

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

Brendan asks: How did you negotiate with your water department to avoid water security concerns when pitching trail access on their properties?

Yves answered: We often work with the Santa Clara Valley Water District. The Water District is a water management and flood control agency. We executed a Collaborative Action Plan with the Water District in 2003 to support Joint Trail Agreements where San Jose can operate recreational trails upon Valley Water lands, with commitment that San Jose assumes all liability for public use of the sites. San Jose assumes the recreational liability for allowing the public onto the land. We defend them so they do not become the subject of suits. That has worked really well for us. We have worked with water supplier companies. There are wins and losses, just like this presentation. We had one water company that said for the federal homeland security rules they could not allow a trail bridge to span over a portion of their property. Because of the rules that they were working under they could not give us any rationale or background. We had to say we had an infeasible project and we could not work around it. We have also worked with water suppliers that could see that we could actually be a partner in Isaac more secure financing in an area they could not manage well. So, the trail became an avenue for there to be better control and monitoring at the edge of their property. See if you can offer them something that is actually beneficial to them. Just be aware that when it comes to water, forgiving public access to people, it is a tough project.

Chris asks: Would like to learn how you get a trail thru a culvert under a highway that also carries water and still meet the flood flow capacity requirement for the culvert. Base flow is easy, but flood flow restriction make water engineers nervous and we need to show them examples of what works elsewhere to get them on board.

Yves answered – If I understand the question correctly, we would not consider providing public access within a box culvert. Even if water flow is seasonal, the surface would be impacted by silt, mud and debris. In instances like this, we would propose a bridge structure with acknowledgement that it is a long-term effort and requires intentional grant writing and lobbying to advance.

Does having a gravel shoulder for trail storm water sheet flow (non-point) absorption provide "pre-approval" for storm water design or do you still have to do storm water calculations as if a linear trail acted like a parking lot in a storm with "point flow" outfall pipes, etc.

Yves answered – Our calculations consider the gravel shoulder as an impermeable service. Our specifications call for 95% compaction, so they are functionally permitting sheet flow water but may have some impact on dissipating energy of flow. The reugl

Christina asks: How do you collect trail user data?

Yves answered: We have been conducting Trail Count since 2007 and post a Summary Report on the following web page: <https://www.sanjoseca.gov/your-government/departments/parks-recreation-neighborhood-services/outdoor-activities/trail-network/trail-count> The 2008 Summary Report provided details about how the Counting process was conducted and may be a good resource for planning counts along your trail system. In general, we recruit about 20 volunteers annually, host 6-7 count stations, and count cyclists and pedestrians using numerous

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

trails on one Wednesday in September each year. The National Bicycle and Pedestrian Documentation Project is also a good resource: <http://www.bikepeddocumentation.org>

Have you used pervious pavement for trail pavement? If so, how did it compare in cost and how was maintenance?

Yves answered: We have steered away. One argument was that we should use permeable pavement on a levy. We had to argue that the levy by nature was impermeable. So, why would we permeate water onto that structure? That resolved that. There was the idea that we should have that in the under crossings. The moment you get muddy and soldier from a flood event you cannot flush the water back into the Creek. With the environmental rules here in San Jose. It really has not worked from that perspective. I have always been concerned about the texture of the permeable pavement. I think falling off of a bike and hitting pavement at any speed you will get hurt. It seems like that material may be rougher and more challenging. I do not have any studies though. That would be something to be concerned about. Our approach has been to acknowledge that our trails are 12 feet wide. We tend to be toward landscape shoulders where the water can permeate from there. We are not taking out such a large area that the water cannot get back to the ground in the immediate area. Up until this point I do not have experience with permeable pavement.

How do you pay for amenities along trails? I.e. signage

Yves answered: The cost of signage, striping, benches and all other amenities in a trail are initially estimated as part of our Master Planning stage of work. We use this cost guidance to budget for design and construction of the projects. On an annual basis, we work with the City Council to prioritize park system investments and will often supplement trail budgets with competitive grant writing.

Daniel asks: Why do you feel the need for trail shoulders?

Yves answered: The shoulders are intended as a softer jogging surface. Extra capacity for equestrian users. They also give you a little bit more with if there is a service vehicle. There is images of shoulder striping in my presentation that is only if we cannot achieve the shoulder or there is a drop off. We're trying to strike as we would a roadway. That tends to be for a hazard. Shoulders tend to be asked for by the community. People want an area they can step off of the trail. Pedestrians view the paved trail for the cyclist. They appreciate having an area that is more identify for them.

John asks: Do you attempt to connect with on-street biking infrastructure, since trails don't go to all destinations while streets do.

Yves answered: We do. We meet regularly with the counterpart at the Department of Transportation, the goal is always to align work plans. To get the bike ramp set up where they are appropriate and we are thinking accordingly on how to work together. The most often intersect if we have to have and on street crossing with a traffic signal will work with teams to get that delivered.

Lewis asks: What staff are dedicated to trail planning / projects? And to trail maintenance?

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

Yves answered: We have a full-time trail manager, I held this position until recent years. She works with consultant firms on feasibility studies and works with our public works department through the design and planning. Our team as a manager and our senior analyst to help with the grant, financing, budgeting, it is two different people. It is small. We do want to grow that team. Through public works and funding, we are looking at a broader team. We may have 10 people actively assigned depending on what the budget permits. Of course our planning department and engineering consultants.

Linda asks: Has anyone had issues with invasive willow vegetation suckering up through asphalt pathways? Big problem in last 5 years in southern Ontario, Canada.

Yves answered: We do not have a issue with invasive plants impacting trail pavement, but have found that invasive species in creek channels are reducing the capacity of creeks and rivers. This doesn't have a direct impact on trail operations, but does impact our capacity to sustain mitigation sites.

Marilyn asks: Please provide link to Trail signage guidance doc.

Yves answered: Our Trail Signage and Mileage Marker Guidelines are posted here:
<https://www.sanjoseca.gov/home/showpublisheddocument/9855/636656974736870000>

Matt M asks: Do you have any problems with the gravel shoulder kicking out on the asphalt or concrete?

Yves answered: We did in the Albertson Parkway example. The material was really loose. If we get a good spec, which we think we have now, and we get a very good mix, a good range of that aggregate, then add line as a living, --gluing method it holds up. I do not know that I could really call it a soft jogging surface, it is hard. That has held up for many years now. I can follow up with that if you would like.

Matt P asks: I notice you include edge lines on your trail as a standard. Is this based on safety/operating experience? Any advice for jurisdictions that don't do this as a typical practice?

Yves answered: The shoulders are intended as a softer jogging surface. Extra capacity for equestrian users. They also give you a little bit more with if there is a service vehicle. There is images of shoulder stripping in my presentation that is only if we cannot achieve the shoulder or there is a drop off. We're trying to strike as we would a roadway. That tends to be for a hazard. Shoulders tend to be asked for by the community. People want an area they can step off of the trail. Pedestrians view the paved trail for the cyclist. They appreciate having an area that is more identify for them.

How as universally accessible design / ADA influenced trail designs?

Yves answered: It has not been easy but it is not been that challenging. If there is an Army core cord were within under crossing and you need a certain slope to manage the flow, we have to sign and make people aware that we cannot commit to that. ADA allows for that when there are these type of circumstances. For the most part our trails are all within ADA. We tend to be 3 to 5 percent. It really has not been a challenge for us. We are lucky San Jose is flat.

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

Mike asks: What provision is there to allow all wild animals to cross all trails and roads (wildlife corridors)?

Yves answered: Most trails are within established riparian corridors where wildlife sustains the ability to travel in the area. We are mindful to limit and avoid impacts to sensitive landscapes, but are not building facilities that prevent passage. Within our region, highways and major arterial roadways have prevented wildlife passage. I'm aware of a wildlife tunnel proposed beneath Monterey Highway in south San Jose and a wildlife bridge over Highway 17 in Los Gatos (neighboring town).

Patrick asks: The speaker mentioned that San Jose is managing about \$10M in grants for the trails. What sources are the grants coming from?

Yves answered: Thank you Patrick. We have looked at local, state and federal grants. When I talk about open I say Santa Clara open district as a property measure. We look at state of California grants, some of them are specifically tied to trails. On the federal side we have benefited from legislation from the 2008 federal transportation bill we are still spending those funds. We also looked at competitive grants to the federal programs. On the federal grants we tend to look at programs that will have a large grant reward. The time and extra cost. Federal money is good money. Definitely be mindful you will have extra and costly steps to take. You want to make sure there is quite a bit of money to make the effort worthwhile.

Robert asks: Does San Jose address ADA?

Yves answered: It has not been easy but it is not been that challenging. If there is an Army core cord were within under crossing and you need a certain slope to manage the flow, we have to sign and make people aware that we cannot commit to that. ADA allows for that when there are these type of circumstances. For the most part our trails are all within ADA. We tend to be 3 to 5 percent. It really has not been a challenge for us. We are lucky San Jose is flat.

Shawn asks: How do you incorporate equity considerations in your decision-making about which trails to prioritize for development?

Yves answered: There are a few approaches we use there. San Jose has 10 different Council districts. Part of our process is to say let's propose a trail project for each council district. Each council member has a role in funding and supporting equitable delivery of trail projects. Then we have a prioritization process that looks at the projects that have seven different measures. If we invested in a project would be see higher usage? Would it be closing a gap or extending it? So, we would see more usage there. In terms of equity the primary approach is to make sure that we have trails in each council district. Some Council districts have five or six different trail systems. We make sure each council district is investing as much as they can. Because we are using rivers and creeks and railroad corridors, the alignments are kind of where they are. Some of the neighborhoods in the western part of town tend to be wealthier, there really are very rare opportunities for trails.

Do you record the demographics of trail users for equity-based analysis?

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

Yves answered: Our Trail Count process counts the number of pedestrians and cyclists, and we have recorded male and female users. Our on-line survey will ask a few questions about age and sex of the persons taking the survey. Our planning process does include robust outreach to neighborhoods and we refer to demographic data and consult with Council Offices to provide multi-lingual presentation materials and translators when needed. This service is always “upon request” if the demographic data may not necessarily suggest that language is a barrier to participation. We outreach to advocacy groups to extend awareness of planning efforts.

Scott asks: Yves, thank you for your presentation. Your presentations are always pragmatic and provide excellent common sense ideas and information. The San Jose trail network is a wonderful example for others to follow. Where do you think the next innovation in trail planning, design, construction or management will come from? What new idea are you anxious to explore?

Yves answered: Thank you very much. I really appreciate the question on the future of trails. A few thoughts come to mind. 1) The popularity of electric bikes may be increasing the number of trail users and addressing a prior barrier to participation. But speed, weight (batteries) and novice users may present safety concerns. I anticipate that ITS (Intelligent Transportation Systems) may find their way onto urban trails with systems that might reinforce speed limits, suggest congestion and/or ticket for speeding with video detection if bike registration were to be visually recognizable (ie. License plates). 2) During Covid, we transitioned to on-line meetings. It was a mixed bag with some meetings during great participation and others having a limited audience. I think that on-line meetings can resolve a barrier to participation but more engaging tools are needed so that persons feel like they have a say in future projects.

Your projects show great tenacity and a long term view to completion. What has been you most daunting project problem that you solved and how did you solve it?

Yves answered: I do think that upon reflecting on this question, it’s really important to embrace the challenges we face daily and identify small steps to keep a project moving forward. I tell myself, “It’s amazing what I got done under these circumstances”.

It’s important to recognize that projects that can take 10 years to complete are not likely to be well-charted with a clear work plan. I worked on the Three Creeks Trail project for 16 years and initially thought that writing many grants for \$6M was the biggest challenge. That funding supported acquisition of land, after multi-year negotiations, site remediation and uncertainty about site encroachments. After that step, the project faced strong community support as well as opposition, special studies, historical investigations, a lawsuit, and many, many other challenges. Had I known this in 2003, I probably would have avoided the project. But the inability to predict the future, and have a motivation to keep trying can get projects completed.

Steve asks: Have you use permeable AC paving on any trails? Anaheim has had success with it to lessen runoff.

QUESTIONS FOR WEBINAR:

Trail Design Details: The Wins and Losses

July 29, 2021

Yves answered: We have not used permeable pavement along trails. Concern about the integrity and longevity of the surface is one issues, and the long-term budget impact to sustain the permeability with higher-than-normal maintenance has been a concern. San Jose's clay soils may often warrant a sub-drain system, so in effect, we would be capturing water and directing it to the shoulder in the same manner as if it was sheet flowing. So we haven't seen a strong case for its use at this point.