

# Global Ripple

When a small pebble is dropped in a body of water it creates ripples that are much larger than the pebble itself which then emanate in all directions till they touch all corners. San Jose is like that small pebble that creates waves and touches all corners of the world. While most global city monuments are static in nature, the pebble is dynamic, reflecting the dynamic nature of Silicon Valley. The pebble is made of glass paying homage to Silicon that so profoundly changed the world we live in. While the entire world has abundance of sand (Silicon Oxide) in much greater amounts than Silicon Valley, it was here specifically that we learned to turn a nearly worthless abundant substance into globe changing products that touch the lives of the whole global population. The ripples have colored LEDs embedded throughout paying homage to the Semiconductor Laser and its derivative technology Light Emitting Diodes, both locally developed. Starting at dusk, the LEDs create a dynamic movements of the waves away from the Globe. The “ripples” are made of a special partially transmissive solar panels that harnesses the power of the Sun to power the entire complex for a fully carbon free footprint.

The pebble is also dynamic; at times it may show the global map rotating around its axis, or a flailing US Flag on Memorial Day, or convey Holiday wishes to the diverse population on Christmas, Chinese New Year or Diwali etc. On New Year’s Eve, a countdown clock and amazing LED light show will entertain the crowds gathered around it. The pebble’s dynamic illumination is based on a central multicolored lasers on gimbals paying homage to the multitude of pioneering local laser companies from the laser industry’s infancy<sup>1</sup>. The system will receive information wirelessly and via fiber-optics networks from various sources paying homage to the profound impact of pioneering local companies in the field of networking and optical communications<sup>2</sup>

The pebble will have a garden and orchard paying homage to our agricultural roots, the garden will consist of a traditional garden and orchard as well as an indoor fully automated vertical farm developed in San Jose’s Growzebo representing the past and the future of agriculture.

What is unique about the globe is what is unique about Silicon Valley: It’s Dynamic! We don't know what the future will bring, but whatever happens, the pebble monument will adapt accordingly

Notes:

1 Spectra Physics, Coherent, Spectra-Diode-Labs, Uniphase, Lumentum

2 Cisco, Juniper, Brocade, JDSU, E-Tek/Dynamics, AC-Photonics, SDL

TECHNICAL NOTE: The proposed concept will be 100% compliant with the requirement of this competition including Environmental, Riparian and Aviation requirements/restrictions. Some non-laser experts may be concerned regarding the use of the lasers on gimbal to create moving color images on the globe’s exterior and may consider it as a hinderance to the pilots as they are approaching SJC/Mineta airport. As someone who spent 16 years in the laser industry I can

assure anyone concerned that this is not a concern. The inside surface of the globe on which the laser will project will be textured (an etched appearance). The laser light impacting such surface, essentially disburse the light in all directions and the beam is no longer coherent. This will in no way interfere with the pilot's view or eyesight whatsoever. Likewise, the external surface of the globe will also be slightly textured so as to avoid the sun reflecting towards the pilot during landing approach (or occasional reverse direction takeoff). Furthermore, the semi transparent solar tiles that make up the roof will be made up of roughly 6,000 individual smaller tiles that essentially all point in slightly different direction an any of the adjacent tiles. Hence the viewing effect will be akin to a shimmering diamond where there is no one dominant reflection of the sun aimed in the direction of the pilots as they approach. In fact, the pebble and ripples will provide a shimmering appearance in daylight as light reflects from different panels as the approach occurs exactly as you get when a clean diamond ring is moved around. This same shimmering effect will also apply for people driving on 87. At night, the Global Ripple monument lighting will be no brighter than a giant-sized 3-dimensional television screen. Pilots will love having the visual landmark as they approach when not using autopilot to land (day or night). Likewise, the vertical walls which are made of textured glass block, are all vertically oriented to avoid even the remotest possibility of reflection towards the pilot even during sunset or sunrise period. Lastly, the top tip of the pebble will be at the 200 foot limit and will clearly visible from most downtown buildings and Guadalupe freeway. The Global Ripple monument will not interfere with: Guadalupe River Trail • Tributaries Monument • San José Vietnam Memorial • Weaver's Gift • Five Skaters (including the reflecting pool, pillars, and metal stands). In fact, it will blend well and provide a nice backdrop for the reflecting pool portion of the Five Skaters monument.

The outdoor Garden/Orchard will be located at on the far side of the two rivers and will not use any artificial light (Only the internal automated Growzebo vertical farm will utilize artificial light). We will specify that the enormous amount of glass used in this monument must be made substantially of recycled glass (Glass Block Walls and all the solar panels). Lastly, this building with it's absolutely huge solar roof will be a huge energy generator that will provide significantly more electric power than is needed for all electronics (essentially It will be a mini solar power plant)