SAM LUCIDO: All right, everybody. Welcome to CSI CAD standards implementation, and my name is Sam Lucido. Many of you have seen me, and first we're going to get the first three questions out of the way. Number one, yes that's my giant head up there in the hallway. Number two, no, I did not pay anybody to do that. And then there's also a rumor going around that I go really fast in my classes, and I was get these comments, you go too fast. Well, that only happens when I'm either really excited or really nervous, and I'm a little bit of both. So buckle up.

So this class is a CAD standards implementation, and my name is Sam Lucido, like I said. I'm a CAD services manager for a company by the name of Haley and Aldridge. I have operators all over the United States, west coast, east coast, we are not in the same location, not one person. So my job is to ensure that we deliver a consistent product throughout all these offices. And then my other half of my job is I'm a civil designer. So half work, half managing.

So that being said, how many people in here are CAD managers? How many have we got? I can't see too many. Well, not as many as I thought. So you CAD managers out there, Roger Penwar, if you ever read these cartoons of his, he gave me the rights to do this. The problem with this one is I think I was Vincent in there, complaining, and that the CAD manager. So my second question, is this your dream job, or was that your dream job?

Oh boy, nobody said a word. Wow, well anyway, most of the CAD managers that I know are engineers, scientists, technical specialists, people that have become very good and very passionate about what they do, that they're recognized by the company, and they say you need to manage this process because CAD management is a very difficult task. Not only do you need to manage the people-- like in the slide up here, this is not what this class is about.

If you want to learn about the people part of the whole CAD managing process, Mark [? Kiker, ?] Robert Green, look them up. They're very respected resources. That's where I've learned most of that part of the tool from, and there's a class today at three o'clock, my friend Rick Ellis is hosting. It's four CAD managers with 100 years of experience. It's a great way to end the conference. You'll get to meet them and ask questions. So think about that.

But that's not what we're talking about here. I'm a straight up design CAD person. So my summary, I don't want to read it to all of you. I just want to go over the part, the CAD standards manager in AutoCAD can help you check, correct, maintain the standards within your

company. That's what we want to do, and what I mean about that, the two important things about that statement are internally and externally. I want my projects to look the same in the house, as well as they do out of the house. That's what that is.

And then I always put these up when I do presentations, the three things, because my goal here is most importantly, I want you to bring back value, and give you the knowledge to help you excel and succeed. Because my thought is, if I provide you something today that you didn't know-- you are like me. Everybody's here for a reason to learn something. If I show you something you didn't know, you're going to go back to the office, you're going to make it your own and turn it into a bunch of different things.

So what we're going to do, our objectives today, we have 60 minutes. So I'm going to go through a few demos. I don't do PowerPoint the whole time. I go on computer. So we're going to understand how to use and configure the CAD manager tools in AutoCAD. That manage tab on the ribbon, that is either turned off or rarely used. Identify change and create standards files to identify your company CAD standards. A DWS file is just the file extension. It's just like a DWT, just like a DWG.

You're going to associate that file, and we're going to do separate and then together. If you looked at the handout prior to this, we're going to associate that with different drawings, and then we're going to use the layer translator to automate the process of changing layers to company standards. The layer translator is one of the most powerful tools I've used, and the reason I can say that is all these standard tools on here, my job is to-- we audit my operators. We check their work periodically, quarterly, and they love it.

But if I can use this standard, I said, man I can use a standards manager to save me the overhead time of checking the drawings. And the only reason we do that, it's not to criticize, it's to give positive feedback to them, so we can provide a uniform product and consistency. I believe we're doing that. We all get busy at the end and things happen, but the tool here you're going to see will enable us to do that. So the first thing we're going to do, I'm going to flip over AutoCAD. I'm going to show you where the CAD standards manager is on the ribbon, and then we're going to check out some of the tabs.

So up in here in AutoCAD, you see we have AutoCAD 2017, and I just have a CSI theme up here. So the manage tab on the ribbon is located right here. So what you see here is this panel on the ribbon. Not much there. Since this CAD manager's been there, this has not

changed. It's been around in AutoCAD for five-- it's been around for a while. It's just not used. So I'm going to pull it out. If you're not familiar, I'm going to left-click and just pull my panel out just so you can see it.

What do we have here? We have the layer translator. If I selected, we'll go through this. It has a box that tells you translate from, translate to, and we'll go through each of those individually. We have a check. Now, this is going to come up and nothing's going to happen because I have not added a DWS file to this blank drawing that I have here.

So I'm going to cancel, and then here's where the configure part comes in. This is where we have these options, and we don't have a whole lot to do. We have dimension's styles, layers, line types, and textiles. Those are the things we can check. And basically when you really think about it, that's pretty much the fundamental root of what we're looking for. If those things are correct, you should be able to get a good output.

So that being said, the first thing we're going to do-- oh, CAD standards not in the ribbon. There's one more thing that I wanted to cover in those four objectives in the beginning. There's something called the batched standards checker, and we only have 60 minutes but we're going to we're going to look at this because this one's pretty cool. This is not located on the ribbon, it's sort of like the reference manager.

So if I go out to my desktop you'll see I've loaded it here, and there it is. It's the batch standards checker, and you can load multiple files, and we'll go through this each time. So the first thing we're going to do is we're going to build different files. So we're going to build one with layers, line types, and you see I have some custom line types in there, so I want to check my drawing against these custom line types. Textiles, dimension styles, that's it.

So the question you're probably asking is, why don't you just put them all in one file, Sam? Well, yes, you can do that, but for this exercise we're going to show the way to do them separately and add them to one. That was the first question, and the reason I wanted to go separate, because we can go one at a time. And when I first started using the CAD standards manager, the main reason-- it might be one of the articles I wrote-- was for text

I would get drawings in that were converted from Microstation or some other program, and I'd go into the drawing, and what bothers me when you get into a drawing, when you don't do your-- it's like getting into your car when it's dirty. When you get into the drive, and you're zoomed into a spot, you don't even know where you're at, and then you look at the styles, and

it shows 50 styles in there, textiles that you don't know what they are.

So my goal was to actually use a program to merge the textiles. So I used to use this text merge list file and then a couple other ones, and then I said, why can I use the CAD standards manager? If I define my fonts, or my company standard styles in a drawing, I can just fix them that way. So that's how it started, and then I started experimenting later with that.

So I'm going to flip over to AutoCAD, and the first thing we're going to do is create the standards file. I'm going to pull this back up on the ribbon just like that. I'm going to Home tab, and I'm going to open up a file called standards, My Company Standards. So there is the file called My Company Standard, and this would be if I wanted to take all of my textiles-- I'll zoom in so you can see a little better.

So right over here I have a detail with some dimensions. So if I type DDIM for dimension, I've got an AU standard for my dimension in there. These are all my standard font files. If I type style, you can see these are all the fonts I'm using in the drawing. And then if you go down here, line types, you can see if I type LT for line type, I've got all these line types.

OK, so that's cool. So next, what do I do? What do I do with this? Well, I save it, obviously. But what do I save it to? So the first thing I'm going to do is save it to a DWG file like I did, and then you have the option of saving it here to a DWS or a DWT. Now the reason I wanted to cover the DWT, and I'm not going to go back to PowerPoint, is because I save as a drawing file, then I go to the DWT, then I go to the DWS. It seems kind of one too many, right?

You can go right to the DWT, and the reason people use the DWT is if I actually go to save my drawing as a DWT-- I'll do this one, file save as, and I'll just do a DWT, and call it Test. You see what it gives me here? What it gives me is the option, right here, to save all the layers as unreconciled. There's your advantage of your DWT. And I'm sure all of you know, now if you have-- this is related to this, it's a standard thing. So I'm going to cancel out of there, and I'm just going to type my layer command.

If you hit the gear over here on the left, there's a button here, New Layer Notification. If you don't turn that save the reconcile layers thing, and you have this layer notification on, you're going to get a bunch of warnings all the time. It's pretty annoying. Now, is that overkill? I don't know. We turn that off so I don't worry too much about it, but I wanted to make sure you are aware that that's out there.

So that's basically that. So I have my company standard. I saved it to DWT. I reconciled the layers, and then I saved it to a DWS file, which is right here. And I'll go under standards, and you see what I did? I have My Company Standard right here, and then I have My Company Line Types, My Company Layer's, Details, Dimensions. And I'll show you those files really quick, and then we'll do a check on text.

So the first one is if I go on to my standards files, the text is just contained in the company standard. So if I went into two dimensions, I'll show you. What I did was I changed the extension lines, the colors. I just made a different dimension style so you can see what it does when it brings it in. I'm a Civil guy. We don't use dimensions too much in what we do. Civil 3D takes care of a lot of that, but you architectural people in mechanical have many different dimensions styles. This is where this can help you out.

So you take your dimension style created in any drawing, and like I said, it can be in any drawing, or it can be another one, and save it as a DWT, or a DWG, and then a DWS. I'm going to open up another drawing to show you. Line types. Line types you saw in the other one, but this is a separate one, line types, and I've got all my line types in there. You see this one is like two diamonds in it, where-- I love line types.

If you followed me over the years, I love-- you can create a lot of different things with line types. That uses the wingdings font, and you just type in the letter that creates the diamond. So that's part of our standard. We use that, so I want to make sure we check against that in our drawings.

I'm going to open up another drawing, the test one, and there's our standard text files. So basically what I did was I went through my layers, my line types, my text, and my dimension styles. Everything I had in my company that I think was a standard, and I put them into files. Putting them separate for me helped me keep it organized, because a lot of times I just want to check for-- it became cumbersome, but then again, putting them all in one place is a good thing too. So it's your preference.

So I'm going to get out of here. Not going to save anything. And we'll see where we're at on my PowerPoint. Now, my PowerPoint, just so you know, my good friend, Matt Murphy, always told me years ago, I did a class on line types, and I made the best PowerPoint. I was so proud of it. But my PowerPoint's not for you, it's for me to keep track of my time. That's all it is. I mean, I'd rather show you live in the program of how to do things. It has the images and

everything we need, but it's there just to kind keep me on track.

So we saved it to a DWG, and then I told you the difference between the DWT. So just keep this in mind. I sort of still do the DWG, and then the DWT, and then the standard just because I like the DWT because I can give it a description too, and tell it version whatever. So now that we've got all our CAD standards in place, we want to load up the drawing file into our thing.

So we saved our DWS file. So now what we're going to do is I'll just briefly show you. We're going to check a drawing for the text plug-in. And like I said, this was the first thing I did, and when it worked I was so happy to show people. And I said, this is easy. This is simple. It's very simple to do. So we're going to do text files, and we're going to add it in our drawing, and we're going to check a new one.

So I'm back in AutoCAD. So I received the base map from the client. Like I said, I'm a Civil guy, but that doesn't really matter. Nifty site plan, Toppo, some textiles in there. I type style at the command prompt. And look at that, Aerial, Dim Aerial, F1, Standard, Working, so on and so forth. Not what I want to see. Remember our standards were that CSI SHP standard. We had them set in our other drawing. So how do we fix this quickly?

So we made that DWS file, My Company Standard. I'm going to go over the manage tab on the ribbon again, and I'm going to go to configure. I'm going to add that text file. This one is My Company Standard. So I added it. Do you see how it added it in there? There's a settings button in here you have to look at as well, which will give you an alert once you add this in there, if someone violates the standard, or if the standard file is not found. So the settings can be checked there. I usually display an alert upon a violation, and then over here, you can set it to none or your company standard file.

So I'm going to hit OK. Plug-ins? I'm only going to check for textile. So I'm going to uncheck everything, and then I'm going to hit check standards. What AutoCAD's going to do-- let me pull this up a little bit. You'll see it says-- they're coming up here and it's says, Sam, I've got this text style called F1. It's not part of what you're showing me down here. What do you want to change it to?

And I said OK, maybe I'll change it to Ariel. And you'll see what happens is the standards manager is going to say, OK the current value is a Roman's 0.2, and your new value is a zero high of Ariel. I'm just going to go through and fix it. The next one is Aeriel. I'm going to pick fix. The next one is Style Working, fix. You'll have to kind of look at the font and see what it

represents, because a lot of people don't really name all these, especially when you get them from somebody else.

Dimension Ariel, we have a CSI dimension. We're going to fix it, and it says, Sam, I fixed four problems. Fixed four problems found, fixed automatically, zero fixed manually. You can set this to fix everything automatically, but if you're anything like me, I want to see what I'm fixing. I just don't want it to fix it and not tell me what's going on. So I'm going to hit close, close, I'm going to type style at the command prompt, and you see all that stuff's gone. Just like that, you cleaned up your textiles. That was what? Two minutes.

So that's the text part of this, and like I said, it's pretty basic, but for me, I fought with that for years in drawings. I loaded up this merge file, we had drawings that would come from DGN styles. We couldn't get rid of them. This gets rid of things. So that takes care of text. I'm going to get out of my base map file, and I'm going to bring up my dimensions.

So we hired this young person, intern, and we said we have 15 details to do for our library. We want you to do these details all week. So he comes and he does the details, and look at the dimensions. If you look at them, we've got tick marks, we've got italicized fonts. They're all red. Remember the dimension one I showed you? And we'll go back and look at it again. If I go under my standards, and I go under my drawing, I'll just bring it up. That's our standard dimension.

Now, that's probably not what you would do, but I wanted to make it visually represented. So that's what we saved our dimension style as, as opposed to this. So it's pretty different. So let me get out of there. Same concept, CAD standard-- the panel on the ribbon. I'm going to go to configure, and there's one in there, My Company Dimension's. I must have had that already in there. I don't want textiles, I went dimension styles.

So I'm going to pull this over so you can see what's going on here, and I'm going to go to check, and it's going to say, Sam, someone created a dimension style, and you can't manage it out there. This happens. My Own Standard, Jim's Standard, Bob's Standard, or whatever. That happens a lot. People like to use their name, they're proud of it. So that's fine, but it's not our company standard. So I'm going to change that to AU Standard.

And notice down below, these are all the values that are going to be changed in the CAD standards manager. And one thing I want to point to-- so we'll go into settings again, it's the same warnings again. Down here there's a button that says, mark is ignored. OK, a lot of

times you get drawings and files from clients that you have to do it their way. The client trumps your standards, right? Well, in my world it does. So that's when the CAD manager, or whoever's doing that, you can mark it as ignored, and then when you run the check it'll say ignored by S Lucido, or whatever your login name is.

So let me go back here, and we're going to say yeah, I want to fix that. And it's going to say, one fixed automatically, and hit close. See what happened? It happened pretty quick, but that's pretty cool, isn't it? Everything changed on the fly like that. So if you have multiple dimension styles-- so we fixed dimension styles, and we fixed test styles.

I'm going to close this. Close my dimensions. I'm going to hit no. So next up is line types. OK, so we had that standard line type file that we used all these line types, and this is just a base map I created, just made it up, and I have all these different cool line types in there. But I noticed when I had the line type file, when I zoomed in I said man, my fence does not have one x. It has two for the fence. S2 is under my property, as you can see. It looks like it's a sanitary sewer. S1 is a storm sewer, and remember our standards were SAN, STM, and the one x for the fence.

So we can fix the same-- doing the same concept, is we're going to configure the standards first, add the line types plug-in, that one in there, and then check against the line types. I'm going to bring you up a quick one for this one. I'm not actually going to go through each line type one, and show you what it did.

So after running the check, it changed my line types to sanitary, storm, drain, and water. So there's two fixed lines. So text, dimensions, line types. So what else? That's pretty much it, right? OK, let's go into the layer translator. Those are our basic things. There's layers in there too, but those are basic concepts for this. So I'm going to go back out to the PowerPoint, and we'll see where we're at.

So we've fixed our company dimensions. You see those are the ones that were the wrong ones, and we just fixed them through there. We went back out, we did the same thing with this survey map for line types. And the reason I didn't go over line types too hard is because the layer translator can do that too. So you can save a step by going through there, but it's a good way to fix line types, especially DGM line types that come in there. It'll fix them and remove that SHX warning.

So the layer translator. So what is the lawyer translator? This is a pretty cool program. Basically what you do is you bring up your drawing, that's the non-standard. You bring up the drawing that is your standard, and you map things. So we're going to go back out to AutoCAD again. Let me get out of my line types. Layer translator. Oh, same guy. Same guy, or person, or detail person created this detail from our library, and they put everything on these layers that really doesn't look too correct to me.

So we know that a few things are off. So let's open up our detail, the one that was our standard. I remember I created a standard file called Details, and the reason I did that is because detail standards sometimes are different than an actual overall drawing standard, depending on where you work for. So I wanted to show you. So there's our access road, our standard access road, the way it's supposed to look, and here's the one the intern drew.

So what are we going to do? Let's use the layer translator to fix that. I already saved this detail drawing as a DWS file, right? So I'm going to get out of there, and I'm going to say layer translator. So notice the first thing that happens is it comes up, and it says Sam, here's all the layers in your drawing. And if you get the little broom in here, that means you can purge it. Translate to what? Well, what do we want to translate to? Let's bring up my standard file.

AUDIENCE: What did you say about purging?

SAM LUCIDO: It might show up, and when we do another exercise, I'll show you. If there's a little broom here next to it, you can right-click and-- if there's a little broom icon-- the question was, what did I say about purging? If there's a little broom next to the layer, it means that it's not used in the current drawing. You can right-click and purge it there, otherwise it's going to remain in the drawing until you do purge it.

So I'm going to load my standards file. OK, so basically, this is how you do it. I wanted to show you one thing on the settings on this. If you go down in here, this is where you have to set up the layer translator to actually translate what you want. Force the object to bi-layer, force the line type bi-layer. Remember I told you about the line type thing? You can do it in here. So you don't necessarily have to go out and do it the other way.

Force transparency, and translate the [INAUDIBLE] blocks. I don't usually typically write a translation log. It's just a log file. And then the show or layer contents when inserted, so the reason I don't do that it-- everybody knows what the layer walk command is. Right? How you walk through layers. If you check that button on, when I select map one to the other, it's going

to kind of walk you through the layers one by one. If I don't check it, like I'm doing now, I'm just going to map the layers.

So I'm going to hit OK. So I'm going to just do this. I'm going to select dimensions on the left, and I'm going to select this on the right, and hit map. And you'll see dimensions here, AU detail dimensions, continuous line type. Geo textile, I know that's on a geo textile, map ground surface, ground surface map, hatch, hatch map, labels, map, label lines. It might have been that one. Primary line, map, slope, map, and then we have two text lines. I can actually have my control key and hit text for both of them, if I wanted to. Map, and def points, obviously we can map in any way just to get it to zero, map. OK.

So I've mapped everything. Now what do I do? I translate it. So watch my detail when this happens. Remember what the other one looked like. Translate, OK. Says Sam, do you want to save the mapping file? In this instance I don't, and I'll show you the next exercise how we're going to save the mapping file. And the reason being is because I don't have another-- the layers that were on this detail probably won't be on another one, so there's no reason for me to actually save a file to redo the layer translator.

So I'm going to translate only. See what happened? There's our detail right there. Everything translated to what we wanted in our drawing. It looks exactly the way we want it. The line types are hidden, the geo textile's there, the layers are good. So that's the layer translate. That's a pretty basic example of how to use that, but I encourage you to take a look at it.

Now, the next example I'm going to show you how to use that is what I believe is the key to using this. So I'm going to get out of my translator, and I'm going to go back to my PowerPoint and see where we're at. So we went through the layer translator, and we went through the settings. Remember, we said force object. Just remember that that last one is sort of like air walk.

I didn't really do that. If your group is disciplined enough that everything's drawn by the layer, which is challenging at some point in times, because if it's not drawn by layer, this is not going to work. And then we translated the drawing. So now I want to show you. Remember what came up and said, do you want to save the mapping file? This is where the key comes into this. So I have a contractor. So I'm going to bring up a drawing.

So I have a contractor that we use, and he does-- see ignore SHX files. He does property surveys [INAUDIBLE]. Great guy. We love the guy, but his surveys come in, and they're not

very good. But cost effective, friend of somebody. We like him, we use him all the time. We use the same surveyor to do drawings for all these properties in certain areas. The same surveyor gives us his same layer settings, his same settings every single time. So this is where the key comes into mapping.

So what I what I did was I said OK, so I got my first drawing from the surveyor. They're going to send us 10 more. Or the same surveyor is going to send us updates to the base map every three months. Those are those are the case you use it. So now I'm going to actually configure this. I'm going to add a drawing in here. I have to test it in here, use the layer translator, and then map the settings.

Actually I'm going to cancel out of there. I'm going to go back in here and configure again. Layer translator. I'm going to load the drawing file back in my layer translator, my surveys. Survey clean. So basically, I cleaned one of them up. I took one of the surveys, and I called it Survey Clean. Now I'm going to go through and I'm going to map my-- just like I did. I'm not going to do every one, because we don't have the time to do every single one, but I'm going to go through and take all these layers from that guy, and do land, to this, to this, to my company standard.

So land boundary lines. You know, SiteTopo, I'll map, primary, I'll map, I'll map, and then I'll save it or I'll translate. I'm not going to do it. This is where I'm going to translate and save the mapping information when I get done. So I'm going to save that back out to a DWG or a DWS file. DWG, and then a DWS, or T. So I'm going to hit cancel because I'm not going to go through every one, I'm going to show you what the layers are in these.

So here's the survey. Here's what his layers are. Start with land, and then the one we cleaned up starts with site, SiteTopo, and it changes a few line types. OK, so we think we're ahead of the game, right? This is this one I actually used on products. It actually work. So I saved mind mapping file and I call it Survey Clean. So I took that, saved it to a DWS file. So I've got this drawing. So we've got this guy, he just sent us another drawing. He sent us two more.

So we're going to open up the second one. I'm going to ignore the SHX, it's probably a line type, and then I'm going to open up the third one. So if you look at them, and like I said, if you look at the layers, and you layer walk command, you can see we've got a couple of different land [INAUDIBLE]. Layers are pretty similar, right? Kind of looks the same. Kind of looks the same.

So we know we map that file, so now what we want to do is take these three drawings and convert them. So how many people, when you get a survey-- and I manage a lot of CAD people. I've done this for years. Oh, it's going to take me 48 hours to clean that up. It happens, right? It happens. Clean it up, make it look good to your standards, make sure it plots.

So I'm going to go into here, I'm going to go to the layer translator, and I'm going to load the settings here. I'm going to go to DWS. So I saved it to survey clean, right? OK, I'm going to do this. I'm going to do one, two, three, open. See what happened? Everything from my left side went to the right side, because it's the same survey with the same layer translatings, and I mapped it to that DWS file. I'm going to hit translate. Watch my file.

I'm not going to save the mapping file, I'm going to translate. Look at my file. That's number one, survey number two, layer translator, load, survey clean, translate, translate only, looks pretty good. Survey three, layer translator, load, survey clean, translate, translate only. This is when my good friend Michael Beal goes like this, and does touchdown. Isn't that cool? Think about what you can do with that.

I took three drawings that came from somebody that uses the same layer scheme-- in a perfect world, you give them your layer scheme, and they send it back to you, but that doesn't happen. At least it doesn't happen with me. But if you use the same surveyor on projects, which a lot of times isn't up to you. It's up to the project manager or the client. You set up these files and you can translate.

It works well for me when we get base map updates for surveys for land development projects, and then we can create these mapping files. You just keep it in a folder called standards, and you're good to go. Man, you guys weren't as excited about that as me. That was my--

[CHUCKLES]

AUDIENCE: Woo!

SAM LUCIDO: Yeah, anyway, let's go out and see where we're at on the PowerPoint. So mapping the layer translation. So that does that. Oh, making a new layer. I threw this in there because I wanted to say, if you do have a standards file connected to your drawing and somebody tries to make a new layer, you're going to get a warning that says, hey, you can't do that. Or do you want to have it on something in there.

So if I actually opened up a drawing. I'll get out of my translates. I'm going to open up one called layers. So I have a standard file attached to this. It's my company standards. And then the plug-ins are set to layers, and it's attached to this drawing and I saved it as test. OK, and if I go to layer-- if I try to make a new layer, see what it says? It says it's not part of it. I can choose a layer that's existing on there.

This would be if you had layer settings where you had every single layer in your company all set. You could set it to this file, attach that CAD standards that file, and then the operator would know, hey look, you can't do that. I always wanted it to do a wild card though, to kind of reference so if your layers were prefaced by something. But that's what I mean by layer in there, and that's controlled by adding the plug-in to it.

I can tell you, honestly, a lot of times when I can figure these-- so I've got that set there. When I get done, I remove it. And this is at the end of the PowerPoint because there's a system variable called standards violation, and if you set it to one, what I noticed-- I have about 12 to 15 core users. They know what that means, but I also have 80 other users that when they get the little bubble that pops up on the lower right that says, standards file missing, they think there's something wrong with the file.

There's nothing wrong with the file, it's just that you checked it against some DWS file that's not located on their system. So it's called standards violation. It's either one or zero. If you set it to zero, it'll turn that notification off. Even if that file's not in there, and it doesn't see it, they won't get a warning. So we made a new layer,

Batch Standards Checker. So back to details again. So Batch Standards Checker. So like I said, I audit drawings for my team, and we have a detail library. So when people get light on work, I'll give somebody a pool of erosion control, a pool of road access, and they'll do a bunch of drawings. So how do you check them? So this little tool is located outside of AutoCAD, and these are the icons that are showing up there in the first one. New, open, save, save as, start, check, stop, and so on and so forth, and I'll show you how to do that.

So I'm out. I'm actually not in AutoCAD. I'm going to actually go out to my desktop. Let's just get out of AutoCAD completely. So we don't actually have to be in the program to use this standards checker, and if you want to get it on your-- if you want to know where it's located, I have the reference manager here. If I double click it, there's a reference manager, and if I double click the Batch Standards Checker, the Batch Standards Checker comes up there as

well.

Both of them are located under start, under programs, under Autodesk, Autodesk 2017, Batch Standards Checker, Reference Manager. Now, I do know you can run the Reference Manager. This is from AutoCAD. There is a way to do it. I'm not going to tell you how to do right now, but there is a way to do that. I tried to do that with the Batch Standards Checker, like writing code, and it locked up pretty bad. So I don't recommend doing that.

So what the Batch Standards Checker does is I'm going to open up AutoCAD just to show you real quick the details we have. Like I said, we build a detail library. So I have three details in there. One's an access road, one's a temporary turnaround, and one's a steel pole, and they have to be done to our company standards.

So we've got everybody on the same page, and they have these details in there. Access road, and I could open them all at once. You see that one looks pretty good. That was the one we've been using. Steel pole, may or may not be right, and then temporary turnaround. So those are drawings.

So my guy came back to me and said, Sam, I finished all three for you. I'm good to go. I said OK. So normally I would open up AutoCAD and start checking things, but now what I do is I created a DWS file for details. Specifically for that because line types are different for detail sometimes because sometimes the lines need a bit lighter weight.

So I'm going to get out of the drawings. Leave AutoCAD open. Now, for some reason, this is going to come up on my PowerPoint. So I'm going to go to a blank slide. I'm going to leave it right there. So if I go back out the desktop, Batch Standards Checker, and you'll notice the buttons that are-- actually, this actually works pretty good because control-shift-A will do-- that's new. You see, there's new there. I wanted to make these, but it's so small. I don't know why it's that small, but it is.

So I've got all these buttons in here. So I want to do a new one. I want to open. I want to add drawings to it. So the first thing I want to do, I want to add those three drawings, access road, steel pole, temporary turnaround. So I added them to my Batch Standards Checker. What do I want to check this against? Do I want to check it against a standard file that I already have attached to each of those? Or do I want to check it against one that I don't have attached?

Well, normally I don't attach standard files, so I'm going to attach it to one that we created. So

I'm going to check that through drawings there, and I'm going to attach one called, My Company Details.

AUDIENCE: Why do you not attach to the standard file?

SAM LUCIDO: The question is why do I not attach the standard file to the original drawings. You know what, you can, and then you can just check it against that file if you want your operator to actually run that standards check. Most of the time, I don't even tell them about it. They should know the standards. So when I get it, I just check it. Certainly, you can, and then all you would have to do you, won't have to attach anything, you would just have to run a check.

OK, to take that a step further. Say you had details, site plans, and something else that had different standards files, and in that case, those files already have standards files attached. Then you could do it because you need different checkers. Does that make sense?

AUDIENCE: Yes.

SAM LUCIDO: Plugins. I want to check everything. In this instance, I want to check everything. I want to make sure this person did everything according to my company standards. Notes, I can just say version 1.0 check on road details. Progress? Progress is just a button that shows up when you run the check. So what's going to happen here, I'm going to actually hit this check button, and what's going to happen, it's going to say Sam, you have to save the check file first. You can't just check it.

But what AutoCAD's telling you to do, it's going to say I want to save a file that you can load up again because when you run this report, the odds of that being 100% correct the first time is very slim. So you want to be able to take the same check file, it's a CHT extension, and open it back up again.

So I'm hit OK, and then under the details, My Details Check, and I'm just going to overwrite that. I'm going save it. And you see what happened? It happened very fast. The progress thing went [INAUDIBLE]. So this is what you get. It brings up your browser, and this is the overview of the report. Here are your three drawings. My temporary turnaround, my access road, and my steel pole. Well, we know the access road we worked on earlier. That one's pretty good. It had no problems. It had nothing wrong.

The temporary turnaround only has three. The steel pole has five. I can go over on the left here, and I can select OK, I want to see the standards I checked it against, which is that. And

you'll have to remember to zoom down. It didn't go away, and I just want to see the problems. So this one, no active problems were encountered in the first one, and this one had the following problems.

So you can actually get out of here. Now, you're done. Since the access road's good, you just turn that one off and go back to problems, and now you're only displaying the problems for the two. Or you can send them one at a time. So I'm going to get out of my browser, and you'll see right in here, it says you can view the report, and you can export the report. I'm going to export the report. I'm just going to through it on my desktop and call it My Details Check. You see it's an HTML file.

So basically what you do is you save it, hit close. I'm going to go over to my desktop, and then My Details right here, double click it. I can send that to my operator and say, hey look, you've got a couple of things to clean up. For me as a CAD manager, trying to ensure consistency in my deliverable, this is a big time saver. Then they can go, oh yeah, I did. I missed a font, or we have something in here that's wrong.

Sometimes it seems like we get to harped on the standards, and how picky we get, but you have to keep your drawings organized, and everybody has to be on the same page. They just have to be accountable for their work, and know that you're checking it. But for me as a manager, this saves me a ton of time. I send them the HTML: file, they look at it, they send it back to me, we run another check. Now I can open that check file again.

The only thing I have to do is they send me back the details, I go back to the Batch Standards Manager, run it again, and I'm going to open the check file. And you see what happens? It brings up the drawings that we already checked, but they're new drawings. The person sent them back to me. So I can run the same exact report.

So that's the Batch Standards Checker. It's been around for a while. There's certain industries, Departments of Transportation, that actually use this. They send you their DWS files, and they say, hey look, you need to check that against these. So it's a pretty powerful tool.

So I'm going to go back out to PowerPoint. So you've got your standards audit report. We ran our Batch Standards Checker, and you can see up in here we had a few problems, and the problems were fixed. I told you about the standards violations system variable. That's what I meant about the run, the configures. It'll get the missing standards file, and even though it

does nothing, people will get nervous and think there's something wrong with the drawing file. So by hitting the zero on that thing, you can turn it off.

So in conclusion for this, and I did go a little faster than I wanted to, but I think that was-- it's pretty basic. We can go over different topics when we talk about more of it. I left this up here and I change this at the end because consistency in design and drafting are very important for maintaining and sharing drawings, internally and externally in your work. What's in your house, make it, own it, keep it good, and then when you send it out, do the same thing.

You want to make sure you provide consistency in your output. It's like if you get something and it doesn't look all right, you start thinking there might be something else wrong with it. But if you can use this tool, which has been around for a very, very long time, to help you with the layer translator mappings, the batch standards, the text files, it's one of those tools where even if you just use it for text, you've done your thing.

I've tried a lot of different programs to convert line types, textiles, dimension styles, and this thing works. It works. So what I'm going to do is I'm going to load up some drawings on the data set, like the line type one with the standards and stuff, and some standard files that you can check against. They're not up there now, but I'll do that tonight. So you can take a look at that and play with that.

For this, we always do the surveyors-- the surveyors. I'm Stuck on the survey thing, I think. Right? Anyway, the surveys are for-- it's like me talking about the CAD standards. I have to give feedback to people, and I used to take it hard too, back in the day. I used to be, come on, I don't go to fast. Come on. But now I kind of encourage it because it helps me slow down, keep pace, and cover the topic needed without losing everybody. So please fill those out. You can do them on your phone. Autodesk likes that.

And then did you forget to take notes? That's my graphic of that. That's how you feel when you've done that layer translator thing that you guys all clapped about, and said I was so excited about. Anyway, I have a screencast page on the Knowledge Network. I work with a lot of the Knowledge Network folks. So everything I did today, there's a video for everything I did. And in the handout, it's interactive, it links directly to each and one of those videos.

If it went too fast, or you want to look at it again, the screencast, I keep them like five minutes long at the most. They're quick. So you have in the handout, you can go back and forth, click on each of the layer things, and then click on my screencast, and it's under CSI. It's called the

collection, if you're not familiar with it. So you'll see my collection, and there's over 10 videos there.

If you like sheet sets, I've gotten with over 20 there, and then I also did one for Macros here too. So there's over a hundred of these that you can look, and view, and download. That's it everybody. Thanks! Any questions before I-- we can ask them together, or you can come up.

AUDIENCE: I gone one. Your layer standards aren't really divided out. They're kind of like natural CAD standards, where they've got to be like v equals three letters, four letters. Can you make it check that just so that--

SAM LUCIDO: Just those prefixes?

AUDIENCE: Yeah, because we don't have--

SAM LUCIDO: No, not right now that I'm aware of. I wish it would do that too.

AUDIENCE: If you already have your DWS, [INAUDIBLE] use the map layers done across--

[INTERPOSING VOICES]

SAM LUCIDO: The question was if you received-- correct me, if I'm wrong. If you received a file, you already have your DWS file, you have a client, and then they added some layers, right? So all you'd have to do is go into your standards file and add those layers. You can run the check, and it will come up and say those three are wrong, and you can ignore the problem, or you can go back to your standards file and add the layers. The more you add, the better because if you have too many, and there's only five there, it's not going to matter on the mapping. It's just going to overlook it.

AUDIENCE: In the layer translator, let's say you get a drawing from an architect, and you're a Civil guy. You don't care about anything inside the building [INAUDIBLE] you're drawing. Does the layer translator purge out interior wall layers, for example? Can you make it purge out layers you don't want?

SAM LUCIDO: You remember I showed you? I didn't have one that actually brought it up. You can write if you don't want the layers. I don't think so. You can merge it to another layer. It's kind of like the layer merge command, but I would do the whole thing, and then the layers you don't need, delete. If they're unused, you'll see them. A good way to delete layers that you can't get rid of,

like some of the Civil [INAUDIBLE] have layered delete and then by name, because then you can bring it up in the list.

AUDIENCE: OK, Thank you.

AUDIENCE: Sam, is there anything unique to what you showed us today to 2017, or is 2016--

SAM LUCIDO: It's exactly the same.

AUDIENCE: No change.

SAM LUCIDO: I could show you 2015, 2014.

AUDIENCE: No change for years?

SAM LUCIDO: No. Where did I put these desktop documents? I'll go back out to AutoCAD really quick. So I have 2017, here. I kind of cleaned my desktop up. It's usually a mess, but I have three versions below installed, because some of my users are still on a few below. I'll do this one, right here, because this is the version for my company, 2016. So we did 2017, and that managed tab on the ribbon-- what a lot of people do, I noticed the sub CAD managers, they'll actually remove that tag because they don't want people doing it.

So I'll start a new drawing, and you'll see this is my company settings. So we go to the manage tab on the ribbon, same panel. All of this stuff is the same. The same panel's there, and then if I even want to AutoCAD 2015, you'll see the same thing. I don't know how far back-- I mean, it's been around for a while. I don't know how far back. It came on when the ribbon came on. But those tools are the same, they haven't changed. So that's it.

You have everything you need to succeed from the handout, and the screencast, and everything else. It's only a 60 minute class. So we don't want to get into in-depth. We could do one on the layer translator in itself, if we really wanted to get in-depth on it, or the Batch Standards Checker. But it takes a little getting used to because it's a different way of thinking, but they do work. They're very, very good tools, and they're not very difficult to use once you kind of wrap your head around about what you're doing.

AUDIENCE: I have a quick question. We have some pretty creative technicians sometimes, and--

SAM LUCIDO: I love that term, creative.

AUDIENCE: In dimension styles that you set, and part of your standard, if they make a change to that dimension style, but they leave the name the same, does it compare all of your settings in those dimension styles?

SAM LUCIDO: Yes. If they override, it'll compare it. It'll tell you before--

AUDIENCE: So [INAUDIBLE] it's just the same name, but it'll just say this doesn't match?

SAM LUCIDO: Correct. Correct. Or it'll just come up and say there's a problem with it. There's an override in there. Dimensions are tricky because dimensions-- there's hundreds of system variables for dimensions. And between the annotative, and the architectural, and the engineering, they're tricky to get used to, and a lot of people use a lot of different styles. But yeah, if you do have your standard, it'll overwrite that other one. The Batch Standards Checker is a good one for that one too.

AUDIENCE: Quick question on the M-text. If they do a force override on the color, will that do a corrective on it?

SAM LUCIDO: It will correct.

AUDIENCE: OK.

SAM LUCIDO: You mean if everybody sets everything to [INAUDIBLE] layer translator--

AUDIENCE: They type in the M-text and then they force color on their line string of text--

SAM LUCIDO: Right in the layer translator, if you look at it, it changes transparency, color, layer, line type. Those items there. And you have the option of telling it don't change it. You remember the icon that said force color to bi-layer? That's exactly where that's-- you turn it off, but I know exactly what you're talking about. A lot of people do that because they just don't like the way the company--

I have an example. Someone doesn't like the way it prints because it's too bold, so they change it to a different color, but you can force it back. I did a Macro class the other day, and there's a macro we wrote that was creating a default layer, and I used the view port layer because a lot of people like their own color. So we created a default layer that automatically overwrote whatever somebody else wrote, and put it to no plot on a certain color by clicking the button. So there's a lot of way to override things, but yeah, that'll work.

AUDIENCE: On the M-text if they add-- they open up M-text, and they'll start typing in RomanS, and then they'll actually change the physical text to say, Ariel. And then they change it back to--

SAM LUCIDO: You mean within the actual string?

AUDIENCE: Yes, they're actual--

SAM LUCIDO: Should we try it?

AUDIENCE: I was just wondering if this could fix that.

SAM LUCIDO: Let's try it. You want to try?

AUDIENCE: [INAUDIBLE]?

AUDIENCE: Very creative.

SAM LUCIDO: That is extremely creative. So we're going to type M-text at the command prompt, and we're going to type my text color. And I'm going to change this color to red, right?

AUDIENCE: Yeah, and then they'll change the actual text to say--

AUDIENCE: A different font.

AUDIENCE: To a different font.

SAM LUCIDO: And let's make it big. How's that?

AUDIENCE: That's exactly what they do.

SAM LUCIDO: So that's exactly what they do? That's some creative CAD work you've got going on there. All right, let's see if we can do it then. We'll do it together. We're going to configure it, and we're just going to change it to the text that I did. I actually had one in here for my company. We're on AutoCAD 2016 now, so I'm going to go to My Company Standard, I'm going to hit Open, I'm going to go to my plug-in, I'm going to go to textiles. Let's move this out of the way. So let's see. How many people think it's going to work? That is a low number.

[LAUGHTER]

All right, check standards. What style did I use? Wait a minute, let me get out here. I'm going to see what I used first. So my style is called-- we'll make it a different style. We'll call it new,

and we'll call it test, and we'll set it to current. Close, put this over here. This is style is test, OK. Now I'm going to configure my standards, plug-ins, text check. OK, style line types, next, next, next, next. There's test. We're going to change it to Ariel. The magic question. Fix. Problems five, fixed automatically. Close. Didn't do it.

AUDIENCE: Mine did.

AUDIENCE: Mine did, but--

[INTERPOSING VOICES]

SAM LUCIDO: You overrided inside of font, specific characteristics that it can't recognize. So it changed the style back to Aeriel, but since you did it inside-- that's a great question.

AUDIENCE: We deal with that every day.

SAM LUCIDO: So they found a way how to fool the CAD management. No, but that's a good question. I'm glad we looked at it. So now we know.

AUDIENCE: You've probably never had that question asked ever before in your career.

SAM LUCIDO: In my group? I've seen it done. I've seen it done a lot of times, but I didn't check it when I was doing this class because it's just one of those-- it's a rare thing. I'll look into it, though. I will look into it and see if there's something I'm missing, or something that we didn't cover.

AUDIENCE: Or if there's-- we'll probably write a Lisp routine [INAUDIBLE]

SAM LUCIDO: You know what? If you can't find an answer for something, there's always usually a Lisp routine out there. I mentioned the screencast on the Knowledge Network. If you go to the Knowledge Network and you have your Autodesk account, even your question, post it. There's people like me that are in the expert elite group. They love the challenge of answering questions. It's almost like an internal competition of who can answer , and you get a lot of smart-- it is. You get a lot of smart people like competing to try to figure it out. That's a very good question, though. I'm going to write it down. I'll write it down and I'll see. That's an excellent question. You guys want to do anything else while we're here? OK, one more question.

AUDIENCE: When you do your line type check or your layer translator, if you translated everything to a different one, and it leaves that other one empty, I guess, does it make Auto purge? Or do you

do it and then you do a purge?

SAM LUCIDO: No, it purges everything. Yeah, they're gone. When that window went blank, that means the layers are gone.

AUDIENCE: [INAUDIBLE]?

SAM LUCIDO: Yeah. It's just like the layer merge command when you merge one to the other. They're gone. That's why I like using it so much because we don't have-- and like I meant, we like this surveyor that we use. Very affordable, does a great job, but his line work is not the greatest. But by using this, we get what we want out of the surveyor, and we fix his stuff like that, just by entering it in.

AUDIENCE: We deal with a lot of consultants and we have the same issue. They like to do their own things. Is it easier to have them correct it on their side?

SAM LUCIDO: If you can get them to do it.

AUDIENCE: Rather than using your internal--

SAM LUCIDO: If you can get them to do it. In my experience, I would love to be able to send somebody a sheet of paper and say, this is what I want you to do, but it just doesn't seem to work that way. In a rare instance, you'll get somebody to do it, but they've got their GPS and all their controls, and everything set. And they run it, and that's what they're contracted to do, and you get the file. But in a perfect world, that would be great. I think we actually have done that in some instances, but not all the time. I think it's just a money thing. It costs more.

AUDIENCE: Is layer translator-- I know this is a check function, [INAUDIBLE] works with the line layers in the drawings? It doesn't check against any of the x refs.

SAM LUCIDO: That is correct. The question was, does it check against x refs? That is correct. It only works with what you have in your current drawing. It doesn't check anything that's nested. That's a good question.

AUDIENCE: [INAUDIBLE]?

SAM LUCIDO: But then you just go into your x ref and do the same thing. I'm going to look into that, though too, because that is a very good wish list item because that would make sense. Why would you want to go into a five x refs if--

AUDIENCE: The problem is if they start using [INAUDIBLE]?

SAM LUCIDO: Yeah, that's something. You have creative users too.

AUDIENCE: Will these same tools run on other Autodesk platforms like Civil 3D and--

SAM LUCIDO: I know it's in Civil 3D because I use civil 3D, and in most of the vertical products, yeah.

AUDIENCE: Will it find that text style [INAUDIBLE]?

SAM LUCIDO: That is a very good question. Last question, OK. Will it find, for the Civil 3D users like myself. Civil 3D is based off a style, so you can change files independent. Styles are like your objects. I do not think it does, but I'm going to write that one down too. That's a very good question because I know what you're dealing with. We deal with that too. People love to change the styles in Civil 3D within the style editor, but I don't think it will check that. Are we good? Was it good?

AUDIENCE: Thank you!

AUDIENCE: Thank you very much.

[APPLAUSE]

SAM LUCIDO: Thanks, everybody.