



APPROVED
BY THE CITY COUNCIL

1.10

JUN 3 1997

OFFICE OF THE
CITY CLERK

GR 97-007

5730 - 24TH. STREET
BUILDING NINE
SACRAMENTO, CA
95822-3699

PH 916-433-6336
FX 916-393-3725

BARRY BATES
STREET DIVISION MANAGER

DEPARTMENT OF
PUBLIC WORKS

STREET DIVISION

CITY OF
SACRAMENTO
CALIFORNIA

May 16, 1997

Sacramento City Council
Sacramento, California

Honorable Members in Session:

**SUBJECT: TIRE RECYCLING GRANT PROGRAM/RUBBERIZED ASPHALT
CONCRETE (RAC) GRANT FOR "I" STREET, 5TH STREET AND
"H" STREET**

LOCATION AND COUNCIL DISTRICT: District 1

RECOMMENDATION:

This report recommends that:

1. The the City Council approve the attached grant application.
2. The City Council adopt the attached resolution.

CONTACT PERSON: Violet Jakab 433-6336

CITY COUNCIL MEETING: June 3, 1997

MAY 18 1 07 PM '97
CITY CLERK'S OFFICE
CITY OF SACRAMENTO
RECEIVED

City Council Meeting
Rubberized Asphalt Grant Program
June 2, 1997

SUMMARY:

This report recommends that the City Council approve the attached grant application and resolution.

COMMITTEE/COMMISSION ACTION:

None.

BACKGROUND INFORMATION:

Pursuant to AB 1843 (Brown), Chapter 974, Statute 1989, the California Integrated Waste Management Board (CIWMB) is authorized to award grants to local agencies for the purpose of diverting tires from landfill disposal by promoting markets of recycled-content products.

The CIWMB has appropriated a total of \$200,000 for rubberized asphalt concrete (RAC) grants during fiscal year 1996-97. The City of Sacramento, Public Works Department is requesting a \$50,000 RAC grant for the overlay of "I" Street, 5th Street and "H" Street around the Federal Courthouse.

ENVIRONMENTAL CONSIDERATIONS

Adoption of the attached resolution and application for grant, if successful, would not affect the environment. The California Environmental Quality Act (CEQA) does not apply to such actions, pursuant to Section 15378(b)(3), 15273(a)(4) and 15304(f) of the CEQA Guidelines set fourth in Chapter 3, Title 14 of the California Code of Regulations.

FINANCIAL CONSIDERATIONS:

The City is planning to overlay I Street, 5th Street and H Street around the new Federal Courthouse building as soon as the project is complete in 1997/98. The overlay project will cost approximately \$100,000. Obtaining the grant will help reduce the cost to the City, as well as have a positive effect on the landfill and will promote a market for a recycled product. The grant application is for \$50,000 in matching funds.

City Council Meeting
Rubberized Asphalt Grant Program
June 2, 1997

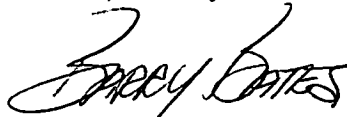
POLICY CONSIDERATIONS:

The City of Sacramento generates about 400,000 used tires per year. The majority of these tires end up at the landfill, taking up precious and expensive landfill space. A RAC program throughout California will save landfill space, while extending the life of the overlays on the roads. The benefits derived from this program will potentially extend the life of the streets while saving landfill space and recycling used tires.

ME/WE:

Not applicable

Respectfully submitted,



Barry Bates
Street Division Manager



WILLIAM H. EDGAR
City Manager

APPROVED:



Michael Kashiwagi
Director of Public Works



DEPARTMENT OF
PUBLIC WORKS

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CITY OF SACRAMENTO
CALIFORNIA

5730 - 24TH STREET
BUILDING NINE
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95822-3699

PH 916-433-6336

BARRY BATES
STREET DIVISION MANAGER

May 15, 1997

California Integrated Waste Management Board
Financial Assistance Branch
Grants Administration Unit-MS19
8800 Cal Center Drive
Sacramento, CA 95826
Attention: Mercy Caputi

Dear Ms. Caputi:

The City of Sacramento sincerely appreciates this opportunity to apply for the California Integrated Waste Management Board's (CIWMB) rubberized asphalt concrete (RAC) grant program.

The City maintains 1250 center lane miles of public roads, and we are in need of continuous improvements to the technologies used for street maintenance. We are also aware that there are about 400,000 used tires generated within the City of Sacramento, that are taking up precious landfill space and contribute to a number of environmental problems.

If you have any questions on the application please contact Violet Jakab at 433-6382.

Sincerely,

Barry Bates
Manager, Streets Division

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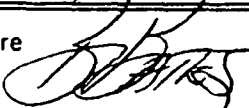
APPLICANT INFORMATION		
Applicant	City of Sacramento Public Works Department, Street Division	
Mailing Address	5730 24th Street, Bldg. 9 Sacramento, CA 95822-6382	
City/County/Zip Code	Sacramento, CA 95822-6382	
Position/Title	Street Division Manager	
Telephone Number	916-433-6381	FAX Number 916-393-3725
Legislative District Numbers	Assembly: 9	Senate: 6
Federal Tax Identification Number	94-6000410	

Applicant Type:(circle one)	Funding Information:	
<input checked="" type="radio"/> City	Grant Funds Requested	\$ 50,000
<input type="radio"/> County	Matching Funds (50% of Total Project Cost)	\$ 50,000
<input type="radio"/> School District	Total Project Cost	\$ 100,000
<input type="radio"/> Park District		
<input type="radio"/> Other		

Project Summary (A concise summary: Who; What; When; Where; How, and; Why)

The City of Sacramento is planning to overlay I Street (from 5th to 6th Street), 5th Street (from H to I Street), and H Street (from 5th to 6th Street). Work will be performed for the City of Sacramento during the summer of 1998 by an outside contractor. Streets will be overlaid because of low pavement quality index (PQI) and in conjunction with the construction of the federal court house.

Certification: I declare, under penalty of perjury, that all information submitted for the CIWMB's consideration for allocation of grant funds is true and accurate to the best of my knowledge and belief.

Applicant - Authorized Signature		Date 5/14/97
Type or print name and title	Barry Bates, Street Division Manager	

**B. CALIFORNIA TIRE RECYCLING GRANT PROGRAM
GRANT APPLICATION
PROJECT DESCRIPTION**

1. PROJECT GOALS AND OBJECTIVES

The City of Sacramento is planning to perform a street overlay project around the newly constructed Federal Courthouse. These streets are "I" street from 5th to 6th Street, "5th" Street from H to I Street and H Street from 5th to 6th Street. These streets have a Pavement quality Index (PQI) bellow the acceptable level, and were farther deteriorated during the construction of the Federal Courthouse.

These streets have high visibility due to high traffic counts and central location in California's capital. The City is extremely aware of the need for end markets for recyclable materials. The City is producing about 400,000 used tires annually and the disposal cost is about \$1 per tire. The City is disposing of used tires to Total Tire Recycling (TTR), and we are aware that the used tire market is extremely limited, therefore most tires end up shredded and disposed of at a landfill, therefore occupying precious limited landfill capacity. Presently, the City is building a sound wall around its landfill Gas Flare Station out of recycled tires.

Our goal and objective is not only to receive a better final product in the form of rubberized asphalt concrete (RAC) but also follow up on the pavement quality, to compare with similar age and traffic condition streets therefore promote the product City and state wide.

2. OPERATIONAL PLAN

The project has four phases:

1. Design of Plans and Specifications: this is the first phase of the project. City staff will assemble the construction documents, plans, specifications and estimates for the project.
2. Advertize for bids, open bids and award contract: this is the second phase. The City will advertize for bids, open bids and award the construction contract to the lowest responsible bidder.
3. Construction phase: the contractor will complete construction of the overlays.
4. Follow up phase: the City staff will follow up annually for five years with a visual condition rating of the newly overlaid streets, comparing to similar age and traffic condition streets.

3. PUBLIC EDUCATION AND AWARENESS PROGRAM

The program recommended to inform the public about the project is as follows:

- During and after construction the following sign will be posted at the project boundaries: "This project is a cooperative effort between the California Integrated Waste Management Board (CIWMB) rubberized asphalt concrete grant program and the City of Sacramento Public Works"
- After completion of the program and the first year follow up the City Public works staff in cooperation with the CIWMB staff will publish an article in the American Public Works Association Reporter on the process and quality of the final product

4. COOPERATIVE EFFORTS REGARDING IMPLEMENTATION OF THE PROJECT

The City of Sacramento Public Works, Street division staff will work in close coordination with the CIWMB staff.

5. STATEMENT OF QUALIFICATION OF MANAGEMENT PERSONNEL

This project will be managed by Mr. Barry Bates, Streets Division Manger. Mr. Bates is responsible for the maintenance of 1250 center line miles of roadway in the City of Sacramento. Mr. Bates worked for the City's street division since 1959 in various capacities, and its manager for the past 4 years.

The technical responsibility will be provided by Ms. Violet Jakab MS, PE. Ms Jakab is a Registered Civil Engineer in the State of California since 1976. Ms. Jakab worked as a design engineer from 1976 to 1983 at VTN Engineers, where she was responsible for a large number of streets and storm drainage design. She was also Deputy Director of Public works for Calaveras County, Engineering Supervisor for Orange County and since 1993 Senior Engineer with the City of Sacramento, directly responsible for the City's Pavement Management System and annual overlay and street seal work program.

6. NUMBER OF WASTE TIRES DIVERTED, COST PER TIRE TO CONVERT TO RAC AND MITIGATION OF ADVERSE ENVIRONMENTAL EFFECTS.

The recommended overlay work will use 1300 tons of RAC. At \$60 per ton the cost of the work to be performed is \$78,000. The amount of tiers used per ton of RAC is 25 lbs. Therefore the total amount of tires used will be 32,500 lbs which is equivalent to 2700 passenger car tires. It is estimated that the life of a street overlaid with RAC is double to that of regular AC. In addition the use of recycled tire will save valuable landfill space, and alleviate negative environmental effects caused by tire dumping.

The annual costs to the City of Sacramento is \$500,000 in code enforcement and clean up of abandoned or illegal tire disposal areas.

**TIRE RECYCLING GRANT PROGRAM
Work Statement**

Grant Applicant: City of Sacramento
 Project Title: I Street, 5th Street, H Street Overlay

Task #	Task Description	Budget		Product or Results	Staff/Contractor	Time Period
		Grant	Match			
1.	Prepare plans and specifications	10,000	10,000	Plans & Specs	Staff	Aug/Sept 97
2.	Advertise for bid/award	1,000	1,000	-	Staff	Spring 98
3.	Construction	39,000	39,000	New street	Contractor	Summer 98
4.	Follow up phase	0	1,500	Report	Staff	1999-2004

Make additional copies as needed

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**TIRE RECYCLING GRANT PROGRAM
Budget Itemization**

Task #	Category	Expenditure Details	Grant Funds	Match Funds	Total Funds
1.	personnel (# people/rate)	(1 / 21.09) (1 / 30.80)	\$ 9,600	\$ 9,600	\$ 19,200
	personnel (# people/rate)	(1 / 33.38) (/)	\$ 400	\$ 400	\$ 800
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$	\$	\$
	other costs		\$	\$	\$
	TOTAL			\$10,000	\$10,000
2.	personnel (# people/rate)	(1 / 21.09) (1 / 30.80)	\$ 800	\$ 800	\$ 1,600
	personnel (# people/rate)	(1 / 33.38) (/)	\$ 200	\$ 200	\$ 400
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$	\$	\$
	other costs		\$	\$	\$
	TOTAL			\$ 1,000	\$ 1,000
3.	personnel (# people/rate)	(/) (/)	\$	\$	\$
	personnel (# people/rate)	(/) (/)	\$	\$	\$
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$39,000	\$ 39,000	\$ 78,000
	other costs		\$	\$	\$
	TOTAL			\$39,000	\$ 39,000
TOTAL GRANT FUNDS			\$50,000		
TOTAL MATCH FUNDS				\$ 50,000	
TOTAL PROJECT FUNDS					\$ 100,000

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**TIRE RECYCLING GRANT PROGRAM
Budget Itemization**

Task #	Category	Expenditure Details	Grant Funds	Match Funds	Total Funds
4.	personnel (# people/rate)	(1 /21.09) (1 / 30.80)	\$ -	\$ 1,000	\$ 1,000
	personnel (# people/rate)	(1 /33.38) (/)	\$ -	\$ 500	\$ 500
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$	\$	\$
	other costs		\$	\$	\$
	TOTAL			\$	\$
6	personnel (# people/rate)	(/) (/)	\$	\$	\$
	personnel (# people/rate)	(/) (/)	\$	\$	\$
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$	\$	\$
	other costs		\$	\$	\$
	TOTAL			\$	\$
	personnel (# people/rate)	(/) (/)	\$	\$	\$
	personnel (# people/rate)	(/) (/)	\$	\$	\$
	materials		\$	\$	\$
	equipment		\$	\$	\$
	services/contracts		\$	\$	\$
	other costs		\$	\$	\$
	TOTAL			\$	\$
TOTAL GRANT FUNDS			\$ 50,000		
TOTAL MATCH FUNDS				\$ 51,500	
TOTAL PROJECT FUNDS					\$ 101,500

Make Additional Copies As Needed

TIRE RECYCLING GRANT PROGRAM
Summary of Current and Previous Grant Awards

Type of Grant	Source of Grant	Contract Number	Grant Award \$	Brief Program Description (1-2 Sentences)	Audit? (DATE)
NONE					

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**Asphalt Rubber Hot Mix-Gap Graded
Thickness Determination Guide
(Interim)**

Procedure:

1. Determine the thickness of conventional DGAC required for the structural needs of the pavement (based on deflections and structural section stiffening using current Caltrans procedures).
2. Determine the thickness of conventional DGAC required to retard reflection cracking (using current Caltrans procedure).
3. Select a DGAC overlay thickness that satisfies the requirements of 1 and 2 above.
4. Use either Table 1 or Table 2 to determine the ARHM-GG equivalent sections, with and/or without SAMIs. Use Table 1 if structural needs control and Table 2 if reflection crack retardation controls.
5. If the ride score of the pavement to be rehabilitated is greater than the allowable maximum and there is no structural need per 1 above, select one of the following:
 - a) Place two 0.10' thick lifts of ARHM-GG or
 - b) Cold plane to a depth of 0.10', then place ARHM-GG as determined per Steps 1 thru 4 above.

RUBBERIZED ASPHALT CONCRETE PROJECTS PLACED IN CALIFORNIA

PROJECT		CLIMATIC ³ REGION	CONST. DATE	DISTRICT COUNTY ROUTE	POST MILE LIMITS	STRUCTURAL ¹ SECTION (FT)	AADT ² (% TRUCKS)
1.	Meyers	S	1978	03-Ed-50	72.45/72.50	0.20 Flo	17,300 (3.1)
2.	Strawberry	S	1980	03-ED-50	52.2/66.5	0.10 ARC/0.20 AC/PRF	12,100 (3.1)
3.	Donner Summit	S	1980	03-NEV-80	5.16/5.59	0.20 ARC/0.40 AC	26,500 (9.0)
4.	Donner Lake	S	1981	03-NEV-80	7.3/8.8	0.20 ARC/PRF/LEV	26,500 (9.0)
5.	Boca	S	1982	03-NEV-80	23.8/24.8	0.10 & 0.20 ARC/0.10 OGAC (R)	21,400 (16.1)
6.	I-80/Rt. 20 Jct.	S	1982	03-NEV-20	44.1/44.3	0.08 OGAC (R)	2,700 (8.0)
7.	Ravendale	S	1983	02-Las-395	92.0/101.4	0.15 ARC & Plus 0.15 & 0.25 ARC & Plus/SAMI (R)	1,200 (22.3)
8.	Colfax	S	1984	03-Pla-80	35.0/36.9	0.15 ARC/PRF/LEV	25,500 (14.2)
9.	Flouriston	S	1984	03-NEV-80	23.5/28.0	0.25 RAM/PRF/LEV	21,400 (16.1)
10.	Monte Vista	S	1984	03-PLA-80	42.9/45.7	0.25 RAM/PRF/LEV	25,500 (14.2)
11.	So. Lake Tahoe	S	1985	03-ED-89	8.6/10.0	0.17 ARC/PRF/LEV	17,800 (4.1)
12.	Pittsburg	C	1985	04-CC-4	16.8/18.8	0.10 OGAC/SAMI (R)/0.10 OGAC	90,000 (5.7)
13.	White Cloud	S	1986	03-NEV-20	28.3/29.2	0.10 Plus	2,700 (9.8)
14.	Hayward	C	1986	04-Ala-880	13.7/15.0	0.08 OGAC (R)	175,000 (8.2)
15.	Elkhorn RSR ⁴	V	1987	03-Sac-5	34.0	0.10 ARC	N/A
16.	Ludlow	D	1987- 88	08-SBd-40	80.4/140.0	0.20 & 0.30 ARC & Plus	11,200 (51.9)
17.	Goldrun	S	1988	03-Pla-80	38.3/42.9	0.20 & 0.30 ARC & Plus/PRF/LEV	25,500 (14.2)
18.	San Francisco	C	1988	04-SF-101	0.0/3.0	0.08 OGAC (R)	260,000 (4.1)
19.	Pit River Bridge	V	1989	02-Sha-5	28.1/28.8	0.10 ARC	17,000 (28.9)
20.	Antler Undercrossing	V	1989	02-Sha-5	41.05	0.10 ARC	15,400 (31.9)
21.	Chico	V	1990	03-Bur-32	18.58/18.71	0.10 ARHM-GG	1,500 (11.8)
22.	Tulelake	S	1991	02-Mod-139	41.1/50.5	0.15 & 0.25 ARC/SAMI(R)	3,100 (13.6)
23.	Running Springs	S	1991	08-SBd-18	31.6/36.7	0.25 ARC & 0.20 ARHM-GG	8,000 (11.3)
24.	Los Banos	V	1991	10-Mar-5	3.03/3.50	0.10 OGAC/SAMI(R)/LEV	24,700 (29.8)

Notes:

1. FLO = Flobrx
ARC = Asphalt-Rubber Concrete
PRF = Pavement Reinforcing Fabric
LEV = Conventional DGAC Levelling Course
OGAC (R) = Open Graded Asphalt Concrete using
Asphalt-Rubber Binder.
Plus = PlusRide
SAMI (R) = Stress Absorbing Membrane Interlayer
using Asphalt-Rubber Binder.
RAM = Ramflex

ARHM-GG = Asphalt-Rubber Hot Mix Gap Graded
AC = Asphalt Concrete

2. AADT = Average Annual Daily Traffic in 1990.

3. S = Snow Region - Tire Chains Used
C = Coastal Region
V = Valley Region
D = Desert Region

4. RSR = Roadside Rest.

*Approved
6.3.97*

RESOLUTION NO. 97-288

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

RESOLUTION APPROVING A TIRE RECYCLING GRANT PROGRAM/RUBBERIZED ASPHALT CONCRETE (RAC) GRANT FOR I STREET, 5TH STREET AND H STREET FOR AN AMOUNT OF \$50,000.

WHEREAS, the people of the State of California have enacted Assembly Bill 1843 (W. Brown, Chapter 974, Statutes of 1989) that provides grants to local governments, businesses and non-profit organizations for the purpose of diverting tires from landfill disposal by fostering new business enterprises and encouraging cooperative local government programs; and

WHEREAS, the California Integrated Waste Management Board has been delegated the responsibility for the administration of the program within the state setting up necessary procedures governing application by local agencies, businesses and non-profit organizations under the program; and

WHEREAS, said procedures established by the California Integrated Waste Management Board require the applicant to certify by resolution approval of the application before submission of said application to the state; and

WHEREAS, the applicant will enter into an agreement with the State of California for development of the project;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Sacramento authorizes the submittal of an application to the California Integrated Waste Management Board for a 96/97 Tire Recycling Grant.

The Mayor of the City of Sacramento is hereby authorized and empowered to execute in the name of the City of Sacramento all necessary applications, contracts, agreements, amendments and payment requests hereto for the purposes of securing grant funds and to implement and carry out the purposes specified in the grant application.

MAYOR

ATTEST:

CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: _____

DATE ADOPTED: _____



1/10

DEPARTMENT OF
PUBLIC WORKS

STREET DIVISION

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BARRY BATES
STREET DIVISION MANAGER

May 16, 1997

City Council
Sacramento, California

Honorable Members in Session:

**SUBJECT: TIRE RECYCLING GRANT PROGRAM/RUBBERIZED ASPHALT
CONCRETE (RAC) GRANT FOR "I" STREET, 5TH STREET AND
"H" STREET**

LOCATION AND COUNCIL DISTRICT: District 1

RECOMMENDATION:

This report recommends that:

1. The City Council approve the attached grant application.
2. The City Council adopt the attached resolution.

CONTACT PERSON: Violet Jakab 433-6336

CITY COUNCIL MEETING: June 2, 1997