General Questions:

Ann asks: How can our small rural town best maximize our extensive trail system to bolster economic development?

Tom answered: I will bullet point my opinions on economic development – feel free to contact me for specifics!

- one thing (possible two) the trail system has that any around the area do not (total miles, point of interest, etc) use that on internet/website if the trail has one.
- involvement on social media .. highlight views etc.
- encourage trail sponsorships with local businesses / use Chamber of Commerce
- hold events there ie festival
- partner with another trail system for promotions

These are a few bullet points what can be expanded upon.

David asks: General questions, if time allows: OK if not. One goal of pulic health is to increase use of trails to increase physical activity to promote health. You touched upon how signage may help resolve confusion among trail users and this may increase ease of trail use. Do you know of any evidence, or based on your personal experiences, that adding signage to trails currently without singage leads to greater trail use? Also, do you have examples of how signage can be used to promote trail accessibility among people with disabilities (e.g., people with low vision; or who rely on wheelchairs for using trails that meet accessibility guidelines)?

Tom answered: I can not find any studies to talk to your first point but I can say from feedback we get from customers is the better the trail is marked the better overall experience. The simplest form can be color coded or by shape etc. If you would like to contact me about trail promotion on accessibility, I would be happy to get you some details.

Ernest asks: Do you have a list of resources for signs? Do you have signage standards or guidelines?

Tom answered: <u>https://www.railstotrails.org/build-trails/trail-building-toolbox/design/signage-and-</u> <u>surface-markings/</u>

The above like is most likely the best comprehensive guide I know of.

Jill asks: Do you have examples of emergency way finder signs for search and rescue location information

Tom answered: This is the easiest/flexible one due to being able to write in location out in the field. We have similar ones that we have printed coordinates on.

Alistate. Power sports INSURANCE	emergency Locator Information
FOR THIS LOCATION	
GPS Information	1
Lat	
Long	
Junction ID	
Road Crossing 911 Address	
-	
o	
8008-122115 K005 K005 K005 K005 K005 K005 K005 K	VDE ROM, UC MARKER, NY 1514-053 1 485-07-588 www.Ywellys.com

John asks: Do you have a recommendation for the number of appropriate signs to be placed on a trail? What's the best way to balance adequate wayfinding vs. over signage?

Tom answered: Based on feedback and recommendations, for marking the trail .. is you should be able to see or pick out the next sign on the trail from the one you are at. When you have a corridor or intersection, save the signs for those spots. Take some time and look at the trail and just keep it simple.

Lawrence asks: Multi use trails also include scooters, skateboards, hover boards, etc. Is there signage that includes these options?

Tom answered: The majority of multi use signs are custom made just for that reason.. signs are typically produced with icons of the customers choosing.

Megan asks: I am most interested in getting your biggest bang for your buck on signs. Our city does not like signs. We are very limited on how many we can use. What are the most important ones to have and what information MUST be on them?

Tom answered: We have customers that have that challenge.. First thing to remember, you can put whatever you need on the sign...no limitations on colors etc. As for what should be on there, I have to say, typically our customers tell us and we arrange it on the sign. I would like to help, so if you want please contact me and we can brainstorm a little.

Mikes asks: What about graffiti resistance? Cleaning and maintenance?

Tom answered: If we had the solution to the graffiti issue, we would be retired !! I know a few sign companies advertise graffiti resistant so that is an option. We print a clear coat or apply a over laminate to protect the sign, it is not graffiti proof. The product Goof Off actually works well on stone, siding, glass etc but could harm a typically sign .. I would use it in small doses to see what results you have.

Subhalaxmi asks: What are the best signage materials which could be vandalize proof?

Tom answered: Unfortunately, there is not end all product... I would stay away from using aluminum (cost to replace and people like the sound of it when hit.) Dibond and a thicker plastic is the best in my opinion. Plastic does not make a sound when hit and does not rip. Dibond acts like aluminum but without the sound of it. It is plastic encased in aluminum.

Blazers Questions:

Bill asks: For hiking trail blazers, is an oval shape more expensive than a round or square standard and if so by about how much?

Tom answered: I can talk to what we do. I also know that if an oval and/or round shape is pretty prevalent, pretty easy. We do a lot of them. Basically, what it is a die cut type system so to produce those versus ones you see on the screen, pretty much the same amount of money as anything else no matter who you talk to. The more you buy, obviously, the price goes down so in terms of shape, the only -- you know, I know, Candace and I know you know, the fact that when you see like the Appalachian Trail signs, those types of things, the pregnant triangle is prevalent but that's also for marking state federal trail systems so the shape really doesn't make a difference. The only thing I'll tell you is if you do choose a shape make sure you are consistent. It's about matching and making sure people understand that if they are on a trail that has an oval with blue background and white print that they know that that, when they see that they are still on the same trail.

Brenda asks: What is the recommended method of attachment of the blazers?

Tom answered: Typically, most blazer s will go on some type of tree for the most part. That's probably 80 OR 90% of the time. We'll always recommend aluminum nails just because if you nail into that tree, A, the aluminum doesn't harm the tree at all and if that tree were to be harvested it's a soft metal so the impact to the tree or sign minimal and if you use a deck screw or drywall screw it will eventually rust and corrode and make the blazer have that rust color and it becomes unattractive so we always recommend aluminum nails.

Heidi asks: Can a blazer be lasered to put words on it?

Tom answered: They can be engraved. We also just -- we would also recommend if you are just putting numbers, letters, words, screen print, that's what we do here, we read the screen print and the ink and that is our plastic dose and in terms of durability, that's typically not an issue. I kind of hope that helps. When you engrave something especially in the outdoors there's dirt. There is all sorts of stuff out there. Elements just in general. Elements. So we try to tell people, you don't really want to engrave anything because after a while, you know, you are taking that product and taking some of that product away in terms of you are taking less, some of the plastic away so the best way to do it is to have something screen printed or digitally printed.

Ivy asks: Do blazers require much maintenance? When I'm hiking I sometimes see trees growing around the blazer. Could this damage the trees? Or is there a proper technique for application?

Tom answered: Yes there's minimal damage. The reason why you start seeing blazer s or any other sign for that matter grow around trees is one of two things. A, the person putting it up nailed it too tight to the tree. That's the biggest thing and typically for every 8th inch it's about three or four years, give or take on the tree, growth. So we always tell people, when you are posting something or tacking something onto a tree, IE a blazer, leave it up a quarter inch, half inch, just as long as it's attached on to the tree and the blazer is not going to go anywhere, it's going to let the tree do it's thing for anywhere between five, seven, nine years and by that time, sometimes you want to replace them or you go back and pop them out and just re nail them.

Norma asks: We are not allowed to put nails in trees in my city, what other options are there?

Tom answered: There are a couple different options. You can get wood stakes and post them along the trail. That's probably the easiest thing or get some economical posts like we talked about in terms of what's on the screen here. That's really the only options that are out there unless the only other thing you could do and depending on where this trail is, you could also put them on the trail itself. You could put them on the pavement. You could actually glue them on to the pavement if you wanted to or glue them on to the surface that's there. I know there's various SURFACES for trails. Those are the only highway down south the reflector s in the middle of the road, same concept. Whenever somebody asks us, if we can't do the trees, what else is there, the most economical way to do it is wood posts that are usually two or three foot high and you can screw them in there or nail them in there. You just drive that right into the ground.

Design Questions:

Chris asks: You mentioned plastic. How about DieVon? Does it last longer than aluminum? Does it get bent like aluminum?

Tom answered: What is offered is like mentioned, aluminum, dieVON, plastic. And there's something called corrugate I have plastic and for most folks that's your yard signs, political signs, those types of things, that's what chloroplast is.

The result of stuff we do are those three substrates, plastic, die bon which is similar to aluminum, all it is plastic encased in a thin sheet of aluminum on each side and it's as durable as aluminum and a little bit more for giving in terms of if it gets dented because the plastic will absorb some of that whereas if you hit aluminum the substrate itself is pure aluminum.

A little bit more lightweight so if you have an instance where you need, you know, a fair amount of them and you need to put them in a backpack or put them in a bag and you need to post a trail, it's definitely a little bit lighter than aluminum and overall, we tend to tell people if they are going back and forth between alumni and die bon, die bon is a little bit better option, a little bit more for giving and in terms of cost just a touchless expensive as well.

Daria asks: Trail signs and markers should be made so they glow in the dark for hikers lost at night. Photo luminescent signs are used in buildings for fire escape exits, so they do work and can save lives.

Tom answered: We get a lot of those questions in terms of most trail people that call us or contact us they, you know, we always ask the question, why do you want to use reflective and that's the majority of the response is we want to make sure that if hiker s either A, forget time or do like to hike in the dark or before daylight, that's most important. We offer in terms of reflectivity, the simplest way to do that, the most simple way to Mark a trail is what we call blazer s and I'm going to touch on that here in a second. And there's reflective in general and any sign company can offer you some type of reflective. So, if you have hiker s or you have trail people that use your trails in that instance, we would definitely recommend using reflective marker s anywhere along your trail system.

Dennis asks: Think he is talking reflective versus glow in the dark FYI

Tom answered: Well the glow in the dark is something a little bit deemed as glow in the dark is that neon greenish material. That's more of what our experience is in terms of glow in the dark. That is more towards or used for interior like buildings, that kind of stuff. That is our experience. In terms of reflectivity we would hope that any type of flashlight head lamp will allow the amount of reflectivity you would need on a trail that you are using. So in terms of the glow in the dark, I've got be honest, we don't use a lot of it. I know it's out there but when we do use it it's typically for building use and interior type uses in terms of emergency exists, those types of things so on a trail environment, I apologize, we don't do a lot of glow in the dark. It's mainly reflective.

Drew asks: Have (USA and/or Canada) National (and/or state/province) standards been established regarding, trail signage relative to background colors, font type, minimal letter size, icons, etc.? Trail Planning is all about connectivity and standardization.

Tom answered: Most important information is and you'll see this further in the presentation would be keep it consistent. If you are on a trail and it goes into the woods or it's X amount of miles, make sure people know where they are at any given time. If you have obviously donors, if you have somebody that is maintaining a trail, you want to put that on as well. In terms of the type or the substrate you want to use, we do a lot of plastic and aluminum. Depending on if you have a trail that if the signs are offset a little bit and you want them to last maybe a little bit longer, aluminum is going to be your go to but it's also a little bit more expensive: The majority of what we see and do are the plastic ones and with that, you want to keep it simple, in terms of you don't need a lot of verbiage. You don't need a bunch of different colors, which type of thing and in terms of design, it can be a circle. It can be a trapezoid, it can be something other than your typical, you know, rectangle, that type of thing to dress it up a little bit, increase in cost, negligible and just makes that sign a little bit more attractive. I hope that answers the question.

Frieda asks: Signs may include information such as a map that needs to be updated at some point. What is the most efficient way to update an existing sign, without replacing it completely?

Tom answered: A couple different things. The easiest and fastest is for us to or for any sign company to take care of data map, printed detail, make sure that the sign is clean and has the new map on it over the existing one but we will also tell you that that will only last so long. How long? It all depends. There's

Southern exposure and in the elements might be up to maybe a year or two. Or you know, if it's undercover, again, under a kiosk, those types of things, it could last year's so, I would always tell a customer that if you have one or two signs that need to be replaced on an updated map, it might cost you 20 or 30 bucks depending on the size to replace it. That might be the easiest way but besides replacing the sign which you don't want to do is definitely put some type of de cal over it but any of us in the sign world we'll tell you we'll do it but we're not going to guarantee it will stay there for the longevity of the sign-in general.

Heidi asks: Does de-linear come in purple?

Tom answered: Unfortunately, purple is not a stock color. Depending on the quantity being ordered, that could be produced as a custom color.

Jon asks: Is there any "design standard" for the use of colors for blazers, etc? Such as red difficult/ white easy (or a coding of some type on signs) or is color just a means to differentiate routing?

Tom answered: Bingo the last portion, I can tell you in some industries water being blue, natural gas is yellow and that kind of stuff. ATVS somebody's use blue, AT V trails but typically you can assign the trail color yourself and use that color throughout your trail and if you have multiple trails, one of those things on the trailhead have this color means this, this color means this, this color means this. There's no standardized color coded out there that no matter where you go in the country, you know, that's what it means.

Any standard for "stand-offs" when using trees along trail to provide for growth and tree protection. (Distance/material etc.)

Tom answered: There are not any standard "stand-offs" for trees along a trail. The only thing that is fairly common is the use of "sight lines". Sight lines is simply an imaginary line for viewing. So, if you are using trees that get 10 ft around when mature and you want a 2 ft sight line on the trail.. plant your tree 7 feet off of the trail for example. 5ft for the tree plus the 2ft sight line.

Mike asks: How long do different materials last? What are warranties? 1 year, 5?

Tom answered: There are people that we'll give warranties which we should. Do we advertise warranties? No we do not. I can tell you that a lot of times we don't but we also stand behind our product so aluminum, die bon, plastic. We talked about those things and aluminum is going to be your longest lasting out there but it's also the most expensive especially currently and depending on what material it is there is liability for not necessarily sharp edges but there's still an edge to it and it's metal. Die bon is better. More cost effective. Really good, like I mentioned before, within the webinar, if you had a choice between aluminum and die bon I'm going to tell you to go die bon every single time just because of the material, the forgiveness and it's nice and flat and it prints well and it looks really good and professional and it's easier to make and shape out of than aluminum and lastly, I can talk about plastic all day long because we do make our own plastic on site and you want to go with one that has the ability to have the color that will not fade so the plastics usually seven to ten years depending on where you are in the world, I'm going to tell you in southeast Arizona

you could get four or five years out of them. Here in Upstate New York or Northeast you get ten to 12 years. Die bon, ten to 12 years, and aluminum, obviously, fifteen to twenty.

Stephanie asks: Are there recommended colors that should be used for accessibility - for people who may be color blind, etc.?

Tom answered: That's a good question. Stay away from your blue s and greens. And your red s and yellow s, typically. Stick with like a white or there's, you know, purple s out there. As long as -- the one thing I can tell you is as long as -- if color blindness is an issue or you want to address that, you can address that, again, if you have some type of trail marker and/or kiosk in front of the trailhead that explains everything and/or QR code that explains and if you are color blind, please hit this QR code and you can have explanation but typically those four colors, we try to tell you to stay away from just because they are very similar from what we understand from color blindness.

Tim asks: Acceptance of International Symbols?

Tom answered: Depending on the type of trail it is, we have seen an uptick in the acceptance of standard/international symbols. Snowmobile and ATV/UTV trails are the most apt for acceptance.

Digital Boards / QR Code Questions:

Cathy asks: Multi-use bi-directional trail. Is it possible for trail user to post when they are on the trail? We have a multi-use bi-directional trail that is mainly used by bicycles as a one way trail. Is there a solution so other trail users can post a notice real time, which they are on the trail: Equestrians on trail.

Tom answered: There is a few solutions but can require some outside equipment.. the easiest place to start is with Google. Avery large percentage of people carry their phones with them.. you can incorporate a QR-code that links to a track URL. Secondly, the use of cameras is a possibility but again that is additional equipment.

Christopher asks: How are QR codes registered?

Tom answered: I wouldn't necessarily say registered. So what happens is I can speak from experience because we've created QR code s here. You go to a QR code generator and punch in your information and it willself generate a code and you take that code and you have to link it to like I mentioned, a static web page or a website or some type of landing page that when you click on that, it goes to that link. Does that answer the question? I know I can tell you the technology has come a long way even the last couple of years. It's pretty straightforward in terms of if you type in QR code generator in Google it basically takes you step by step on how to do it. That's typically, in terms of the registration question, that's how you register a QR code.

Elizabeth asks: QR codes are just barcodes and there are many websites that you can use to create one for free or right inside of InDesign.

Tom answered: Yes as long as you have a cell phone with signal and depending on what your cell provider does, as long as you have signal or WI-FI we've noted that some trail systems are putting in

outdoor WI-FI but WI-FI in general, as long as you have signal and you can catch the internet, QR code will work anywhere.

Gwen asks: QR codes often change, resulting in broken link and an outdated sign. Can you print a weatherproof sticker with QR code to go on a plastic sign?

Tom answered: So two things: Anybody that does your signs for you, we will always require you to give us the QR code. It doesn't matter who you talk to. We're not going to generate your QR code. You are going to have to do that. You give it to us and I can only speak to us but I know other folks in the sign industry, that we do business with, that we will make sure that we print it and then we'll make sure it works before us, you know, produce your order. That's the biggest thing. The broken link, that's a maintenance issue and I think technology has gotten better since the first one when we did this where if you put your QR code to a URL on your website or static page that you create that link seems to be holding longer and better. That's only based on our experience. But yes you can switch out QR code s without an issue with a simple detail that goes right over the old one.

Hilary asks: Can you speak to tactile signs for people with visual impairment?

Tom answered: That is one thing that ADA signage, we do it here on site. There's other companies that just specialize in it and that's all they do. On a trail system, off the top of my head I can think of three instances that we've done not all the trail, all the trail signs but a small majority of them in terms of at certain points. So if there was one hundred signs that were ordered maybe twenty of those had braille on them that explained what the sign was. So we do see it. Is it prevalent? Not a lot but we do do it from time to time.

Jesse asks: Are there options for digital boards in areas with limited cell service? Such as satellite or manual offline updates.

Tom answered: Again, learning technology a little bit in terms of the power, the solar is taken care of. When you have a limited reach public options that are easiest and most simple form typically, they still don't come with USB plug s believe it or not. Most do. You can preload USB drive, walk it out there, load it up and it will run whatever you are running on that USB drive. So if you do have limited access, you don't have cell service you can still do that. It's just a manual type thing and you can plug it in. That's how it started in terms of the digital boards at least the ones that we were privy to. It started with USB and then it went to if you have some type of signal, cell signal or whatever the case may be or WI-FI you are able to do it remotely but yes it's still possible.

Jon asks: Any particular apps better for reading QR codes?

Tom answered: Most phones that are at least 3 three generations or newer have QR code scanning built in .. the link below does list the top free scanning apps. <u>https://blog.beaconstac.com/2019/09/7-best-qr-code-scanner-apps-leading-the-pack-in-2019/</u>

Kris asks: How much do the digital signs cost?

Tom answered: Comparable to the highest TV right now. Boards can range anywhere between and again this is just me, it depends on how many you buy and what brand you go with, you are talking QR code signage on one side of this slide that costs, if you buy one hundred of these things, a couple two three dollars apiece, these signs on the left are between five to fifteen to 20,000 dollars. It all depends on the size, the pixilation and what you want to do with it. The biggest thing is that the Board is the upfront cost but you also have associated cost with the maintenance in terms of having somebody change out messaging and those types of things but again, as you can tell, it offers a really good user experience as well.

Lisa asks: How do the digital board hold up to winter weather?

Tom answered: It all depends on which one you buy. The one on the left where it says Rio, that one is --I can't remember the maker. I should have put an asterisk under that. I apologize. But both of these, as long as they say weather proof on them you are good to go. Again technology has come a long way in the last four or five years so is as long as it's made for outdoor use and is weather proof you do not have a problem.

Meg asks: What is the recommendation in having digital and QR codes as a supplement to the wayfinding information on the trail. Also this is a way to outreach to individuals with low vision who can't read the description signs.

The only recommendation in have supplements is picking points throughout the trail when vital trail information is needed.. ie intersection, trailhead, change in surface or point of interest etc

Michelle asks: What gets more use by Trail users, QR codes or Digital signs?

Tom answered: From a marketing standpoint and that's just how I think. If you are have a QR code you can track that person once they click on your QR code and it goes to your website you can capture that data and tell how much people download the ap or that go to that QR code, what pages they go to, what they are really interested in and those types of things. So you have an automatic return on investment, so to speak, where you get your own data capture and you can use that for anything you want. If you have three or four trails, one is underperforming, why? Well it doesn't do this, this and this or this trail has this, this and this. Maybe we should put in something similar to the other ones. Basically, it gives you a fair amount of data with little to moderate work in terms of keeping the back end going in terms of making sure the links work, those types of things.

Norma asks: Do QR codes work in the wilderness?

Tom answered: Yes as long as you have a cell phone with signal and depending on what your cell provider does, as long as you have signal or WI-FI we've noted that some trail systems are putting in outdoor WI-FI but WI-FI in general, as long as you have signal and you can catch the internet, QR code will work anywhere.