

CITY COUNCIL STAFF SUMMARY

Meeting Date: 28 Aug 17

Agenda item: 5.1

Prepared by: Bill Hill

Reviewed by: Bill Hill

AGENDA ITEM DESCRIPTION: Discussion - FY 2017-18 Proposed Budget

Attachments for Reference:

- 1) Ald. Colemere Proposed Topics
- 2) Electrical Concept
- 3) Environmental Friendly Parking

BACKGROUND / HISTORY: At the August 22nd Budget Workshop, Ald. Colemere proposed consideration of five topics / actions related to budget or objectives for the FY 2017-18 budget year. At the conclusion of the meeting, consensus was to readdress at the next workshop and to confirm costs. After the workshop, staff met with SARA to consider options for environmental friendly parking at City Hall and grant opportunities from SARA.

DISCUSSION:

- 1) Shaded Fuel Break – Staff follow up with Texas Forest Service (TFS) indicates that upon Council approval of the Shaded Fuel Break, TFS will submit grant to fund the project. No additional funds would be required. TFS will provide up to 10 persons to cut and would be looking for approximately the same number of staff / volunteers to assist (mostly dragging and chipping). The exact location of the break would be determined by a site visit by TSF.
- 2) Chainsaw Class – Staff research on this opportunity would indicate that this is primarily focused on Firefighters, but that the training would fall short of certification because training requires the cutting of a number of large trees. Fire Chief doesn't think there would be significant participation.
- 3) Water Feature – Requires additional research to determine exact requirements and cost.
- 4) Increased Electrical Capability City Hall – Public Works Director and City Manager met with Rhoads Electrical in effort to understand requirements and to estimate a cost. See attached diagram for concept. Cost for adding electrical is estimated to be \$2000 for trenching and asphalt repair and \$8000 or less for electrical. Exact cost would not be known until project was bid on.
- 5) Transfer remaining Muni-tract balance. Fund balance in Capital Replacement for Muni-tract is currently \$26,030. Should Council agree to fund the electrical improvements from Capital Replacement there will be approximately \$16,000 remaining to consider.

6) Environmental Friendly Parking

7) Other budget items (Council)

- After accounting for receipt of 100% property tax collection, the increase in revenue minus misc additional expenses increases the revenues over expenses by \$24,914. Council can consider lowering the amount of fund balance used to fund the Capital Replacement Fund or some other budget use.

COURSES OF ACTION: Provide staff guidance on actions to be included in the budget

FINANCIAL IMPACT: Varies

STAFF RECOMMENDATION: N/A

PROPOSAL FOR A REQUESTED ADDITION TO THIS YEAR'S GOALS AND BUDGET PROCESS

PRIMARY GOAL AND PURPOSE

Perform a “Shaded Fuel Break” on the undeveloped municipal tract from the current Fire wise area done last year and continue running in an area near the back boundary behind Elm Spring and Bikeway residents. A significant natural buffer will be maintained between the private properties and the fire break canopy to protect their privacy. It is likely that very little of this work will be seen or even noticed from any residence or roadway. The bulk of this work will be done by representatives of the Forestry service who will plot it by GPS and coordinate with city officials on the final plan. Also the work will include an “IMPROVED ENTRY FRONTAGE “view along DE Zavala set back a short distance from the road in an irregular path to clean up, enhance and soften the casual visual impact of the tract while keeping a natural look. The downed fence along DeZavala will need to be removed by city personnel and or volunteers. There is no provision in this proposal to repair or replace this fence. It may be possible to incorporate the newly cut well #6 access path into a fuel break as well. All the pathways are intended to be more or less irregular and not long straight unnatural rows. While most of the work for the cutting will be performed by the forestry service personnel, the city will most likely need to provide one or two employees and or volunteers to aide in the brush removal to the chippers. We assume the chipped mulch will be available for ground cover use around municipal landscapes.

For clarification see definitions below (<https://tfsweb.tamu.edu/content/article.aspx?id=19850>)

*A **fuel break** is the thinning of vegetation, or fuels, over a specific area of land. They are most commonly used to surround a community and slow the spread of a wildfire. By decreasing the amount of vegetation the fire has to travel through, you are significantly reducing the risk of extreme fire behavior.*

*A **fire break** is a break in vegetation. In some cases it may be a gravel road, a river or a clearing made by a bulldozer. A ‘green’ fire break uses grasses with high moisture content, such as winter rye or winter wheat to provide a break in the continuity of the fuel. If wide enough, a fire break will stop the spread of direct flame. However, embers can still be lofted into the air and travel across the line.*

Fuel breaks are most effective when placed along a natural fire break like a road. Choosing a site along a road also allows easy access for equipment.

Follow these helpful tips when creating a fuel break:

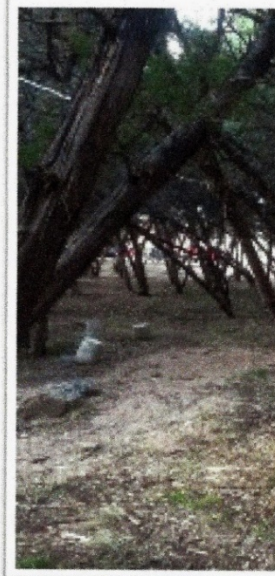
- *Follow a natural fire break or contour lines*
- *Prune large trees to 10 feet from ground*
- *Remove ladder fuels such as tall brush and small trees*
- *Thin trees to create a crown spacing of 25 to 30 feet*
- *Break up thick areas of brush*
- *Maintain a minimum width of 60 feet on flat land and 100 feet on slopes*

Shaded Fuel Break

- Reduce the fuel load.
- Raise the canopy base height.
- Reduce fine fuels while preserving the shaded canopy cover.
- Remove all dead and downed vegetation.
- Eradicate any invasive, non-native species found.
- Promote a mixed hardwood/juniper closed canopy (70-100%) woodlands cover-type

Treatment Targets

- Fuel loadings of highly flammable fuels
- High density with “ladder” fuels
- Invasive Species Management
- Favor valuable species
- 3 Types of common treatments:
 - Access Corridors
 - Dead and Down Removal
 - Shaded Fuel Break



The current view of the Municipal Tract



The heavy orange shaded area shows the possible look of a path for a “Shaded Fuel Break”. The wavy line running from DeZavzla to the NW upper corner (top left), is a general path of the well site #6 access path recently cut by Public Works. The light green line along the border of DeZavzla is a suggestion of an “improved entry” to the tract. **Note none of these are to scale only a general idea.**



Location 4: BEFORE

Location 4: AFTER



Long views are gained by removing dead and other highly flammable trees from under larger trees and treating the stumps to prevent regrowth. The ample space between large canopy trees results in a shaded fuel break.

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Shaded Fuel Break

Shaded Fuel Break is removing the highly inflammable trees (eastern red cedar, brush, and small dead trees) which when ignited shoot embers skyward that are blown down wind to ignite new sites. Wild fire is cooled down from extremely hazardous to grass fire burning under hardwoods (that are less combustible) which may or may not ignite. Fire fighters fighting a cooler fire are relatively safer and their ability to contain the fire is more manageable.

Location 1: BEFORE



Location 1: AFTER

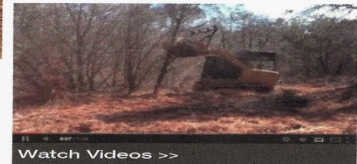


Here, we took ladder fuel from under larger trees, beginning with smallest and working up.

The benefit of forestry mowing to wildlife is light for grasses and flowers (forage) to grow with forestry mower operator leaving adequate nesting. This provides the benefit of wildfire more selectively.



Modern Forestry Mower >>



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Better Than Bulldozing
In mid-July we did a demonstration shaded fuel break on a property in Paige... [Read More >](#)



A Fence Line Revealed
Recently (Sept 17 & 18) we did fence line around back half of 10 acres. The... [Read More >](#)

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POSSIBLE CHAINSAW CLASS

This work could be also be performed in conjunction with a chainsaw class instructed by the Forestry Service to our fire department and public works staff (15-20 people?) as work is done. This class is not covered under a grant and is expected to cost between \$1000 and \$1500. If it is not felt to be of benefit then we can remove it from the plan and reduce the cost to the city.

A description of the Chainsaw class as copied from
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_033716.pdf



*S-212, WILDFIRE POWER SAWS 2004
30 hrs. Course Description Wildland Fire
Chain Saws, S-212, is an instructor-led
course intended to be presented at the
local level. The course lessons provide
introduction to the function, maintenance
and use of internal combustion engine
powered chain saws, and their tactical
wildland fire application. Field exercises
support entry level training for firefighters*

with little or no previous experience in operating a chain saw, providing hands-on cutting experience in surroundings similar to fireline situations. Objectives • List, define, and apply chain saw safety standards as required by OSHA and NWCG member agency manuals, handbooks and directives. • Incorporate the approved use, maintenance, and function of personal protective equipment (PPE) in wildland fire chain saw applications. • Identify basic chain saw parts nomenclature, maintenance, tuning, troubleshooting, and safety features. • Demonstrate field maintenance tasks required for chain saw operation. • Demonstrate the tactical application of chain saws in brushing, limbing, bucking, and falling for fireline construction and mop up operations. Target Group this course is required training for all wildland fire chain saw operator positions. Minimum Instructor Qualifications Instructor qualifications are agency determined. Also see NWCG Instructor Qualifications at the beginning of this Guide.

Course Prerequisites Qualified as a firefighter type 2 (FFT2); current certification in Basic First Aid and CPR. Course Level Local



WATER FEATURE

Also included as an improvement to the track and benefit to wildlife, this proposal is recommending installation, **by the city staff**, of a wildlife water feature to be a prefab water tank made of concrete approximately 7' diameter x 2'. A water line will need to be run from a water source or irrigation line near city hall. The tank would be a ground level tank set in such a way to allow it to use natural terrain and be graded up to near the top on approximately 1/3 to 1/2 of the diameter. A float valve is recommended to be installed to keep the feature regularly topped of and as fresh as possible. No recirculating pump is planned at this time but a solar unit is an option in the future as well as running electrical service and using a conventional pump. I am not including any funding for pumps or power to the pond in this proposal. One thing to consider is the regulation as to whether this feature falls under the "Pool Enclosure Fence Codes" if it does then we will need to reconsider a different and shallower feature. I have not received any firm decision on this code issue at this time. In any case a water feature is a doable feature once we determine the proper rules and course of action.

Possible examples of what this might look like are in the pictures below



FUNDING

Based on conversations with Logan Scherschel, the Forestry Dept. representative, we feel there is an excellent chance that since we are a Fire wise city now most if not all the trimming and cutting of brush is possible to be paid for by grants. The fiscal year for this grant begins on September 1, so we need to get our plan in as early as possible to take advantage of these grants.

The chainsaw class is an extra and the cost is approximately \$1000-\$1500. The water tank will cost approx. \$800 delivered and connecting up to water source is expected to be around \$2500 depending on type, size and distance from primary source of water as well as the amount of work to level and backfill against the tank. Automatic filling ball float valves will be used to keep tank topped off at a cost of \$100-\$200.

Assuming we get the grants for the Fire wise work the budget for this should be right at \$5000. Costs of water to maintain are expected to be relatively minimal on an annual basis.

Funding for this will be from the funds already allocated to the municipal tract (Municipal Tract Fund established approximately 5 years ago), currently some \$26,030.

I propose that we pull from the Munitract fund all required funding as well as an additional \$10,000 to extend needed electrical power upgrades and outlets around the city hall grounds to aid and improve the city events. In total the amount to be allocated from the current municipal tract fund will be set at \$15,000. This should be enough to accomplish all this assuming we can get the grants to perform the work by the Forestry service. This leaves a balance in the fund of approximately \$11,030. Unless other council recommendations are suggested or added here to use these funds, I recommend the excess be returned to the general fund.

I am making this proposal dependent on it passing a full council vote and becoming an actual project to be done.

Should it not pass then the suggestion to move any funds out of the Municipal Tract Fund for any and all other purposes "not" related to needed work, enhancements or maintenance of the municipal tract are withdrawn.

CONCLUSIONS

THIS PROPOSAL SERVES TO DEAL WITH SEVERAL KEY ISSUES

- 1- Primary accomplishment is that it allows for adding a critical and adequate access in the rear of the tract for fire fighters and their equipment to protect key city facilities and private residents along Bikeway and Elm springs in the event of a fire, while retaining a natural rustic look from all sides.
- 2- Provides additional features to aid and improve the natural wildlife and habitat on the tract and provide needed water and a free path for larger wildlife to move easier through the property.
- 3- Greatly enhances and improves the casual visual image of the property from along DE Zavala.
- 4- Removes the generally undesignated excess funds from the Munitract fund and returns them into the general budget (approximately \$11,030).
- 5- Sets the tract up as a nature habitat and allows for the possibility of very low impact nature trail settings to be considered at some future point to allow for all our residents use without removing the general rustic and natural look and feel.
- 6- Gives the tract a set (all be it compromised) purpose and hopefully removes it from much of the divisive and unproductive conflict in our city.

Shadow Mist Fuel Reduction Project



Before



After

- Leon Valley, Bexar County, 2016
- Shaded Fuel Break
- Chainsaws were used to create a shaded fuel break 50 feet wide. Tree canopies were maintained, but were pruned up to a height of greater than 6 feet. Cut brush was chipped and broadcasted within the shaded fuel break.
- Area Treated: 1.5 Acres
- Area Protected: 13 Acres
- Total project cost: \$132,060
- Total values protected: \$14,367,350



TEXAS A&M
FOREST SERVICE

Los Reyes

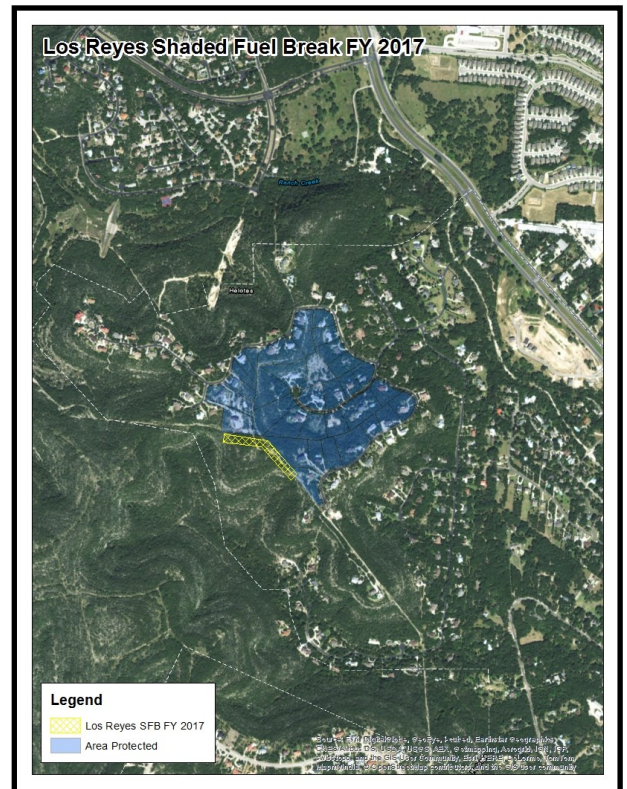


Before



After

- Government Canyon State Natural Area, Bexar County 2017
- Treatment Type: Shaded Fuel Break, 75-100 feet wide
- Treatment Method: Chainsaws used to limb trees up 6-8 feet, remove dead and down, thin overlapping canopy, all debris chipped and broadcast on site.
- Total Area Treated: 1.5 Acres
- Total Area Protected: 68 acres
- Total Project Cost: \$1,314.72
- Total Values Protected: \$14,789,130
- Cooperators: Helotes FD, San Antonio FD, District 7 Fire Rescue, Los Reyes Canyons Firewise Community Volunteers, USAA, Texas Parks and Wildlife, and Texas A&M Forest Service.



Project Name



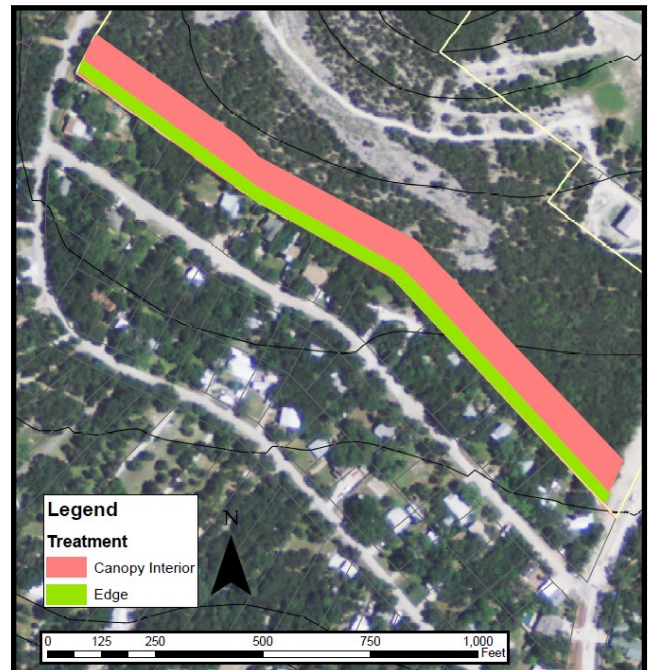
When a before/after picture would not be valuable, caption other photos that show and explain importance of working relationships, disposal training or of the fuel reduction

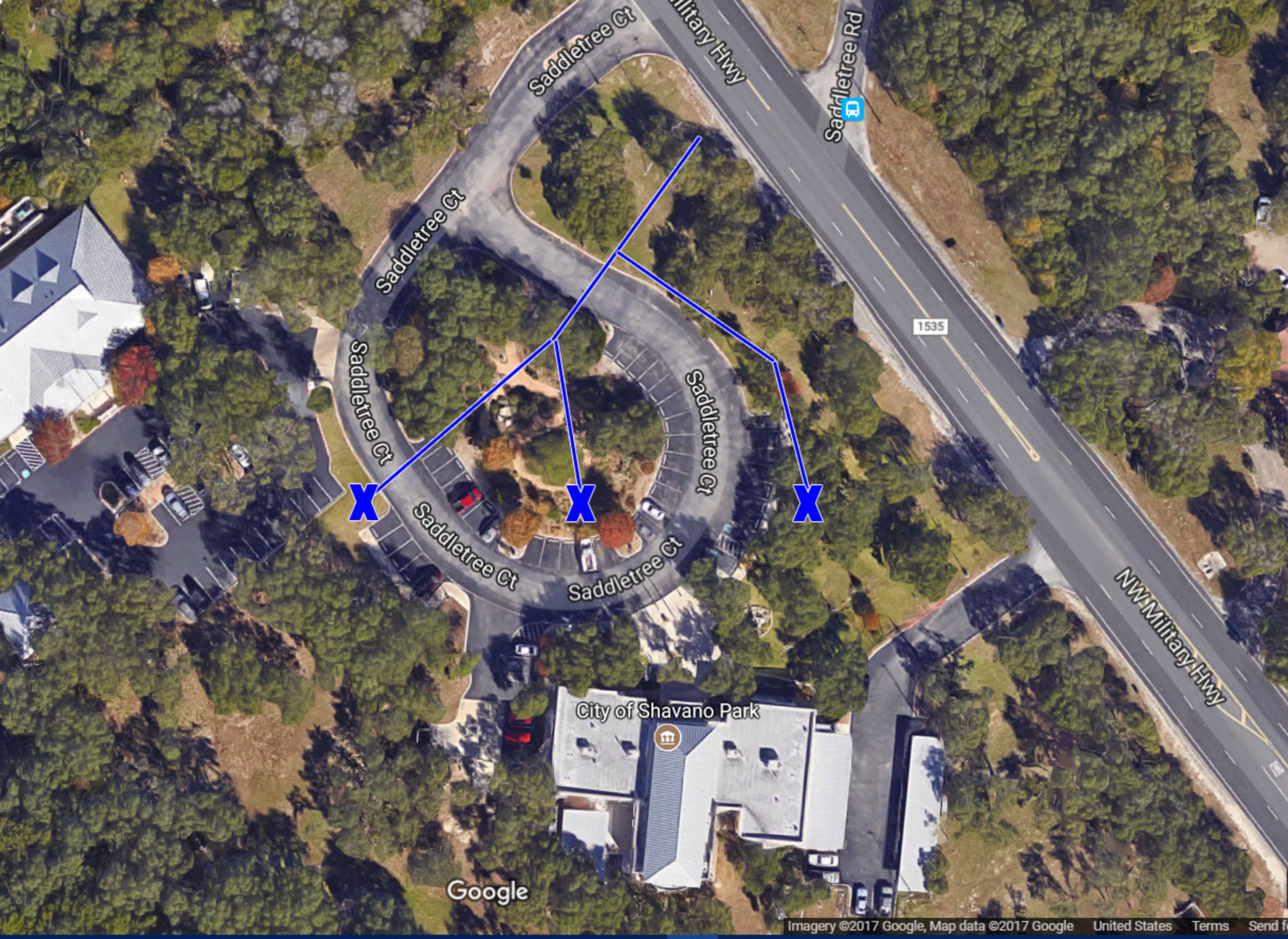
- Location/County, Year
- Treatment Type: Example is shaded fuel break
- Treatment Method: Equipment, type or vegetation removed, diameters, disposal method
- Total Area Treated: acres or length of fire break/road
- Total Area Protected: acres, this is dependant on the type and size of project. Ask team lead or see guide for help
- Total Project Cost: \$0.00
- Total Values Protected: \$X,X00,000 calculated from the area protected using home/building values and land values.



TEXAS A&M
FOREST SERVICE

Trails End Mitigation Treatment Map





Saddletree Ct

Military Hwy

Saddletree Rd

1535

Saddletree Ct

Saddletree Ct

Saddletree Ct

X

X

X

Saddletree Ct

Saddletree Ct

NW Military Hwy

City of Shavano Park

Google

CITY COUNCIL STAFF SUMMARY

Meeting Date: August 28, 2017

Agenda item: 5.1.3

Prepared by: Curtis Leeth

Reviewed by: Bill Hill

AGENDA ITEM DESCRIPTION: Discussion - FY 2017-18 Proposed Budget

- Environmental Parking at City Hall

x

Attachments for Reference:

- 1) Pictures - Fire Lane at Bader House and Other
- 2) Product Sheets

BACKGROUND / HISTORY: City events and Municipal Court proceedings often overwhelm the parking capacity at City Hall and cause unsafe overflow parking onto NW Military. City has in recent years directed cars to a flat area on DeZavala behind the Police Department wing of City Hall. A rough depiction is seen below.



DISCUSSION: Discussions with the City Engineer and San Antonio River Authority (SARA) and the City's own review leads to the conclusion that there are three options for creating an roughly 20,000 square foot environmentally friendly parking lot.

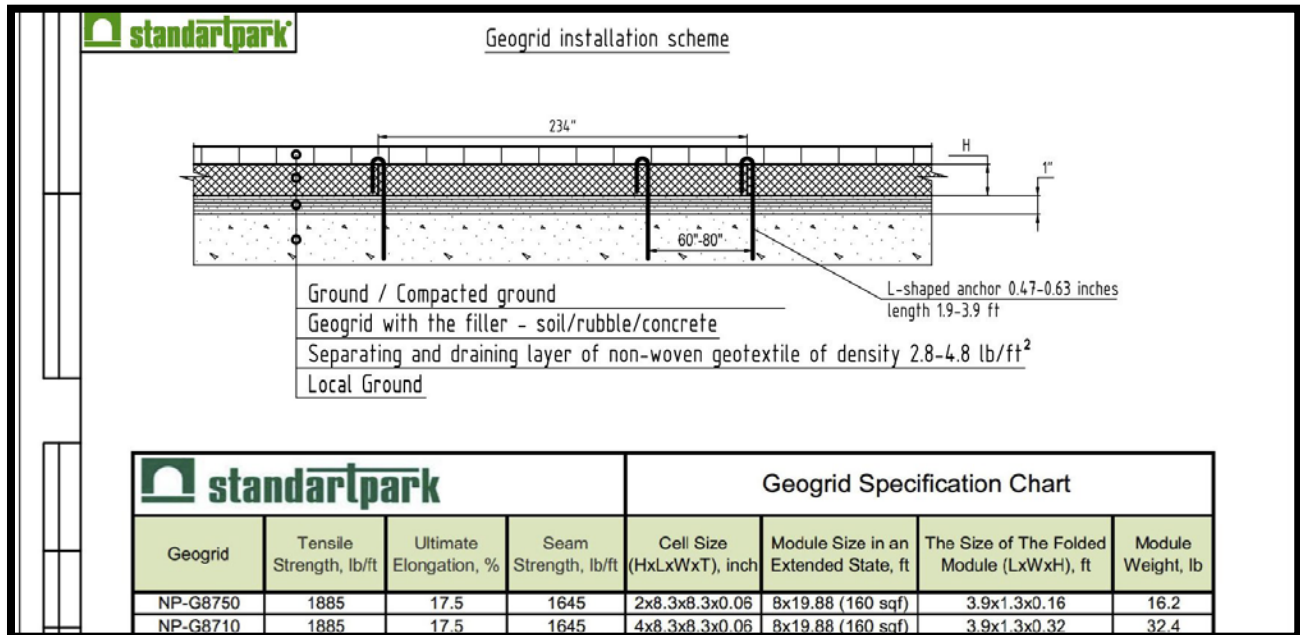
In predicted cost from lowest to highest:

1. Utilize existing rock surface with minimal topsoil and simply delineate the parking area using railroad ties or bricks.
2. Create a permeable structured base using plastic pavers and gravel.
3. Create a paved parking lot with curbs but with permeable structured base for the parking stalls.

SARA reports only option 3 is available for the SARA rebate program. Their Landscape Architect, as a subject matter expert, did not however recommend creating option 3 as the site was not suited for it. Staff doesn't believe this option meets the intent of Council.

There are several different options for a permeable surface.

The cheaper option the City investigated is a polyurethane grid that stretches to form an interlocking surface but is anchored with rods 2 to 4 feet into the ground. Staff is unsure if these rods are suitable for the solid rock surface covering parts of the overflow parking site. The stretched polyurethane also lacks any way for staff to delineate parking stalls. Cost: approximately \$16,000-\$20,000.





The more expensive option the City investigated is a rigid plastic paver that is interlocked easily:



The rigid system also comes with installable “superspots” that allow easy marking of parking spaces:

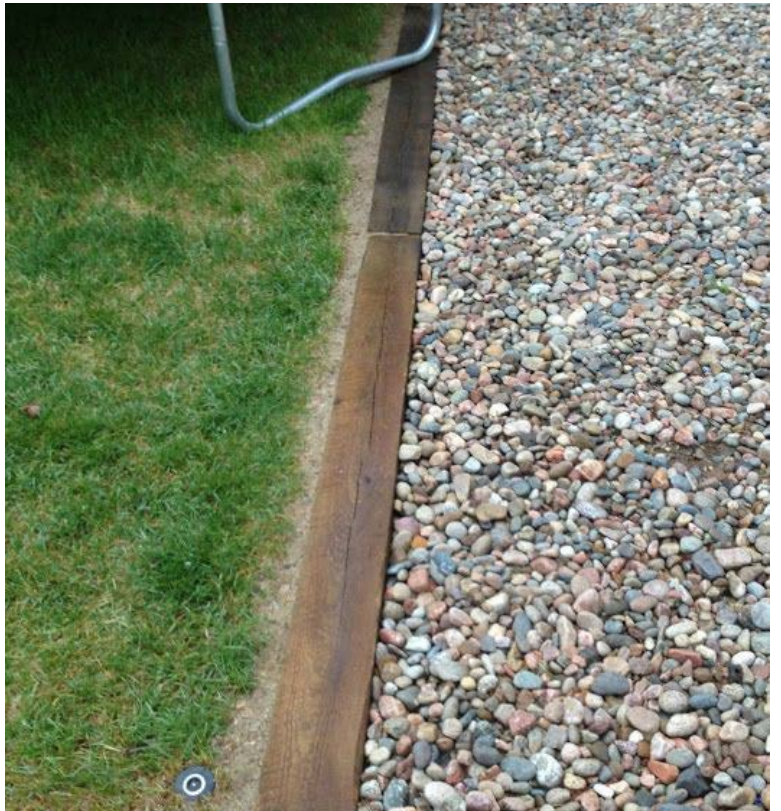


COURSES OF ACTION: Varies

FINANCIAL IMPACT: Varies.

1. Cost of Option using brick / rail road ties not developed
2. 20,000 sq ft for 2 inch polyurethane stretch grid (approximately \$16,000-\$20,000)
3. 20,000 sq ft rigid plastic paver grid (approximately \$40,000-\$50,000)

RECOMMENDED MOTION: N/A







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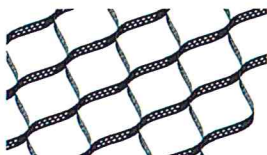
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PRODUCT DESCRIPTION

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Our 2" thick ground grid is perfect for all sorts of projects. From parking spaces, landscaping, and anything that needs to withhold a heavy driving load. Made from polyethylene material which lasts the test of time, and will hold any type of aggregate or filling you desire to fill it with. Easy to install.



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PARAMETERS

Article NP-G8750

Material Modified Polyethylene

Coverage 160 SQ FT

Dimensions 9FT x 17FT

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- 1885 LBS / SQ FT - Tensile Strength
- Perforated Material
- Dense for easy installation.

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Amazing

Isaiah on Jul 10, 2017

I have been working with the grid for quite a time and let me tell you - it's THE best!

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Perfect for what its for

Tom on Jun 28, 2017

Used this grid several times, on slope walls, trails, and paths... withholds a substantial amount of weight and things are looking great. I highly recommend this over many of the competition.

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PERFECTION

Tony R on May 16, 2017

This was a breeze to install and worked perfectly. Very strong, and unique. The price was perfect, and we couldn't be more happy with the driveway result. Used gravel and it had no effect on the grid. The grid is holding very strong and really working well. Really advise to use this if you are doing any type of gravel driveway , or even grass. Its very strong and will hold.

[Report as Inappropriate](#)