0	\$0	\$0	\$42,000	\$0
MSDI005	Thurman Street storm drain consisting of 1,250 lf 36" storm drain and manholes.	\$70,000	\$70,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$40,000	W
MSDI007	Basin "C" storm drain collection facilities consisting of 42" and 30" pipes, extending south and east. Expands service area to Kettleman and Guild.	\$172,000	\$172,000	\$0	\$0	\$0	\$0	\$0	W	\$88,000	\$88,000
MSDI008	Evergreen Drive storm drain collection facilities extending service area north to Turner Road. Improvements include pipe that will carry runoff to Basin "E".	\$129,000	\$129,000	\$0	\$0	\$0	\$43,000	\$43,000	\$43,000	\$0	\$0
MSDI009	Evergreen Drive storm drain collection facilities extending service south of E-basin. Improvements include 30" and 36" pipe that will carry runoff to Basin "E".	\$63,000	\$63,000	\$0	\$21,000	\$21,000	\$21,000	\$0	\$0	\$0	\$0

45

**TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE**

21-Aug-91

Project Number	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
MSD1010	Westgate Park expansion and development. Park improvements are not included.	\$1,934,000	\$1,934,000	\$0	\$1,343,000	\$157,000	\$157,000	\$277,000	\$0	to	to
MSD1011	Development of new Basin "F", located north of Kettleman Lane and west of Lower Sacramento Road. Service area includes land west of Lower Sacramento Road, north of Kettleman, and south of the WID canal. Park improvements are not included.	\$3,519,000	\$3,519,000	\$0	to	to	\$0	\$0	to	\$2,532,000	\$987,000
MSD1012	Basin "F" storm drain collection facilities extending north of Basin "F" including 54", 48", and 30" pipes.	\$367,000	\$367,000	\$0	to	to	to	to	\$0	to	\$367,000
MSD1013	Storm drain consisting of 36" and 30" pipes extending easterly from the existing 54" trunk line north of Kettleman Lane. Exact location not yet determined.	\$149,000	\$149,000	to	to	\$0	to	\$0	to	\$149,000	\$0
MSD1014	Basin "F" outfall storm drain consisting of 30" pipes extending easterly from the basin to the existing 54" trunk line.	\$184,000	\$184,000	\$0	to	to	to	to	\$0	\$184,000	to
MSD1015	Basin "G" storm drain collection facilities consisting of 48" and 36" pipes extending southerly and easterly from Basin "G". Exact location not yet determined.	\$261,000	\$61,000	to	to	\$0	\$0	to	to	\$261,000	to

**TABLE 5 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE**

21-Aug-91

Project Number		Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSD016	Basin "G" collection facilities consisting of 30" and 36" pipes extending westerly and northerly from the existing 36" trunk in Orchis Way. Exact Location not yet determined.	\$84,000	\$84,000	\$84,000 (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MSD017	Expansion and development of Basin "G". Golf course improvements are not included.	\$3,744,000	\$3,744,000	\$108,000 (1)	\$0	\$2,000,000	\$50,000	\$0	\$817,000	\$769,000	\$0
MSD018	Master Plan/Updates	\$50,000	\$50,000	\$10,000 (1)	\$0	\$0	\$0	\$0	\$20,000	\$20,000	\$0
MSD020	Development of Basin "I" located south of Kettleman Lane and west of Lower Sacramento Road.	\$3,619,000	\$3,619,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,619,000
MSD021	Basin "I" collection facilities consisting of 30, 36, 42, and 48 inch pipes extended north of the basin.	\$265,000	\$265,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265,000
MSD022	Basin "I" discharge consisting of 42" inch pipe extending north and east to Basin "G".	\$275,000	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$275,000
	Upgrades to Existing Facilities	\$1,051,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Parkwest (E - area) Reimbursement Agreement	\$268,838	\$268,838	\$0	\$0	\$0	\$0	\$0	\$268,838	\$0	\$0
	Sunwest (G - area) Reimbursement Agreement	\$154,869	\$154,869	\$0	\$0	\$0	\$0	\$0	\$154,869	\$0	\$0
TOTAL STORM DRAINAGE COST:		\$17,285,707	\$16,234,707	\$212,000	\$1,541,000	\$2,178,000	\$271,000	\$320,000	\$1,523,707	\$4,377,000	\$5,812,000

NOTE:

(1) Previously Appropriated from Drainage Fees

Relationship of Storm Drainage Projects to New Development

A reasonable relationship must be established between the projects and improvements funded by the fee and the type of development upon which the fee is imposed. Essentially, it is incumbent upon the City to show that the development is served by and/or benefits from the public facilities to be financed by the fee revenue.

City of Lodi Storm Drainage Master Plan presents a soundly conceived and comprehensive plan for providing storm drainage services to all areas of the General Plan. Only those improvement costs benefitting the areas included in the fee program are included in the fee program.

Relationship of Storm Drainage Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

The concept of RAE is based upon defining a base demand that, in this case, is selected to be an acre of low density single family detached dwelling units. The base acre has an assigned RAE of 1.0. All other land use categories have RAE factors that show their relative demand for Storm Drainage Facilities compared to the base acre of low density single family housing.

Based upon the cost of facilities to provide comparable levels of service to residential and commercial/industrial areas, the City has adopted a commercial/industrial fee that is 1.33 times the residential fee. Following a review of the methodology employed by the City, it is concluded the methodology is reasonable and fairly compares the demand for storm drainage facilities by the various land uses. Therefore, the City adopted (and defacto) RAE schedule is incorporated into this study.

Recommended Fees

The Storm Drainage Facilities Fee is shown in Table 5-2. The total fee is 57,910 per low density residential acre.

TABLE 5-2
SUMMARY OF DEVELOPMENT IMPACT FEES
STORM DRAINAGE

21-Aug-91

Land Use Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$7,910
Medium Density	Acre	1.00	\$7,910
High Density	Acre	1.00	\$7,910
East Side Residential	Acre	1.00	\$7,910.
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$7,910
Medium Density	Acre	1.00	\$7,910
High Density	Acre	1.00	\$7,910
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	1.33	\$1 0,520
General Commercial	Acre	1.33	\$1 0,520
Downtown Commercial	Acre	1.33	\$1 0,520
Office Commercial	Acre	1.33	\$1 0,520
<u>INDUSTRIAL</u>			
Light Industrial	Acre	1.33	\$1 0,520
Heavy Industrial	Acre	1.33	\$1 0,520

Note: Fee amounts shown are for fiscal year 199111992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 6

STREETS AND ROADS

OVERVIEW

For as long as the City of Lodi has been in existence, streets and roads have been the primary system used in intercity travel. With the change in City-wide growth, there welcome a need to improve the streets and roads in the community. The Draft General Plan will expand the City and additional traffic will be generated within the community. As a result new streets will be needed and existing streets will need to be improved. The following sections will describe these improvements, the City obligation for funding, and the fees calculated to reimburse the City costs.

Existing Traffic Conditions

Existing traffic counts were collected by the City of Lodi Public Works Department in 1987 at numerous locations throughout the City by the City and their traffic consultant. The data were used to establish the current Level of Service (LOS) within the project study area. Currently, roadways and intersections throughout the City are operating at a LOS of C or better with the exception of Hutchins Street/Kettleman Lane intersection, which operates at a LOS D. The City of Lodi considers C to be the standard level of service with anything less considered to be substandard.

Circulation Plan

In December of 1989, a City-wide circulation study was prepared by the Traffic Consultant, TJKM, that identified the impacts associated with the envisioned General Plan. As mentioned earlier, the existing traffic counts were done by the City's staff. Incorporating this information along with using a computer based travel demand model, TJKM was able to forecast future traffic conditions throughout the project study area. Based upon these forecasts, road sections of future streets and improvements to existing streets were identified.

A listing of general street, intersection, signalization, and interchange improvements was submitted to the City along with the circulation study. Working with City staff and the City improvement standards, cross-sections were prepared for future streets and improvements to existing streets. These are discussed in the following section.

Existing Deficiencies

Existing deficiencies are relatively minor and mainly consist of deteriorated pavement, and curb and gutter and drainage facilities on some streets. Project costs to correct existing deficiencies are not funded by development impact fees unless the correction is incidental to providing higher capacity

to serve future growth. For example, Lockeford Street between the Southern Pacific Railroad and Cherokee Lane needs to be widened to four lanes and this project is included in the fee program. Incidental to widening Lockeford Street, curb and gutter will be reconstructed along the widened stretch.

Reconstruction, overlays and other maintenance activities are not included in the fee program. Funding for these activities is derived from the general fund, gas taxes, TDA, Proposition 111 gas tax, Measure K sales tax, and other sources. Typically, general fund allocations are strictly used for operations and maintenance (O & M) activities. Funds from other sources are allocated to O and M, capital and reconstruction activities.

Based upon the current budget for capital maintenance and reconstruction of \$1.66 million, a forecast was prepared for the program cost for similar work during the General Plan period. The total is shown in Table 6-1 as Enhancements to Existing Facilities in the amount of \$26.56 million. Funding for these program costs is anticipated to come primarily from General Fund, Gas Tax and Transportation Development Act (TDA) sources in proportion to existing funding levels of 52%, 26%, and 22%, respectively.

PLANNED CIRCULATION IMPROVEMENTS

Presently, the City policy toward funding street and road improvements applies only to limited access expressways such as Lower Sacramento Road and South Hutchins Street and widenings to existing streets. Based upon current State law and common practice in other agencies regarding impact fees and developers' requirements, it is recommended that present policy be changed. The following section describes the recommended policy and how it is implemented in this fee program.

Developer Required Improvements

for all projects within the City, the developer is required to build streets to serve the project. Relative to street improvements, the developer is required to provide all improvements and dedicate all right-of-way for one half width street consisting of curb, gutter, sidewalk, one travel lane and a shoulder or parking lane. Maximum right-of-way dedication is 34 feet and is dependent upon existing right-of-way at the improvement location. Improvements required of the developer include 5.5 feet of curb and sidewalk, 2 feet of gutter, and 24 feet of paving that corresponds to those designated as a major collector. Typical section for a major collector is provided in Figure 6-1. In the case where development occurs on one side of a major collector, the developer typically is required to construct only one-half of the street. In the case where development occurs along a street having a greater designated capacity than a major collector, the development impact fee funds or other funds will be used to construct the more extensive improvements. Examples of these streets include: Kettleman Lane, Harney Lane, Century Boulevard, and Lower Sacramento Road.

TABLE 6-1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS001	Restriping of Kettleman Lane (6 - Lanes, Divided) from Lower Sacramento Road to Ham Lane.	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$22,000	\$0
MTS002	Restriping of Kettleman Lane (6 - Lanes, Divided) from Ham Lane to Stockton Street.	\$22,000	\$22,000	\$0	\$0	\$0	\$0	to	\$22,000	to	to
MTS003	Restriping of Kettleman Lane (6 - Lanes, Divided) from Stockton Street to Cherokee Lane.	\$12,000	\$12,000	\$0	\$0	\$0	\$0	to	\$12,000	\$0	to
MTS004	Design, construction, and engineering associated with widening Kettleman Lane (Highway 12) @ State Route 99. (Measure "K" Funding = \$700,000, State Funding = \$831,000)	\$5,106,000	\$3,575,000	\$0	\$0	\$0	\$0	to	\$1,787,500	\$1,787,500	to
MTS005	Widening of Kettleman Lane (4 - Lanes, Divided) from Beckman Road to Guild Avenue.	\$519,000	\$519,000	\$0	\$0	\$0	\$259,500	\$0	to	\$0	\$259,500
MTS006	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Turner Road to Lodi Avenue. (Measure "K" Funding = \$185,250)	\$463,250	\$278,000	\$0	\$0	\$0	\$0	\$30,580	\$47,280	\$200,160	\$0
MTS007	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Elm Street to Taylor Road. (Measure "K" Funding = \$130,000)	\$325,000	\$195,000	\$0	\$0	\$0	\$0	\$21,450	\$33,150	\$140,400	to
MTS008	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Taylor Road to Kettleman Lane. (Measure "K" Funding = \$91,000)	\$228,000	\$137,000	\$0	\$0	\$0	to	\$0	\$0	\$137,000	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-hug-01

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS1009	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kettleman Lane to Orchis Drive. (Measure "K" Funding = \$94,250)	\$235,250	\$141,000	\$0	\$0	\$0	\$0	to	\$0	\$141,000	\$0
MTS1010	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Orchis Drive to Century Blvd. (Measure "K" Funding = \$78,000)	\$195,000	\$117,000	\$0	\$0	\$0		\$0	\$0	\$117,000	\$0
MTS1011	Widening of Lower Sacramento Road (6 - Lanes, Divided) Century Blvd. to Kristen Court. (Measure "K" Funding = \$120,250)	\$300,250	\$180,000	\$0	\$0	\$0		\$0	\$0	\$0	\$180,000
MTS1012	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kristen Court to Harney Lane. (Measure "K" Funding = \$52,000)	\$130,000	\$78,000	\$0	\$0	\$0	\$0	\$0	to	\$0	\$78,000
MTS1013	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road East 2,650 feet.	\$173,000	\$173,000	\$0	\$0	\$0	\$0	\$0	\$0	\$173,000	\$0
MTS1014	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing West 2,650 feet.	\$173,000	\$173,000	\$0	\$0	\$0	\$0	\$0	\$0	\$173,000	\$0
MTS1015	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing East 2,250 feet.	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$120,000	\$0
MTS1016	Widening of Harney Lane (4 - Lanes) from Hutchins Street to Stockton Street.	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$120,000	\$0
MTS1017	Widening of Harney Lane (4 - Lanes) from Stockton Street to Cherokee Lane.	\$147,000	\$147,000	\$0	\$0	\$0	\$0	\$0	\$0	\$147,000	\$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS018	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road to the General Plan Boundary.	\$179,000	\$179,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$179,000
MTS019	Highway 12 Project Study Report	\$90,000	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS020	Design, construction, and engineering associated with widening of Turner Road over State Route 99.	\$1,500,000	\$1,500,000	\$0	\$0	\$0	\$0	to	\$0	\$0	\$1,500,000
MTS021	Restriping of Lodi Avenue (4 - Lanes) from Cherokee East 3,000 feet.	\$13,000	\$13,000	to	\$0	\$0	\$0	\$0	\$0	to	\$13,000
MTS022	Reconstruction of Lodi Avenue (4 - Lanes) from Guild Avenue West 700 feet.	\$33,000	\$33,000	\$0	\$0	\$0	\$0	\$0	\$0	\$33,000	\$0
MTS023	Restriping of Turner Road (4 - Lanes) from Bee Road East 2,500 feet.	\$11,000	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,000
MTS024	Widening of Turner Road (4 - Lanes) from Guild Avenue West 700 feet.	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,000
MTS025	Widening of Century Blvd. (4 - Lanes) from Lower Sacramento Road east 4,100 feet.	\$240,000	\$240,000	\$0	\$0	\$0	\$0	\$0	\$240,000	\$0	\$0
MTS026	Widening of Century Blvd. (4 - Lanes) from Stockton Street to Chickadee Lane.	\$31,000	\$31,000	to	\$0	\$31,000	\$0	\$0	\$0	\$0	to

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS1027	Widening of Stockton Street (4 - Lanes) from Kettleman Lane to Harney Lane.	\$81,000	\$81,000	\$40,500	\$0	\$40,500	\$0	\$0	\$0	\$0	\$0
MTS1028	Widening of Guild Avenue (4 - Lanes) from Lodi Avenue to Kettleman Lane.	\$168,000	\$168,000	\$20,160	\$10,080	\$10,080	\$10,080	\$10,080	\$10,080	\$48,720	\$48,720
MTS1029	Widening of Turner Road (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$84,000	\$84,000	\$0	\$0	\$0	\$0	\$42,000	\$42,000	\$0	\$0
MTS1030	Widening of Lodi Avenue (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$84,000	\$84,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,000
MTS1031	Widening of Kettleman Lane (4 - Lanes) from Lower Sacramento Road West to the General Plan Boundary.	\$178,000	\$178,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$178,000
MTS1032	Widening of Lockeford Street (4 - Lanes) from Sacramento Street to Cherokee Lane.	\$1,267,000	\$1,267,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,267,000
MTS1033	Widening of Victor Rd. (Hwy 12) to 4 lanes.	\$342,000	\$342,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$342,000
MTSO001	Master Plan 1987	\$76,187	\$76,187	\$76,187	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTSO002	Master Plan and C.I.P. Update - 1997	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0
MTSO003	5 Year Master Plan and C.I.P. Update - 2002	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0

TABLE 6-4

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS001	Installation of traffic signal located at the int. of Lower Sacramento Road and Turner Road.	\$95,000	\$95,000	\$0	\$0	\$95,000	\$0	\$0	\$0	\$0	\$0
MTS002	Installation of traffic signal located at the int. of Turner Road and the State Route 99 Southbound Ramp.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95,000
MTS003	Installation of traffic signal located at the int. of Victor Road and Cluff Avenue. (50%)	\$95,000	\$47,500	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS004	Installation of traffic signal located at the int. of Lodi Avenue and Lower Sacramento Road. (50%)	\$95,000	\$47,500	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS005	Installation of traffic signal located at the int. of Lodi Avenue and Mills Avenue. (50%)	\$95,000	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$47,500	\$0
MTS006	Installation of traffic signal located at the int. of Lower Sacramento Road and Vine Street. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0
MTS007	Installation of traffic signal located at the int. of Kettleman Lane and Mills Avenue. (50%)	\$95,000	\$47,500	\$47,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MTS008	Installation of traffic signal located at the int. of Kettleman Lane and the State Route 99 Southbound Ramp.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$95,000	\$0	\$0	\$0

**TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS**

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS009	Installation of traffic signal located at the int. of Kettleman Lane and Beckman Road.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$0	\$95,000	\$0	\$0
MTS010	Installation of traffic signal located at the int. of Lower Sacramento Road and Harney Lane.	\$95,000	\$95,000	\$0	\$0	\$0	\$0	\$95,000	\$0	\$0	\$0
MTS011	Installation of traffic signal located at the int. of Harney Lane and Mills Avenue.	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$0	\$0	\$90,000	\$0
MTS012	Installation of traffic signal located at the int. of Harney Lane and Ham Lane.	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,000
MTS013	Installation of traffic signal located at the int. of Harney Lane and Stockton Street. (50%)	\$90,000	\$45,000	\$0	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0
MTS014	Installation of traffic signal located at the int. of Elm Street and Lower Sacramento Road. (50%)	\$90,000	\$45,000	\$45,000	\$0	W	\$0	\$0	\$0	\$0	W
MTS015	Installation of traffic signal located at the int. of Lockeford Street and Stockton Street. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	\$45,000	\$0	\$0	\$0	\$0
MTS016	Installation of traffic signal located at the int. of Turner Road and Stockton Street. (50%)	\$90,000	\$45,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS017	Installation of traffic signal located at the int. of Pine St. and Stockton Street. (50%)	\$90,000	\$45,000	\$0	\$0	\$45,000	of	\$0	of	\$0	of
MTS018	Installation of traffic signal located at the int. of Turner Road and Millie Avenue. (50%)	\$90,000	\$45,000	of	\$0	\$0	of	\$45,000	of	of	of
MTS019	Installation of traffic signal located at the int. of Turner Road and Edgewood. (50%)	\$90,000	\$45,000	of	of	of	of	\$45,000	of	\$0	\$0
MTS020	Installation of traffic signal located at the int. of Kettelman Lane and Central Avenue. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	of	of	\$45,000	\$0	\$0
MTS021	Installation of traffic signal located at the int. of Elm Street and Mills Avenue. (50%)	\$90,000	\$45,000	\$0	\$0	\$0	of	of	\$45,000	\$0	\$0
MTS022	Installation of traffic signal located at the int. of Cherokee Lane and Vine Street. (50%)	\$105,000	\$52,500	of	of	\$0	of	\$0	of	\$52,500	of
MTS023	Installation of traffic signal located at the int. of Ham Lane and Century Blvd. (50%)	\$95,000	\$47,500	\$0	of	\$0	of	\$0	of	\$47,500	III
MTS024	Installation of traffic signal located at the int. of Cherokee Lane and Elm Street. (50%)	\$105,000	\$52,500	of	of	\$0	of	\$0	of	\$52,500	\$0
MBC001	Widening of WID Box Culvert along Lower Sacramento Road approx. 1,360 feet South of Lodi Avenue.	\$298,000	\$298,000	of	of	of	of	\$0	of	\$298,000	of

57

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MBC002	Widening of WID Box Culvert along Turner Road approx. 2,400 feet West of Lower Sacramento Road. (50% S.J. Co.)	\$150,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0
MBC003	Widening of WID Box Culvert along Mills Avenue approx. 100 feet South of Royal Crest Drive.	\$141,000	\$141,000	\$0	\$0	\$0	\$0	\$0	\$0	\$141,000	\$0
MBC004	Widening of WID Box Culvert along Harney Lane approx. 3,300 feet West of Hutchins Street.	\$216,000	\$216,000	\$0	\$0	\$0	\$0	\$0	\$0	\$216,000	\$0
MRRX001	Widening of S.P. railroad crossing on Lower Sacramento Road 1,400 ft North of Turner Road. (50% S.J. Co.)	\$202,000	\$101,000	\$0	\$0	\$0	\$0	\$0	\$0	\$101,000	\$0
MRRX004	Widening and upgrade of protection devices of the railroad crossing at the int of Locketford Street and Guild Avenue.	\$202,000	\$202,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202,000
MRRX005	Widening of Central California Traction Co. crossing on Victor Rd. (Hwy 12) 1,350 ft. East of Guild Avenue.	\$222,000	\$222,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$222,000
MRRX006	Widening and upgraded protection devices of the railroad crossing at the intersection of Beckman Road and Lodi Avenue.	\$227,000	\$227,000	\$0	\$0	\$0	\$0	\$0	\$0	\$227,000	\$0
MRRX007	Construction of railroad crossing at int. of Lodi Avenue and Guild Ave.	\$215,000	\$215,000	\$0	\$0	\$0	\$0	\$0	\$0	\$215,000	\$0

**TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS**

21-Aug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MRF008	Construction of railroad crossing at Int. of Cluff Avenue and Thurman Street	\$189,000	\$189,000	\$0	- 5 0	\$0	\$0	\$0	\$0	\$189,000	\$0
MRF009	Widening and upgrade of protection devices of Central Calif. Traction Co. X-ing on Kettleman Ln. 1,350 ft. East of Guild Ave.	\$215,000	\$215,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$215,000
MRF010	Widening of SP railroad crossing on Harney Ln. 1,380 ft. East of Hutchins Street.	\$202,000	\$202,000	\$0	\$0	\$0	\$0	\$0	\$0	\$202,000	\$0
	Upgrades to Existing Facilities	\$26,560,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	New Development Share of Existing Facilities										
	a. Hutchins St. Widening-Tokay to Lodi (93%)	\$41,828									
	b. Hutchins St. Widening-Rimby to Vine (58%)	\$151,458									
	c. Locketford St. Widening-Pleasant to SPRR (80%)	\$59,838									
	d. Cherokee/Century Intersection Widening (100%)	\$46,373									
	e. Century/WID Box Culvert (86%)	\$109,551									
	f. Stockton St. Widening-Kettleman to Vine (100%)	\$463,597									
	g. Stockton St. Widening-Vine to Tokay (100%)	\$82,235									
	h. Turner/Cluff Intersection Widening (100%)	\$138,835									
	NEW DEVELOPMENT SHARE SUBTOTAL:	\$1,094,000	\$1,094,000	\$68,375	\$68,375	\$68,375	\$68,375	\$68,375	\$68,375	\$341,875	\$341,875
	STREETS AND ROADWAY COST	\$45,100,937	\$15,290,687	\$527,722	\$123,455	\$289,955	\$382,955	\$407,485	\$2,608,365	\$5,422,655	\$5,328,095

61

Signal lights, bridge crossings, and freeway interchanges are not privately constructed facilities and are completely funded by the City through development impact fees and other funding sources such as Federal, State, County and Measure K.

Street and Road Improvements

A listing of the street and road improvement projects included in the development impact fee program is provided in Table 6-1. Location of these projects is shown on Figure 6-2. For the most part, the improvement projects consist of new construction and modification of routes.

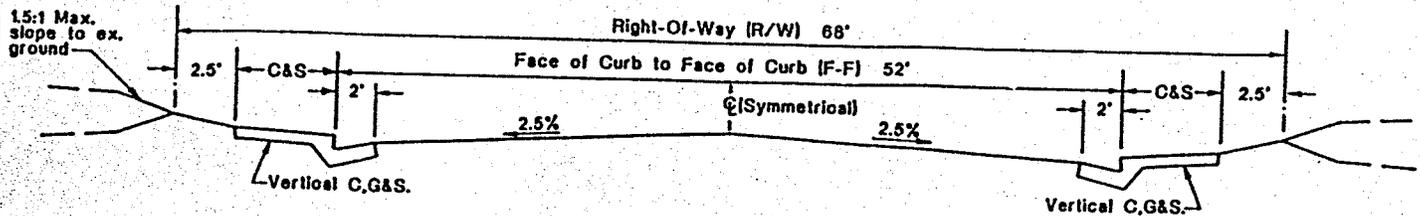
For the purpose of identifying the portion of each major route that will be funded by the City, the typical sections described above have been assumed. The developer obligation, as described in the previous section, is limited to right-of-way and improvements to construct a major collector (68 feet).

In the circulation study prepared for the City, the need for new traffic signals was identified. Costs of these signals have been included in the development impact fee program. At locations where minimum CalTrans signal warrants have already been met, 50 percent of the improvement cost has been allocated to the Impact Fee Fund.

Freeway Improvements

As recommended by TJKM, interchange improvements for Kettleman Lane/State Route 99 and Turner Road/State Route 99 will be necessary to maintain a LOS C or better. Proposed interchange improvements at Kettleman Lane/State Route 99 call for the realignment of Beckman Road. Currently, Beckman Road is located about 225 feet east of the northbound ramp onto State Route 99, a distance that is considered too close for two signalized intersections. Realignment of Beckman is proposed in the environmental impact report for Kettleman Properties located at the northeast corner of Kettleman Lane and Beckman Road. The proposed design constitutes a realignment of both Beckman Road and the northbound offramp, but is still subject to review by Caltrans and approval by the California Transportation Commission. As part of the Kettleman interchange work, a route study will be prepared that will address traffic and circulation at the interchange.

Measure K identified the SR 99/12 interchange as a funded project in the amount of 5700,000. For the purposes of this study, it is assumed that 30 percent of the interchange costs will be derived from sources outside this fee program. A portion of the 30 percent will be Measure K funds and the other could be State funds or possibly additional growth in local not covered by this study.



MAJOR COLLECTOR
 TWO LANE
 MAXIMUM CONSTRUCTION BY DEVELOPER

FIGURE 6-1 TYPICAL STREET SECTION

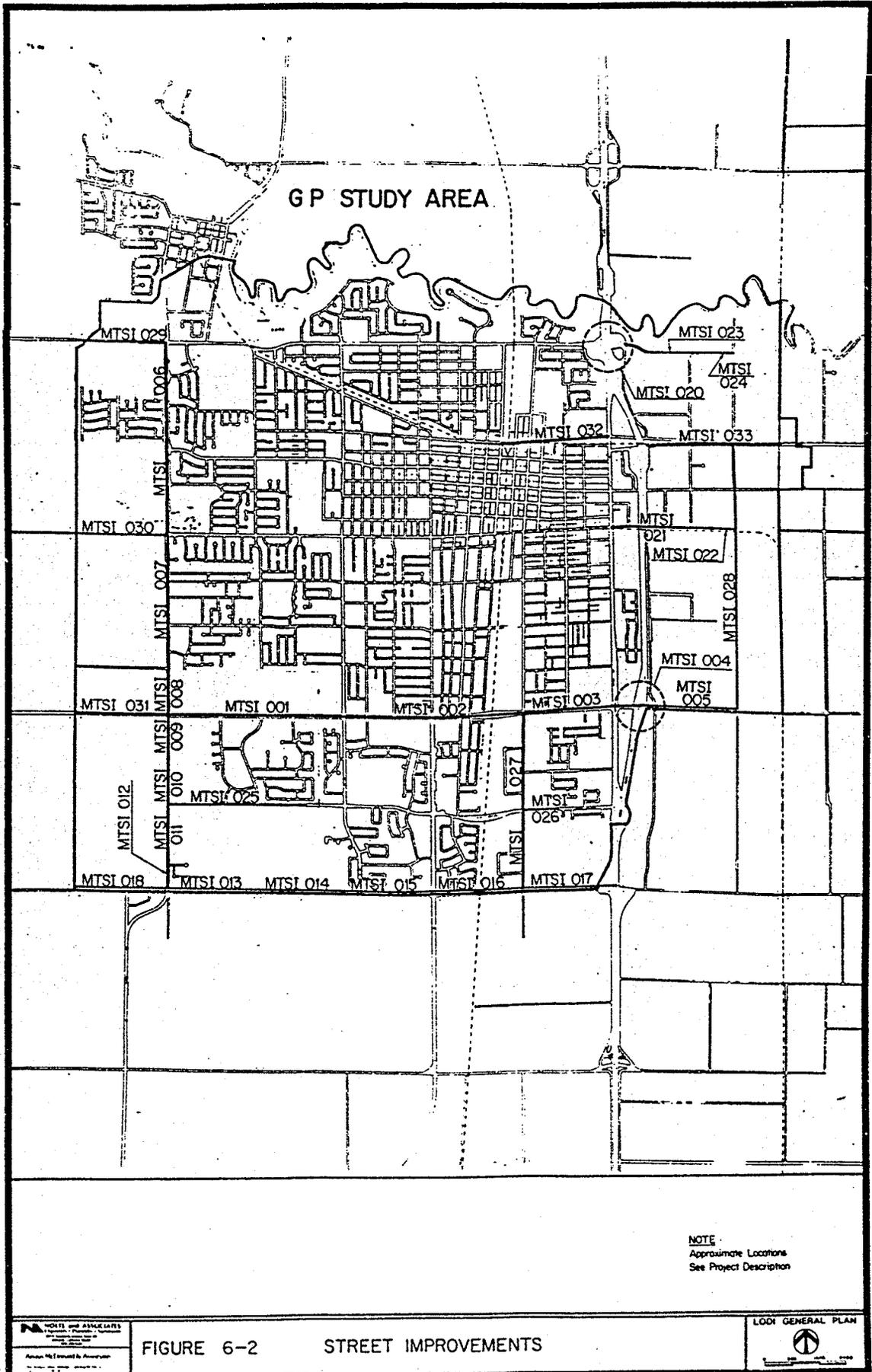


FIGURE 6-2 STREET IMPROVEMENTS

NOTES AND ASSUMPTIONS
 1. Project Location
 2. Project Description
 3. Project Schedule
 4. Project Budget
 5. Project Risk
 6. Project Impact
 7. Project Evaluation
 8. Project Review
 9. Project Approval
 10. Project Implementation

LOI GENERAL PLAN

ESTIMATED COSTS AND PHASING

In Table 6-1, a summary of the street projects and development impact fee funding is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Roadway improvement costs reflect only the City's funding responsibility per the proposed City Reimbursement Policy and do not reflect the total estimated construction cost.

In preparing the estimates of construction cost, the developer obligation, City obligation and development impact fee funding for the projects, the following factors were considered. The City obligation for funding of projects includes everything not required of the developer including special medians, landscaping, and right-of-way.

Phasing of the improvements is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 6-1, the phasing is divided by year for the first seven years followed by two five-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Lower Sacramento Road is also included in the list of projects funded, in part, by Measure K. Based upon discussion with the City, the funding of Lower Sacramento Road improvements are divided amongst the City fee program, developer and Measure K. Obligations of the developer have been discussed. For the purposes of this study, it is assumed that Measure K funds will pay for 2 lanes (one each direction). Therefore, the obligation of the City Fee Program is for 2 lanes and the center median and curbs.

Relationship of Streets and Roads Projects to New Development

A reasonable relationship must be established between the fees use and the type of development on which the fee is imposed. In order to establish this relationship, we must first demonstrate that the type of development upon which the fee is to be charged will, in fact, use, be served by, or benefit from the public facilities to be financed.

Each and every land use will benefit from the streets and road facilities within the community. Residents use the streets to get to and from work, shopping, and entertainment. Commerce and industry use the streets for deliveries, customers, and employees. Each and every land use in the Proposed General Plan will benefit from the facilities constructed as part of the capital improvements program and, therefore, is appropriately part of the fee program.

Relationship of Streets and Roads Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

Trip generation factors developed and used in the Circulation Study form the basis for calculating an RAE schedule for streets and road facilities. Based upon recommendation of the City Transportation Consultant, trip generation factors for commercial categories were reduced by 30 percent to compensate for pass-by trips. As a result, net trip generation factors were calculated for each land use and compared to the base RAE factor of 1.0 for single family detached residential. The RAE schedule shows a reasonable relationship between the cost of streets and roads projects and the financing burden placed on each land use as based upon their relative generation and demand for streets and road facilities. RAE schedule for streets and roads is shown in Table 6-2.

Recommended Fees

The Streets and Road Facilities fee is shown in Table 6-2. The total fee is \$5,470 per low density residential acre.

Regional Facilities

The fee program presented in this report does not include funding for improvements to roads outside the City of Lodi General Plan boundaries. The 4 cent sales tax override for transportation (Measure K) recently approved by San Joaquin County voters, includes a provision for Regional Traffic Mitigation fees to be adopted by January 1, 1993. This fee program will need to be modified in coordination with San Joaquin County and the Council of Governments (the local transportation authority) to include a regional element.

TABLE 6-2

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
STREETS AND ROADS**

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,470
Medium Density	Acre	1.96	\$10,720
High Density	Acre	3.05	\$16,680
East Side Residential	Acre	1.00	\$5,470
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$5,470
Medium Density	Acre	1.96	\$10,720
High Density	Acre	3.05	\$16,680
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	1.90	\$1 0,390
General Commercial	Acre	3.82	\$20,900
Downtown Commercial	Acre	1.90	\$10,390
Office Commercial	Acre	3.27	\$17,890
<u>INDUSTRIAL</u>			
Light Industrial	Acre	2.00	\$10,940
Heavy Industrial	Acre	1.27	\$6,950

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 7

POLICE

OVERVIEW

Level of Service

Target for emergency response time is 3 minutes anywhere in the City. Currently, emergency response times are under this goal. There were a total of 65 sworn personnel and 33 non-sworn personnel authorized in 1988/89. These figures reveal a service standard of 0.95 sworn personnel and 0.47 non-sworn personnel per 1,000 persons served. Currently, the department is understaffed relative to the standard described above by 11 sworn and 5 non-sworn personnel.

The service level that is typically espoused for Police is so-many officers per 1,000 residents. This service standard does not account for employees, shoppers, tourists and other persons present in the service area during the day who may use or require assistance from the Police Department. Developing a standard in terms of "Persons Served" considers all persons who may use these services so that the service standard also captures the burden these other participants will place on the facilities. This is done through estimating the demand or use of the facilities by persons associated with each land use type.

Instead of determining the use from each unit of land developed, as is the procedure with RAEs, the use of each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new development.

Existing Police Facilities

The Lodi Police Department provides police protection services to all areas within the city limits. The Police Department serves a 9.4 square mile area with an estimated population of 50,300 in 1990. The Police Department, located at 230 W. Elm Street, has an estimated 21,571 square feet of building space. The current employee standard based 98 total employees is 1.3 employees per 1,000 persons served. The current space standard is 220 square feet of building space per employee.

Existing Deficiencies

Existing deficiencies are calculated based on what is currently provided in the way of staff and facilities and what staff and facilities are planned to be provided at the end of the planning period. Further, the existing deficiency calculation is prepared to identify the portion of the facilities, if any, which should be serving existing development based upon a current staffing or facility deficiency relative to the future standard for police staffing and space.

Table 7-1 presents the calculation of the existing deficiency for the Police Station Expansion. Based upon forecasts provided by the City for building space and police staffing in the future, the space standard and the staffing standard increase slightly. This produces only a very minor existing deficiency such that 7.3% of the Police Station Expansion is not funded from the development impact fees.

PLANNED POLICE FACILITIES

Police facilities to serve at buildout of the Proposed General Plan were identified by City staff and the Police Department. A summary of the facilities is presented in Table 7-2. With the exception of the Police Station expansion and the jail expansion, the major facilities are self explanatory.

Currently, alternatives for police and jail facilities are being considered by the City and the Police Department. Specific locations for the facilities have not been identified. Alternatives being considered include renovation and expansion of the existing Police Station.

ESTIMATED COST AND PHASING

In Table 7-2, a summary of the Police Facility and estimated costs to serve the future City of Lodi is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Phasing of the improvements is based upon forecasts of facility needs by the City over the planning period.

For the purposes of fee study, the police station expansion costs are not wholly attributable to the development provided for under the Proposed General Plan. A portion of the building expansion (7.3%) will serve existing development. The cost in Table 7-2 reflects the reduced estimated cost. The jail expansion and the other facility costs listed in Table 7-2 are not subject to the existing deficiency reduction.

TABLE 7-1

21-Aug-91

**EXISTING DEFICIENCIES ANALYSIS
POLICE**

Description of Item	Existing Service Population	Future Additions	Future Total
<u>GENERAL GOV. PERSONS SERVED</u>	81,478	35,796	117,274
<u>SERVICE CAPACITY</u>			
Police Employees	98.0	43.0	141.0
Police Facilities (Sq. Ft.)	21,571	10,000	31,571
<u>SERVICE STANDARD</u>			
Current Service Standard:			
Police Employees Per 1,000 Persons Served	1.20		
Building Sq. Ft. Per Employee	220.1		
Target Service Standard			
Police Employees Per 1,000 Persons Served			1.20
Building Sq. Ft. Per Employee			223.9
<u>ADDITIONAL SERVICE CAPACITY REQUIRED</u>			
Additional Employees	0.0	43.0	43.0
Additional Building Area (Sq. Ft.)			
For Existing Employees	372		372
For New Employees	0	9,618	9,618
Total	372	9,618	9,990
Burden on New and Existing Development	3.7%	96.3%	100.00%
Cost of New Facilities	\$74,000	\$1,926,000	\$2,000,000

Note: Fee amounts shown are for fiscal year 1991-1992.

Sources: Nolte & Associates and Angus McDonald & Associates

**TABLE 7-2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
POLICE**

21-Aug-91

Project Number	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007	
LPD001	Police Station expansion to add 10,000 square feet of space.	\$2,000,000	\$1,926,000	\$0	\$0	\$0	\$0	\$0	\$92,900	\$1,833,100	\$0
LPD002	Jail expansion to add 10 new cells	\$275,000	\$275,000	\$0	to	\$0	to	\$0	\$27,500	\$247,500	to
LPD003	Miscellaneous safety equipment for 29 officers.	\$44,000	\$44,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$13,000	\$13,000
LPD004	Animal control truck and equipment	\$23,000	\$23,000	to	\$0	to	to	to	to	to	\$23,000
LPD005	2 pickup trucks equipped with radios and other equipment.	\$36,000	\$36,000	to	to	to	\$0	\$0	\$0	\$36,000	to
LPD006	Eight patrol cars and equipment.	\$144,000	\$144,000	\$18,000	to	\$18,000	\$0	\$18,000	\$0	\$36,000	\$54,000
LPD007	Ten portable radios.	\$26,000	\$26,000	\$0	\$3,000	to	\$3,000	\$0	\$3,000	\$9,000	\$8,000
LPD008	Five work stations.	\$20,000	\$20,000	to	\$4,000	to	to	\$4,000	to	\$4,000	\$8,000
LPD009	Five computer terminals.	\$8,000	\$8,000	to	\$1,500	to	\$1,500	\$0	to	\$2,500	\$2,500
TOTAL POLICE DEPARTMENT		\$2,576,000	\$2,502,000	\$21,000	\$11,500	\$21,000	\$7,500	\$25,000	\$126,400	\$2,181,100	\$108,500

DEVELOPMENT IMPACT FEE

Relationship of Police Projects to New Development

The relationship between existing deficiencies, improved service standards and capacity for new development was summarized in Table 7-1. Only the portion of the police facilities whose demand was generated by new development was included in the Development Impact Fee program.

Relationship of Police Projects to Land Uses

The RAE schedule for police facilities that is shown in Table 7-2 was developed based on the data supplied by the Lodi Police Department. The schedule is based on the relative number of calls for service from each land use category.

Recommended:

The Police Facilities fee is shown in Table 7-3. The total fee is 81,110 per low density residential acre.

TABLE 7-3

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
POLICE**

[Land Use Categories	Unit	RAE	Fee
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,110
Medium Density	Acre	1.77	\$1,960
High Density	Acre	4.72	\$5,240
East Side Residential	Acre	1.09	\$1,210
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1,110
Medium Density	Acre	1.77	\$1,960
High Density	Acre	4.72	\$5,240
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	4.28	\$4,750
General Commercial	Acre	2.59	\$2,870
Downtown Commercial	Acre	4.28	\$4,750
Office Commercial	Acre	3.72	\$4,130
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.30	\$330
Heavy Industrial	Acre	0.19	\$210

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 8

FIRE

OVERVIEW

Level of Service

The level of service that guides the requirement for and placement of a new fire station is to provide a maximum of a three minute driving time to all areas within the City limits and the Limit of Utilities Planning.

Existing Fire Facilities

The City of Lodi Fire Department currently serves the City from three fire stations. Station #1 is located at 210 W. Elm Street, Station #2 is located at 705 E. Lodi Avenue and Station #3 is located at 2141 South Ham Lane. When these stations were constructed, they provided the desired service levels to the City and additional service capacity to the east, south and southwest areas. With new development occurring West of the existing City, additional fire protection capacity is required.

Existing Deficiencies

Currently, no major deficiencies exist in the Fire Facilities relative to the level and service standard for the City. Response times to some areas in the northwest are below the City standard. In a strict sense, correcting the existing deficiency in the northwest area should not be a cost allocated to the fee program. However, in the west side area, excess fire service capacity exists that will be used to serve future growth. Future growth should be required to purchase from the City excess capacity in the existing facilities. Considering that the existing deficiency is relatively minor compared to the excess capacity, and since the City has traditionally treated fire service on a city-wide basis, it is recommended that the fee be based solely on new capital expenditures. This serves to simplify the fee program and eliminates the need for zone fees and minor deficiency adjustments.

PLANNED FIRE FACILITIES

Fire Facilities to serve buildout of the Proposed General Plan were identified in the Fire Station Location Master Plan and by City and staff during preparation of this report. Major facilities projects are listed in Table 8-1. The new Fire Station (#4) will be located on Lower Sacramento Road near Park West Drive. Other facilities listed in Table 8-1 will equip Station #4 and expand capabilities at the other stations.

During the preparation of the fee study, a number of fire facility capital improvement projects were identified by the City. The nature of these

TABLE 8 - 1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
FIRE

GENERAL CITY PROJECT PHASING

Project Number	Description	Estimated Construction Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LFD001	New westside station construction (#4), furnishings and equipment.	\$475,000	\$475,000	\$0	\$45,000	\$430,000	\$0	\$0	\$0	\$0	\$0
LFD002	New 100' ladder truck and equipment.	\$475,000	\$475,000	\$0	\$0	\$0	\$475,000	\$0	\$0	\$0	\$0
LFD003	Two sedans.	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000	\$10,000
LFD004	Two mini-vans.	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0	\$15,000
LFD005	Five computers.	\$16,000	\$16,000	\$0	\$0	\$0	\$0	\$0	\$3,000	\$6,000	\$7,000
LFD006	Fire fighting Safety gear for 23 employees.	\$13,000	\$13,000	\$0	\$0	\$0	\$0	\$0	\$13,000	\$0	\$0
LFD007	12 self-contained breathing apparatus.	\$18,000	\$18,000	\$0	\$0	\$0	\$0	\$0	\$18,000	\$0	\$0
LFD008	Station #1, Construction/remodel.	\$18,000	\$18,000	\$0	\$0	\$0	\$0	\$0	\$0	\$18,000	\$0
	Equipment Replacement	\$1,090,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL FIRE		\$2,155,000	\$1,065,000	\$0	\$45,000	\$430,000	\$475,000	\$0	\$49,000	\$34,000	\$32,000

projects can be characterized as upgrading of existing facilities and purchase of equipment. As a result, only those costs directly related to extending the existing level of service to new development are included in the fee program. These costs (such as radios, fire engines and equipment replacement) are estimated to be \$1,065,000. No personnel are included.

ESTIMATED COST AND PHASING

A summary of the Fire Facility projects and estimated costs and phasing is presented in Table 8-1. Estimated costs are based upon the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673.

DEVELOPMENT IMPACT FEE

Relationship of Fire Projects to New Development

As noted previously, existing deficiencies were not included in the Development Impact Fee program. Only those projects, or portions of projects, that serve new development were financed from Development Impact Fees.

Relationship of Fire Projects to Land Use

The RAE schedule for fire facilities that is shown in Table 8-2 was developed from data supplied by the Lodi Fire Department. The RAE schedule considers relative number of fire calls and Emergency Medical Service (EMS) calls generated by each land use category. Calls involving automobile accidents and fires were spread back to the land use categories based on the streets and roads RAE factors.

Recommended Fees

The summary Fire Facilities fee is shown in Table 8-2. The total fee is \$520 per low density residential acre.

TABLE 8-2
SUMMARY OF DEVELOPMENT IMPACT FEES
FIRE

21-Aug-91

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$520
Medium Density	Acre	1.96	\$1,020
High Density	Acre	4.32	\$2,250
East Side Residential	Acre	1.10	\$570
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$520
Medium Density	Acre	1.96	\$1,020
High Density	Acre	4.32	\$2,250
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	2.77	\$1,440
General Commercial	Acre	1.93	\$1,000
Downtown Commercial	Acre	2.77	\$1,440
Office Commercial	Acre	2.46	\$1,280
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.64	\$330
Heavy Industrial	Acre	0.61	\$320

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 9

PARKS AND RECREATION

OVERVIEW

This chapter of the report presents the cost estimates and the proposed phasing for each Park and Recreation improvements that are to be financed from development impact fee revenues. Government Code §66000 specifies certain findings are necessary for a valid development impact fee. This chapter presents the required findings and presents the calculation of the Parks and Recreation fee.

Level of Service

The current level service for standard parks (not including school parks or drainage basins) is 3.3 acres per 1,000 Park and Recreation Persons Served and the current level of service for community center building space is approximately 1,765 square feet per 1,000 Park and Recreation Persons Served. The City has adopted standards of 3.4 acres per 1,000 persons served and 1,800 square feet of community center space per 1,000 persons served.

Existing Park and Recreation Facilities

Table 9-1 provides a summary of the existing park acreage in the City of Lodi. In the table, the most important number is the 177.8 acres of Standard Park area. It is this acreage that is used to compute the existing standard for park acreage. Based upon an estimated current usage of 53,713 park and recreation persons served, the existing standard for parks and recreation acreage is 3.3 acres per 1,000 persons served. Based upon an estimated current building space inventory of 94,800 square feet in community center buildings, the existing space standard is 1,765 square feet per 1,000 persons served. A summary of existing park facilities provided by the City and is presented in Table 9-2.

The adopted standards are slightly higher than what the City is currently providing. As a result, a small percentage of the new facilities will be paid for from funds generated outside of the fee program. This calculation is shown in Table 9-3.

The level of Parks and Recreation services is often expressed in terms of acres per 1,000 population. This service standard must be interpreted carefully. Employees, shoppers, tourists and other persons present during the day may use the park and recreation facilities in addition to residents of Lodi. The concept "Persons Served" considers all persons who may use these facilities so that the service standard also captures the burden these other participants will place on the facilities. A weighting factor is estimated that accounts for various categories of persons served in accordance with the

TABLE 9-1
INVENTORY OF EXISTING PARK AND RECREATION ACREAGE

1	Description	Existing Park Facilities				Future Parks
		Total Acres	Standard Park	Basin	School	Total Acres
1.	Armory	3.2	3.2			
2.	Beckman	16.6	0.8	15.8		
3.	Blakely	9.0	9.0			
4.	Kandy Kane	0.2	0.2			
5.	Century (1)	2.5	2.5			
6.	Emerson	2.0	2.0			
7.	English Oaks Commons	3.7	3.7			
8.	G-Basin	0.0				
9.	Henry Graves	12.6	3.0	9.6		
10.	Grape Bowl	15.0	15.0			
11.	Hale	2.6	2.6			
12.	Hutchins Street Square	10.0	10.0			
13.	Kofu	10.0		10.0		
14.	Lawrence/Zupo Hardball	18.0	10.0		8.0	
15.	Legion	5.6	5.6			
16.	Lodi Lake	101.0	101.0			
17.	Maple Square	1.0	1.0			
18.	Pixley Park (C-1 Basin)	17.0		17.0		
19.	Salas Park	21.0	1.0	20.0		
20.	Softball Complex	7.6	7.6			
21.	Van Buskirk	1.0	1.0			
22.	Vinewood	14.0	0.8	11.2	2.0	
23.	Westgate	6.0	0.3	5.7		
24.	Washington School	5.1			5.1	
25.	Lakewood School	5.0			5.0	
26.	Reese School	6.0			6.0	
27.	Nichols School	5.8			5.8	
28.	Heritage School	2.0			2.0	
29.	Woodbridge School	5.0			5.0	
30.	Sr. Elementary	12.0			12.0	
31.	Lodi High School	25.0			25.0	
32.	Tokay High School	21.0			21.0	
33.	Needham School	2.0			2.0	
Westgate Expansion				13.4		0.6
	G-Basin			50.0		1.0
	F-Basin			24.0		1.0
	I-Basin			24.0		1.0
	C-Basin Expansion			8.0		1.0
	Park Area #1					3.0
	Park Area 13					3.0
	Park Area 16					10.0
	Park Area #4					10.0
	Park Area 15					8.0
	Park Area #7					10.0
	Eastside Park					2.0
	East Side Softball Complex					19.4
	Lodi Lake - Expansion					13.0
Total Acreage		368.5	180.3	208.7	98.9	83.0
Total Acreage for Standard (1)			177.8			

Source: City of Lodi.

(1) Century Park is a temporary park and is not included in standards.

relative frequency with which they are expected to use park and recreation facilities.

Existing Deficiencies

Calculation of existing deficiencies is based upon the current standard relative to the future standard for parks and recreation acreage and community building space. In Table 9-3, results of the existing deficiency analysis are presented.

The findings indicate the following. First, the added park acreage in the Proposed Fee Program matches the acreage standard from 3.3/1,000 persons served. As a result the added park acreage can be allocated to new development. Second, the added community building space will match the existing space standard of 1,800/1,000 person served.

Existing deficiencies are not funded through the development impact fee program. In this fee study, alternative funding sources are not specifically identified that would cover parks and recreation existing facilities deficiencies.

TABLE 9-2

INVENTORY OF EXISTING PAM AND RECREATION FACILITIES

<u>PARK FACILITY</u>	<u>EXISTING STANDARD</u>
Park Acreage	3.3/1,000 persons served
Community Building Area persons	1,765 sq ft/1,000 served
Restrooms	1/park over 3.0 acres
Lighted Baseball Diamonds	11 Total
Tot lot	1/park
Lighted Tennis Courts	11 Total
Swimming Pools	4 Total

Source: Nolte and Associates and Angus McDonald & Associates

PLANNED BARK AND RECREATION FACILITIES

A summary of the Parks and Recreation Facility Projects is presented in Table 9-4. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673. Project descriptions played an important role in preparing the project estimates and were developed in

TABLE 9-3
EXISTING DEFICIENCIES ANALYSIS
PARKS AND RECREATION

21-Aug-91

Description of Item	Existing Conditions	Future Additions	Future Total
<u>PARK PERSONS SERVED</u>	53,713	24,020	77,733
<u>SERVICE CAPACITY</u>			
Park Acreage	177.8	83.0	260.8
Community Center Buildings (Sq. Ft.)			
1. Hutchins Street Square Cafeteria	6,400		
2. Camp Hutchins Room	6,000		
3. Hutchins Street Square N. Complex	19,600		
4. Hutchins Street Square Pool Area	5,400		
5. Hutchins Street Square Fine Arts Bldg.	8,700		
6. Recreation Annex, N. Stockton St.	3,500		
7. Kofu Park Building	1,800		
8. Lee Jones Building (@ Legion Park)	900		
9. Grape Festival Pavilion	32,000		
10. Grape Festival Chablis Hall	9,600		
11. Recreation Office Meeting Room	900		
Total All Buildings:	94,800	45,100	139,900
<u>SERVICE STANDARD</u>			
Current Service Standard:			
Park Acres Per 1,000 Persons Served	3.3		
Community Center Sq. Ft. Per 1,000 Persons Served	1,765		
Target Service Standard			
Park Acres Per 1,000 Persons Served			3.4
Community Center Sq. Ft. Per 1,000 Persons Served			1,800.
<u>ADDITIONAL SERVICE CAPACITY REQUIRED</u>			
Additional Park Acres	2.4	80.6	83.0
Additional Community Center Sq Ft	1,870	43,230	45,100
<u>BURDEN ON LAND AND BUILDING ELOF</u>			
Additional Park Acres	3.0%	97.0%	100.0%
Additional Community Center Sq Ft	4.0%	96.0%	100.0%

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPP001	Parks and Recreation Master Plan.	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP002	Administration building expansion at corporation yard.	\$2,864,000	\$1,289,000	\$0	\$0	\$0	\$128,900	\$1,160,100	\$0	\$0	\$0
MPP003	Underground tank replacement	\$37,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP004	Lodi Lake Central Park Improvements.	\$866,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP005	Lodi Lake peninsula improvements.	\$375,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP006	Lodi Lake expansion to 13 acre westside area.	\$1,818,000	\$1,818,000	\$0	\$0	\$0	\$0	\$0	\$181,600	\$1,634,400	\$0
MPP007	Lodi Lake silt removal.	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP008	Lodi Lake Turner Road Retaining Wall.	\$158,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP009	Lodi Lake Utility Extension (Water).	\$133,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP010	Softball complex Concession.	\$79,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP011	Softball Complex replacement of concession stand.	\$107,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP012	Softball Complex shade structure.	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP013	Softball Complex paving.	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP014	Softball Complex upgrade sports lighting.	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

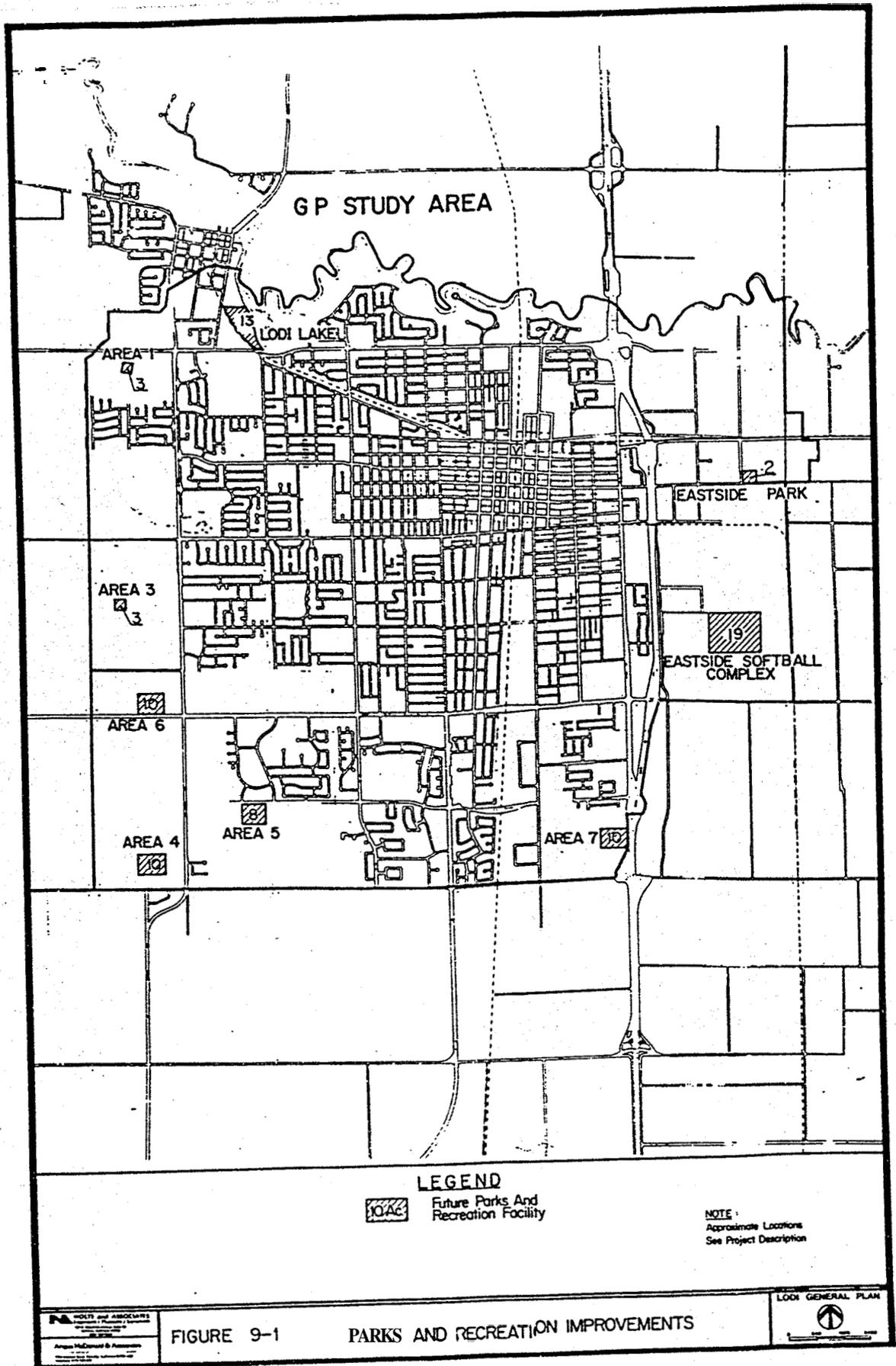
Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPP015	Stadium Electrical & Sports Lighting.	\$122,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP016	Stadium Press Box	\$44,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP017	Stadium Parking Lot Landscape & Lighting	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP018	Stadium Turf & Drainage Improvements	\$136,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP019	Stadium Additional Seating	\$82,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP020	Kofu Park Enlarge Bleacher Area	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP021	Kofu Park New Playground Equipment	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP022	Kofu Park Permanent Backstop	\$8,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP023	Kofu Park Group Picnic Facilities	\$7,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP024	Kofu Park Entrance Improvements	\$13,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP025	Armory Park Parking Lot	\$126,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP026	Armory Park Press Box & Bleacher Wall	\$27,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP027	Armory Park Upgrade Electrical	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPP028	Zupo Field Replacement of wood seats.	\$26,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION**

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR029	Zupo Field Upgrade Electrical & Sports Lighting	\$61,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR031	Hale Park General Improvements	\$296,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR033	Community Buildings (City-Wide)	\$4,510,000	\$4,329,600	\$0	\$288,640	\$288,640	\$288,640	\$288,640	\$288,640	\$1,443,200	\$1,443,200
MPR034	Blakely Park Upgrade Lighting	\$22,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR035	Salas Park Protective Shade Structures	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR036	Salas Park Fenced Diamond Area	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR037	Emerson Park Restroom Replacement	\$178,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MPR038	Pixely Park (C ^o Basin) General Improvements	\$465,000	\$465,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$465,000
MPR039	Westgate Park Improvements	\$353,000	\$353,000	\$0	\$0	\$0	\$0	\$0	\$353,000	\$0	\$0
MPR040	Area #1 Park (3ac.)	\$459,000	\$459,000	\$0	\$0	\$0	\$0	\$0	\$0	\$459,000	\$0
MPR041	Area #3 Park 6 Pool (3ac.)	\$712,000	\$712,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$712,000
MPR042	Area #4 Park	\$1,462,000	\$1,462,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,462,000
MPR043	Area 16 Park Improvements	\$1,377,000	\$1,377,000	\$0	\$0	\$0	\$0	\$0	\$0	\$688,500	\$688,500
MPR044	Area 15 Park Improvements	\$1,148,000	\$1,148,000	\$0	\$0	\$0	\$400,000	\$400,000	\$35,000	\$313,000	\$0
MPR045	Area 17 Park Improvements	\$1,660,000	\$1,660,000	\$0	\$0	\$166,000	\$0	\$1,494,000	\$0	\$0	\$0
MPR046	Eastside Park General Park Improvements.	\$307,000	\$307,000	\$0	\$0	\$0	\$0	\$0	\$0	\$307,000	\$0

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR048	I-Basin Improvements Pa										
MPR052	G-Basin Park Improve										
MPR053	Hutchins Square Catering Kitchen										
MPR054	Hutchins :										
MPR055	Hutchins Square Child Center										
MPR056	Hutchins Square Connect. Walkways										
MPR057	Hutchins Square Auditorium Remodel	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL PARKS AND REC.		\$30,191,000	\$18,306,445	\$50,000	\$288,640	\$454,640	\$817,540	\$3,342,740	\$858,240	\$5,145,100	\$7,349,545



concert with City staff. Project numbers listed in Table 9-4 are used to identify project locations in Figure 9-1. The Parks and Recreation Master Plan is scheduled early in the program to refine details and costs of the new parks.

ESTIMATED COSTS AND PHASING

Improvement and land acquisition costs for parks and recreation facilities are based upon information provided by City staff and the City Capital Improvement Plan. Land costs were determined to be \$100,000 per acre. In cases where land for parks expansion is already owned by the City, the proposed fee program does not pay or reimburse the City for land costs. The fee calculation methodology did not consider different cost increase factors for land acquisition versus construction.

A number of the projects identified by the City are not attributable to new development and more accurately fall into the category of maintenance and repair. These projects are easily identified because no cost has been allocated to the impact fee fund.

In Table 9-4, the phasing of construction costs is presented only for those Parks projects to be funded through the fee program. Phasing of the projects is based upon forecasts provided by the City. The Parks and Recreation Master Plan is scheduled early in the program to refine details and cost of the program.

Analysis of the existing and planned facilities for the corporation yard identified that only a portion of the facilities will serve future growth. Based upon building footage, 45 percent of the planned corporation yard improvements costs are allocated to future growth.

DEVELOPMENT IMPACT FEE

Relationship of Park and Recreation Projects to New Development

The additional park acres to be added throughout the program serve only new development. The existing deficiency analysis presented in Table 9-3 also shows that the added community center space is serving only new development.

Relationship of Park and Recreation Projects to Land Uses

The RAE schedule for parks and recreation that is shown in Table 9-5 recognized explicitly that, while demand is primarily generated by the residential population, parks and recreation facilities also serve employees. Examples of non-residential demand include lunch time use, company picnics and company team participation in sports leagues.

The RAE schedule was based on the relative amount of time available to residents and to employees to make use of park and recreational facilities.

Recommended Fees

The summary Parks and Recreation fee is shown in Table 9-5. The total fee is \$11,980 per low density residential acre.

TABLE 9-5

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
PARKS AND RECREATION**

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fees</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1 1,980
Medium Density	Acre	1.43	\$17,130
High Density	Acre	2.80	\$33,540
East Side Residential	Acre	1.10	\$1 31 80
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$1 1,980
Medium Density	Acre	1.43	\$1 7,130
High Density	Acre	2.80	\$33,540
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.32	\$3,830
General Commercial	Acre	0.32	\$3,830
Downtown Commercial	Acre	0.32	\$3,830
Office Commercial	Acre	0.54	\$6,470
<u>INDUSTRIAL</u>			
Light industrial	Acre	0.23	\$2,760
Heavy Industrial	Acre	0.33	\$3,950

Note: Fee amounts shown are for fiscal year 199111992

Sources. Nolte & Associates and Angus McDonald & Associates.

CHAPTER 10
GENERAL CITY FACILITIES

OVERVIEW

Level of Service

The current staffing level of service provided by the City of Lodi for general city services (e.g. City manager, finance department) is 1.25 Full Time Equivalents (FTEs) per 1,000 persons served. The current space standard is 229 square feet per FTE. These standards were used as the basis for calculating the percentage of additions to City Hall that would be appropriately charged to either new or existing development.

While there is not a stated level of service for general city facilities there is an implied standard based on the current level of city employees and building space per city employee. The service standard used to examine the existing deficiencies for General City Facilities includes demands for general city services generated by business as well as demand by residents.

A "Persons Served" standard is calculated by estimating the demand or use of general city services by persons associated with each land use type. Instead of determining the use by each unit of land developed, as is the procedure with RAE factors, the use for each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. There use per "per person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new developments.

Existing Deficiencies

Table 10-1 presents the results of the existing deficiency analysis. In the case of the City Hall addition, both the staffing standard and the space standard are increased over the planning period. As a result, a portion (27.8%) of the addition can not be funded from development impact fees.

PLANNED GENERAL CITY FACILITIES

In Table 10-2, a listing of General City Facilities Projects is provided. Included in the listing are those capital improvements and expenditures identified by City Department heads in their budget forecasts for 2006/7.

ESTIMATED COST AND PHASING

A summary of the phasing of projects funded by the fee program is provided in Table 10-2. Phasing of the projects is based upon the forecast of units constructed over the General Plan period.

TABLE 10-1
EXISTING DEFICIENCIES ANALYSIS
CITY HALL FACILITIES

Personnel	Units		
	Current 1989/90	Change 1989/90- 2007/08	End State 2007/08
Administration	13	8	21
Finance(w/o Purchasing)	28	14	42
Purchasing (FT)	5	3	8
Purchasing (PT)	1	-1	0
Data Processing	5	13	18
Building (CDD)	6	5	11
Planning (CDD)	5	4	9
Public Works	19	9	28
Totals:	82	55	137

Personnel	Units (1)		
	FTE Conversion	Factor	Units (1)
Administration	100%	13.0	8.0
Finance(w/o Purchasing)	100%	28.0	14.0
Purchasing (FT)	100%	5.0	3.0
Purchasing (PT)	50%	0.5	-0.5
Data Processing	100%	5.0	13.0
Building (CDD)	100%	6.0	5.0
Planning (CDD)	100%	5.0	4.0
Public Works	100%	19.0	9.0

Total Units	Building Area Square Feet			Staffing Standard:			Space Standard:		
	1989/90	Change 1989/90- 2007/08	End State 2007/08	FTE	Conversion	Factor	FTE	Conversion	Factor
Administration	81.5	13.0	8.0	100%	13.0	8.0	100%	13.0	8.0
Finance(w/o Purchasing)	18,657	28.0	14.0	100%	28.0	14.0	100%	28.0	14.0
Purchasing (FT)	64,906	5.0	3.0	100%	5.0	3.0	50%	0.5	-0.5
Purchasing (PT)	18,657	0.5	-0.5	50%	0.5	-0.5	100%	0.5	-0.5
Data Processing	64,906	5.0	13.0	100%	5.0	13.0	100%	5.0	13.0
Building (CDD)	18,657	6.0	5.0	100%	6.0	5.0	100%	6.0	5.0
Planning (CDD)	18,657	5.0	4.0	100%	5.0	4.0	100%	5.0	4.0
Public Works	228.92	19.0	9.0	100%	19.0	9.0	100%	19.0	9.0
Totals:	228.92	82	55						

Total Units	Building Area Square Feet			Staffing Standard:			Space Standard:		
	1989/90	Change 1989/90- 2007/08	End State 2007/08	FTE's per 1,000 Person's Served	Conversion	Factor	FTE's per 1,000 Person's Served	Conversion	Factor
Administration	81.5	13.0	8.0	1.26	13.0	8.0	1.26	13.0	8.0
Finance(w/o Purchasing)	18,657	28.0	14.0	1.26	28.0	14.0	1.26	28.0	14.0
Purchasing (FT)	64,906	5.0	3.0	1.26	5.0	3.0	1.26	5.0	3.0
Purchasing (PT)	18,657	0.5	-0.5	1.26	0.5	-0.5	1.26	0.5	-0.5
Data Processing	64,906	5.0	13.0	1.26	5.0	13.0	1.26	5.0	13.0
Building (CDD)	18,657	6.0	5.0	1.26	6.0	5.0	1.26	6.0	5.0
Planning (CDD)	18,657	5.0	4.0	1.26	5.0	4.0	1.26	5.0	4.0
Public Works	228.92	19.0	9.0	1.26	19.0	9.0	1.26	19.0	9.0
Totals:	228.92	82	55						

Source: Nolte & Associates and Angus McDonald & Associates

TABLE 10-1

21-Aug-91

(Cont.)

**SUMMARY OF DEVELOPMENT IMPACT FEES
CITY HALL FACILITIES**

Description of Item	Existing Population	Future Additions	Future Total
GENERAL GOVERNMENT PERSONS SERVED	64,906	30,064	94,970
SERVICE CAPACITY			
General Government Employees (Full Time Equivalent (FTEs))	81.5	55.5	137.0
General Government Buildings (Sq. Ft.)	18,657	14,448	33,105
SERVICE STANDARD			
Current Service Standard:			
General Government Employees Per 1,000 Persons Served	1.3		
Building Sq. Ft. Per Employee	228.9		
Target Service Standard			
General Government Employees Per 1,000 Persons Served			1.4
Building Sq. Ft. Per Employee			241.6
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Employees (Full Time Equivalent (FTE))	12.1	43.4	55.5
Additional Building Area (Sq. Ft.)			
For Existing Employees	1,037		1,037
For New Employees	2,931	10,480	13,411
Total	3,968	10,480	14,448
Burden on New and Existing Development	27.5%	72.5%	100.0%
Cost of New Facilities	\$1,159,125	\$3,055,875	\$4,215,000

Source: Nolte & Associates and Angus McDonald & Associates

TABLE 10 - 2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
GENERAL CITY FACILITIES

21/08/91

Project Number	Location	Program Costs	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
GCFI001	City Hall Remodel and Addition	\$4,215,000	\$3,055,875	\$0	\$700,000	\$700,000	\$0	\$0	\$0	\$1,655,875	\$0
GCFI002	Civic Center Parking Lot Expansion 13 N. Church.	\$141,000	\$141,000	\$0	\$0	\$0	\$0	\$0	\$141,000	\$0	\$0
GCFI008	Property acquisition, 217 E. Lockeford.	\$213,000	\$213,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$213,000
GCFI009	Parking Lot Improvements, NE corner of Lockeford and Stockton.	\$70,000	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,000
GCFI010	Library Expansion	\$2,900,000	\$2,900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,900,000	\$0
GCFI011	Public Works - Trucks	\$750,000	\$750,000	\$46,875	\$46,875	\$46,875	\$46,875	\$46,875	\$46,875	\$234,375	\$234,375
GCFI012	Public Works - Pickups and Sedans	\$715,000	\$715,000	\$44,688	\$44,688	\$44,688	\$44,688	\$44,688	\$44,688	\$223,438	\$223,438
GCFI013	Public Works - Air Compressors	\$90,000	\$90,000	\$5,625	\$5,625	\$5,625	\$5,625	\$5,625	\$5,625	\$28,125	\$28,125
GCFI014	Public Works - Misc. Office Equipment	\$65,500	\$65,500	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094	\$20,469	\$20,469
GCFI015	Finance - Misc. Office Equipment	\$181,700	\$181,700	\$11,356	\$11,356	\$11,356	\$11,356	\$11,356	\$11,356	\$56,781	\$56,781
GCFI016	Finance Computer (AS 400 Upgrade)	\$72,000	\$72,000	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$22,500	\$22,500
GCFI017	Fee Program Monitoring	\$2,560,000	\$2,560,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$800,000	\$800,000
CODV001	General Plan Update 1987	\$411,109	\$411,109	\$411,109	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CODV002	General Plan Update 1997	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0
CODV003	General Plan Update 2002	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0
TOTAL CITY FACILITIES		\$12,884,309	\$11,725,184	\$688,247	\$977,138	\$977,138	\$277,138	\$277,138	\$668,138	\$6,191,563	\$1,668,688

DEVELOPMENT IMPACT FEE

Relationship of General City Projects to New Development

The relationship between existing deficiencies, changing service standards and demand created by new development was presented in Table 10-1. This exhibit was used to allocate responsibility for financing between Development Impact Fees and other sources of financing.

Relationship of General City Projects to Land Uses

The RAE schedule that has been developed for general City facilities is shown in Table 10-3. This schedule is based on an estimate of relative population and employment (measured in persons per household and in employees per thousand square feet, respectively) and on the judgment that employees place a relative burden on general City administrative facilities that is 50 percent of that imposed by residents.

Recommended Fees

The summary General City Facilities fee is shown in Table 10-3. The total fee is \$6,380 per low density residential acre.

TABLE 10-3

21-Aug-91

**SUMMARY OF DEVELOPMENT IMPACT FEES
GENERAL CITY FACILITIES**

<u>Land Use Categories</u>	<u>Unit</u>	<u>RAE</u>	<u>Fee</u>
<u>RESIDENTIAL</u>			
Low Density	Acre	1.00	\$6,380
Medium Density	Acre	1.43	\$9,120
High Density	Acre	2.80	\$17,860
Last Side Residential	Acre	1.10	\$7,020
<u>PLANNED RESIDENTIAL</u>			
Low Density	Acre	1.00	\$6,380
Medium Density	Acre	1.43	\$9,120
High Density	Acre	2.80	\$17,860
<u>COMMERCIAL</u>			
Neighborhood Commercial	Acre	0.89	\$5,680
General Commercial	Acre	0.89	\$5,680
Downtown Commercial	Acre	0.89	\$5,680
Office Commercial	Acre	1.53	\$9,760
<u>INDUSTRIAL</u>			
Light Industrial	Acre	0.64	\$4,080
Heavy industrial	Acre	0.93	\$5,930

Note: Fee amounts shown are for fiscal year 19911992.

Sources: Nolte & Associates and Angus McDonald & Associates.

APPENDIX A

FORECAST OF MAPPED ACREAGE FOR
PROPOSED GENERAL PLAN

TABLE A-1

GENERAL PLAN ACREAGE GROWTH FORECAST
CITY OF LODI PUBLIC FACILITIES FINANCING PLAN

Land Use Categories	Units	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997 /2002	2002 /2007	Total Forecast
RESIDENTIAL										
Low Density	Acres	3	2	2	2	2	2	2	2	17
Medium Density	Acres	1	0	1	1	1	1	1	1	7
High Density	Acres	0	1	0	1	0	1	1	1	5
East Side Residential	Acres	0	0	0	0	0	0	1	0	1
PLANNED RESIDENTIAL										
PR - Low Density	Acres	74	82	74	61	66	61	267	288	973
PR - Medium Density	Acres	5	5	5	4	4	4	17	18	62
PR - High Density	Acres	6	7	6	5	5	5	21	23	78
Total Residential		89	97	88	74	78	74	310	333	1,143
COMMERCIAL										
Neighborhood	Acres	15	15	6	6	6	6	25	26	105
General	Acres	0	1	1	1	1	1	3	3	11
Downtown	Acres	0	0	0	0	1	0	1	1	3
Office	Acres	2	2	2	2	2	2	11	11	34
Total Commercial		17	18	9	9	10	9	40	41	153
INDUSTRIAL										
Light Industrial	Acres	26	17	22	22	22	22	139	165	435
Heavy Industrial	Acres	10	7	9	9	9	9	56	66	175
Total Industrial		36	24	31	31	31	31	195	231	610

Source: City of Lodi Public Works Department.