



# AGENDA ITEM MEMORADUM

Item No. 119

**MUNICIPAL SERVICES**

Department

**DON PRINCE**

Department Director 

<b>COMMISSION MEETING DATE - 7:00 PM</b>	<b>Deadline to Town Clerk</b>
<input checked="" type="checkbox"/> Aug 23, 2011	Aug 12 <sup>th</sup>

- Presentation     Reports     Consent     Ordinance  
 Resolution     Quasi-Judicial     Old Business     New Business

**SUBJECT TITLE: Park Playground Surface Replacement**

**EXPLANATION:** The playground surface at the Municipal Park has deteriorated to the point it has become a trip hazard and, in some, no longer provides the needed protection. The surface is about twelve (12) years old and was repaired approximately three (3) years ago.

There are multiple areas that are in need of repair and the previous repairs are failing as you can see in the attached photos (**Exhibit 1**).

Staff contacted Site Horizons, the company that installed the Pirate Ship play equipment and playground surface to see if repairs could be made. Site Horizons advised that to continue repairing the surface is not recommended because of the age and condition of the surface.

Site Horizons provided us a quote (**Exhibit 2**) of \$27,333.40 for the removal and installation of 2,200 square feet (approximately \$13.00 a square foot) of pour in place rubber playground surface padding based on the Palm Beach County School Bid #10C-54B. In addition we are checking with the Broward County Parks Department and the Broward School District to ensure the Palm Beach School District price offers the best value.

Temporary measures have been taken to ensure the public's safety at playground but the expedited replacement of the surface is recommended. A new poured-in-place surface is recommended.

According to Wikipedia:

In the United States playground-related injuries send 200,000 children to an emergency room every year. If visits to doctors are included, the figure rises to 500,000 injuries, according to the American Academy of Orthopedic Surgeons. More than half of these injuries result from falls to a playground surface that can cause fractures, concussions, dislocations, and internal injuries. Recognizing these facts, many organizations, including the Consumer Product Safety Commission, have issued guidelines and standards for playground surfaces.”

In the United States, as well as being safe, a playground surface should be firm enough to meet the requirements of the Americans with Disabilities Act, which means it must offer easy mobility for children in wheelchairs. Meeting these dual objectives limits the number of types of surfaces that can be considered by responsible playground owner/operators. ASTM International has developed test method F1951 to evaluate compliance with the Americans With Disability Act (ADA). However, meeting the ADA's requirements does not guarantee that all children with disabilities can use the playground equipment.



As the table above makes clear, some surfaces commonly used do not provide adequate protection from the effects of falling, or may not offer adequate wheelchair access. The American Academy of Orthopedic Surgeons states, "Soil, packed dirt, grass, and turf are not recommended for surfacing." A thick layer of lush green grass, moist from recent rains, may seem soft enough. But in practice the grass wears away and either turns to mud in wet weather or dries to a hard crust in dry weather

Common surfaces used in playgrounds include:

**Engineered Wood Fiber (EWF)** This material consists of shredded wood into sizes and aspect ratios determined by a series of specified sieves. The wood chips are springy enough to meet ASTM F1292 for impact attenuation and firm enough to meet ASTM F1951 for wheelchair access. Engineered wood fiber is made from biodegradable virgin wood. A wood fiber surface tends to compact over time and needs to be topped off every two to three years.

**Poured-in-Place (PIP):** is typically a one-piece, seamless EPDM rubber surface, usually about 3/8" thick, which is placed over a layer of cushioning from 1" to 5" inches deep, consisting of rubber particles bound together with a polyurethane binder. The surface comes in a wide range of colors and even mixtures of colors. A typical poured-in-place surface meets national standards for safety and wheelchair accessibility. The sun's rays and power washing may cause PIP colors to fade and degrade after a few years.

**Rubber Mulch:** Rubber Mulch is often chosen as a safety surface for home, school, municipal and private playgrounds because of its high fall height protection and low-maintenance. A 6-inch layer of some Rubber Mulch products will cushion a child's fall from as high as 16 feet. Certain brands of Rubber Mulch have been certified by the International Play Equipment Manufacturers Association (IPEMA) Rubber Mulch tends to be safer, more cost-effective (over time), durable, environmentally-friendly and lower-maintenance (users save time and money by removing the need to re-apply safety surfacing once or twice every year). Rubber mulch is also clean - minimizing airborne dust and particles. Colored rubber mulches tend to vary in composition, but brands that use chemically bonded materials state that the color will last up to 12 years.

Sometimes derided as dangerous, toxic or flammable because it typically uses recycled tire rubber as source material, there has been no scientific testing that has shown it to be dangerous in any way<sup>[3]</sup>.

**ATP Rubberized Unitary Surface:** ATP stands for Aliphatic Thermoplastic Monomer. This surface also meets safety and accessibility standards. It consists of a layer of almost-spherical rubber particles, about one-sixteenth of an inch in diameter, which are chemically bound by a color-fast binder. This surface, in turn, is bonded to a layer of Engineered Recycled Foam (ERF) to absorb shock. The colors are vibrant, and they will not fade from the sun or power washing. As with PIP, its main disadvantage is high cost. But this limitation is somewhat offset by long life: Data from Europe and the U.S. indicate these surfaces have a useful life of at least 10 years.

**Shredded rubber:** This material consists of shredded tires about 1" by 1/8" in size. The loose particles are spread on the playground surface where they absorb shock effectively and meets the ASTM F1292 standard.

But there are certain drawbacks. The material moves around in a playground as children play, creating an uneven surface that is not wheelchair accessible. Wear areas under swings and at the base of slides are particularly prone to scuffing out. When this occurs, the thickness of the shredded rubber surface may not be enough to cushion falls from originally specified heights. There is also a risk of fire. Only a small number of such fires are reported each year, but they are



apt to be extremely hot and may not respond to conventional fire-fighting equipment. When this occurs, the playground equipment above the surface may be totally destroyed.

**Sand and gravel:** The extent to which these surfaces meet safety standards depends on the exact type and depth of the material used. When sand is wet, the surface becomes hard and unyielding. In such a condition, the ability of a sand surface to absorb impact is seriously compromised. Neither sand nor pea gravel meet the requirements of the Americans with Disabilities Act for wheelchair accessibility.

In addition to the information above about safety and ADA issues, there are the practical issues of hygiene. Loose materials allow the accumulation of food and debris creating environments for pests and insects. Some loose materials such as sand, may attract the neighborhood cats and become a large litter box. Solid surfaces can be easily clean when accidents occur.

We were going to budget in FY12 to replacement of the playground surface, but because of safety considerations and the availability of funds in the Recreation Division's Special Events Account, we recommended moving forward in the current year via the following budget transfer.

**FISCAL IMPACT AND APPROPRIATION OF FUNDS:**

<b>Budget Transfer:</b>	
From: Recreation Division, 001-572-000-500-495 Special Events	\$26,500
To: Recreation Division, 001-572-000-500-640 Capital Account	\$26,500

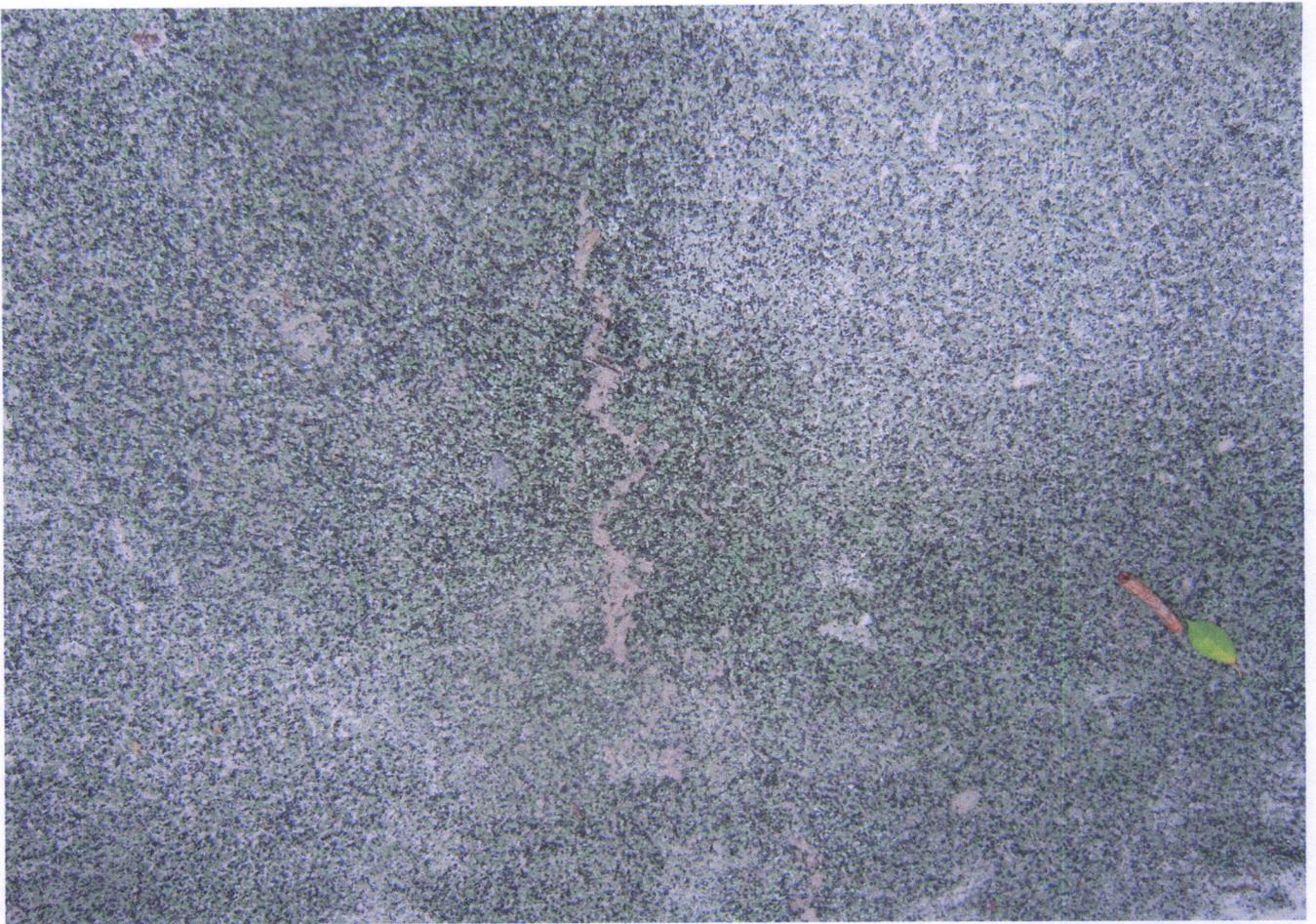
**RECOMEMNDATION:** While \$27,000 for a playground surface may seem excessive, in light of the improved safety, hygiene and ADA access, we believe it is justified.

We recommend the Commission approve the proposed budget transfer and authorize the Town Manager to piggy-back on an existing government contract to replace the playground surface.

- EXHIBIT(S):** 1: Photos  
 2: Site Horizon Quote

Reviewed by Town Attorney  
 Yes     No

Town Manager Initials   CIA







# SITE HORIZONS

# QUOTE

13750 W. Colonial Dr. Ste. 350-134, Winter Garden, FL 34787  
Tel: 407-947-6318 Fax: 407-614-4313

Quote Date: 8/19/11

**Sell To:**  
Don Prince  
Lauderdale by the Sea  
4501 Ocean Dr.  
Lauderdale by the Sea, FL 33308  
Ph: 954-776-5119  
Fax: 954-776-0578  
Email: DonP@lauderdalebythesea-fl.gov

**Ship To:**  
Don Prince  
Lauderdale by the Sea  
4501 Ocean Dr.  
Lauderdale by the Sea, FL 33308

DELIVERY CONTACT: TBD

Qty	Model No	Description	Unit Cost	Discount	Total
2200	PIP	2,200 sq. ft. pour in place, 2.5" 50/50 blend	\$11.33	10%	\$22,433.40
1	Demo	Removal and disposal of existing 2.5" PIP (2200 sq.ft.)	\$4,400.00		\$4,400.00
1	Dumpster	Commerical Dumpster	\$500.00		\$500.00

Discount per Palm Beach County Schools Bid#10C-54B	Sub-Total:	\$27,333.40
Price Includes: delivery and installation	Tax:	Exempt
	Freight:	Included
	Total:	<u>\$27,333.40</u>

Lead Time: 6-8 Weeks ARO  
Payment Terms: Net 30 with approved credit  
Sales Associate: Mary Langley

Ship Via: Best Way  
FOB: Factory  
This Quote is valid for 30 days

Approval and Acceptance of this quote may be executed by signing and faxing to 407-641-0154

Signature: \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

**All Purchase Orders must be made out to**  
**Site Horizons - 13750 W. Colonial Dr. Ste. 350-134 - Winter Garden, FL**  
**34787**