



**Agenda Item B.1**  
**DISCUSSION/ACTION ITEM**  
**Meeting Date: March 3, 2009**

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**TO:** Mayor and Councilmembers

**FROM:** Steve Wagner, Community Services Director

**CONTACT:** Marti Schultz, Principal Civil Engineer

**SUBJECT:** Street Improvement and Reinvestment Program Status Report

**RECOMMENDATION:**

Receive a status report on the City's Street Improvement and Reinvestment Program.

**BACKGROUND:**

On May 13, 2003, the City initiated an aggressive Street Improvement and Reinvestment Program to improve the overall condition of Goleta's street system and eliminate the backlog of deferred street maintenance. The program consists of two primary components: an annual pavement rehabilitation program (paved areas); and an annual concrete repair program (sidewalks, curbs and gutters). Each year a visual inspection of all City streets is conducted to determine the scope of the annual pavement rehabilitation and concrete repair project. A copy of the 2003 Street Improvement and Reinvestment Program report is included as Attachment 1 to this report.

To date, the City of Goleta has invested over \$12.7 million dollars in improvements to its streets and sidewalks as part of the Street Improvement and Reinvestment Program. At the end of this fiscal year it is estimated that the amount invested in the program will be over \$14.3 million dollars. A status report on the City's Street Improvement and Reinvestment Program including a summary of the work completed to date is presented herein for Council's information.

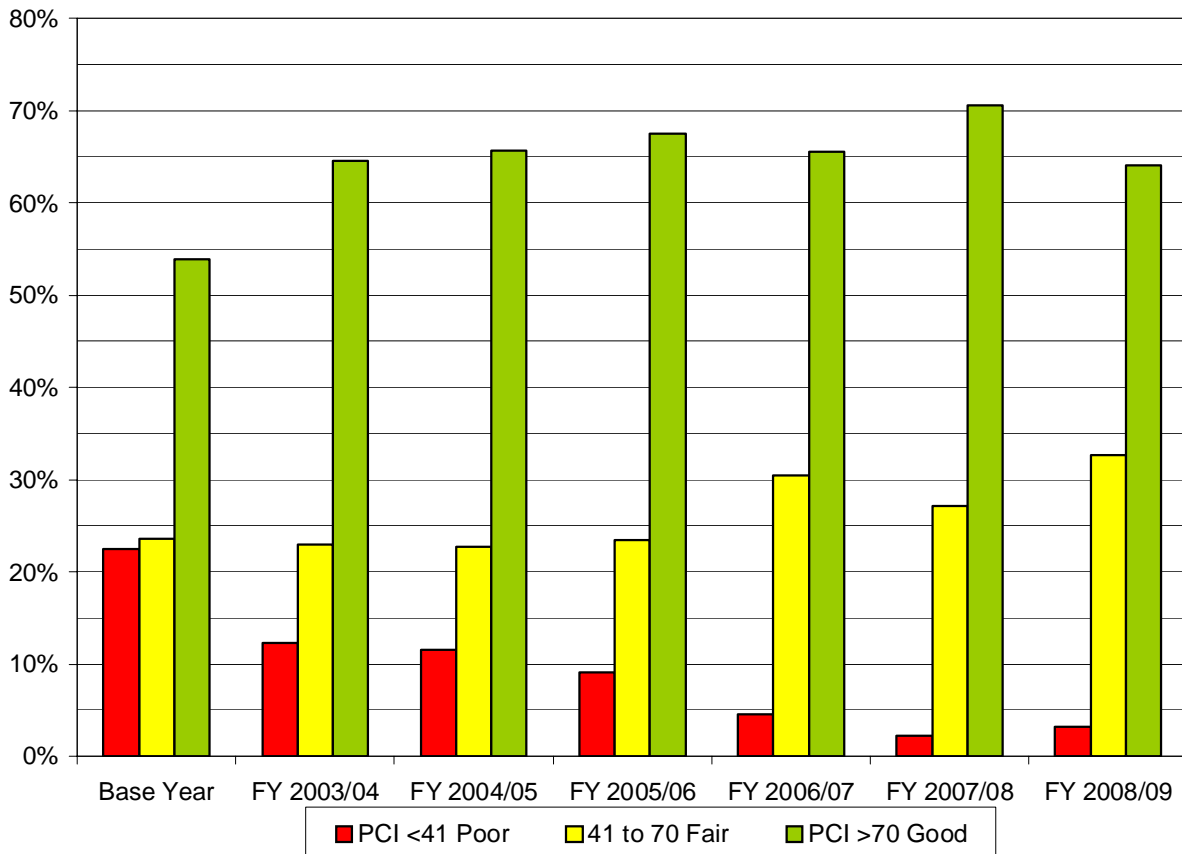
**DISCUSSION:**

The City's paved roadways are in a constant state of deterioration due to several factors, including, but not limited to, vehicle travel, abrasion, sunlight, rainfall, temperature changes and subsurface moisture. A more detailed discussion of these factors is included in the 2003 Street Improvement Program report.

In order to track the current condition of the City's paved roadways, the City uses a computer based pavement management system called MicroPaver™. This system can also model (forecast) the future condition of individual paved street sections based on

the amount and type of future maintenance work performed. These future pavement condition model runs are helpful in defining the amount of maintenance work and/or annual expenditure required to maintain a certain level of pavement condition. A pavement condition index (PCI) is a numerical rating between 0 and 100 used by MicroPaver™ to quantify the pavement condition of a roadway segment. A PCI rating of 0 would represent a completely failed roadway and a PCI rating of 100 would represent a newly constructed or paved roadway. Roadway segments are generally classified as poor (PCI rating less than 41), fair (PCI rating from 41 to 70), or good (PCI rating greater than 70). A summary table and bar chart showing the percentage of the City's street system classified as poor, fair and good for each year since the City's incorporation is shown below:

City of Goleta Street System				
	PCI <41 Poor	41 to 70 Fair	PCI >70 Good	Average PCI
Base Year	22.5%	23.6%	53.9%	64.6
FY 2003/04	12.3%	23.0%	64.6%	71
FY 2004/05	11.6%	22.7%	65.7%	71.3
FY 2005/06	9.1%	23.4%	67.5%	71.1
FY 2006/07	4.5%	30.5%	65.5%	71.0
FY 2007/08	2.26%	27.17%	70.57%	72.0
FY 2008/09	3.2%	32.7%	64.1%	74.2



As shown above, the City's average PCI has increased from 64.6 to 74.2 since initiation of the Street Improvement and Reinvestment Program. The reduction in the percentage of street segments in the "poor" range (PCI 40 or less) along with the increase in the percentage of street segments in the "good" range (PCI 70 or greater) reflects the goals of the program and demonstrates an ongoing reduction in the maintenance backlog.

Concrete Repair Program:

The other component of the City's Street Improvement and Reinvestment Program is the concrete improvement program. The City inspects all streets on an annual basis and inventories damaged sidewalks, curbs and gutters and missing access ramp locations. Concrete repair locations are prioritized and the repair methodology is determined. Repairs consist of either removal and replacement or grinding in place.

The following table summarizes the repairs completed to date as part of the City's concrete repair program.

	<b>Sidewalk Repairs (sf)</b>	<b>Curb &amp; Gutter (lf)</b>	<b>Access Ramps</b>	<b>Grind Locations</b>
FY 03/04	62,104	3,987	56	1,002
FY 04/05	31,108	1,930	43	1,869
FY 05/06	17,376	2,418	19	2,589
FY 06/07	16,208	1,401	31	2,170
FY 07/08	9,485	1,036	22	1,482
<b>Total:</b>	<b>136,281</b>	<b>10,772</b>	<b>171</b>	<b>9,112</b>

As shown in the above table, over 136,000 square feet of damaged sidewalk (5.2 miles) and 10,772 linear feet (2.0 miles) of damaged curbs and gutters have been replaced and 171 new access ramps have been installed as part of the Street Improvement Program since the City's incorporation. The FY 08/09 concrete repair program is scheduled to begin later this spring.

**FISCAL IMPACTS:**

The 2003 Street Improvement and Reinvestment Report estimated that an annual expenditure of \$2.5 million per year for pavement rehabilitation and \$1 million per year for concrete repairs would eliminate the maintenance backlog in five years. However, since initiation of the Street Improvement Program the City has expended approximately \$1.7 million per year on average for pavement rehabilitation and approximately \$355,000 per year on average for concrete repairs. Although the annual expenditure level has been less than originally proposed, the overall improvement to the City's street system has been significant. The following table shows the actual amount expended by the City for both the pavement rehabilitation and concrete repair programs.

## Street Improvement Program Annual Expenditure Summary

Year	Pavement	Concrete	Total
FY 03/04	\$2,190,107	\$614,410	\$2,804,517
FY 04/05	\$1,810,242	\$604,929	\$2,415,171
FY 05/06	\$2,151,869	\$496,309	\$2,648,178
FY 06/07	\$2,280,997	\$370,979	\$2,651,976
FY 07/08	\$1,991,104	\$230,535	\$2,221,639
FY 08/09	\$1,422,903	\$168,839	\$1,591,742
<b>Total</b>	<b>\$11,847,222</b>	<b>\$2,486,001</b>	<b>\$14,333,222</b>
<b>Average Annual</b>	<b>\$1,692,460</b>	<b>\$355,143</b>	<b>\$2,047,603</b>

A detailed data table that breaks down the above annual expenditure totals by funding source is included as Attachment 2 to this report. As shown above, the total annual expenditures on the City's Street Improvement Program have been reduced over time. This is due to the transition to less costly pavement maintenance strategies such as slurry coats and the availability of designated state and federal transportation funding.

Over the last several years the City has been successful in obtaining and expending various one time and/or non-recurring state and federal transportation funds such as Proposition 42 and 1B funds, as well as Regional and Local Surface Transportation funds to augment the annual Gas Tax and Measure D funds expended on the Street Improvement Program. It is not known what amount, if any, of these types of funds will be available in the future. This, coupled with significant reductions of other transportation funds (Measure A and Gas Tax), will make it much more challenging to improve the City's street system in the future.

Future pavement condition model runs were developed using MicroPaver™ to determine how reduced annual Street Improvement Program expenditure levels will affect the future condition of the City's street system. These model runs are described as follows:

Maintain Current PCI: This model run demonstrates the amount of annual funding required to maintain the City's current average pavement condition (PCI 74). Based on this run the average annual expenditure amount required to maintain the City's current pavement condition is \$2.1 million dollars. This is greater than the \$1.7 million dollars average amount the City has expended in the past.

Current Funding Level: This model run assumes no future 1-time/non recurring funds, all Measure A funds, all Gas Tax funds and no reduction in the amount of General Fund subsidy. Based on these assumptions the ending year (FY 2022) PCI would drop to 54 and the deferred maintenance backlog would increase to \$34.4 million dollars.

Reduced General Fund Contribution by \$300,000: This model run assumes no future 1-time/non recurring funds, all Measure A funds, all Gas Tax funds and a reduction in the amount of General Fund subsidy to both the Street Improvement Program and Street Maintenance Program by \$300,000. Based on these assumptions the ending year (FY 2022) PCI would drop to 46 and the deferred maintenance backlog would increase to \$44.9 million dollars.

Reduced General Fund Contribution by \$700,000: This model run assumes no future 1-time/non recurring funds, all Measure A funds, all Gas Tax funds and a reduction in the amount of General Fund subsidy to both the Street Improvement Program and Street Maintenance Program by \$700,000. A reduction of \$700,000 would completely eliminate all General Fund monies expending in the Street Maintenance division (budget unit 5800). Based on these assumptions the ending year (FY 2022) PCI would drop to 40 and the deferred maintenance backlog would increase to \$52.3 million dollars.

A copy of the output data associated with the above future pavement condition model runs is included as attachment 3 to this report.

These future model runs demonstrate what could happen to the City's street system based on various funding levels. Given the future reductions in the City's dedicated transportation funding, it will be challenging to maintain the City's current pavement condition without increasing the amount of future General Fund expenditures or obtaining other funding sources.

Submitted By:

Reviewed by:

Approved By:

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Steve Wagner,  
Community Services Director

\_\_\_\_\_  
Michelle Greene  
Administrative Services Director

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Daniel Singer  
City Manager

**ATTACHMENTS:**

1. May 2003 Street Improvement Program Report
2. Street Improvement Program Annual Expenditures by Funding Source
3. Pavement Management System Future Model Run Summaries

## **ATTACHMENT #1**

### **May 2003 Street Improvement and Reinvestment Program Report**



**FY 2003/2004**

**Street Improvement and Reinvestment Program**

**Budget Workshop**

**May 12, 2003**

## **Introduction**

The City's street pavement network consists of 86 centerline miles, equaling a total pavement area of approximately 16.2 million square feet. This report identifies the current condition of Goleta's street system and suggests future street improvement and reinvestment funding levels to improve the overall condition of the street system.

A Pavement Management System for the City of Goleta has been developed using street network data provided by the County of Santa Barbara. This data was based on an inspection of all City streets in the fall of 2000. When entered into a Pavement Management System, this data provides a current inventory, and allows for future condition modeling based on various funding assumptions. The Community Services Department is seeking direction on certain street improvement and reinvestment strategies in order to develop a scope and budget for the 2003/2004 street maintenance program.

## **Background**

In preparing this report, the City has reviewed the following reports and information on Goleta's street system:

1. City of Goleta Pavement Network Listing December 2001
2. Micro PAVER™ Pavement Management System database file for City of Goleta as provided by Santa Barbara County
3. Santa Barbara County Public Works Department Road Maintenance Annual Plan reports for FY1999/2000 to present
4. Pavement maintenance work histories in MS Excel™ spreadsheet format indicating maintenance work completed by the County of Santa Barbara within the City limits from 1999 to 2002
5. Federal Highway Administration Functional Classification maps for the City of Goleta.

The existing street network information for the City of Goleta was analyzed using the Micro PAVER™ pavement management system to determine the current level of deferred maintenance (backlog) and future street system conditions based on various funding levels. Spreadsheets listing all road condition data and the representative Pavement Condition Index (PCI) sorted both by street name and PCI order are attached as Exhibits 4 and 5.

## **Pavement Management System**

A Pavement Management System (PMS) provides:

- A current inventory of all public roadways
- The current pavement condition for all public roadways
- A project listing of all pavement needing maintenance, rehabilitation, or replacement
- A forecast of budget needs for maintenance, rehabilitation, or replacement of deficient sections of pavement for Capital Improvement Program planning



The goal of a PMS is to bring all pavement segments to the condition where preventive maintenance is the primary strategy being applied.

### **Pavement Condition Index**

An important feature of a PMS is the ability both to determine the current condition of a pavement network and to predict its future condition. To predict pavement condition reliably, an objective, repeatable rating system for identifying the pavement’s condition must be used.

The Pavement Condition Index (PCI), as developed by the Army Corps of Engineers for airfield pavements, roads, and parking lots has received wide acceptance has been adopted as the nation’s standard rating system by AASHTO and ASTM. This PCI rating system is the system used in the Micro PAVER™ pavement management system. The PCI is a numerical index ranging from 0 for a failed pavement to 100 for a pavement in perfect condition. Calculation of the PCI is based on the results of a visual condition survey in which pavement distress type, severity, and quantity are identified.

As part of the development of the Pavement Management System for the City of Goleta, a visual survey and inspection of the pavement network was conducted in the fall of 2000 to determine the condition of street system. This included a process of evaluating the existing surface condition of 416 street segments to determine their individual Pavement Condition Index (PCI).

The table below relates PCI ranges to general pavement conditions. The conditions range from “Failed” to “Excellent”, with an “Excellent” condition corresponding to a pavement at the beginning of its life cycle, and a “Failed” condition representing a badly deteriorated pavement with virtually no remaining life.

<b>Condition</b>	<b>PCI Range</b>	<b>Description</b>
Excellent	86 - 100	No significant distress.
Very Good	71 - 85	Little distress, with the exception of utility patches in good condition, or slight hairline cracks; may be slightly weathered.
Good	56 - 70	Slight to moderately weathered, slight distress, possibly patching.
Fair	41 - 55	Severely weathered or slight to moderate levels of distress generally limited to patches and non-load-related cracking.
Poor	26 - 40	Moderate to severe distresses including load-related types, such as alligator cracking.
Very Poor	11 - 25	Severely distressed or large quantities of distortion or alligator cracking.
Failed	0 - 10	Failure of the pavement, distress has surpassed tolerable rehabilitation limits.

PCI Ranges recommended by the U. S. Army Corps of Engineers.

## Street System Statistics

The entire pavement network within the City of Goleta is comprised of 86 centerline miles of paved surfaces. This equates to a total pavement area of approximately 16.2 million square feet with an estimated removal and replacement value of approximately \$81 million dollars (base on \$5 per square foot replacement cost in today's dollars). As such, the street system is one of the City's largest capital investments and one of its most important assets.

The entire pavement network represents a current replacement valuation of \$122 million broken down as follows:

Item	Replacement Value
Pavement:	\$81,000,000
Concrete Curb & Gutter	\$14,000,000
Sidewalks	\$27,000,000
<b>TOTAL:</b>	<b>\$122,000,000</b>

To assist in the planning of the City's maintenance needs, the City's road system was divided into categories based upon the Federal Highway Administration's functional classification system. A map of the road network is attached as Exhibit 1.

## Current Conditions

The condition of the City of Goleta road network based on the fall 2000 inspection (broken down by road category) as shown in the following table.

Category	Definition	Length Miles	% of Total	Average PCI
A	Principal/Major Arterial	21.9	25.5%	65
B	Major Collector / Minor Arterial	7.7	9.0%	62.7
C	Minor Collector	18.7	21.7%	56.6
D	Major Rural	0.1	0.1%	99
E	Residential	37.5	43.6%	54.2
X	Alleys	0.1	0.1%	100
	<b>System Total:</b>	<b>86.0</b>	<b>100.0%</b>	<b>58.4</b>

Goleta's street system weighted average PCI is 58.4 which corresponds to the lower end of the "good" range.

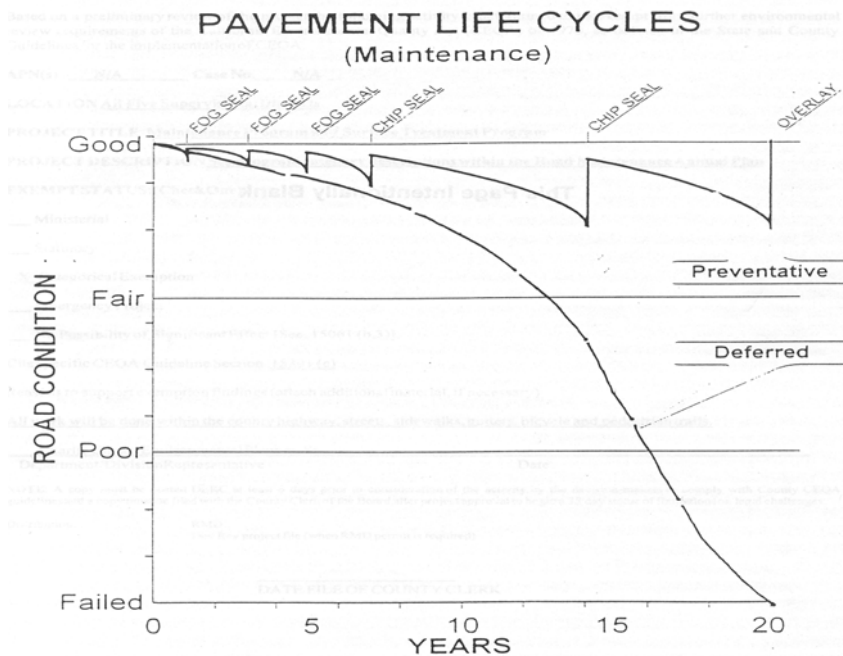
## Road Repair Methods and Maintenance Strategies

Asphalt pavement begins to deteriorate almost as soon as it is built. Water seeps into the road base and flushes the asphalt out of the pavement. The sun and air pollutants cause

oxidation and hardening. Traffic flexes the pavement thousands of times a day. Utility companies dig holes and trenches. The pavement cracks, potholes form and, eventually, major repairs are needed.

The typical asphalt pavement is designed for a life span of 20 years. With preventive maintenance, the life cycle of the pavement can be significantly extended. Depending upon soil and drainage conditions and structural adequacy, if pavement receives planned periodic seal coating, resurfacing, and patching, the 20 year life cycle can be extended for several cycles. If the pavement has become badly deteriorated, it can be saved from total destruction by various rehabilitation strategies such as recycling or major reconstruction. It is estimated that with regular preventive maintenance the annual maintenance costs are less than half than if the pavement is neglected and allowed to deteriorate.

A preventive maintenance program is preferred over no maintenance and a 10-year overlay program for two reasons: improved ride quality and decreased maintenance cost. The table shown below illustrates this point.



The ride quality for a 20-year life cycle with no maintenance is depicted as a dashed line. The ride quality with preventive maintenance is depicted as a solid line. Notice that preventive maintenance provides a far better ride quality through out the pavement life cycle. A preventive maintenance program is superior in terms of ride quality and cost to maintain.

### Repair Methods

Pavement repair and replacement methods are generally chosen based on pavement condition. Preventive maintenance measures such as fog seals, chip seals, and slurry seals are typically used on street that are in good condition and are relatively inexpensive

(less than \$1 per square foot). Overlays are typically used on streets that are in fair condition shape and cost between \$1 and \$3 dollars per square foot. Descriptions of the various preventative maintenance methods are given below:

### **Fog Seal**

This technique involves the spraying of a light coat of a bituminous material (0.03 to 0.05 gallon per square yard) on the surface of an existing pavement using a distributor. It is used to prolong the life of an asphalt concrete pavement by helping to reduce raveling and to improve waterproofing. Fog seals are especially good for treating pavements that carry little or no traffic. Without traffic, asphalt concrete pavements tend to ravel and harden faster than pavements that support moderate to heavy traffic.

### **Chip Seal**

A Chip Seal involves a 2-step process in which an asphalt emulsion is sprayed onto the road pavement and immediately covered with a layer of fine aggregate. The surface is rolled and then swept to remove the excess aggregate. Although chip seals do not add to the structural strength of the pavement section the can extends the life of the pavement by approximately 4 to 5 years.

### **Slurry Seal**

A Slurry Seal is sand mixed with asphalt emulsion that is spread onto the road pavement to provide a wearing course and to seal cracks that begin to appear 4 to 5 years after an overlay. The Slurry Seal extends the life of the pavement approximately 4 to 5 years.

### **Asphalt Concrete Overlay**

An asphalt concrete overlay is asphalt concrete placed on the roadway approximately 0.15' thick. This treatment is designed as a structural improvement to the roadway. Asphalt concrete overlays with proper preventive maintenance strategies will provide approximately 20 years to the serviceable life of the roadway

## **Street Improvement and Reinvestment Strategies**

In order to predict the future condition of the street system, unit costs for the various types of maintenance methods were calculated and input into the PMS. The unit costs for the various pavement improvement methods are attached as Exhibit 6

### **Future Conditions Analysis**

Several model runs were completed using the Micro PAVER™ PMS to determine the current level of deferred maintenance (maintenance backlog) as well as how much future street improvement funding is necessary to eliminate the maintenance backlog and improve the overall condition of the road system to acceptable levels.

Pavement improvement cost assumptions that were used as inputs to the PMS model runs are attached as Exhibit 6

### **Current Deferred Maintenance Level**

The current level of Goleta's deferred street maintenance is estimated to be approximately \$10.6 million dollars. This situation now requires strategies for replacement and reinvestment. The current deferred maintenance level was determined by the PMS as the current cost to bring all road segments up a preventative maintenance standard (PCI value greater than 61) in one year. This current need increases to approximately \$17 million dollars in 10 year if no maintenance or reinvestment is completed.

Two other model PMS model runs were made to determine the annual budget necessary to eliminate the current need or backlog in 5 and 10 years. The amount of funding necessary to eliminate the current need or backlog in 5 years is approximately \$2.5 million per year for or a total of \$12.5 million. The amount of funding necessary to eliminate the current need or backlog in 10 years is approximately \$1.5 million per year for or a total of \$15 million. Once the current need or back log is eliminated, the annual budget required to maintain the street system is estimated to be approximately \$800,000.

### **Other Street Maintenance Cost Considerations**

While this report focuses primarily on the costs associated with various pavement improvement and reinvestment strategies, the costs associated with replacement of damaged sidewalks, and the maintenance of traffic signals, street trees and landscaped medians must be taken into consideration when developing the budget for the City's overall street maintenance program.

### **Sidewalk Replacement**

The total cost to repair and/or replace all of the damaged sidewalks in the City is unknown at this time. An inventory of damaged sites will be conducted in fall 2003. Once the inventory is completed, the sites will be ranked based on severity, proximity to critical facilities, and pedestrian volume.

Without an inventory of needed repairs, the City has estimated that the current total cost to replace the City's sidewalks to be approximately \$4 million dollars. This amount is based on the following assumptions:

1. 60 percent of the City's 172 lane miles have sidewalks (103.2 miles of sidewalks)
2. 15% of the City's sidewalks need to be replaced (15.48 miles)
3. The unit cost per square foot to replace sidewalk is 10 dollars
4. The average width of the City's sidewalks is 5 feet.
5. The cost to replace sidewalk increases by 5% per year

In order to replace all of the damaged sidewalks in 5 years, the City would have to budget approximately \$1 million dollars per year.

## **Tree Maintenance**

The annual cost of maintaining the City's street trees is unknown at this time. A tree inventory will be conducted in the spring 2004. Once the inventory is completed, a tree management program will be brought to the Council for consideration.

Without a tree inventory, the annual cost to maintain the City's trees is estimated to be approximately \$91,000 dollars. This amount is based on the following assumptions:

1. 50% of the City's 172 lane miles have street trees (86 miles)
2. There are approximately 50 trees per mile (4300 trees)
3. The trees need to be trimmed once every 4 years
4. The average cost to trim a tree is \$85

## **Traffic Signal and Traffic Control Maintenance**

The City's 34 signalized intersections are currently maintained under contract with County of Santa Barbara. The County also provides traffic control maintenance (striping and sign maintenance) under the same contract. The County's estimated cost to provide signal and traffic control maintenance pursuant to their maintenance contract with the City was \$240,000 per year. Recent inquiries with private signal maintenance firms indicate that the total cost to maintain our signals could be as high as \$350,000. This higher amount was used for projecting future budget needs related to traffic signal and traffic control maintenance.

## **Landscape Medians**

There are currently 40 landscaped medians located in City right-of-way. These medians were installed and have been maintained by the Goleta Median Landscape Project, Inc. (GLMP) in cooperation with the Goleta Water District (GWD) and the County of Santa Barbara. The ongoing maintenance cost associated with the existing medians is estimated to be \$75,000 per year. The GLMP is no longer receiving funds from the County or GWD.

## **Financing and Revenue Sources for Street Improvement and Reinvestment Program**

The objective is to establish a 3 to 7 year street improvement program that reinvests in order that in the future, an annual maintenance program can prevent deterioration. This short term program, if feasible, invests to a threshold that allows in the future for a preventative maintenance at a lesser cost. As an example, a 5 year strategy to reach a level where preventive maintenance could be effective would require approximately \$2.5 million each year for the next 5 years. An additional amount of \$516,000 would be required for street related maintenance program components (such as trees, traffic signals, and landscaped medians) on an annual basis. A portion of this \$523 is currently included in the maintenance contract with the County.

Is a 5 year program feasible?

The City currently receives approximately \$2.3 million per year from Measure D (\$1.4 million per year) and Gas Tax (\$900,000 per year). Other sources of street maintenance funding such as STIP augmentation funds are episodic and should not be relied on for an annual street maintenance program

**A Recommended Street Improvement and Reinvestment Program 5 Year Budget**

As noted, to create a 5 year street improvement and reinvestment program based on the assumptions in this report, up to \$1.2 million would be required annually beyond the amount available from Measure D and Gas Tax. Sources of these dollars on an annual basis could be:

1. General Fund transfers to the Improvement and Reinvestment Program
2. Redevelopment Funds for eligible street reinvestment projects in the RDA
3. Bond financing and/or special assessment programs.

A \$3.5 million dollar program for 5 years would return the streets to an acceptable condition. As noted, ongoing related maintenance components are estimated at \$516,000 annually which also could be funded from the General Fund and assessment programs. For example, the City could consider budgeting a certain dollar amount each year for street maintenance and even sidewalk repairs and replacement that would be on a matching basis for a special assessment program in neighborhoods.

Based on Council discussion and direction, and other priorities, it might be realistic to transfer \$500,000 to \$750,000 annually from the General Fund to the street improvement and reinvestment program. A similar amount from the Redevelopment Agency for eligible projects could also be considered. City management recommends that this approach be considered.

<b>Street Improvement and Reinvestment Program</b>	<b>Annual Budget</b>
Pavement Improvement and Reinvestment	\$2,500,000
Sidewalk Repairs and Replacement	\$1,000,000
<b>Total Annual Street Improvement and Reinvestment Funding Required</b>	<b>\$3,500,000</b>
Total Annual Funding Available (Gas Tax and Measure D)	\$2,300,000
<b>Additional Annual Street Funding Required</b>	<b>\$1,200,000</b>

<b>Ongoing Street Maintenance Program Components</b>	<b>Annual Budget</b>
Tree Maintenance	\$91,000
Traffic Signal and Traffic Control Maintenance	\$350,000
Landscaped Median Maintenance	\$75,000
<b>Total Ongoing Street Maintenance Funding Required</b>	<b>\$516,000.00</b>

## **Exhibits**

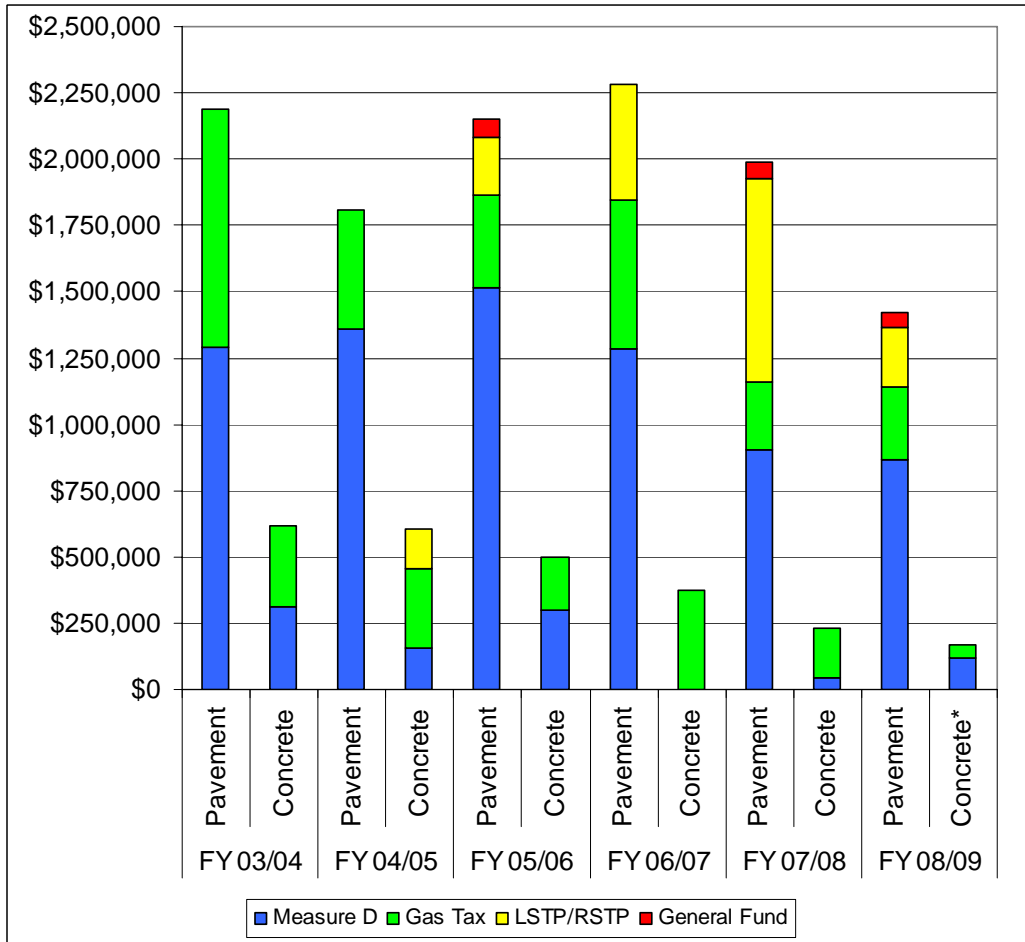
1. Map of Goleta Street System Functional Classification
2. Map of Goleta Street System Pavement Condition Index
3. Map of Goleta Street System Road Maintenance Work History 1997-2001
4. Goleta Street Network Data Spreadsheet sorted by Street Name
5. Goleta Street Network Data Spreadsheet sorted by PCI
6. Pavement Improvement and Reinvestment Strategy Spreadsheet
7. Construction Unit Cost Example Calculation Spreadsheet



**ATTACHMENT #2**

**City of Goleta Street Improvement Program  
Annual Expenditures by Funding Source**

**City of Goleta Street Improvement Program  
Annual Expenditures by Funding Source  
FY 04-FY09**



\*Projected

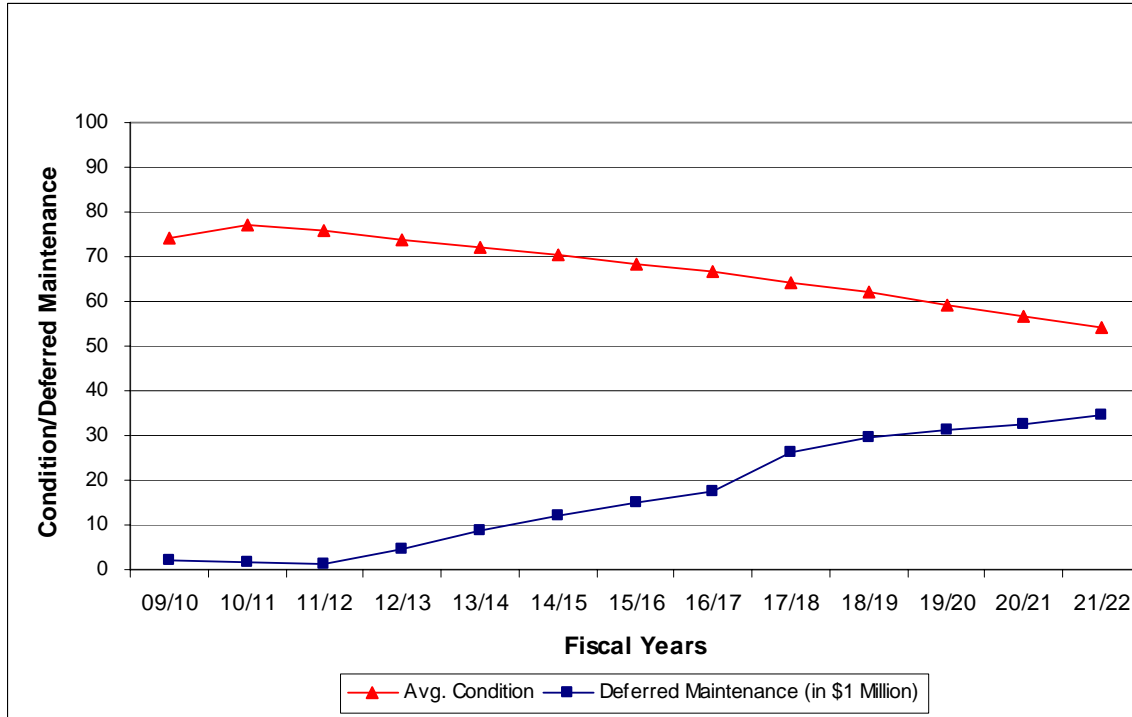
	Measure D	Gas Tax	LSTP/RSTP	General Fund	TOTAL
FY 03/04					
Pavement	\$1,290,107	\$900,000			\$2,190,107
Concrete	\$314,410	\$300,000			\$614,410
FY 04/05					
Pavement	\$1,359,285	\$450,958			\$1,810,243
Concrete	\$154,972	\$300,000	\$149,957		\$604,929
FY 05/06					
Pavement	\$1,515,869	\$350,000	\$216,000	\$70,000	\$2,151,869
Concrete	\$302,309	\$194,000			\$496,309
FY 06/07					
Pavement	\$1,281,817	\$561,180	\$438,000		\$2,280,997
Concrete		\$370,979			\$370,979
FY 07/08					
Pavement	\$906,817	\$255,000	\$766,577	\$62,710	\$1,991,104
Concrete	\$43,123	\$187,412			\$230,535
FY 08/09					
Pavement	\$864,491	\$275,413	\$223,000	\$59,999	\$1,422,903
Concrete*	\$120,699	\$48,140			\$168,839
<b>TOTAL</b>	<b>\$8,153,898</b>	<b>\$4,193,082</b>	<b>\$1,793,534</b>	<b>\$192,709</b>	<b>\$14,333,223</b>

## **ATTACHMENT #3**

### **Pavement Management System Future Model Run Summaries**

# City of Goleta Street Improvement Program Future Pavement Conditions Analysis

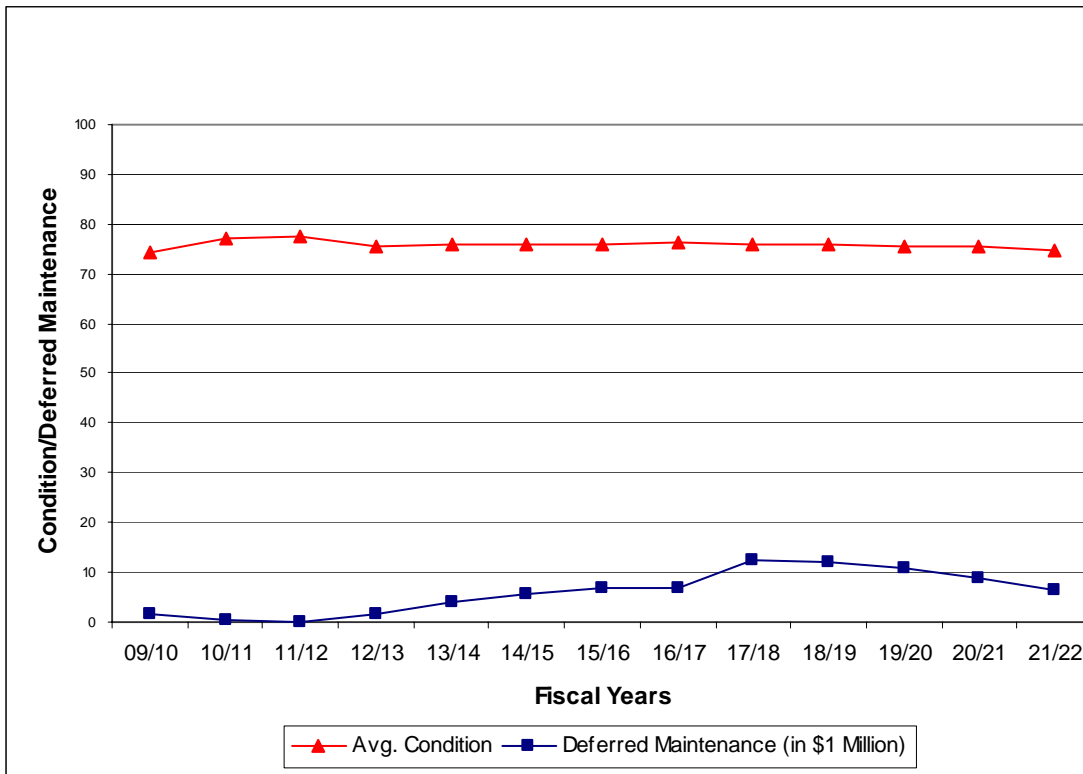
## Current Funding Level



Fiscal Year	Budget	Work Program	Deferred (Citywide)	Average Condition (Citywide)
09/10	\$2,300,000	\$2,293,614.62	\$1,870,683.00	74
10/11	\$1,000,000	\$998,089.26	\$1,636,192.13	77
11/12	\$1,000,000	\$997,182.78	\$1,425,408.53	76
12/13	\$1,000,000	\$999,221.78	\$4,392,176.35	74
13/14	\$1,000,000	\$995,816.69	\$8,691,144.53	72
14/15	\$1,000,000	\$998,810.73	\$11,948,555.56	70
15/16	\$1,000,000	\$999,276.97	\$15,064,122.10	68
16/17	\$1,000,000	\$998,768.02	\$17,457,582.21	66
17/18	\$1,000,000	\$995,252.97	\$26,430,911.67	64
18/19	\$1,000,000	\$997,973.64	\$29,567,962.79	62
19/20	\$1,000,000	\$992,890.63	\$31,061,213.83	59
20/21	\$1,000,000	\$992,331.26	\$32,571,899.24	57
21/22	\$1,000,000	\$988,397.51	\$34,352,414.27	54

# City of Goleta Street Improvement Program Future Pavement Conditions Analysis

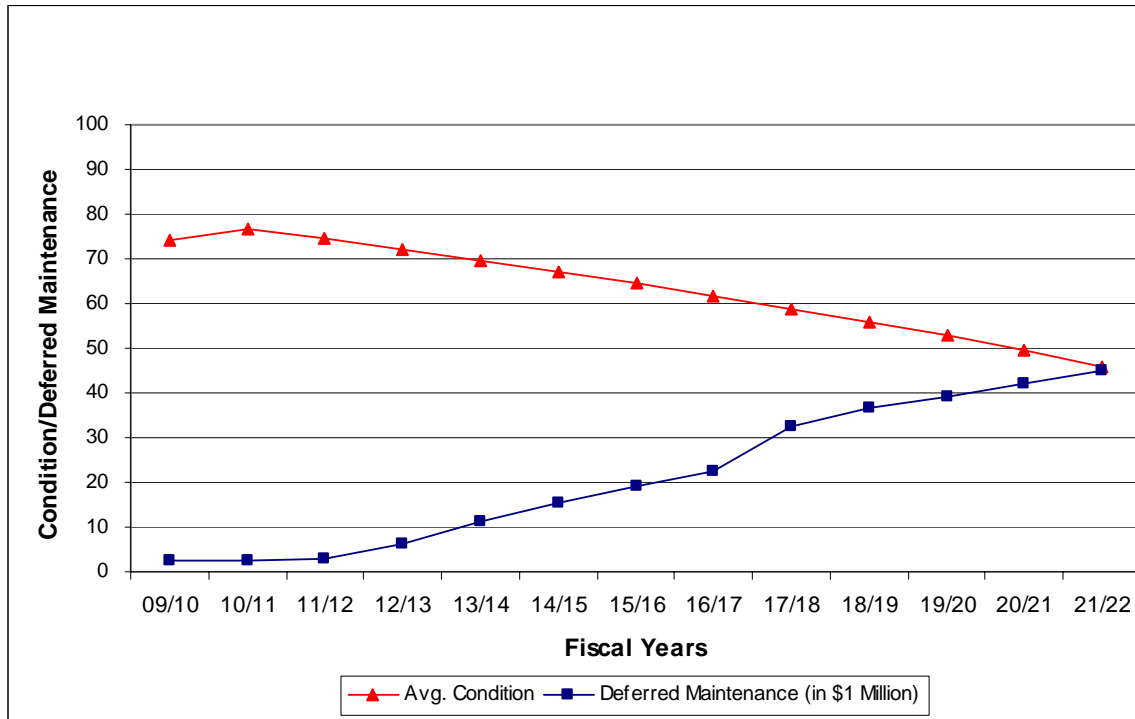
## Maintain Current PCI



Fiscal Year	Budget	Deferred (Citywide)	Average Condition Citywide
09/10	\$2,565,717.51	\$1,851,818.39	74
10/11	\$2,558,248.15	\$357,741.21	77
11/12	\$1,395,317.82	\$0.00	77
12/13	\$2,563,717.70	\$1,715,971.02	76
13/14	\$2,560,373.46	\$4,123,586.49	76
14/15	\$2,563,102.75	\$5,585,990.49	76
15/16	\$2,564,611.33	\$6,922,665.41	76
16/17	\$2,564,478.07	\$6,749,788.88	76
17/18	\$2,561,632.29	\$12,495,818.43	76
18/19	\$2,562,844.90	\$12,191,154.74	76
19/20	\$2,556,550.73	\$10,627,526.69	76
20/21	\$2,547,322.10	\$8,757,084.87	75
21/22	\$2,565,456.79	\$6,750,408.21	75

# City of Goleta Street Improvement Program Future Pavement Conditions Analysis

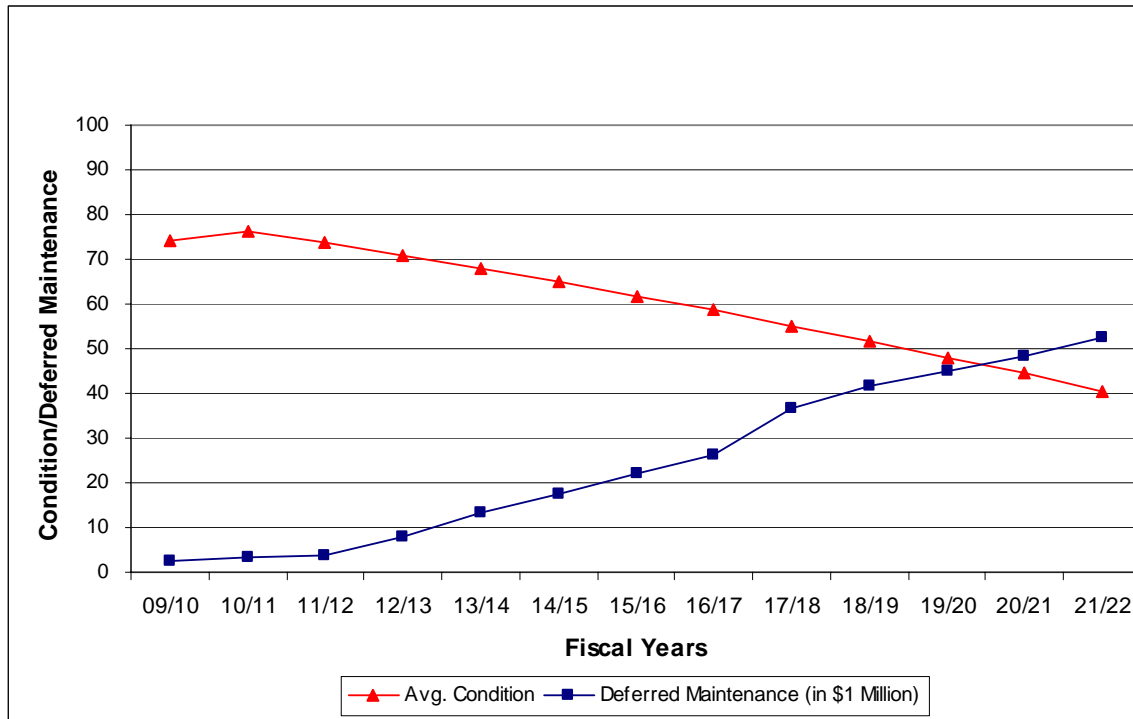
## Reduced General Fund Contribution by \$300,000



<b>Fiscal Year</b>	<b>Budget</b>	<b>Work Program</b>	<b>Deferred (Citywide)</b>	<b>Average Condition (Citywide)</b>
09/10	\$1,900,000	\$1,897,649.35	\$2,266,648.26	74
10/11	\$600,000	\$589,919.94	\$2,526,401.39	77
11/12	\$600,000	\$591,908.85	\$2,794,189.66	75
12/13	\$600,000	\$596,084.11	\$6,331,024.93	72
13/14	\$600,000	\$598,946.97	\$11,283,346.22	70
14/15	\$600,000	\$590,202.75	\$15,262,649.70	67
15/16	\$600,000	\$598,801.43	\$19,255,554.76	65
16/17	\$600,000	\$590,409.71	\$22,664,511.37	62
17/18	\$600,000	\$595,807.55	\$32,560,822.33	59
18/19	\$600,000	\$596,265.40	\$36,757,068.46	56
19/20	\$600,000	\$599,266.17	\$39,281,797.49	53
20/21	\$600,000	\$589,945.78	\$41,895,376.31	50
21/22	\$600,000	\$584,489.83	\$44,869,097.91	46

# City of Goleta Street Improvement Program Future Pavement Conditions Analysis

## Reduced General Fund Contribution by \$700,000



Fiscal Year	Budget	Work Program	Deferred (Citywide)	Average Condition (Citywide)
09/10	\$1,600,000	\$1,599,629.83	\$2,564,667.78	74
10/11	\$300,000	\$299,597.02	\$3,175,793.92	76
11/12	\$300,000	\$294,077.79	\$3,853,105.79	74
12/13	\$300,000	\$298,254.18	\$7,824,588.62	71
13/14	\$300,000	\$295,594.92	\$13,152,264.30	68
14/15	\$300,000	\$298,480.25	\$17,591,700.81	65
15/16	\$300,000	\$298,267.50	\$22,153,465.94	62
16/17	\$300,000	\$298,268.77	\$26,139,542.75	59
17/18	\$300,000	\$290,544.45	\$36,599,958.00	55
18/19	\$300,000	\$291,892.93	\$41,569,351.80	52
19/20	\$300,000	\$290,764.98	\$44,889,783.18	48
20/21	\$300,000	\$299,422.47	\$48,344,634.86	44
21/22	\$300,000	\$294,312.20	\$52,284,276.58	40