Willow Glen Trestle
Larry Ames
and the Friends of the WG Trestle
www.WGTrestle.org
March 2, 2015
The Willow Glen Trestle
to Los Gatos
Willow Glen
Discover Meadow
Diridon
Confluence Pt
Arena Green
WGTrestle
Loz Gatos Creek Streamside Park Committee, 1975 - 2000
Willow Gardens
Willow St. Park
Los Gatos Crk Trail
Urban Stream Restoration Project, in partnership with Santa Clara Valley Water District (SCVWD).

Charter: (1) Flood Control, (2) Water Supply, and (3) Environmentally responsible Land Stewardship.

“History Walk” funded w/ grants from SCVWD, Open Space Authority, Santa Clara Co. Parks, & State of Calif. (Thnx!!)
2004 Master Plan

LOS GATOS CREEK TRAIL, REACH 4
COE AVENUE TO AUZERAIS AVENUE

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

CITY OF SAN JOSE, CALIFORNIA
MAY 2004

NOTE: EXISTING RAILS AND TRACK HARDWARE HAVE BEEN REMOVED

Section 6 Figure 4B
UPRR Railroad Trestle Bridge
2012 City-Commissioned Engineering Report

Three Creeks Trail Railroad Trestle at Los Gatos Creek

Replace Stringer to Cap Bolt, 1" ASTM A325

Replace All Bracing Bolts, 1" ASTM A325
Replace Braces
Replace Both Sashes

Piling Repair

Bent 7 (Looking Ahead on Line)

Note: Spacing of piles at top and bottom are approximations obtained by using the spacing at the cainch and the slope of the pile. These values may vary slightly.

Details of simple repairs
Restoration Plans were derailed

- City departments are set up to procure and install standard-model items
  - Departments do not have the capacity to include old & historic structures that have significance to the community: even they recognize that they “don’t do history” well
  - Thought that nobody knew or cared about the old trestle - it wouldn’t be missed...
Restoration Plans were derailed

- City departments are set up to procure and install standard-model items
  - Departments do not have the capacity to include old & historic structures that have significance to the community: even they recognize that they “don’t do history” well
  - Thought that nobody knew or cared about the old trestle - it wouldn’t be missed...
- City has limited budget for maintenance
  - New items are easier to maintain: it’s better to spend $10 of “other people’s money” than $1 from a Dept. Budget
  - But either way, that money comes from us, the taxpayers...
- The Consultant was hired by the City, and, like any business, they want to keep their customers happy
  - Sensed wish to justify new bridge, so the trade matrix was “tweaked” and then used to justify desired finding in the Executive Summary
- Recommendation was brought to Council for decision just days before arbitrary deadline for major grant
- Council: the decision has been made; can’t waste time reconsidering.

Sometimes it is worth the effort to reconsider something important.

It’s not too late to save the WG Trestle!

We and the community are pleased to support the City as it works with Senator Jim Beall on extending and using this grant.
The public was never given an opportunity to discuss the decision.

There have been various official presentations and working group meetings, but all were limited to discussing design details of the new bridge, never whether there was the wish or need to replace the existing trestle.

City released the “Initial Study / Mitigated Negative Declaration” (IS/MND), Nov. 2013.

Public was invited to comment, BUT...

since this was just an IS/MND and not an Environmental Impact Report (EIR), there was no requirement that public questions be addressed -- and they weren’t

In order to get an opportunity for public comment, the Friends of the Willow Glen Trestle had to sue the City.

As a result of our successful lawsuit, City has had to prepare an EIR.
Draft Environmental Impact Report (DEIR)

- 512 pages total: 1.5" thick (double-sided), weight: 3 lbs 10 oz
  - Send comments to John Davidson at john.davidson@sanjoseca.gov by March 13th, 2015.

- The DEIR describes two alternatives:
  - “Project Alternative” -- the new prefab bridge; and
  - “Retrofit Alternative” - the preserved trestle.
  - It is filled with good technical information, although some important details are missing...

- And the DEIR’s “Executive Summary” mischaracterizes the report’s findings, and continues to recommend the prefab bridge

- The final decision is to be made by the City Council.

Now is the time to ask questions: City is required to address concerns and questions submitted by March 13th.

Now is the time to write to the Mayor and all the Councilmembers! Sign our petition! Make phone calls!
Quick Summary of the DEIR

- Fire
- Flood
- Toxics
- Estimated Life
- Construction time
- Historic Significance
- Inspection and Maintenance
- Total Cost
- Use of an Unweighted Trade Matrix
The trestle is constructed of old-growth redwood – very fire resistant (as evidenced by it still standing after 90+ years)

Retrofit plans include sprinkler system, alarm system, and fire-retardant treatments

Fire fighters have ready access over the full length of the trestle, and there are three fire stations within two miles of the trestle

While steel doesn’t burn, it does lose its strength when heated to brush-fire temperatures

The steel bridge is a truss structure, and, like a chain, it is only as strong as the weakest link: the whole bridge could collapse

The proposed steel bridge doesn’t even include any fire-protection measures – no sprinklers, no alarms, and no debris and brush removal
Fire Precautions

- The DEIR recommends the removal of debris and tree limbs within 25’ of trestle:
  - A reasonable precaution
  - Should also be done for other bridges across town (but isn’t)
  - Should also be done for prefab steel bridge, to reduce probability of metal heat yield

- DEIR Executive Summary penalizes the “Retrofit Alternative” because of this tree trimming:
  - Doesn’t mention that prefab steel bridge requires clearing of trees to make 20 ft. wide access road on upstream side, and that nearby trees on downstream side are nearly all invasive exotics that need to be removed regardless

- The “Project Alternative” should be scored equal or inferior to the “Retrofit Alternative”, since the Retrofit Alternative includes a sprinkler system and debris removal, and the Project Alternative doesn’t.
Impact on stream flow, with trestle in place

“Less than significant”
Blockage by stream-borne debris

- Fallen tree: ~2' dia, 30' long
- Blockage: 60 sq.ft

A snagged fallen tree raises the flood level by about 4 inches.
“Studies in both terrestrial (e.g., railroad ties) and aquatic (e.g., pier pilings) environments have shown significant decreases in creosote and PAH releases from treated wooden structures within 5 years or less of placement. The pilings comprising the Three Creeks Bridge are, for the most part, not new (the bridge itself was built in 1921) and are likely well past the point where meaningful quantities of creosote constituents (particularly the more soluble and toxic LPAHs) are leaching into the environment - either to the creek or to its terrestrial, riparian margins. ... Our current knowledge of the behavior of creosote and its constituents in older creosote-treated wooden structures suggests that leaving the pilings of the Three Creeks Bridge in place will not pose a risk to terrestrial or aquatic receptors. Conversely, if removal is contemplated, this same knowledge clearly indicates that pile removal projects must deploy best management practices (BMPs) to avoid or mitigate the possibility of temporarily increasing PAH levels in soils or sediment as a consequence of the physical disturbance of pilings.”
<table>
<thead>
<tr>
<th>PEDESTRIAN BRIDGE DESIGN ALTERNATIVE</th>
<th>Three Creeks Trail Railroad Trestle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bridge Design Alternatives</strong></td>
<td><strong>Expected Lifetime</strong></td>
</tr>
<tr>
<td><strong>Concrete Deck on Restored Trestle</strong>: Retrofit Alternative</td>
<td>30-50 years with regular maintenance.</td>
</tr>
<tr>
<td><strong>Retrofit Alternative</strong></td>
<td>Note: Table values in parenthesis refer to the overall present value cost.</td>
</tr>
<tr>
<td><strong>Project Alternative</strong></td>
<td>75 years.</td>
</tr>
</tbody>
</table>

**Table 16: Alternative Comparison Matrix**

<table>
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<tr>
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<th>Expected Lifetime</th>
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<tr>
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<td>75 years.</td>
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</table>

**Note**: Table values in parenthesis refer to the overall present value cost.
Construction Time

- Restored Trestle: “Completion of the retrofit project is expected to require 5 months of construction, approximately the same as the proposed project.” (DEIR, p. 6-3)

- Prefab Replacement Bridge: “Construction is expected to begin in summer 2015, and last for approximately 7 months.” (DEIR, p. 2-2)
Historic Significance: The Western Pacific Railroad

The WG Trestle is near the end of the line.
San José and Willow Glen in 1928

In 1927, Southern Pacific shipped 699,002 tons of dried fruit from the area, and Western Pacific shipped 44,781 tons.

Not too shabby, given how many of the canneries were by the SP line...

First fruit packing in Santa Clara Valley: 1871.

The Del Monte brand first shipped in 1917.
Town of WG was founded in conflict w/ railroads
Historic Significance

The History Report in the DEIR says that train trestles are common and nothing special, that they’re everywhere, and not worth saving.

The DEIR says that this is a trestle! “The Goat Canyon Trestle in San Diego County -- the largest wooden railroad trestle in the world! Made out of redwood beams, over 600 feet long & over 180 feet high! However, getting there involves traveling over rough terrain: off-roading to a remote trailhead, committing a whole day to hiking in and hiking out, and possibly breaking the law.” *

Maybe it is worth saving our local trestle: it might not impressive in a National sense, but it is easily accessible, and it is meaningful to us who live here in San José.

The SJ Historic Landmark Commission was never able to agendize the WG Trestle for recognition.

The DEIR does not include the “tally sheet” customarily used in evaluating structures that may be of local significance.

* quote from LastAdventurer.com
* image from DEIR
**Inspection**

Concrete deck on restored trestle: "Retrofit Alternative"

Replace the trestle w/ a prefab steel bridge: "Project Alternative"

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**Table 16: Alternative Comparison Matrix**

<table>
<thead>
<tr>
<th>PEDESTRIAN BRIDGE DESIGN ALTERNATIVE</th>
<th>THREE CREEKS TRAIL RAILROAD TRESTLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inspect Concrete Deck on Restored Trestle</strong></td>
<td><strong>Retrofit Alternative</strong></td>
</tr>
<tr>
<td><strong>Inspect Concrete Deck on Prefab Steel Bridge</strong></td>
<td><strong>Project Alternative</strong></td>
</tr>
</tbody>
</table>

**Inspection**

Inspection would rely on two people with a couple 25 ft ladders, safety gear, hammers, a drill, and oak dowels (to plug drill holes).

Expect one full day of work. Substructure checks similar to alternative one. Deck needs to be inspected primarily for signs of cracking or water infiltration.

This inspection effort can vary depending upon the magnitude of the earthquake. Likely to take 3-4 days with a crew of two people to cover all elements of the bridge. Ladders, safety gear, hammers, drills, and oak dowels (to plug drill holes) are needed.

**Note:** Total present value over 40 years is $46,230**

**Inspection would rely on two people with a couple 25 ft ladders, safety gear, hammers, a drill, and oak dowels (to plug drill holes).**

This inspection effort can vary depending upon the magnitude of the earthquake. Likely to take 3-4 days with a crew of two people to cover all elements of the bridge. Ladders, safety gear, hammers, drills, and oak dowels (to plug drill holes) are needed.

**Note:** Total present value over 40 years is $46,230**

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**Most of the structural elements can be inspected without any special equipment. As weathering steel is used there is no paint to inspect and with a concrete deck, the underside of the truss is mostly protected. Two people could complete this inspection in a couple of hours.**

This inspection could likely be completed in a day or less by two people. Ladders can be used to access the underside to determine if there has been any steel yielding. All other components can be inspected without the use of any special equipment.

**Note:** Total present value over 40 years is $11,558**

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**Estimated Inspection Costs**

- Retrofit Alternative: $4,000.00 (Every Other Year)
- Project Alternative: $1,000.00 (Every Other Year)
The community, thru the San José Parks Foundation, has already raised several years’ worth of maintenance...

Is it realistic to assume that the steel bridge is going to go for 40 or more years with no maintenance at all?

<table>
<thead>
<tr>
<th>PEDESTRIAN BRIDGE DESIGN ALTERNATIVE</th>
<th>Concrete Decking</th>
<th>Steel Decking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Design Alternative</td>
<td>Minimal due to use of concrete</td>
<td>Minimal due to use of weathering steel truss and concrete deck</td>
</tr>
<tr>
<td>Steel deck</td>
<td>Concrete decking will help protect the substructure from water and rot. Repair of elements is less frequent than with the IPE option. However, seismic damage is still a factor.</td>
<td>None</td>
</tr>
<tr>
<td>Structure Maintenance</td>
<td>$20,000.00 Every Five Years</td>
<td>$0.00 Every Five Years</td>
</tr>
<tr>
<td>Substructure Maintenance</td>
<td>Note: Total present value over 40 years is $87,078**</td>
<td>Note: Total present value over 40 years is $0.00**</td>
</tr>
<tr>
<td>Substructure Maintenance</td>
<td>$25,000.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Materials</td>
<td>Note: Total present value over 40 years is $87,078**</td>
<td>$0.00</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>$50,000.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Rating</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Notes</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

*Note:* Total present value calculations were performed using a 3% discount rate. The values reflect the cost of maintenance over a 40-year period. The concrete deck option is more maintenance-intensive than the steel deck option, with repairs required more frequently to maintain the substructure. The steel deck option, while initially more expensive, may require less maintenance over time. However, the long-term cost-effectiveness of either option should be evaluated with a comprehensive maintenance plan in place.
**Cost Plus**

Table 16: Alternative Comparison Matrix

<table>
<thead>
<tr>
<th>PEDESTRIAN BRIDGE DESIGN ALTERNATIVE</th>
<th>Three Creeks Trail Railroad Trestle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retrofit Alternative</strong></td>
<td><strong>Project Alternative</strong></td>
</tr>
<tr>
<td><strong>Concrete deck on restored trestle:</strong></td>
<td><strong>Replace the trestle w/ a prefab steel bridge:</strong></td>
</tr>
<tr>
<td><strong>Note:</strong> $959,000.00</td>
<td><strong>Note:</strong> $1,637,323.00</td>
</tr>
<tr>
<td><strong>Note:</strong> Market prices can make this vary from -20% to +40%. Design effort for this option is considered medium.</td>
<td><strong>Note:</strong> Market prices can make this vary from -20% to +40%. Design cost is highest for this due to need for geotechnical investigations.</td>
</tr>
</tbody>
</table>

- **Total:** $1,592,478
- **Total:** $1,648,884

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To make the Retrofit Alternative look more expensive, they toss in the cost of an extra bridge!
<table>
<thead>
<tr>
<th>Alternative</th>
<th>Pedestrian Bridge Design Alternative</th>
<th>Structure Maintenance</th>
<th>Inspection</th>
<th>Construction/Design Cost</th>
<th>Time to Completion</th>
<th>Expected Lifespan</th>
<th>Neighborhood Aesthetics</th>
<th>Environmental Permitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrofit</td>
<td>Concrete deck on restored trestle:</td>
<td>$47k difference: 3</td>
<td></td>
<td>$678k difference: 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>Replace trestle w/ prefab steel</td>
<td>$47k difference: 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ratings used above are based on a scale of 1 to 3, with 1 being the worst overall value and 3 being the best overall value.

Effectively, that's a tie.
### Unweighted Trade Matrix

#### Table 16: Alternative Comparison Matrix

<table>
<thead>
<tr>
<th>Table: Alternative Comparison Matrix</th>
<th>Three Creeks Trail Railroad Trestle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pedestrian Bridge Design Alternative</strong></td>
<td><strong>Structure Maintenance</strong></td>
</tr>
<tr>
<td>Bridge Design Alternatives</td>
<td>Streamlined Maintenance</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>3</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>3</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concrete deck on restored trestle:** "Retrofit Alternative"

**Replace the trestle w/ a prefab steel bridge:** "Project Alternative"

Ratings used above are based on a scale of 1 to 3, with 1 being the worst overall value and 3 being the best overall value.

<table>
<thead>
<tr>
<th>Cost</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$47k</td>
<td>difference: 3 points</td>
</tr>
<tr>
<td>$678k</td>
<td>difference: 5-10 more years, no added pts.</td>
</tr>
</tbody>
</table>

### Ratings

- **shaved pt.**
- **padded pt.**
- **still nearly a tie, but a different order**

"While this does not salvage the trestle, aesthetics could be made pleasing."

"railroad themed signs could be incorporated."

**While this does not salvage the trestle, aesthetics could be made pleasing.**

**railroad themed signs could be incorporated.**

These estimates were calculated assuming a 5% rate of inflation over the next 40 years, that appraised property value depreciation was not taken into account and the values reported are in terms of 2012 US Dollar values. These estimates are intended to be used as guidance when comparing the overall cost for each alternative that could be expected if the City were to pay each alternative's construction cost now and value an additional salary for the next 40 years by investing a sum of money today.
The Executive Summary in the “Initial Study” used the trade matrix as justification for its recommendation:

“In order to compare all the pros and cons of each option, a comparison matrix was developed and a scoring system applied. It was found that the replacement option had a slightly higher upfront cost, but was the best value for the City over a 40 year time frame. CH2MILL recommends that the bridge be replaced with a new prefabricated bridge to minimize the long term cost to the City.”

The Draft EIR Executive Summary justifies its recommendation based on Section 1.1, which has primarily this note:

“The engineering study evaluated the different approaches using the following criteria: streambed maintenance, structure maintenance, inspection, construction and design cost, time to completion, expected lifespan, neighborhood aesthetics, and environmental permitting. The replacement alternative had the highest rating and an overall present value of $1,648,884. The retrofit alternatives had lower ratings and present values of $1,592,478 and $1,756,798 for the concrete deck and timber deck options, respectively. See Chapter 6, Alternatives, for additional discussion of the retrofit approach and Appendix G for additional details (see Table 16, Alternatives Comparison Matrix, in Appendix G).”
the DEIR’s misrepresentative Executive Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Proposed Project</th>
<th>Retrofit Alternative</th>
<th>No Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Resources</td>
<td>Construction would disrupt instream and riparian habitat. Extensive controls would be used to minimize disruption. Long-term benefits would occur, as creek would no longer be obstructed by piles.</td>
<td>Disruption during construction, and minimization measures, would be the same. Long-term habitat loss would occur from 25-foot maintenance buffers, and benefits of clear-span bridge would not occur. Disruption would occur during periodic maintenance.</td>
<td>Disruption would occur during periodic maintenance.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>The existing trestle does not meet the criteria for designation as a historical resource; therefore, there would be no impact.</td>
<td>Impacts would be the same as for the proposed project.</td>
<td>Impacts would be the same as for the proposed project.</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Long-term benefits would occur, as creek would no longer be obstructed by piles.</td>
<td>Benefits of clear-span bridge would not occur.</td>
<td>No change would occur from existing conditions.</td>
</tr>
<tr>
<td>Land Use</td>
<td>The project would be consistent with all relevant plans and policies.</td>
<td>The project would be consistent with plans and policies regarding bicycle and pedestrian trails, but not with plans and policies for fiscally sustainable infrastructure and urban/wildland fire hazards and would require short-term closures.</td>
<td>The project would not be consistent with plans and policies.</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>The project would be consistent with all relevant plans and policies.</td>
<td>The project would be consistent with plans and policies regarding bicycle and pedestrian trails, but would require short-term closures.</td>
<td>The project would not be consistent with plans and policies.</td>
</tr>
</tbody>
</table>

Steel bridge should have fire-buffer as well; creek is not “obstructed” by the trestle; best to leave pilings undisturbed.

DEIR failed to consider local historic significance

As in point 1: creek is not “obstructed” by the trestle; best to leave pilings undisturbed.

The creek channel should be periodically cleared of debris that snags in the vicinity.

The traffic impacts from repairs once every five years, or after arson fires?
## Comparison of Alternatives

<table>
<thead>
<tr>
<th></th>
<th>Trestle -- “Retrofit”</th>
<th>Prefab Bridge - “Project”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction cost</strong></td>
<td>$959,000</td>
<td>$1,637,000</td>
</tr>
<tr>
<td><strong>Est. Maintenance</strong></td>
<td>$4,000 / year</td>
<td>not budgeted</td>
</tr>
<tr>
<td><strong>Est. Inspection</strong></td>
<td>$2,000 / year</td>
<td>$500 / year</td>
</tr>
<tr>
<td><strong>Construction time</strong></td>
<td>5 months</td>
<td>7 months</td>
</tr>
<tr>
<td><strong>Estimated Life</strong></td>
<td>30 - 50 years</td>
<td>75 years (w/o maintenance?)</td>
</tr>
<tr>
<td><strong>Flooding</strong></td>
<td>not a problem</td>
<td>not a problem</td>
</tr>
<tr>
<td><strong>Creosote</strong></td>
<td>not a problem if left alone</td>
<td>a concern if disturbed</td>
</tr>
<tr>
<td><strong>Fire</strong></td>
<td>not a problem: redwood, sprinklers, alarms and maintenance</td>
<td>no precautions are provided, and steel loses strength at brushfire temperatures</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td>significant to the community of Willow Glen; was not evaluated for City Landmark status</td>
<td>“While this does not salvage the trestle, aesthetics could be made pleasing. Staining the concrete deck to resemble the old track could be done. Also, railroad themed signs could be incorporated at the approaches.”</td>
</tr>
</tbody>
</table>
Summary

The DEIR shows that the “Retrofit Alternative” (restored trestle) is quite viable
- less expensive
- shorter construction time
- less impact of toxics on the stream
- comparable (or better?) at fire safety
- negligible impact on flood levels

For the “Project Alternative” prefab steel bridge:
- the DEIR did NOT evaluate the impact of heat from brush fire on the yield-strength of the steel and the integrity of the truss
- the DEIR did NOT include an analysis of the local historic significance

The Executive Summary in the DEIR is inconsistent with the findings in the body of the report

- the “Retrofit Alternative” appears to be environmentally superior.
The Trestle is a piece of our history!

Why waste over a half-million dollars, just to destroy a piece of our history?

Write the Mayor and Council, asking that they select the EIR’s “Retrofit” Alternative