Rieke Field

REPLACEMENT BOND

Synthetic Turf Field Replacement

Open House 2 – May 18, 2016
Rieke Elementary School Library
Welcome – Tonight’s Program

- Introductions
- Public Involvement Overview
- Meeting Objectives
- Project Schedule
- Project Process Update
- Field Design Updates
- Turf Infill Material
- Q & A
Project Overview & Meeting Objectives

- Existing Field Replacement
- Field and Site Improvements
- ADA Improvements
- Project Goals
  - Health and safety in play
  - Permiteable durable field for year-round play
  - Accessibility
Project Schedule

Spring – Summer 2016
• Design Process and Public Input

Fall 2016
• Permitting

Spring 2017
• Bidding

Summer 2017
• Construction
Existing Site

Site Opportunities

• Make the field safe and playable
• Improve access to parking
• Improvements for spectator areas
• Potential to re-use base rock beneath field

Site Challenges and Constraints

• ADA-compliant access from parking lot to backstop and field
• Steep slopes between field and adjacent paths, and field elevation relative to surrounding uses
• Southern, eastern slopes eroding onto field surface
• Grassy mound on north side creates a blind spot
Field Design

**Soccer**
- Field sizes vary by player age
- No single ‘standard’ size for high school or above
- Typical field sizes:
  - U10 and younger: 120’x155’
  - U12: 150’x225’
  - U14 and up: 210’x330’

**Lacrosse**
- Field sizes can vary by player age
- Typical field size is 60x110 yards (180’x330’)
- Youth field typical size 35x60 yards (105’x180’)
- Fields typically striped for men and women

**Field Sideline Run Outs**
- Varies based on agency or jurisdiction: PP&R standard is 15’; national recommendation is 10’
Preferred Design
Field Cross-Sections
Project Budget Status

- Not-to-exceed budget allocation:
  - $1.3 million (direct construction costs)
  - 30% cost estimate came in over budget
  - Design team and PP&R worked together on cost reduction strategies
  - Current Preferred Design (shown tonight) meets budget
Field Striping

Soccer
330’ x 210’
(white)

Women’s Lacrosse
330’ x 195’
(red)

Men’s Lacrosse
330’ x 180’
(blue)
Synthetic Turf Profile
Infill Materials

Cryogenically treated SBR Rubber

Quartz Sand
Turf Infill Material Review

- Need for sports fields
- Challenge of maintaining natural grass fields
- Synthetic turf as a solution
- Concerns about crumb rubber infill
- Evaluating infill options
- Parks System Recommendations
Turf Infill Material Review

Need for Sports Fields
- How do our fields get used
- Formal vs Casual
- Provide broad access to recreation
- Significant participation in organized sports citywide
Challenge of Maintaining Natural Grass Fields

- Climate and Environmental
- Limited playable hours – field closures
- Unreliable play for younger player development
- Maintenance intensive – requiring water and fertilizer
- Rutted and hardened fields are less safe for play
- Natural grass needs to rest and recover
Turf Infill Material Review

**Sports Field Playability by Month** (in Portland, OR)

- **Synthetic Turf**
  - Hours of Play: 3,000 hrs/yr

- **Living Grass**
  - Hours of Play: 816 hrs/yr

**Synthetic turf as a solution**
- More playable hours to meet demand
- Permit fees provide revenue
- Less impacts from climate and environment
Turf Infill Material Review

Concerns about Crumb Rubber Infill

- Health risks from chemical exposure
- Current best practices and scientific literature review
- PP&R commitment to monitoring
Turf Infill Material Review

Evaluating Infill Options

- Research
- Identify management considerations
  - Health and Environmental
  - Recreation value and Maintenance needs
  - Lifecycle costs
- Learn from our neighbors, understand how alternative infills perform in the NW

Petroleum Based
- SBR Recycled Crumb Rubber
- Post Industrial Grind
- EPDM New Crumb Rubber
- TPE
- Acrylic Coated Sand

Sand

Plant Based
- Cork and Coconut
- Coconut and Sand
# Turf Infill Material Review

## Infill Material Comparison

<table>
<thead>
<tr>
<th>Infill Type</th>
<th>Petroleum Based</th>
<th>Sand</th>
<th>Plant Based</th>
<th>Living Grass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Post Consumer Tire Crumb Rubber</td>
<td>Silicone Sand (Post Industrial Application)</td>
<td>Coconut Fiber &amp; Cork Mix</td>
<td>Grass Turf in Soil</td>
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<tr>
<td></td>
<td>Post Industrial Product Grinds</td>
<td>New Plastic Crumb (TPE Thermoplastic Elastomer)</td>
<td>Coconut Fiber over sand</td>
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<tr>
<td></td>
<td>New Synthetic Crumb Rubber (EPDM)</td>
<td>New Acrylic Polymer Coated Sand</td>
<td>Cork</td>
<td></td>
</tr>
<tr>
<td>Fields in PP&amp;R Permit System</td>
<td>6</td>
<td>2</td>
<td>180</td>
<td>180</td>
</tr>
</tbody>
</table>

## Management Considerations

### Health
- Chemical Exposure
- Sports Injuries
- Noise Exposure

### Environment
- Carbon Footprint
- Water Consumption
- Reuse / Recyclability

### Recreation Value
- Hours of play available
- Reliable Playability

### Cost
- Installation & Replacement
- Annual Maintenance
- Total Cost Over 20 Years

## Legend
- 🚭 Area of Concern
- 🟢 Manageable Concern
- 🟢 Manageable
- 🟢 Manageable Benefit
- 🟢 Area of Benefit

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Infill evaluation by PP&R Staff as of May 2016. Subject to change.
Turf Infill Material Review

Parks System Recommendations

- Continue to provide both natural grass and synthetic turf fields at a system level.
- Continue data gathering and perform monitoring on the petroleum infill products.
- Continue to follow the studies being conducted by California and EPA.
Next Steps

Website – www.parksreplacementbond.org
• Comment form & presentation online
• Final project updates will be available online periodically

Full PP&R Synthetic Turf FAQ’s posted to PP&R general website

Monitoring Program Updates