

PROPOSAL FOR BEACH RENOURISHMENT  
10-61ST STREETS, GALVESTON, TEXAS  
1992-1993

I. Historical Perspective

The current efforts for Coastal Management and Beach Replenishment began in September 1987 with the Commissioners Court's establishment of a Coastal Erosion Committee. Administered by the Galveston County Beach Park Board, this effort has had success in two very important areas:

- A. Education on issues relating to coastal erosion problems and subsequent solutions to these problems.
- B. Legislation: In 1989 this Committee not only organized locally but networked along the Texas Coast for S.B. 1571-Brooks, which mandated the Texas General Land Office to develop a comprehensive Texas Coastal Management Plan.

During the 1991 Legislative Session H. B. 1633-1634-Martin, Hury and Brooks, was sponsored and passed which created Texas Coastal Management. The laws are in place for the management of Texas Coastal resources, however the second part of this legislation which was the funding for projects will hopefully be addressed in the 1993 legislative session.

In addition, the Texas General Land Office is currently making application to participate in the Federal Coastal Management Program.

The Federal program and a state funding source will be two-thirds of future funding for projects we will discuss in this proposal.

II. Long Range Objectives

To completely understand this program, one must initially understand that the issue of Beach Renourishment is a maintenance issue. A one time only program is not sufficient or realistic, for Galveston's long-range needs.

Technologies for Beach Renourishment are well documented and in place to be utilized. The real issue needing to be addressed is funding for the long term.

The long range funding program that our Committee envisions for these projects is a simple cost sharing between a) Federal Coastal Management Program, b) State funding (to be proposed in 93 Session), c) Local government participation. This type of cost

sharing seems to work the best in all the State programs we have looked at. It is our intention to parallel other State programs with Federal and State dollars representing approximately 75% of funding while local participation represents approximately 25%.

It is anticipated that the local 25% could be funded by basically two alternatives 1) local tax dollars, 2) user fees for newly created beaches.

### III. Short Term Goals

The short term goals are extremely critical to the long term objectives. A Pilot Project in Galveston has the potential to ignite coastal communities to rally around the demand for a funding mechanism at the State level, which will be addressed during the 1993 Legislative Session.

This Pilot Project must be able to demonstrate to the coastal region an ability to produce a project of beach renourishment with broad appeal in a positive manner to the general quality of life of a community, environmental concerns and a positive economic climate.

The proposed joint project between Galveston and the U.S. Army Corps of Engineers for Beach Replenishment from 10th - 61st Street represents an extreme opportunity to set in motion a program that:

1. Lends itself to long range objectives.
2. Short term goals.
3. Creates excellent opportunities for economic growth in an area of this community with potential for a rapid return on investment, i.e, sales tax, Hotel-Motel tax, business expansion, ad valorem tax increases, user fee for beach resources, and expanded marketability for Galveston tourism.
4. Enhances the quality of life for Galvestonians, Galveston Countians and the millions of visitors to the Island each year.
5. Provides for the management of one of our most precious environmental areas - our beaches.
6. Provides additional flood protection for those businesses and citizens located from Seawall Boulevard back.

### IV. 1992-1993 Beach Renourishment Program

The initial question for this program is two-fold:

1. Can we really provide a 300 foot recreational beach from 10th - 61st Streets South of the Galveston Seawall?
  - 1a. The technologies for this project are sound and the U. S. Army Corps of Engineers is quite capable of bringing the

project to fruition.

2. How do we develop a realistic plan to finance such a project?

2a. There are several basic methods of financing this project:

- a. Revenue Bonds - payable from revenues generated from new beach parking areas.
- b. Tax and Revenue Bonds - payable from revenues of new beach parking areas and a pledge of a public taxing entity to pay off bonds from revenue on taxes if necessary.
- c. Bond proceeds from the State of Texas administered through the Texas Water Development Board. This would take a pledge from a public entity to retire debt through an identified revenue stream, i.e., user fees or other (tax dollars).
- d. Economic Development Sales Tax (1/8 cent) would take a public referendum in Galveston.
- e. Bond Sale (Cost Sharing Program)

1. City of Galveston	\$	50,000 per year
2. County of Galveston		100,000 per year
3. City Park Board		50,000 per year
4. 1/2 cent Hotel-Motel tax		175,000 per year
5. Navigation District		10,000 per year

### THE PLAN

This writer believes that taking into account the long and short range goals and objectives for such a pilot project in Galveston the most efficient, effective and expeditious method of accomplishing this project is a Revenue Bond issue supported by projected revenues off new created beach parking areas created from 10th - 61st Streets South of the Galveston Seawall.

The following support material for such a proposal must be preceded by a simple understanding that just throwing sand at the Seawall is not the only issue considered.

This proposal is based on the estimates of the U. S. Army Corps of Engineers that the local cost is anticipated to be \$2,237,000.00 (2-6-92 correspondence from Col. Brink Miller, U. S. Army Corps of Engineers to Barbara Crews, Mayor, City of Galveston).

Additional issues considered in this proposal are:

1. Parking - to create such an expanded beach it is anticipated that more people will utilize the resource and that a parking plan must accompany the proposal.
2. O & M - operation and general maintenance of the newly created resource must be factored in.
3. Debt - retirement of a 10 year debt.
4. Traffic - safe and efficient traffic flow along Seawall Boulevard, which is already heavily congested during the tourist season.
  - 4a. The creation of a safe pedestrian traffic plan along the Seawall sidewalk.
  - 4b. The creation of a bicycle, surrey lane along the existing South side parking area, which will double as a turning lane at the entrance points to the beach.
5. Retention of the maximum amount of sand on the beach area by creating a dune system south of the parking area and line of foliage along the base of the Seawall to keep sand from blowing with the prevailing southeast wind across Seawall Boulevard.
6. Create an aesthetically pleasing beach landscape consistent with Galveston's booming beachfront tourist destination.

## ESTIMATED REVENUE FROM PARKING ON REPLENISHED BEACH AREA

**ESTIMATED PARKING CAPACITY:** The area of beach to be replenished extends from 10th Street to 61st Street. The approximate distance is **19,500 linear feet (l.f.)**. If all of that distance was in parking with each parking space averaging **10 feet in width** and a double row of parking was provided, then approximately **3,900 cars** could park in that area. However, **6 access ramps** will necessitate the loss of about **28 spaces** per ramp for a total of **168 spaces**. Also, the area between 20th Street and 27th Street would not have on-beach parking due to the number of piers extending into the water, adding to increased beach erosion. Parking eliminated in that seven-block section is **560 spaces**. Therefore, the total parking available in the two rows extending from 10th St. to 61st St. is **3,172 cars**. A rounded-off figure of **3,170 spaces** will be used in revenue and cost calculations.

**EXPECTED PARKING OCCUPANCY RATES:** Figures for the occupancy rate (i.e. the ratio of vehicles per space per day) at the proposed beach parking area do not exist of course but projections based on existing situations at other facilities can be made. The average occupancy rate in 1991 for parking lots at Galveston County Beach Park Board's largest Beach Pocket Park (Pocket Park 2) are: **33.63% for weekdays** and **65.73% for weekends**. Following is a summary of the revenue to be generated both from a **\$5.00 per car rate** and from a **\$3.00 per car rate** utilizing the estimated occupancy rates at the Beach Pocket Parks. Revenue generation could vary somewhat depending on the actual occupancy rate at the proposed on-beach parking in front of the Seawall.

**SUMMARY OF REVENUE PROJECTIONS:** The cost per car is assumed from the existing "going rate" at government operated beach parking facilities on Galveston Island.

At \$5.00 per car for weekends during the season =\$666,765.00

3,170 spaces  
x \$5 per car  
x 2 days per weekend  
x 32 weekends per season  
x .6573 (% occupancy per weekend)

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\$666,765.12 say \$666,765.00

At \$5.00 per car for weekdays during the season =\$692,946.00

3,170 spaces  
x \$5 per car  
x 5 days per week  
x 26 weeks per season  
x .3363 (% occupancy per week)

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\$692,946.15 say \$692,946.00

**TOTAL REVENUE FOR SEASON (\$5 /CAR)**

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**=\$1,359,711.00**  
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\$666,765.00  
\$692,946.00  
-----  
\$1,359,711.00

**SUMMARY OF REVENUE PROJECTIONS (continued):**

At \$3.00 per car for weekends during the season =\$400,000.00

3,170 spaces  
x \$3 per car  
x 2 days per weekend  
x 32 weekends per season  
x .6573 (% occupancy per weekend)

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\$400,059.07 say \$400,000.00

At \$3.00 per car for weekdays during the season =\$415,768.00

3,170 spaces  
x \$3 per car  
x 5 days per week  
x 26 weeks per season  
x .3363 (% occupancy per week)

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\$415,767.69 say \$415,768.00

**TOTAL REVENUE FOR SEASON (\$3 /CAR)**

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=\$815,768.00  
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\$400,000.00  
\$415,768.00  
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\$815,768.00

**SUMMARY OF COST PROJECTIONS:** Construction estimates are based on a design for parking that provides an ingress and egress point approximately every 1/2 mile at a groin, utilizes a 12" wet-compacted sand bed for the parking surface, incorporates some amenities as screened portable toilets and provides dune walkovers across dunes to be created as part of the latest beach replenishment plan.

- Construction of parking area:

Access Ramps 6 @ \$53,280 ea.	= \$	319,680.00
Tollbooths 6 @ \$1,800 ea.	= \$	10,800.00
Dune Walkovers		
18 @ \$1,000 ea	= \$	18,000.00
Signage & Bollards	= \$	48,776.00
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**TOTAL CONSTRUCTION COSTS**

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**=\$397,256.00**  
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- Maintenance Equipment:

Equipment for wetting, grading, rolling & compacting parking:		
Water Truck	= \$	27,000.00
Grading Machine	= \$	3,800.00
Tractor & front end loader	= \$	25,000.00
Used rubber tired roller	= \$	7,000.00
Pickup for supervisor(s)	= \$	15,000.00
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**TOTAL EQUIPMENT COST**

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**=\$77,800.00**  
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(costs continued on next page)



**SUMMARY OF COST PROJECTIONS (continued):**

**- Employees:**

6 Tollbooth operators  
x 8 hr/day  
x194 days/season  
x 5 per hour  
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\$46,560 Total for tollbooth operators

3 Equipment operators  
x 8 hr/day  
x136 days/yr (3 days x 32 wk/s's'n + 2 days x 20 wk/off's's'n  
x\$16 per hour (includes benefits)  
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\$52,224 Total for equipment operators

10 Grounds maintenance employees  
x 8 hr/day  
x 194 days/season  
x \$6 per hour  
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\$93,120 Total for Grounds maint. employees

2 Supervisors per 8 hour shift  
x 8 hr/day  
x194 days/season  
x\$10 per hour  
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\$31,040 Total for supervisors

**TOTAL ANNUAL EMPLOYEE COSTS**

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=\$222,944.00  
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**- Portacans:**

200 needed per day to serve estimated 20,000  
users at peak demand x \$69.00 /mo. fee  
(3 services/wk.) for 3 months =\$41,400

100 needed per day to serve estimated 10,000  
users at off-peak demand x \$59.00 /mo.  
fee (2 services/wk.) for 4 months =\$23,600

**TOTAL ANNUAL PORTACAN COSTS**

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=\$65,000.00  
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**\*\* GRAND TOTAL OF START-UP COSTS**

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=\$763,000.00  
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**SUMMARY OF ANNUAL OPERATIONAL COSTS:** Below are listed costs that can be expected annually to operate the beach parking facility and to maintain the parking and grounds. Cost figures come directly from the SUMMARY OF COST PROJECTIONS used to determine the GRAND TOTAL OF START-UP COSTS (see previous pages).

- Maintenance (equipment or products)	=\$ 15,000.00	
- Annual set-aside for equipment replacement	=\$ 15,560.00	
- Employee costs	=\$222,944.00	
- Portacans	=\$ 65,000.00	
- Contingency (approx.10%)	=\$ 31,496.00	
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<b>ANNUAL OPERATIONAL COSTS</b>		<b>=\$350,000.00</b>

**SUMMARY OF REVENUES MINUS ANNUAL OPERATIONAL COST:** Presented below is the total revenue generated from both \$5.00 and \$3.00 per car parking fees. Subtracted from those figures is the estimated annual operating costs' (see previous page).

TOTAL REVENUE FOR SEASON (\$5 /CAR)	= \$1,359,711.00
minus the ANNUAL OPERATIONAL COSTS	= \$ 350,000.00
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<b>FUNDS REMAINING FROM SEASONAL REVENUE</b>	<b>= \$1,059,711.00</b>

TOTAL REVENUE FOR SEASON (\$3 /CAR)	= \$ 815,768.00
minus the ANNUAL OPERATIONAL COSTS	= \$ 350,000.00
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<b>FUNDS REMAINING FROM SEASONAL REVENUE</b>	<b>= \$ 465,768.00</b>

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## CONCLUSION

Upon reviewing the data on Projected Revenues and Expenses you will note that the first year's start up expenses are programmed into the bond sale;

1.	Local cost share as determined by U. S. Army Corps of Engineers	\$ 2,237,000.
2.	Grand total of estimated start up cost including:	
a.	<b>Construction Costs</b>	397,256.
1.	Access Ramps	
2.	Toll Booths	
3.	Portable toilet enclosures	
4.	Dune Walkovers	
5.	Signage & Bollards	
b.	<b>Maintenance Equipment</b>	77,800.
c.	<b>Employee Costs</b>	222,944.
d.	<b>Portable Toilet Service</b>	65,000.
	<b>TOTAL START-UP COSTS</b>	\$ 763,000.
	Total Bond Issue	2,237,000.
	Section 1	763,000.
	Section 2	
	<b>TOTAL BOND SALE</b>	\$ 3,000,000.

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Comparison of Revenue and Expenditures including estimated debt at 8.0%.

Total Projected Revenues at \$5.00 per vehicle	\$1,359,711.
O & M Expenses	350,000.
Debt Service	432,000.
<b>TOTAL EXPENSES</b>	782,000.
<b>NET AFTER DEBT EXPENSES</b>	577,711.

Comparison of revenue and expenditures including estimated debt at 7.5% interest.

Total Projected Revenues at \$5.00 per vehicle	1,359,711.
O & M Expenses	350,000.
Debt Service	441,000.
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<b>TOTAL EXPENSES</b>	791,000.
<b>NET AFTER DEBT &amp; EXPENSES</b>	568,711.

The \$3.00 revenue per car can be calculated out however, it is our opinion that beach parking fees should be kept consistent with other public beach and off beach prices. Additionally, the \$3.00 fee does not have the cushion of comfort needed to adjust to unforeseen expenses.

It is further anticipated that the net profits of this project should be pledged to:

- a. 50% sinking or emergency fund to retire the debt in 6-7 years or to adjust to emergency situations.
- b. 50% should be used to continually (yearly) enhance the area, provide for additional security, or the programs associated with the project as they are determined. Any surpluses in this account yearly should be applied back to early debt retirement.

It is further anticipated that beach cleaning and lifeguards will continue to be paid for by the existing pledge of Motel-Hotel tax funds. Hopefully, the new resource will enable that fund to grow proportionately with the expanded resource.

It is still this writer's opinion that the revenue bond issue is the most efficient, effective and expeditious manner of bringing this project to fruition. It also provides a sufficient cushion of flexibility to handle any circumstances other than catastrophe.

The catastrophe or the what if's of life are always of concern. A simple suggestion might be to insure the project for its replacement value through Lloyds of London. This cost no doubt would be quite high, however, it may be worth investigation.

Proposal submitted by Pat Hallisey, Executive Director, Galveston County Beach Park Board.

Contributors:

Bob Duke, Deputy Director, Galveston County Beach Board

Rhonda Brown, Planner, Galveston County Beach Park  
Board

Russ Eitel, Co-Chairman, Galveston County Beach &  
Shore Preservation Association

\$3,000,000 GALVESTON PROPOSED BOND ISSUE

Bonds Dated August 1, 1992 Due February 1

Ten Year Payout At Assumed Interest Rate of 7.50%

Year Ending 12/31	Proposed \$3,000,000	Interest Due Feb. 1	Interest Due Aug. 1	Total Interest	Principal & Interest
1993	\$ 225,000	\$ 112,500	\$ 104,063	\$ 216,563	\$ 441,563
1994	225,000	104,063	95,625	199,688	424,688
1995	250,000	95,625	86,250	181,875	431,875
1996	275,000	86,250	75,938	162,188	437,188
1997	275,000	75,938	65,625	141,563	416,563
1998	300,000	65,625	54,375	120,000	420,000
1999	325,000	54,375	42,188	96,563	421,563
2000	350,000	42,188	29,063	71,250	421,250
2001	375,000	29,063	15,000	44,063	419,063
2002	400,000	15,000	0	15,000	415,000
	<u>\$3,000,000</u>	<u>\$680,625</u>	<u>\$568,125</u>	<u>\$1,248,750</u>	<u>\$4,248,750</u>

\$3,000,000 GALVESTON PROPOSED BOND ISSUE

Bonds Dated August 1, 1992 Due February 1

Ten Year Payout At Assumed Interest Rate of 8.00%

Year Ending 12/31	Proposed \$3,000,000	Interest Due Feb. 1	Interest Due Aug. 1	Total Interest	Principal & Interest
1993	\$ 200,000	\$ 120,000	\$ 112,000	\$ 232,000	\$ 432,000
1994	225,000	112,000	103,000	215,000	440,000
1995	250,000	103,000	93,000	196,000	446,000
1996	275,000	93,000	82,000	175,000	450,000
1997	275,000	82,000	71,000	153,000	428,000
1998	300,000	71,000	59,000	130,000	430,000
1999	325,000	59,000	46,000	105,000	430,000
2000	350,000	46,000	32,000	78,000	428,000
2001	375,000	32,000	17,000	49,000	424,000
2002	425,000	17,000	0	17,000	442,000
	<u>\$3,000,000</u>	<u>\$735,000</u>	<u>\$615,000</u>	<u>\$1,350,000</u>	<u>\$4,350,000</u>

\$3,000,000 GALVESTON PROPOSED BOND ISSUE

Bonds Dated August 1, 1992 Due February 1

Ten Year Payout At Assumed Interest Rate of 8.25%

Year Ending 12/31	Proposed \$3,000,000	Interest Due Feb. 1	Interest Due Aug. 1	Total Interest	Principal & Interest
1993	\$ 200,000	\$ 123,750	\$ 115,500	\$ 239,250	\$ 439,250
1994	225,000	115,500	106,219	221,719	446,719
1995	250,000	106,219	95,906	202,125	452,125
1996	275,000	95,906	84,563	180,469	455,469
1997	275,000	84,563	73,219	157,781	432,781
1998	300,000	73,219	60,844	134,063	434,063
1999	325,000	60,844	47,438	108,281	433,281
2000	350,000	47,438	33,000	80,438	430,438
2001	375,000	33,000	17,531	50,531	425,531
2002	425,000	17,531	0	17,531	442,531
	<u>\$3,000,000</u>	<u>\$757,969</u>	<u>\$634,219</u>	<u>\$1,392,188</u>	<u>\$4,392,188</u>

\$3,000,000 GALVESTON PROPOSED BOND ISSUE

Bonds Dated August 1, 1992 Due February 1

Ten Year Payout At Assumed Interest Rate of 8.50%

Year Ending 12/31	Proposed \$3,000,000	Interest Due Feb. 1	Interest Due Aug. 1	Total Interest	Principal & Interest
1993	\$ 200,000	\$ 127,500	\$ 119,000	\$ 246,500	\$ 446,500
1994	225,000	119,000	109,438	228,438	453,438
1995	250,000	109,438	98,813	208,250	458,250
1996	275,000	98,813	87,125	185,938	460,938
1997	275,000	87,125	75,438	162,563	437,563
1998	300,000	75,438	62,688	138,125	438,125
1999	325,000	62,688	48,875	111,563	436,563
2000	350,000	48,875	34,000	82,875	432,875
2001	375,000	34,000	18,063	52,063	427,063
2002	425,000	18,063	0	18,063	443,063
	<u>\$3,000,000</u>	<u>\$780,938</u>	<u>\$653,438</u>	<u>\$1,434,375</u>	<u>\$4,434,375</u>