



DRILL DESIGN SOLUTIONS

INSPIRE | EDUCATE | COLLABORATE

Workflow Chapter 1: Clients, Contracts, and Planning

Disclaimer: This is my workflow, it comes from writing drill for the last 15+ years on Pyware exclusively. My workflow has allowed me to write upwards to 13 high school bands, and 5 universities all in the same summer, while being a high school band director myself. This workflow has helped me hit my targets for every client I write for, and has allowed me to use drill design as a viable means of making money for my family. It is not perfect, nor am I, but I hope that organizing this information for you can help you whether you're a seasoned drill writer, or you are a high school band director who just wants to learn how to write a pre-game show. Please feel free to add to or omit anything that I use in my workflow if you believe it will help you stay on target, productive and artistic.

Clients

There are a few important things to remember when designing a drill:

1. You must be familiar with your client and their performers.
2. You must have an agreement on cost and services provided.
3. You must have a plan.
4. You must be familiar with your software. (*Watch my video series and practice!*)

Your client always comes first and you should develop a relationship with them as they are trusting you to put together the most important aspect of their production. Your drill is the vehicle on which all the other designers vision will ride on, so it is important that you collaborate as much as possible.

If you have never met the client in person or seen their group live you should take some time and watch a few clips of them perform. Watch the individual student, listen to them play, watch them march and spin. What level would you categorize them in? A-Class, Open Class, World Class? What is their competitive level? These questions all need to be answered before you begin planning the drill for the production.

Included in this tutorial series is a file called "Production Inventory". This file is your all-in-one resource for getting this information from each of your clients. I have also found that this file opens a lot of clients eyes to some of the things they have not thought about when planning a production.

This file is great for two main reasons:

1. It will help to answer all of the questions needed to write the drill for the production.
2. From a business perspective it is backup for when you release the final product as you are trying to make everyone's vision into a tangible object.

Please take a moment to look over the production inventory file and all the information that is included in it. If you would like to modify any of the information feel free to do so. I have found this file to be very useful and I make it required from all of my clients.

Contracts

A good drill design contract should include a few things:

1. Director Name and Contact Info
 - *It is very important for your to know your clients full name and speak with them. DO NOT do business through email only.*
2. School Name and Contact Info
 - *It is important for you to know the schools full name and where they are located for your records.*
3. Show Title and Year
 - *After a few years writing for a school it is good to have a record of the show title and year.*
4. Services Provided by you.
 - *This should include everything you plan to deliver to them. I always include PDF files of Drill and Coordinate Cards, a Video file for each movement synced with the provided mp3, and any other associated need for drill book apps, etc...*
5. Upfront Deposit
 - *DO NOT work without a deposit. You can get burned by schools that end up not paying, directors get hired and fired, or students end up not paying their fees leaving you out to dry. I recommend \$500 upfront and the rest upon delivery of the rest of the drill, or ½ the cost of the drill upfront and the other ½ when the drill is delivered.*
6. Total Cost
 - *It is important to include this line just to make it completely clear how much has been agreed upon.*
7. Date of Drill Delivery (as determined by client)
 - *It is very important that you and your client are on the same page when it comes to the timeline of when the drill needs to be delivered. This helps you to pace out your writing schedule and make sure you do not get behind in your responsibilities.*
8. Signature and Date of all Involved.
 - *Important to have for all parties.*

Included in this tutorial series is a file called "Drill Design Contract" and it contains all of this information. If you would like to modify any of the information feel free to do so. I have found this file to be very useful and I make it required from all of my clients.

Planning

Planning out an entire production takes collaboration from all staff and designer involved and requires a few things:

1. Summary of the Theme or Idea the production is centered around.
2. Counts / Sections Breakdown
 - *Each section of the show within each movement should be thought out for the winds / CG / perc / visual. Some people even go to the length of writing a count sheet.*
3. Winds Plan:
 - *Who is being featured / playing the melody*
 - *Length / Stride Size of movement*
4. Color Guard Plan:
 - *How many silks will be used*
 - *Weapons (will they be used and when)*
 - *Transitions*
 - *Groupings (ie: Rifles are same performers as Sabres. etc...)*
 - *Soloists*
5. Percussion Plan
 - *Battery numbers*
 - *Battery Plan for each movement*
 - *Desired amount of moving and performing area for timing purposes*
 - *Desired intervallic relationship for the battery*
6. Visual Plan
 - *How the visual will help to further the theme in each section of the production.*
 - *What type of drill or motion should be happening during each moment.*
 - *How each effect is going to be created.*

Included in this tutorial series is a file called "Production Plan" and it contains a template for all of this information. If you would like to modify any of the information feel free to do so. I have found this file to be very useful and I make it required from all of my clients.

Files Needed to Begin Writing

1. Drill Design Contract
2. Production Inventory
3. Production Plan
4. Music Score PDFs or Physical Copies
5. Mp3 of the music exactly as written in the score. (It is important to have correct mp3 that match the music score)

Workflow Chapter 2: File setup and Writing

The following is a quick guide for setting up your Pyware Application. I cover this in my tutorial series. If you have already done this skip to Page 6:

SETUP STEPSFIRST

File - Application Options

Feel free to change any of the prompts to help you to create the best setup for you.

Ease of Access - Change control panel, toolbars, count track, position indicators, Field items.

Display - Change the language, Perspective View settings, Production Sheet popup control, and window animations.

Favorite Fabric - You can customize your fabrics to use with the visuals editor.

Plug-Ins, Backups, Internet, Installation, and System Info - All useful info for managing your installation.

*****My Settings**

Ease of Access - DEFAULT

Display - I turn off all shadowing, and Image Smoothing to save on processor speed.

Favorite Fabric - I have a custom fabric from Pyware to match my schools uniform and shako, all others are DEFAULT.

ALL OTHER SETTINGS ARE DEFAULT

Best Practices: Click  when possible to save you settings for each time you load the application.

SECOND

File - Document Options

Properties - Feel free to add Author information and copyright information.

Preferences - Change your drill title, label and symbol fonts and sizes, positioning, and Animation Music.

Real View Perspective - Change your venue, Sky, Ground, Surface, Selected Fabrics, Starting Visuals.

***My Settings

Author and Copyright - "Drill Design by Joe Huls" all other items unchecked.

Preferences - I always title my drill because it appears in the Real View Window and I don't like to use the file name.

- Symbols - PYJAVA2 - Display 32, Print 18
- Labels - SansSerif - Display 11, Print 6
- Positioning - DEFAULT
- Animation - Choose your sound file for that movement. Set your Tempo.

Display is how they will be displayed on your screen as you are writing, Print is the text size for when your drill is printed. Smaller sizes for the "Print" help with less collision of Labels.

Real View Perspective

- Venue - High School Stadium
- Sky - Day
- Ground - NONE
- Surface - Custom Surface (Pyware HS surface will work great. Or you can use the "Blank" Template you received with the tutorial series.)

ALL OTHER SETTINGS ARE DEFAULT

Best Practices: Click  when possible to save you settings for each time you load the application.

THIRD

Utilities - Grid Designer

Change your grid by selecting from the already loaded templates. Move your field markers where you would like to have them. Save your preferred settings so you can open them again in the future.

***My Settings

I move my field markers to 11 steps from the front and back sideline by clicking and holding the "50" marker. I also click the "Flip Orientation of Back Marker" on the top right. That way to grid properly reflects a standard HS football surface.

Best Practices: Save your settings as a Template so you can easily load your settings each time to start a drill.

Setting up your file

Forward

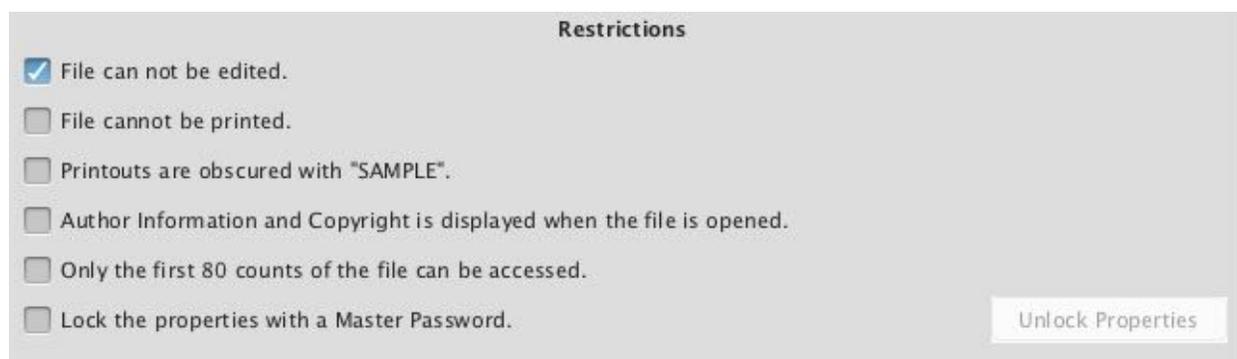
Always use your best practices for creating and saving files. Pyware defaults to a "Drills" Directory. This is a good place to save your drill because you can access the "Backups" folder if needed. Plus all of your drill files are in one place. However you may choose to save to an online backup folder in the cloud like Dropbox or Google Drive. This is also a good choice because then you can access your files from anywhere. Keep in mind that when you are finished writing a drill to deliver to a client they will need PDF's of your coordinates, and drill but they also might want a copy of the Pyware file for drill teaching apps like Ultimate Drill Book etc...

My Experience: *Create a folder for the school and year example "Cedar Grove HS 2018" in the cloud. Share the folder with your client. Save your files for "Cedar Grove HS 2018" to a folder on your hard drive. As you finish movements of the production create the PDF's and Re-Save the drill files to the cloud. This is a good thing to do so that your can share large files with your client, but you are not showing them anything but the finished product. It also makes several backups of the file just in case your computer goes down. I also DO NOT give my schools the ability to edit their files, only access. I do this because I want to be the only one to be able to edit the drill.*

This is done by going to:

File - Document Settings

- Select "File cannot be edited."
- File - Save



Starting a New Drill

File - Save

Choose your destination folder or Press the "Go To Drills Directory" Tab on the right side of the window.

File Types: 3D Drill Package or 3D Drill File

3D Drill File (.3dj):

- + Opens on both 3D (v1) and 3D (v2) and greater
- + Does not include external files used such as props and audio

3D Drill Package (.3dz):

- + Does not open on 3D (v1)
- + Includes any external files used such as: audio, props and floor covers
- + Includes 3D figurines that can be used in the Perspective view
- + Compressed for faster internet transfer

My Experience: *I always save my files as .3dz Drill Packages. This is because I usually do not need to provide older versions of files to clients using older versions of Pyware. .3dz files are great for transferring over everything you have created all in one package as it saves your Realview Fabrics, music files, and props and floor covers in one file.*

In the event you may need to provide a client a file to use on an older version of Pyware, you can always re-save the file to work with their version. .3dz files will work with version 5 - 9 and newer. .3dj files will be for the older versions.

Creating a New Drill File

If you are making a new file after the application has been opened, or you have already saved your current file, you will be met with this prompt.

Drill Title - Add your drill title here. This will appear at the top of the Real View Perspective

Maximum Counts - You can customize the amount of counts needed for the new drill.

Select "New Drill" or "Continuation"

- For continuation you may use a selected count or the last count of the file.

Real View Settings - Template, Grid, Venue, Sky, Ground, Surface

My Experience: *When continuing a drill I always select the count of the very last page tab to continue from. So that I am sure the continuation point is the same as the last coordinate given to the performers on their coordinate sheets.*

Writing - Getting Started

Listen, Watch, Brainstorm

My first step is always to read the theme or synopsis of the production and listen to all of the music with the score open. This helps me to just think through the whole program and gets my creative juices flowing. It also helps to make sure me plan ahead for soloists, or special moments, and pacing out who needs to go where in my head. It is important **NOT** to write one movement at a time having not heard what is coming next. You should have a clear picture of all the ideas in the production so you can have everyone in the right place.

Consolidate Information Into Your Sketchbook

This is a very important part of my workflow. I enjoy writing things down and consolidating all the info into one place. I use a large sketch book and I write down my counts along the left side and add in all the winds / cg / drumline / visual notes next to the counts where the special moments need to happen. I also use my pencil to sketch form ideas and transitions, staging ideas, etc...

This is an optional idea of course because this is essentially the same process as the "Production Plan" file I require of all my clients. Except the process of rewriting all of the ideas onto one page helps me to sort out all of the important moments that need to happen, and gives me free space to draw. Don't forget that this process is meant to be artistic.

Setup Page Tabs and Sync Music

After checking the count sheet against the amount of measures in the music score I go through and setup the page tabs at the bottom of my Pyware file. I simply unlock the count track and click in all of my pages, this process seems to be the fastest for me.

Save your file as a .3dz production file.

OGG Files: If you google "Ogg Converter" you will find tons of websites that can turn your mp3 or other sound files into the OGG files needed to sync to a Pyware file. I then sync my file to the newly created OGG file. As you sync the file you can see if your page tabs are correct and if the mp3 matches the score provided. Doing the process this way can save you a lot of time on the back end especially if your client sent you an mp3 that doesn't match the score.

Save your file.

Writing - Following Your Plan

With your tabs set, your music synced and your plan fully realized on paper in front of you you should now have all of the information needed to get started. This is where the process will differ the most among designers and creatives.

Trying to quantify a creative artistic process into "Right and Wrong" is very difficult but I will offer suggestions that have been successful for me.

Figure Out Your Groupings

Always default to supporting the musical and visual ideas. But it is also important to find balance amongst the sections. I count up my "brass vs. woodwinds" numbers or my "high winds vs. low winds" numbers. This helps me to find a good balance on the field especially if I am looking to start with or eventually come to a symmetrical set.

Figure Out Your Multiples

Figure out what "multiples" for each sections you have, multiples of 3 or 4 or 5. I figure out a complete block form for my groupings and for the full band. Having this knowledge upfront can help save time later in the writing process.

Setup Props and Floor Covers

Set the stage as close to real life as possible using your Performer Prop Tools. Create a pit at the front of the field or wherever they will be set up. Use floor covers to cover the areas of the field where you will not be writing. All this tools can be used to streamline your process, stick to the plan and give your client the best possible simulation in the Real View Window.

Use Your Plan To Decide Where To Start

With your plan in front of you you should be able to see if you need to start with your first hit set and work backwards, or whether to jump right in on count 0. It all depends on the integration of your elements and your first introduction chunk.

Begin Writing Without Labels

With the numbers in your head, begin writing "Label Free" creating exactly the motion and velocity you want to see. Once you feel like you have made it to through your first hit, go back and label your performers and continue from there.

Modify The Counts If Needed

As you write you may find that you can complete your moments sooner or you may need more counts to complete a moment. Tailor the counts to match the music and the moment. Think about what it would be like to be a performer playing the music, or spinning the work. This is where the "Real View Window" really comes in handy.

If you have a transition or drill move that could be completed with 4 more counts, or something simple to add consult your client and see if that can be added. Remember that this drill is your artistic vision as well.

Holding

Make sure that if you are going to make use of body or dance in the winds that you put them in a hold set that is appropriate for it. I find that if you "window" your performers or put them in a covered block form that offers a lot more options for layering body and movement. Think about adding pairs, or trios. All this should be considered when writing your "Production Plan"

***Creating Hold Sets: Some clients like to keep the set numbers going through hold pages. Others like you to use subset pages. I have even had clients that do not want an extra page for holds. You can come up with whatever way of formatting you would like.

Refer To Your "Production Inventory" Whenever Possible

As you write you will need to keep your difficulty level and competitive level in your head. Think about how much integration of the elements is needed. Check to make sure your color guard is not stuck in back or off to the sides or split up. Check that your drumline isn't stuck in one form moving left, right, forward and backward.

Writing - Finishing Up

Once you have completed your movement there are a few formatting options you will need to do.

- **Animation:** Make sure to animate all curved paths in Real View. Your client should receive the most accurate video of the drill as possible.
- **Visuals:** Use the Visuals Editor to add easy horn moves up and down, and CG flags spinning. Add in simple visuals for the winds in their hold sets.
- **Labels:** With the yellow anchor on count 0, drag the red anchor to the last count of the drill. Click the Performer Labeling Tool. Make your label direction straight down, click "CLOSER" until they stop moving, then click "FURTHER" twice. Select the second option "These Change Apply the Counts 1 - ____"
- **Production Sheet:** Fill in your "Production Sheet" with Measures, Title (which I use for Rehearsal Markings) and Notes 1. Every page should have instructions, even if they are as simple as "ALL - MOVE 8".

You are now ready for file creation and the final steps of your workflow.

Workflow Chapter 3: Exporting and Delivery

After you have completed your movement it is time for file creation. I provide three basic files for my clients, rarely do they ask for anything other than this. I also

1. PDF file of the Coordinate Sheets - Here Are My Settings

- Report Type: ¼ page for each performer
- Sort Performers: Name
- Preferences: Quarter Step Resolution. Check Print Measures, Print Set Numbers, Print Transition Counts, Print Performer ID
- Grid Terminology (unless otherwise instructed by my client): SIDE 1, SIDE 2, BACK, FRONT, inside, outside, in front of, behind, steps, yd ln, yd ln, side line, Hash.

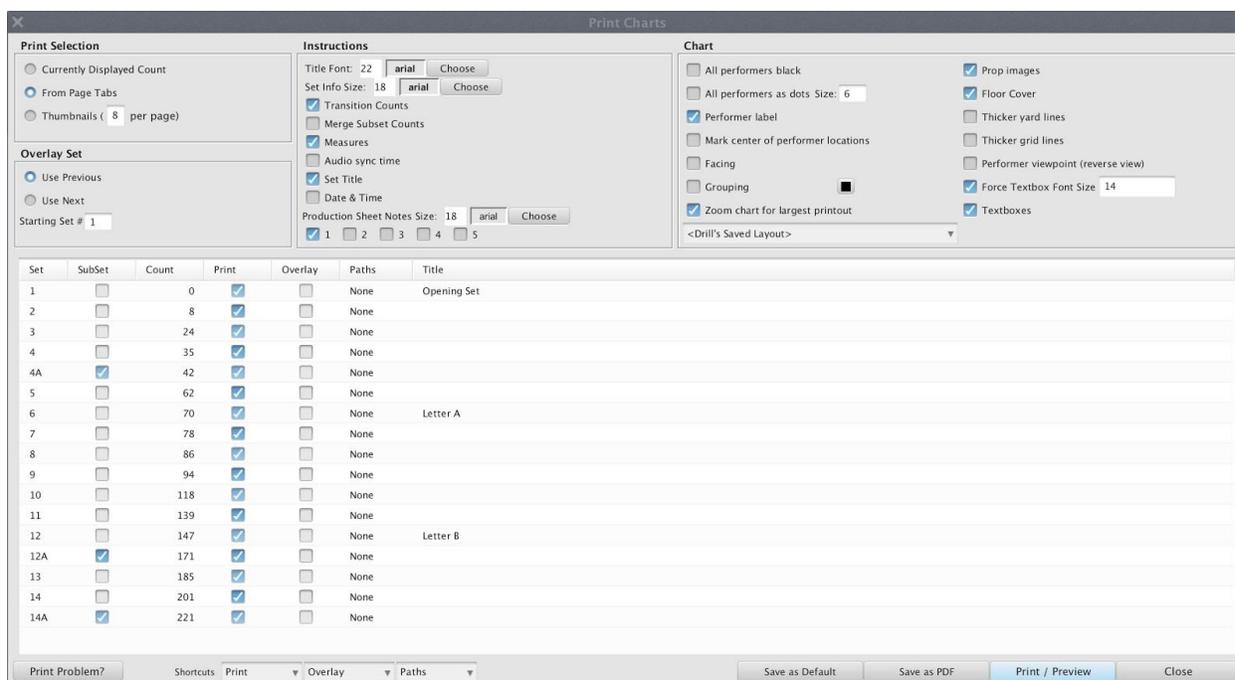
The screenshot shows the 'Print Coordinates' dialog box with the following settings:

- Report Type:**
 - Print Performer's Coordinate Sheet
 - Pagebreak between performers.
 - Combine all drills in this production.
 - List size: 1/4 page (index card size)
 - Print Director's Coordinate Sheet
 - Include coordinates for all sets.
 - List size: half page
- Sort Performers:**
 - Shape and Rank
 - Original Entry Order
 - Name
 - Symbol and Label
 - Label and Symbol
- Preferences:**
 - Step Resolution:**
 - Quarter Steps
 - Half Steps
 - Eighth Steps
 - Whole Steps
 - Tenth Steps
 - Starting Set #: 1
 - Print coordinates for only selected charts.
 - Print date and time of printout
 - Don't print sub-sets.
 - Print only selected positions.
 - Print Performer ID
 - Print Set Numbers
 - Print Set Title
 - Print Measures
 - Print Transition Counts
 - <Drill's Saved Layout>
- Grid Terminology:**
 - Left Side: SIDE 1
 - Right Side: SIDE 2
 - Top: BACK
 - Bottom: FRONT
 - Inside: inside
 - Outside: outside
 - In Front Of: in front of
 - Behind: behind
 - Steps: steps
 - Horizontal Yard Line: yd ln
 - Vertical Yard Line: yd ln
 - Sideline: side line
 - Hash: Hash

Buttons at the bottom: Print Problem?, Save as Default, Save as PDF, Print / Preview, Close.

2. PDF File of the Drill Charts - Here Are My Settings

- Print Selection: From Page Tabs
- Overlay Set: DEFAULT
- Instructions: Title Font: 22, Set Info: 18, Check Transition Counts, Measure, Set Title, Production Sheet Notes Size: 18, Check 1. All others unchecked.
- Chart: Check Performer Label, Zoom Chart for Largest Printout, Prop Images, Floor Covers (optional), Force Textbox Font Size: 14, Textboxes.
- Overlay Drop Down Menu - NONE
 - I choose to have no overlay on my drill pages. This is just personal preference. Your client might like to see an overlay of the previous set on their drill.

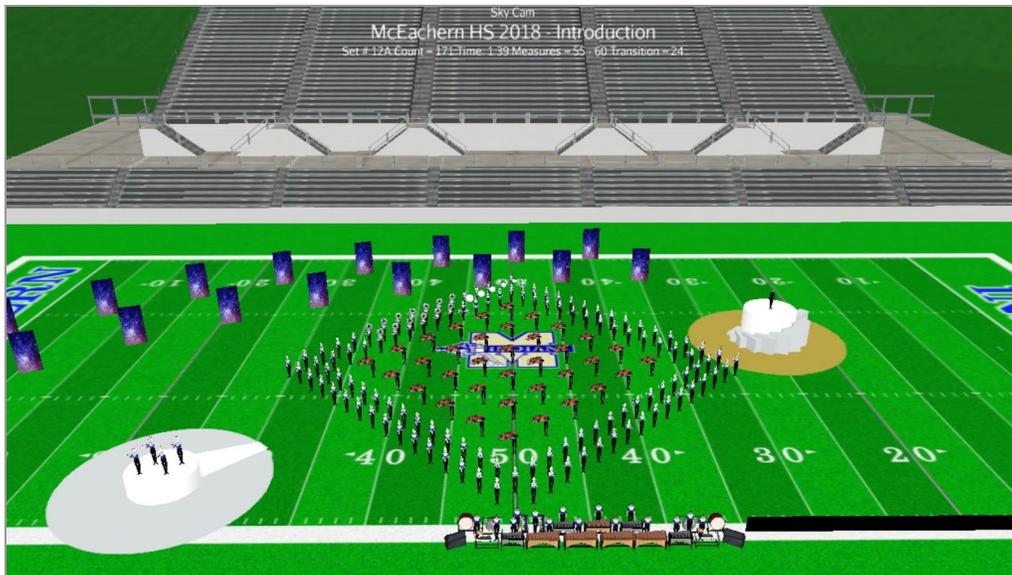


My Experience: I choose to use the “Print Charts” and “Print Coordinates” separate from the “Print” function. I have always done this, and I find that it is very accurate. I also like to check over the coordinate card pages to make sure everyone is there. I have had colleagues that have trouble with the coordinate cards or drill charts not having all of the performer positions using the “Print” feature. I also DO NOT combine my files at the end. I have had several people tell me they run into problems again with incorrect labels, performers missing, etc... Remember, one bad file, and you could put an entire ensemble behind in their learning progression. This is just my experience and I try to make sure that I am providing the best service for my clients.

3. Creating and Sharing Your Video Files

To create your video files you can research the best method for you. I use Mac computers and I find that Quicktime Screen Capture works great. The built in Screen Capture tool works great too.

- I capture the Real View Window and Export to 720p. I have a headphone to headphone wire that I run from my output to my input to capture audio, and I make sure the entire Real View Window is shown. There are tons of view options and cameras available for you to tailor a very cool music video of the drill but I find my clients really want to see it from the pressbox level, right where the judges will be sitting.
- I save the video file with the same title as the drill and coordinates
- Export them and put them into a shared folder for my client.



Dropbox > Woodgrove 2018 DRILL FILES

Name	Modified	Members	
Part 1 - ONE Voice.3dz	8/2/2018 6:53 pm	7 members	...
Part 2 - Channel One Suite.3dz	8/2/2018 6:54 pm	7 members	...
Part 3 - ONE Day More.3dz	8/2/2018 6:54 pm	7 members	...
Woodgrove Part 1 COORD.pdf	7/9/2018 7:51 pm	7 members	...
Woodgrove Part 1 DRILL.pdf	7/9/2018 7:48 pm	7 members	...
Woodgrove Part 1 VIDEO.mov	7/9/2018 7:55 pm	7 members	...
Woodgrove Part 2 COORD.pdf	7/15/2018 9:30 am	7 members	...
Woodgrove Part 2 DRILL.pdf	7/15/2018 9:30 am	7 members	...
Woodgrove Part 2 VIDEO.mov	7/15/2018 9:56 am	7 members	...
Woodgrove Part 3 COORD.pdf	7/15/2018 9:59 am	7 members	...
Woodgrove Part 3 DRILL.pdf	7/15/2018 9:58 am	7 members	...
Woodgrove Part 3 VIDEO.mov	7/15/2018 10:04 am	7 members	...

4. Provide Locked Pyware Files

I re-save all of my files to the "cloud" when they are complete. This gives me a backup and gives everyone involved with the process access to them. Sometimes I may need to get those files and make a quick change for a client if I am not at home, and having them in the cloud helps to get changes done fast. Also the Pyware file is used in several different drill book applications in which you need the URL to create a QR code for your client to download the file.

The reason I do not share unlocked files is because I DO NOT want to client trying to make changes to the file. If my name is going to be on the product, I want be the only person who can edit the file.