



City of
Corpus
Christi

Final Council Presentation January 31, 2012

Street Maintenance Finance Ad Hoc Advisory Committee

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Darryl Haas – Roadway Contractor
Dr. Bob Furgason – At Large
Elizabeth Chu Richter – At Large



Thank you Mayor and Council. Joining me here today is the full Street Maintenance Finance Ad Hoc Advisory Committee; Gabe Guerra, Darryl Haas, Bob Furgason and Elizabeth Chu Richter.

We are here today with our final presentation and recommendations.

I would caution that these recommendations will not be popular or easy to accept. The problem you gave us is colossal and has been long in the making. There are no quick or easy solutions, but there are solutions, if we can all endure the shared sacrifice they will require.

We recognize that any solution requiring new sources of revenue may be unpopular, but we believe that it is our responsibility as your appointees to speak the truth as we see it, even if that truth is painful.



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The Problem

- **Original Estimate In \$1B Range to Repair All Streets**
- **Current Annual Street Budget \$10M**
 - Only \$5M Used for Street Maintenance
 - 200 Years to Repair All Streets
 - Equivalent to \$8/Mo for 106,072 Utility Customers
- **Revised Staff Analysis \$81M Annual Budget**
 - 15 Years to Repair All Streets
 - Equivalent to \$64/Mo Per Utility Customer



So, let's begin with the problem.

City staff, followed by a confirmation study from an independent engineering firm developed original estimates for complete city wide street repair in the \$1B range. The estimate is based on street condition surveys that are conducted every three years. One could argue that the costs are more or less than \$1B, but let's accept \$1B for discussion.

I have a hard time grasping the concept of \$1B. To put that amount in perspective, the current annual street maintenance budget is \$10M of which only \$5M actually goes to street maintenance, the other \$5 to street department general expenses and reactive maintenance. So, at \$5M per year it would take 200 years to repair all the streets. The good news is that \$10M is affordable, since it is equivalent to only about \$8/Mo for each utility customer.

After further discussion and consideration, staff has analysis now indicates an annual street maintenance budget of \$81M. At this funding level, staff believes all streets can be repaired in 15 years, and then maintained in good condition at that same funding level. The bad news is that \$81M is equivalent to about \$64 per month for each utility customer.



The Cause

- **IN 30 YEARS**
 - Proportion of General Fund Allocation Declined 50%
 - Population Grew 23.8%
 - Street Miles Grew 30.6%
 - Street SY/Person Grew 12.3%
 - Land Area Grew 35.1%
- **73.2% Land Yields Reduced or No Revenue**
 - 18.3% Agricultural
 - 10.2% Public/Semi Public
 - 7.4% Park
 - 19.5% Vacant
 - 4.6% Conservation/Preservation
 - 13.2% Street ROW
- **26.8% Land for Meaningful Revenue Generation**



What caused this problem?

As we asked staff for various historical data, we found that in the past 30 years:

The street general fund proportion allocated to streets has declined 50%. As noted in previous presentations, general fund allocations to almost all City functions have declined in the past 30 years, except for Police and Fire, which each increased.

But, during that same period the population grew 23.8%

The street miles grew 30.6%, notably more than population growth

Which then caused street square yards per person to grow 12.3%, meaning we are all supporting 12.3% more streets than we were 30 years ago.

And, the land area grew 35.1%, again more than population growth.

Another interesting data point, is that 73.2% of all land within the city limits either produces no tax revenue, or reduced tax revenue. We find it particularly interesting that 37.8% of all land in the city limits is either agricultural or vacant.

That leaves us with only 26.8% of all land in the city limits for meaningful revenue generation, whether it be taxes or fees.



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The Assignment

- **Develop a Street Maintenance Funding Plan**
 - Match User Cost with User Benefit
 - Must be Predictable and Stable
 - Must be Easy to Implement
 - Easy to Explain (added)



So, what was our assignment?

Simply put it was to:

Develop a street funding plan that will.

Match User Cost with User Benefit

Produce revenue that is Predictable and Stable

Be easy to implement,

And, it must be easy to explain, as suggested by Mr. Loeb, at our last presentation.



Primary Recommendations

- **Adopt a Street User Fee Ordinance**
 - Based on Vehicle Trips Generated Per Land Tract
 - Number of Trips Computed on Land Use
 - Collected Monthly on Utility Bill
 - Sunset Provision in 10 Years
- **Re-Examine Existing Dedicated Sales Tax Uses**

– Crime Control	1/8 cent	\$ 5M/yr
– Seawall	1/8 cent	\$ 5M/yr
– Arena	1/8 cent	\$ 5M/yr
– Economic Development	1/8 cent	\$ 5M/yr
– RTA	1/2 cent	\$20M/yr



So, lets get right to our two primary recommendations.

First, we recommend the City adopt a street user fee ordinance. The fee would be based on:

Trips generated for each tract of developed land with the city, again only 26.8% of all land area. Trip generation was selected for the basis since street wear, or use, is directly proportional to vehicle weight and the number of trips on a given roadway.

The number of trips would be computed on land use

The fees would be collected monthly on the utility bill

And, the ordinance would have a sunset provision requiring reauthorization by future councils

Second, we recommend you examine the existing dedicated sales taxes . We have not studied the effectiveness of these dedicated taxes, but believe they may be worth another look to determine if the needs they address are more important, or at least as important, as the street maintenance needs



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Secondary Recommendations

- **Adopt a 30 Year Street Design Standard**
 - New Streets
 - Reconstructed Streets
- **Adopt a Street Funding Allocation Plan**
 - Reconstruction
 - Overlays
 - Seal Coats
- **Identify Funding Sources for Drainage and Utilities**
- **Adopt Policies to Encourage Infill Development**



We also have several secondary recommendations, that were not part of our assignment, but that we believe are important for you to consider .

First, we recommend that all streets be designed for a 30 year life. That should apply to all streets, whether they be new streets and street reconstruction.

We recommend adopting a street funding allocation plan to properly allocate funding each year to the three major maintenance categories; reconstruction being full depth repair sometime including curbs, overlays which is generally about 2 inches of hot mix, and seal coats which are typically a layer of oil and rock.

We recommend separate funding sources be identified for drainage and utility work associated with street construction,

And, finally we recommend adoption of policies to encourage infill development. As noted in a previous slide, streets and land area are growing faster than population , which is likely a contributing factor to almost $\frac{3}{4}$ of the land area within the city limits being low to no revenue generators.



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Optimum Funding Level

– Reconstruction

- Frequency 30 Years
- Annual Funding \$59,000,000
- 3.33% Streets/Yr

– Overlay

- Frequency 30 Years
- Annual Funding \$14,200,000
- 3.33% Streets/Yr

– Seal Coat


- Frequency 15 Years
- Annual Funding \$7,900,000
- 6.66% Streets/Yr

– Requires Total Annual Funding of **\$81,100,000**




In our last presentation to you, we examined funding levels. If all streets are indeed designed and built for a 30 year life, then it follows that they would need reconstruction every 30 years.

Therefore, the optimum funding level would provide for a 30 year reconstruction frequency, at an annual cost of \$81M, consistent with staff analysis of the funding need.




Minimum Funding Level

- **Reconstruction**
 - Frequency 100 Years
 - Annual Funding \$17,700,000
 - 1.00% of Streets/Yr
- **Overlay**
 - Frequency 50 Years
 - Annual Funding \$8,500,000
 - 2.0% of Streets/Yr
- **Seal Coat**
 - Frequency 10 Years
 - Annual Funding \$11,900,000
 - 10.0% of Streets/Yr
- **Requires a Total Annual Funding of \$38,100,000**




On the other end of the spectrum, if we extended the reconstruction frequency to 100 years, the total annual funding requirement would be only \$38.1M. None of us think a 100 reconstruction frequency is desirable, but as Oscar Martinez pointed out last time, it would be an improvement over what we have now.

We would certainly see improvement to many streets at this level of funding, but overall, the entire street system would continue to deteriorate.



Recommended Funding Level

- **Reconstruction**
 - Frequency 60 Years
 - Annual Funding \$29,600,000
 - 1.67% of Streets/Yr
- **Overlay**
 - Frequency 30 Years
 - Annual Funding \$14,200,000
 - 3.33% of Streets/Yr
- **Seal Coat**
 - Frequency 10 Years
 - Annual Funding \$11,900,000
 - 10.0% of Streets/Yr
- **Requires Total Annual Funding of \$55,700,000**



We believe that a middle ground of about \$55.7M would be an acceptable annual funding level.

It would provide for a street reconstruction frequency of about 60 years

An overlay frequency of about 30 years,

And a seal coat frequency of about 10 years.

We think this funding level is achievable, and the funding allocation among the three major categories of reconstruction, overlays, and seal coats is reasonable.



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Notional User Fee Approach

- **Establish a Reasonable and Affordable Monthly Single Family Dwelling User Fee**
- **Convert to an Equivalent SFD Acreage Fee by Assigning a Conservative Estimate of 4 Single Family Dwellings Per Acre**
- **Compute Other Land Use Acreage Fees by Assigning a Multiple to SFD Acreage Fee**



So, how do we raise \$55.7M each year? Again, we recommend a street user fee as the primary revenue generator.

Last time you asks us to explain further what a user fee might look like.

To keep it simple, let me lay out what I will refer to as a notional approach.

First, lets establish what we all believe would be a reasonable and affordable monthly fee for a single family dwelling, and let that be the base fee from which all other fees are determined.

We could then convert to an equivalent single family dwelling acreage fee using a conservative estimate of 4 single family dwellings per acre.

Then, we could apply multiples to the SFD acreage fee to compute fees for other land uses.



Example Calculation

- **Single Family Dwelling Fee - \$10/Mo**
- **SFD Acreage Equivalent – 4 x \$10 = \$40/Mo**
- **Apply Multiples for Other Uses**
 - Single Family x 1.0 x \$40/Ac = \$ 40/Ac/Mo
 - Industrial x 2.0 x \$40/Ac = \$ 80/Ac/Mo
 - Business x 3.0 x \$40/Ac = \$120/Ac/Mo
 - Multi Family x 4.0 x \$40/Ac = \$160/Ac/Mo
 - Commercial x 5.0 x \$40/Ac = \$200/Ac/Mo



Using this notional approach, this would be an example calculation.

Lets say for instance that a reasonable and affordable fee for a single family dwelling is \$10 per month.

The SFD acreage fee equivalent would then be 4 x \$10, or \$40 per month.

Applying multipliers to the SFD acreage fee of \$40 per month would yield the monthly acreage fees for other uses.

The land uses and multipliers shown are again notional and will need to be correctly established per accepted engineering methods and adjusted to our own community surveys and traffic observations.

But, for discussion lets say that we believe an acre of industrial use land generates 2 times the traffic that an acre of SFD use generates.

Business, generally meaning professional office 3 times

Multi Family 4 times

And commercial , or retail establishment use 5 times.

The monthly fees for each use would then be a multiple of the SFD \$40/ acre; \$80 for industrial, \$120 for business, \$160 for multi family, and \$200 for commercial.



Estimated Fee Generation

SFD Base Fee			\$ 5	\$ 10	\$ 15	\$ 20	\$ 25	\$ 30
SFD Acreage Fee (Base x 4)			\$ 20	\$ 40	\$ 60	\$ 80	\$ 100	\$ 120
	Factor	Acreage	Fees	Fees	Fees	Fees	Fees	Fees
SFD	1	17134	\$ 342,680	\$ 685,360	\$ 1,028,040	\$ 1,370,720	\$ 1,713,400	\$ 2,056,080
Industrial	2	3524	\$ 140,960	\$ 281,920	\$ 422,880	\$ 563,840	\$ 704,800	\$ 845,760
Business	3	440	\$ 26,400	\$ 52,800	\$ 79,200	\$ 105,600	\$ 132,000	\$ 158,400
Multi Family	4	2422	\$ 193,760	\$ 387,520	\$ 581,280	\$ 775,040	\$ 968,800	\$ 1,162,560
Commercial	5	4063	\$ 406,300	\$ 812,600	\$ 1,218,900	\$ 1,625,200	\$ 2,031,500	\$ 2,437,800
Monthly Fees			\$ 1,110,100	\$ 2,220,200	\$ 3,330,300	\$ 4,440,400	\$ 5,550,500	\$ 6,660,600
Annual Fees			\$ 13,321,200	\$ 26,642,400	\$ 39,963,600	\$ 53,284,800	\$ 66,606,000	\$ 79,927,200
General Fund			\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
Total Street Funding			\$ 18,321,200	\$ 31,642,400	\$ 44,963,600	\$ 58,284,800	\$ 71,606,000	\$ 84,927,200

Lets now examine what the formula would produce for various values of SFD monthly fees.

The top line shows various monthly fees for a single family dwelling.

At \$5/Mo, we might be able to generate about \$13 M in fees. Adding the \$5 already allocated from the general fund, we could generate annual street funding of about \$18M. More than we have now, but not enough to make big impact.

At \$10 per month on the next column we achieve about \$31M.

You can see on the blue highlighted column that SFD monthly fees would need to be in the \$20 range to get near our recommended funding level of \$55.7M, and as shown in the green highlight column it would require SF fees in \$30/Month range to achieve the optimum level of \$81M



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Existing Dedicated Sales Tax

- **Crime Control** \$ 5,000,000/Yr
- **Type A Seawall** \$ 5,000,000/Yr
- **Type A Arena** \$ 5,000,000/Yr
- **Type A Ec. Dev.** \$ 5,000,000/Yr
- **RTA** \$20,000,000/Yr



Since we think \$20 per month for a SFD might be too much to ask of homeowners to achieve the \$55.7M annual funding level, you will probably need to supplement the user fee, even beyond the current \$5M from the general revenue fund.

One way to supplement user fees might be to take another look at the existing dedicated sales taxes, although sales taxes do not meet your criteria of matching user cost with user benefit.

However, we can't ignore that the dedicated funds generate about \$40M per year in sales tax revenue.



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Other Funding Sources

- **Sales Tax**
 - 1/8 cent generates \$5M/ year
- **Ad Valorem Tax**
 - 4 cents/\$100 valuation generates \$5M/year
- **Fuel Tax**
 - 5 cents/gallon generates \$5M/year



Of course there are other possible supplemental funding mechanisms that you may want to consider. For example:

1/8 cent sales tax generates about \$5M per year, although CC is currently at the authorized limit for sales tax

A 4 cent/\$100 ad valorem tax generates about \$5M per year,

And we think a 5 cent city gas tax, if enacted by the legislature and approved by the voters, might generate \$5M year, if our estimate of 100M gallons of gas sold in Corpus Christi each year is correct.

Again sales and property taxes do not match user cost with user benefit.

Gas taxes do, although, in the long run a gas tax revenue might decline, if we all start driving hybrid, or all electric vehicles.



Conclusion

- **Additional Funding is Essential**
- **Status Quo Yields Further Street Degradation**
- **Adopt 30 Yr. Street Design Standards**
- **Adopt \$55.7M Annual Funding Goal**
- **Adopt Street User Fee as Primary Source**
- **Identify Other Funding to Reach Funding Goal**
- **Results Not Based on Scientific Analysis**



In conclusion,

I think we can all agree that additional street funding is essential,

The status quo at \$5M per year assures further and continued degradation,

\$55.7M/Yr is the recommended funding level

A street use fee is the recommended funding mechanism, but will likely need to be supplemented from an additional source to achieve the funding goal.

I would like to caution that our work did not follow any scientific method. We have not done exhaustive data gathering or alternatives analysis. We have, however considered the abundant information presented to us, cultivated opinions, and drawn conclusions.

Likewise the revenue generation examples that we have shown you are based on incomplete data and liberal extrapolation, but we believe are in the ball park of revenues that could be expected from a street use fee based on trip generation.



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Final Remarks

- **Recommend City Staff be Directed to**
 - Develop a Street User Fee Ordinance
 - Re-examine Existing Dedicated Sales Tax Uses
 - Examine Other Sources As Directed By Council
 - Set \$55M/Yr as the Funding Goal
- **Retire the Ad Hoc Advisory Committee**
- **Thanks**



Finally, our recommendation is for you to direct staff to

Develop a street user fee ordinance based on trip generation

To re-examine existing dedicated sales tax uses as possible supplements to the street user fee,

To examine other supplemental funding sources as you direct

And to set \$55.7M/Yr as the Funding Goal

And, at this point, we believe we have fulfilled our ad hoc mission and ask for this committee to be retired.

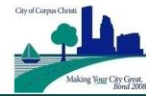
Finally, I want to thank Mayor Adame for his appointments to this committee. Each of us brought a unique perspective to the table. Our varied backgrounds provided different lenses to view the data provided by staff, and different problem solving approaches. In the end, we do all agree on these recommendations.

Also thanks to Oscar Martinez and all of the City Staff members who assisted our efforts and responded promptly to all our data requests.



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Questions?





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Typical 30 Year Design Sections

Residential

12 Inch Compacted Subgrade
Geogrid
8 Inch Base
2.5 Inch HMA

Collector

12 Inch Compacted Subgrade
Geogrid
9 Inch Base
3.5 Inch HMA

Arterial

12 Inch Compacted Subgrade
Geogrid
12 Inch Base
4.5 Inch HMA





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Example of 1 ESAL Vehicle

1 ESAL = 18000 Pound Truck on a Single Axle





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Example of 3 ESAL Vehicle

3 ESAL = 18 Wheeler





ESAL Comparison

- **3 ESAL = 18 Wheeler**
- **1 ESAL = 18000 Pound Truck (Delivery Truck)**
- **Large Passenger Van = 1/300 ESAL**
- **Passenger Car = 1/3000 ESAL**
- **Therefore, the following are roughly equal**
 - 1 18 Wheeler
 - 3 Delivery Trucks
 - 900 Large Passenger Vans
 - 9000 Passenger Cars





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