Producing Quick Orienteering Maps

Step by Step from Open Street Map

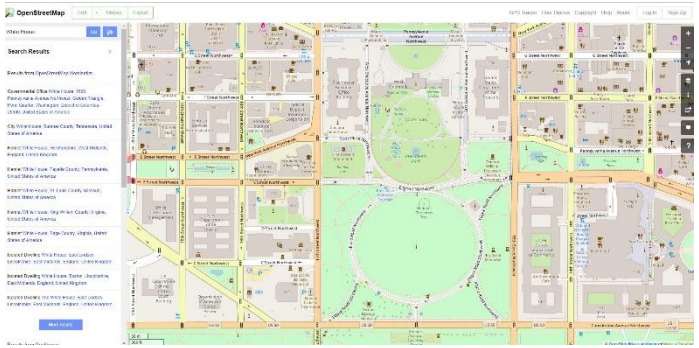
To Open Orienteering Mapper

(and if you prefer)

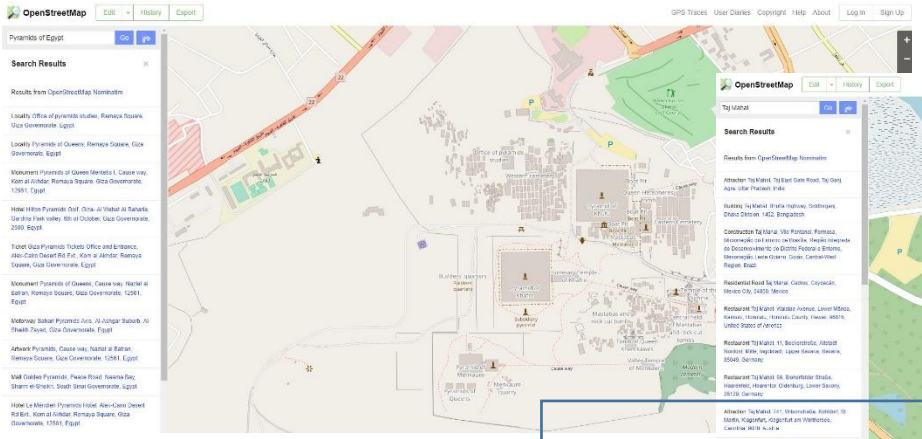
To OCAD 8, 9, 10 and 11

DRAFT

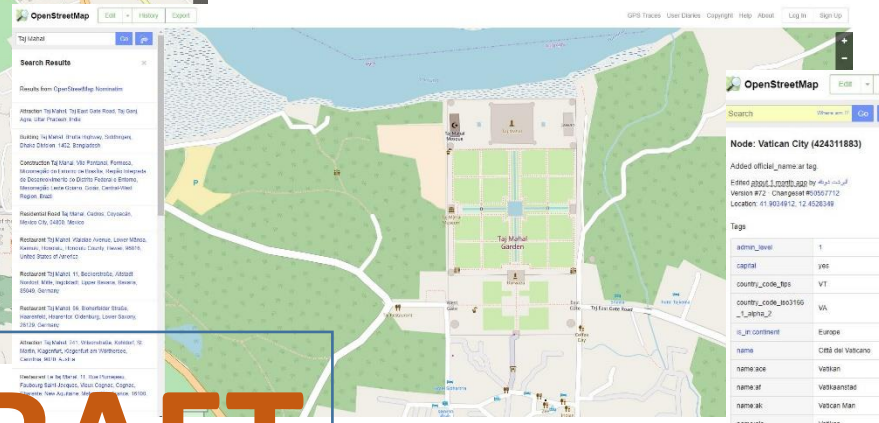
Open Street Map is a free program on the Internet where you can find map information for pretty well anywhere in the world. . .



From the White House to the Kremlin . . .

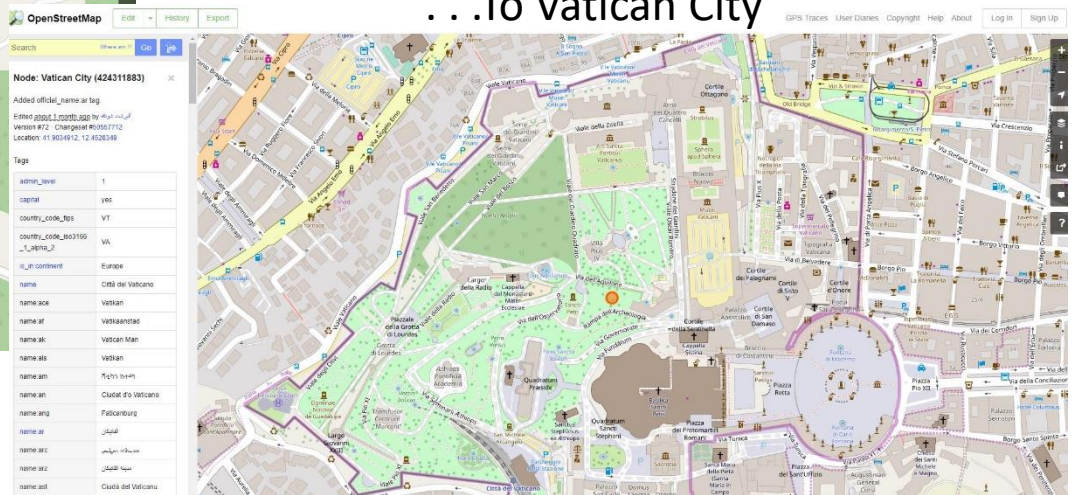


The Egyptian pyramids . . .



. . .To India's Taj Mahal

. . .To Vatican City



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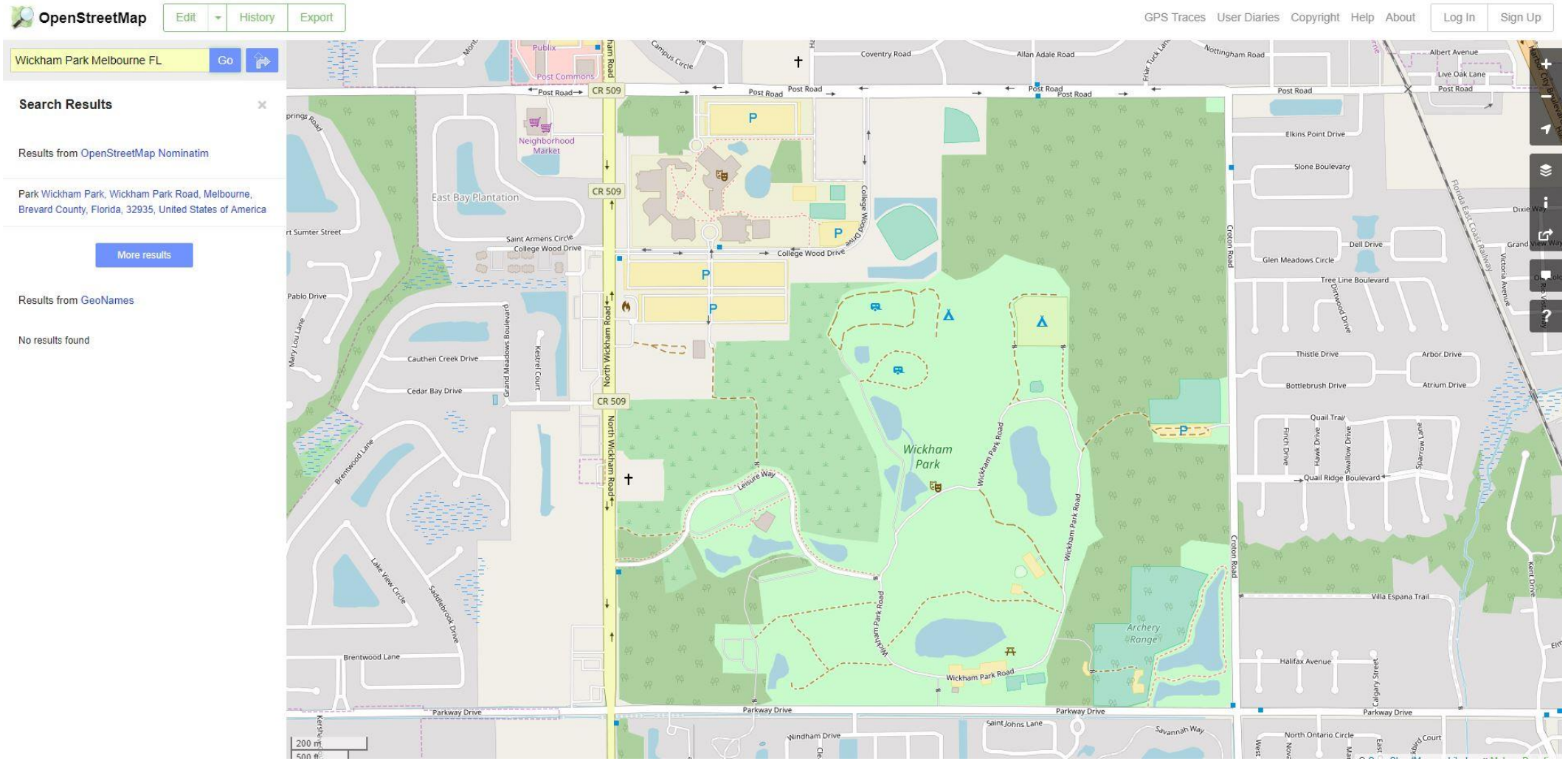
To get started first search Open Street Map to find the area where you would like to make the map



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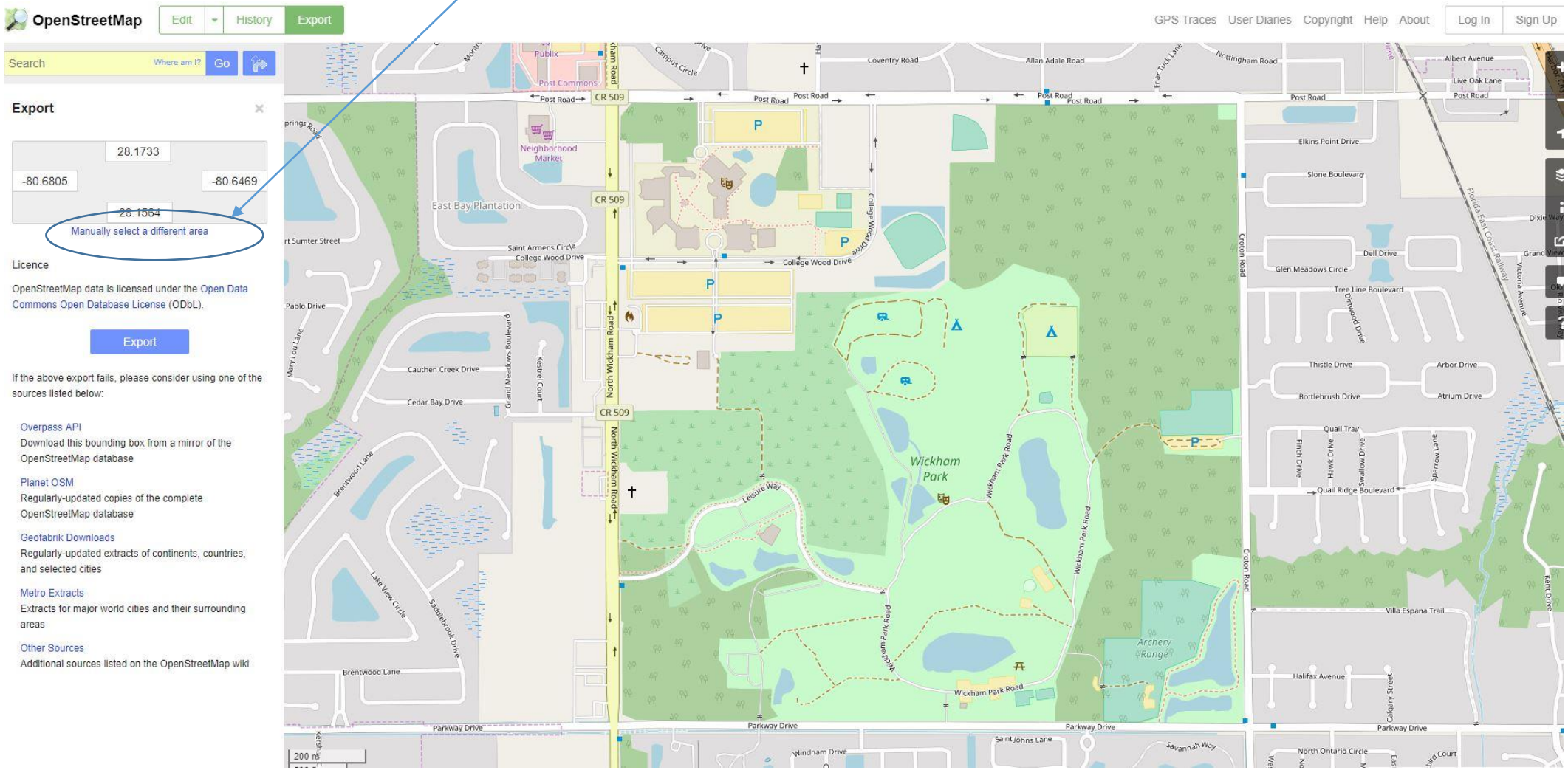
If you would like to narrow down the area Open Street Map allows you to ‘manually select’ a smaller area than is shown on the screen



A box will show up for you to move the edges to narrow down the area

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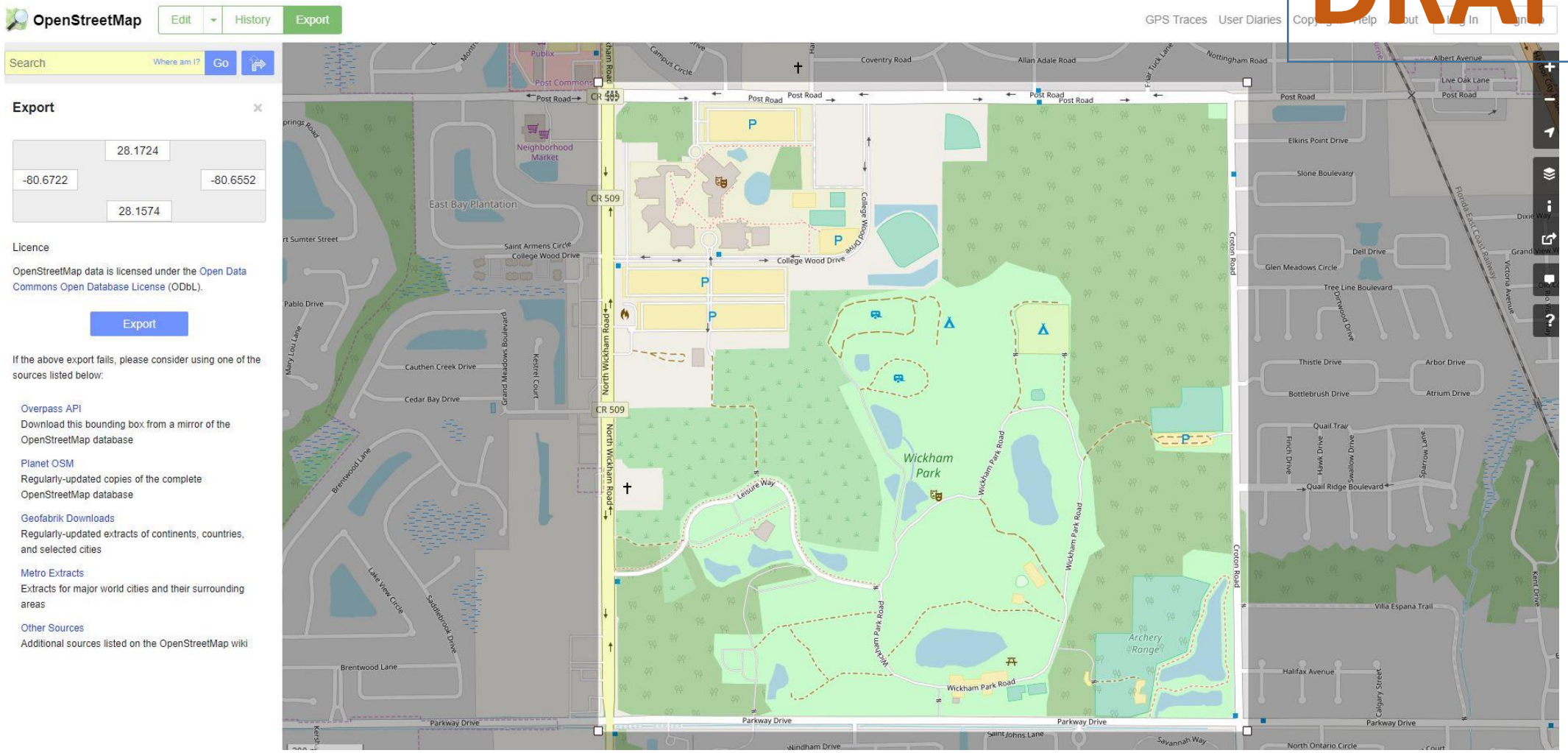
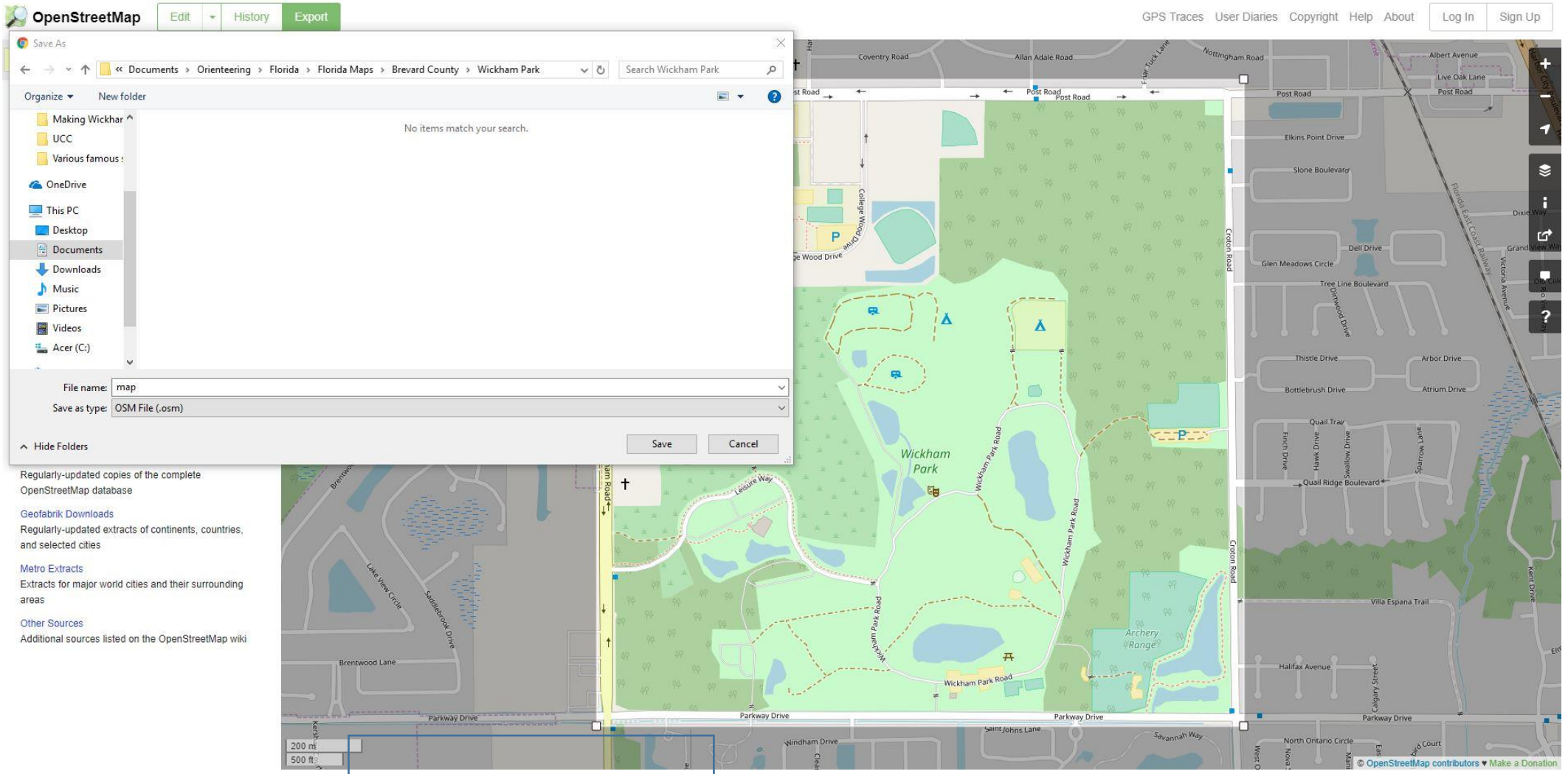


Pick a reliable place and name to save the file.
By default it will be saved as map in your Downloads folder.



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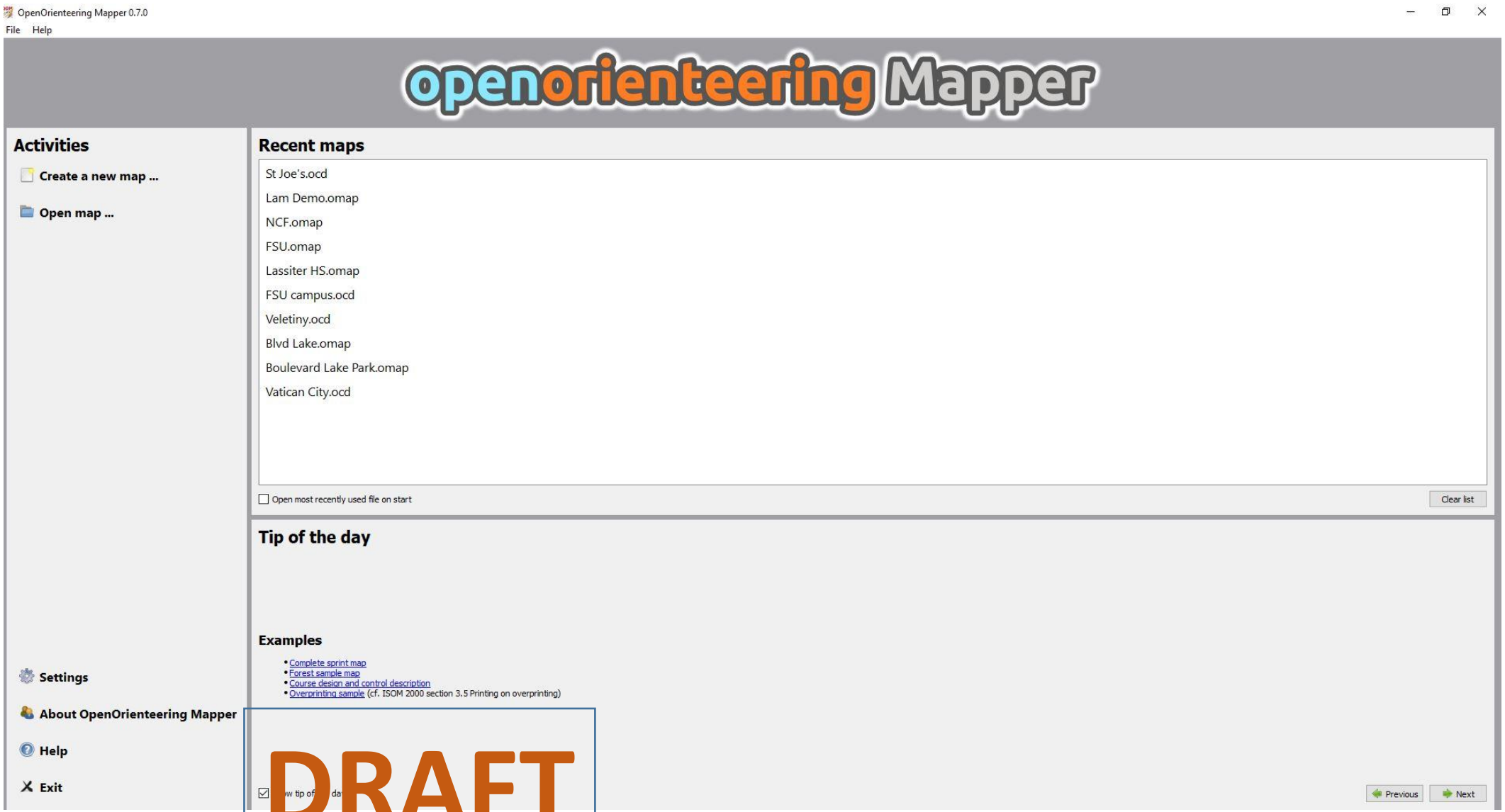
Then the fun begins. Open the program Open Orienteering Mapper and select Create a new map.



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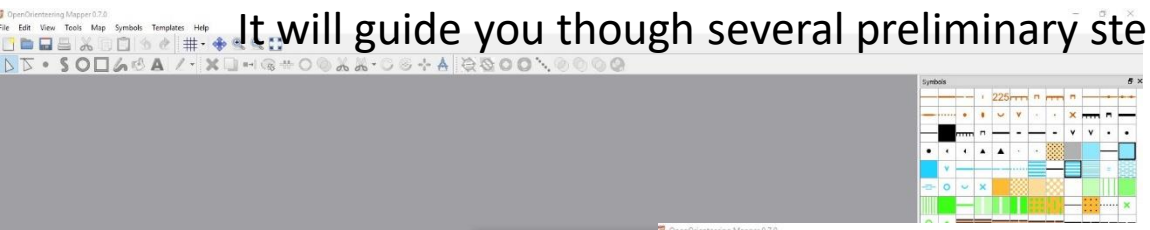
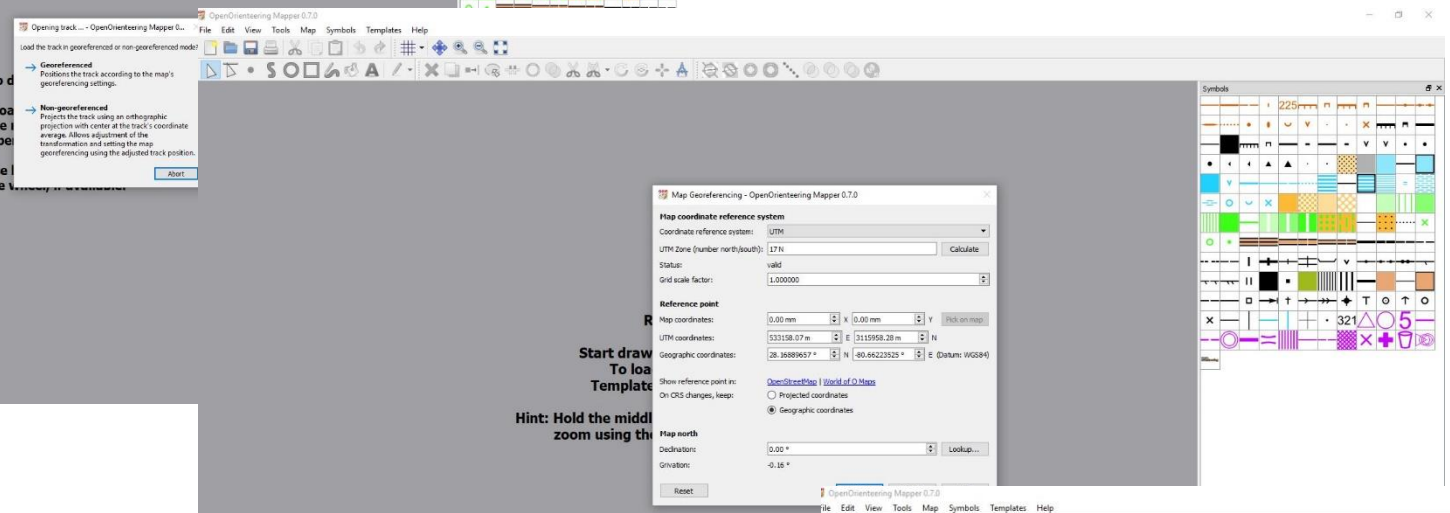
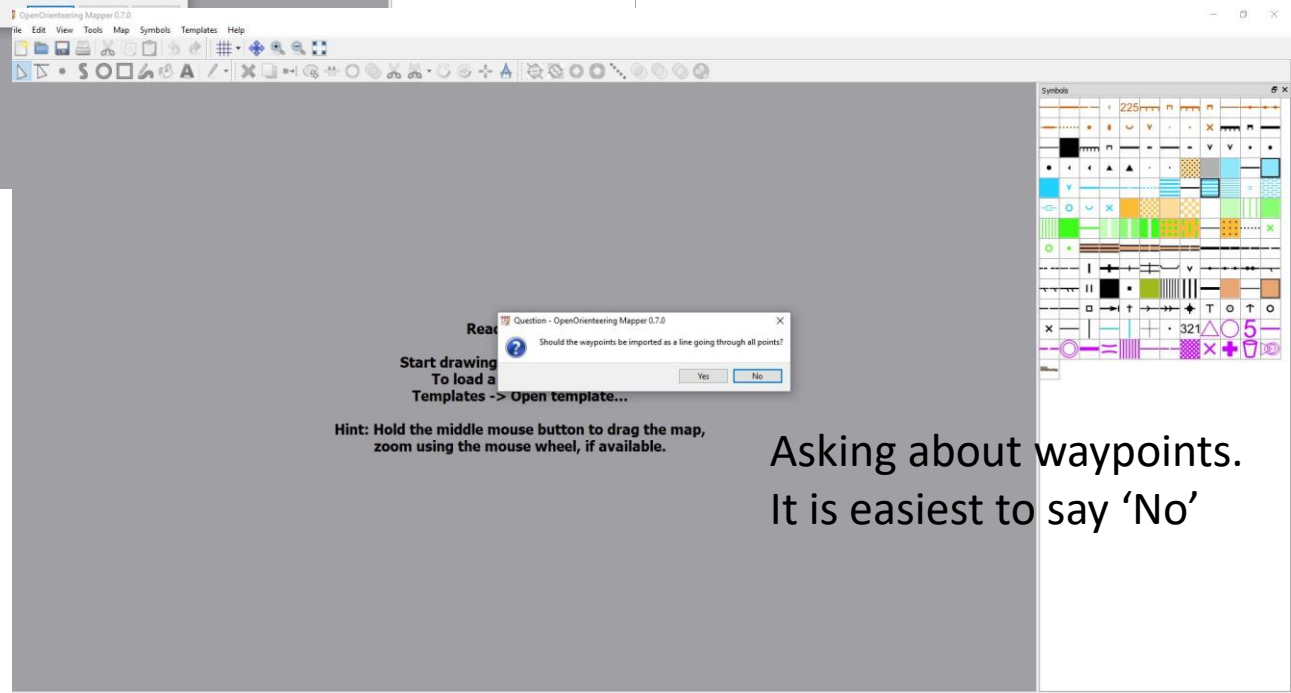
It will guide you though several preliminary steps from



Selecting Geo-referencing to



Getting the correct UTM zone (This is important) to



Asking about waypoints.
It is easiest to say ‘No’

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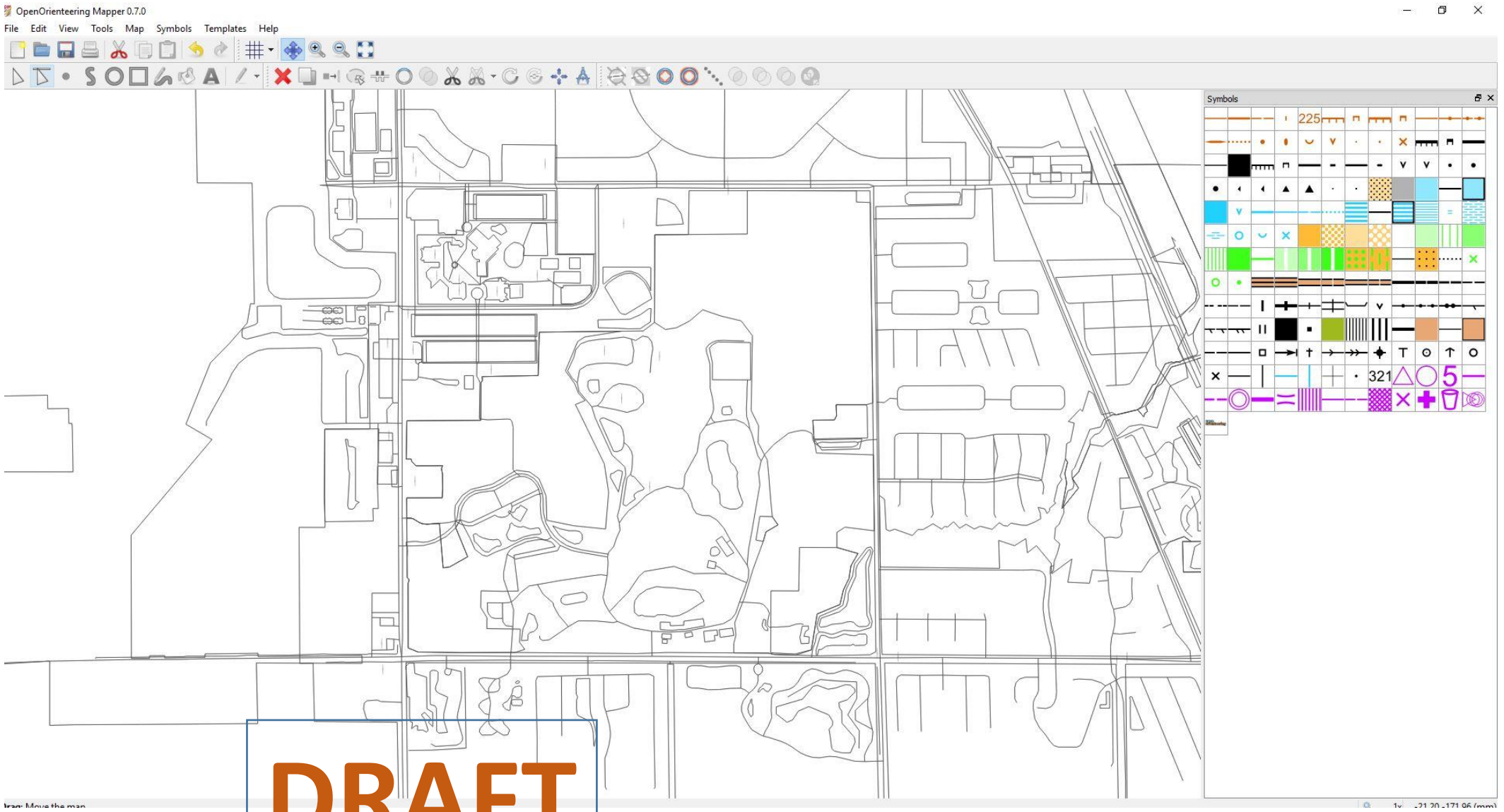
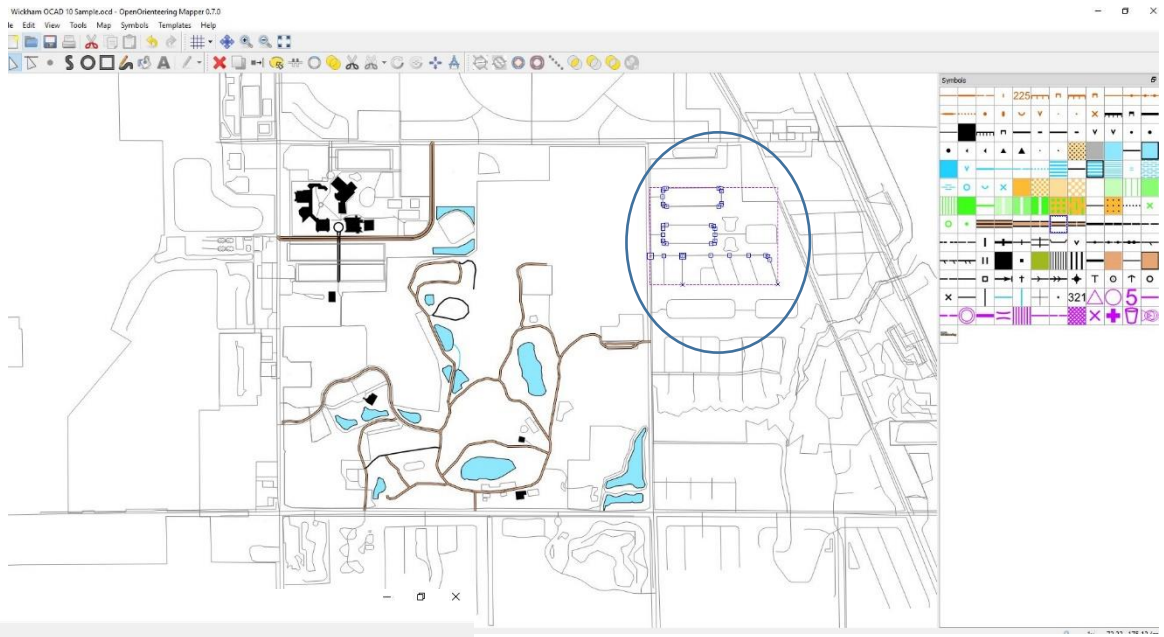
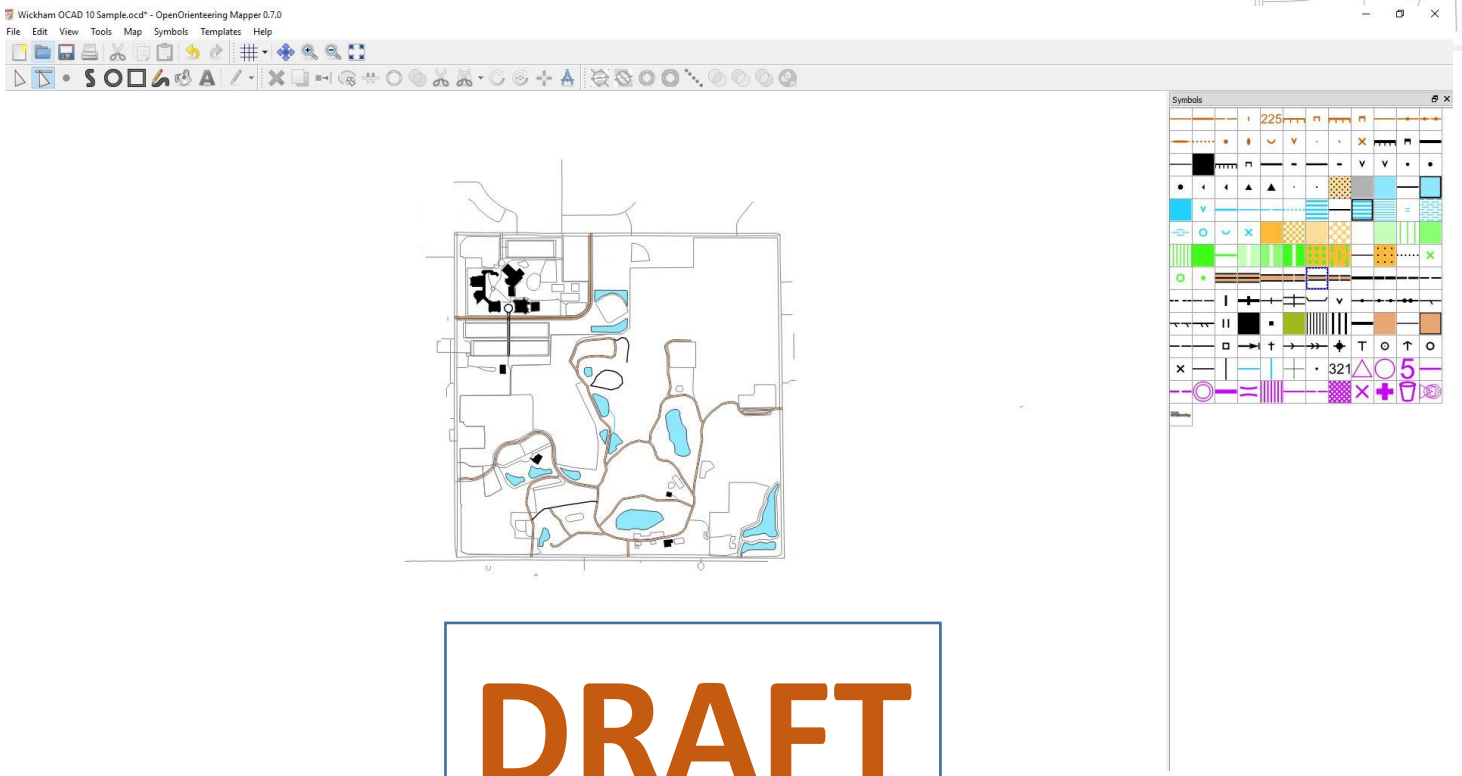
The map will open looking something like this.
We want the area in the middle but it gave us some extraneous details. No problem.



We can strip away the extraneous detail by highlighting and deleting bits or area at a time. . .





. . .until we are left with the map that we want.

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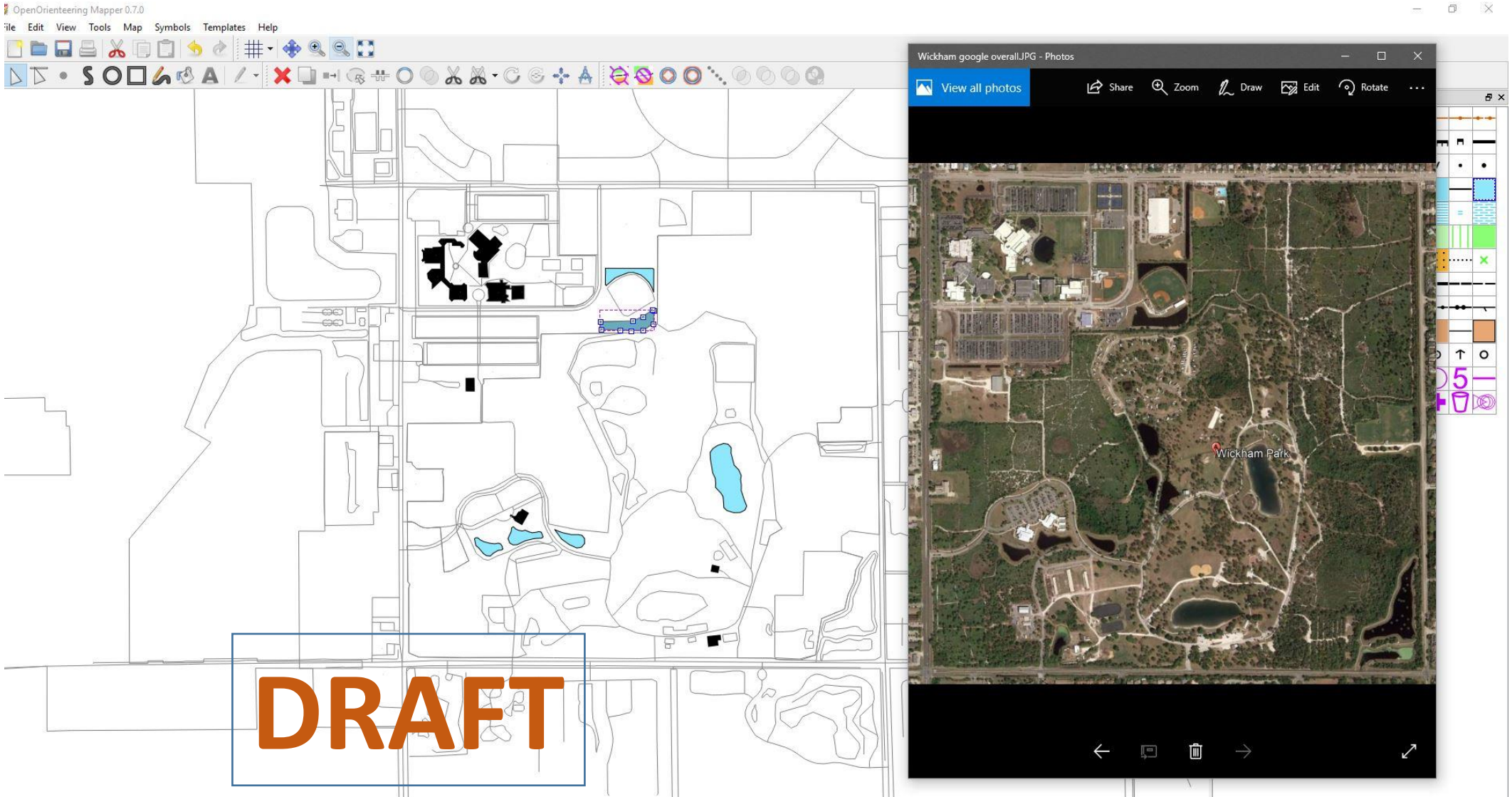
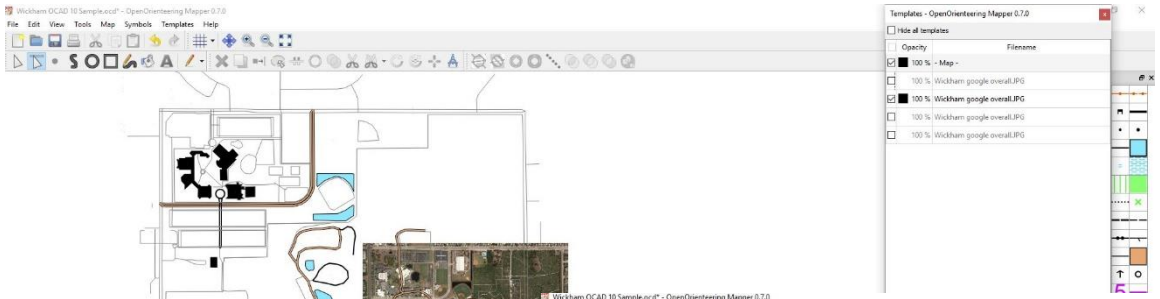
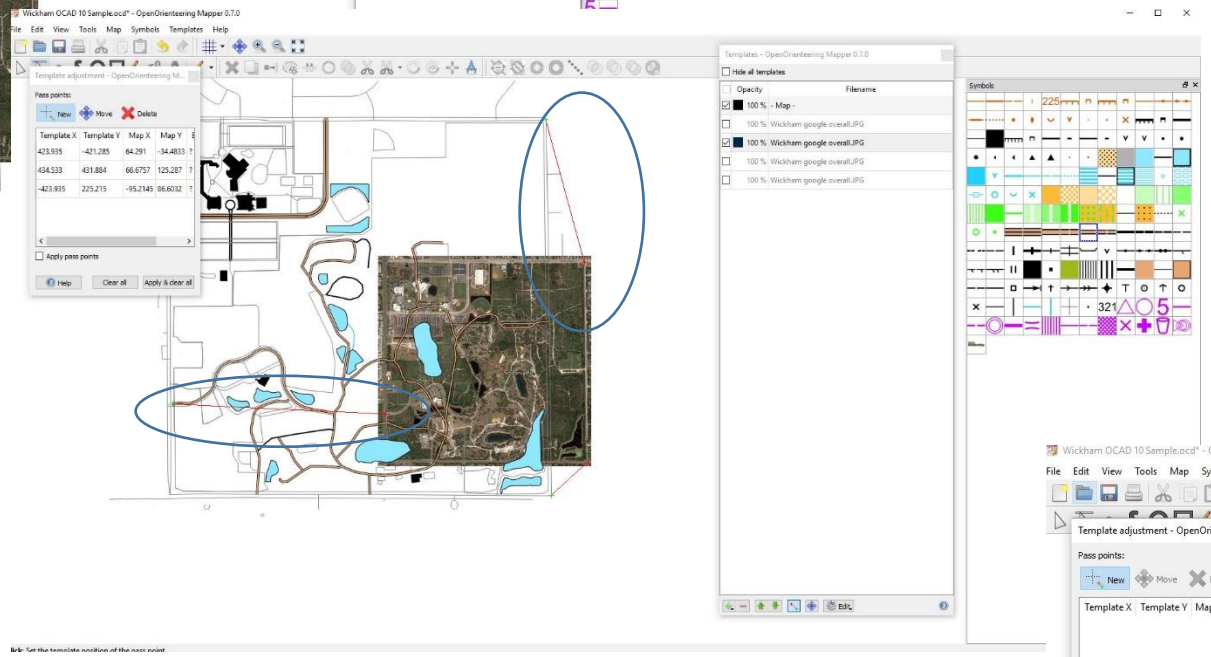
The next step is to convert the open street map symbols to orienteering symbols by using the table of symbols on the side. It may help to have an aerial photo handy for reference.



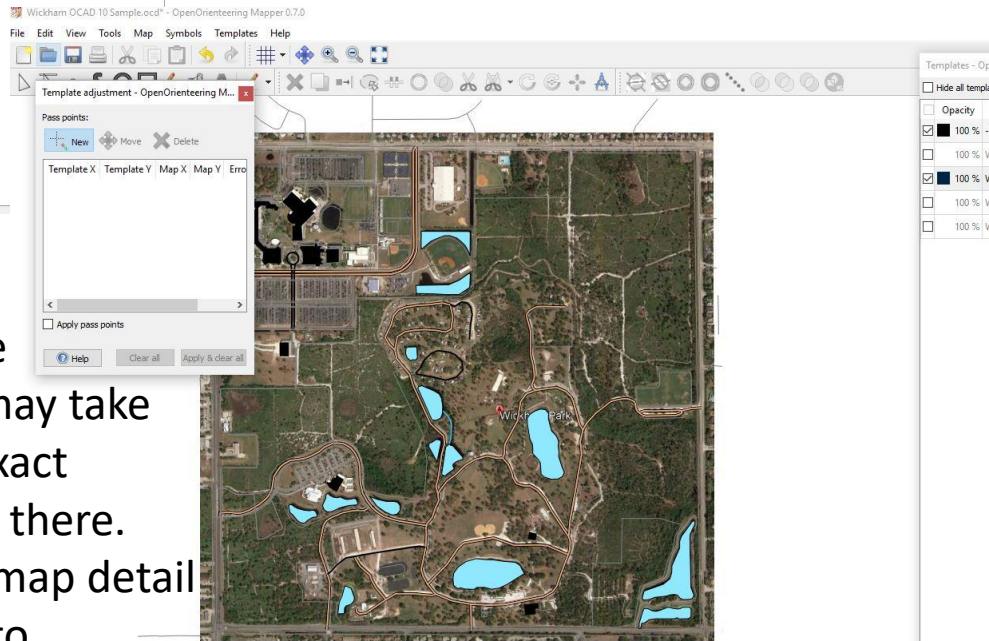
Once the conversion is done it is time to bring an aerial photo in to background to get more detail.



Step I: Import the photo called a template in OOM



Step 2: Align points on the template with the same points on the map.



Step 3: Press Enter and the template will move as you have aligned it. It may take more than one attempt to get the exact alignment you seek. But you will get there. Do not be surprised to see that the map detail does not always agree with the photo.

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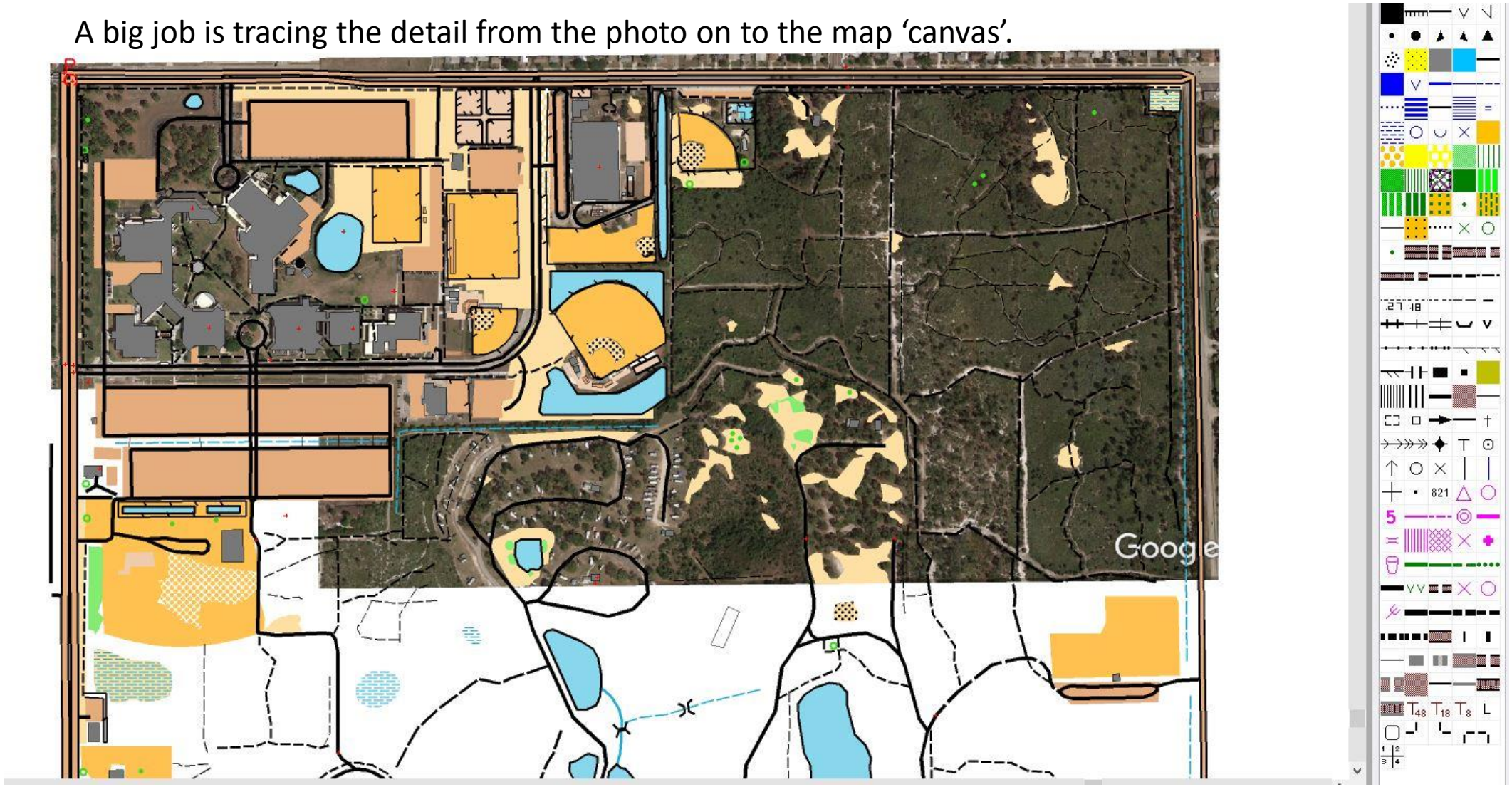
A big job is tracing the detail from the photo on to the map ‘canvas’.



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However once that is completed and you have rotated the map orientation to magnetic north you have a map ready for field work.

Getting Geo-referenced Orthophotos and Other Information County by County Across the USA

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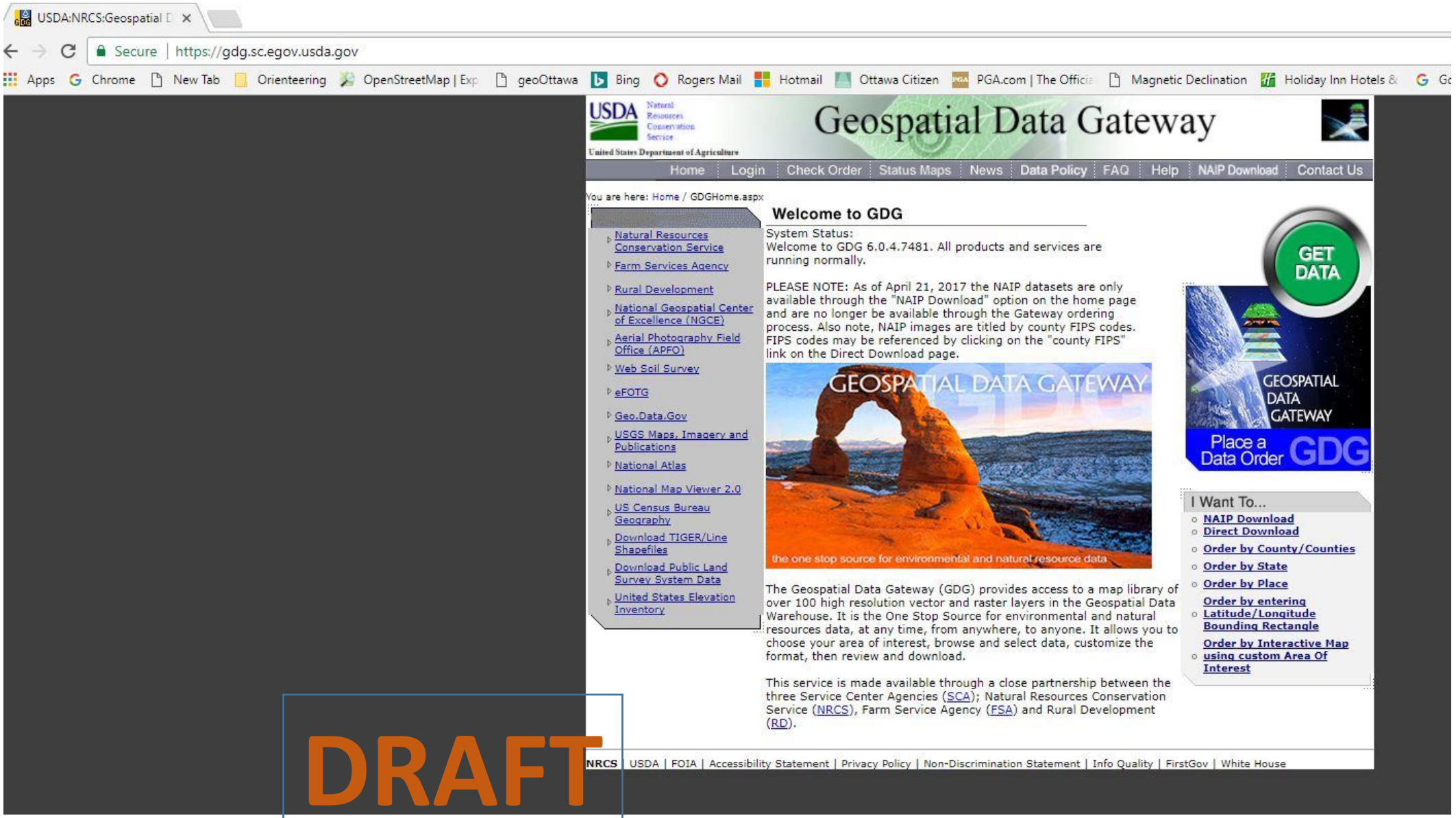
A good source for (free) information to help make quick orienteering maps is the Geospatial Data Gateway of the US Department of Agriculture.



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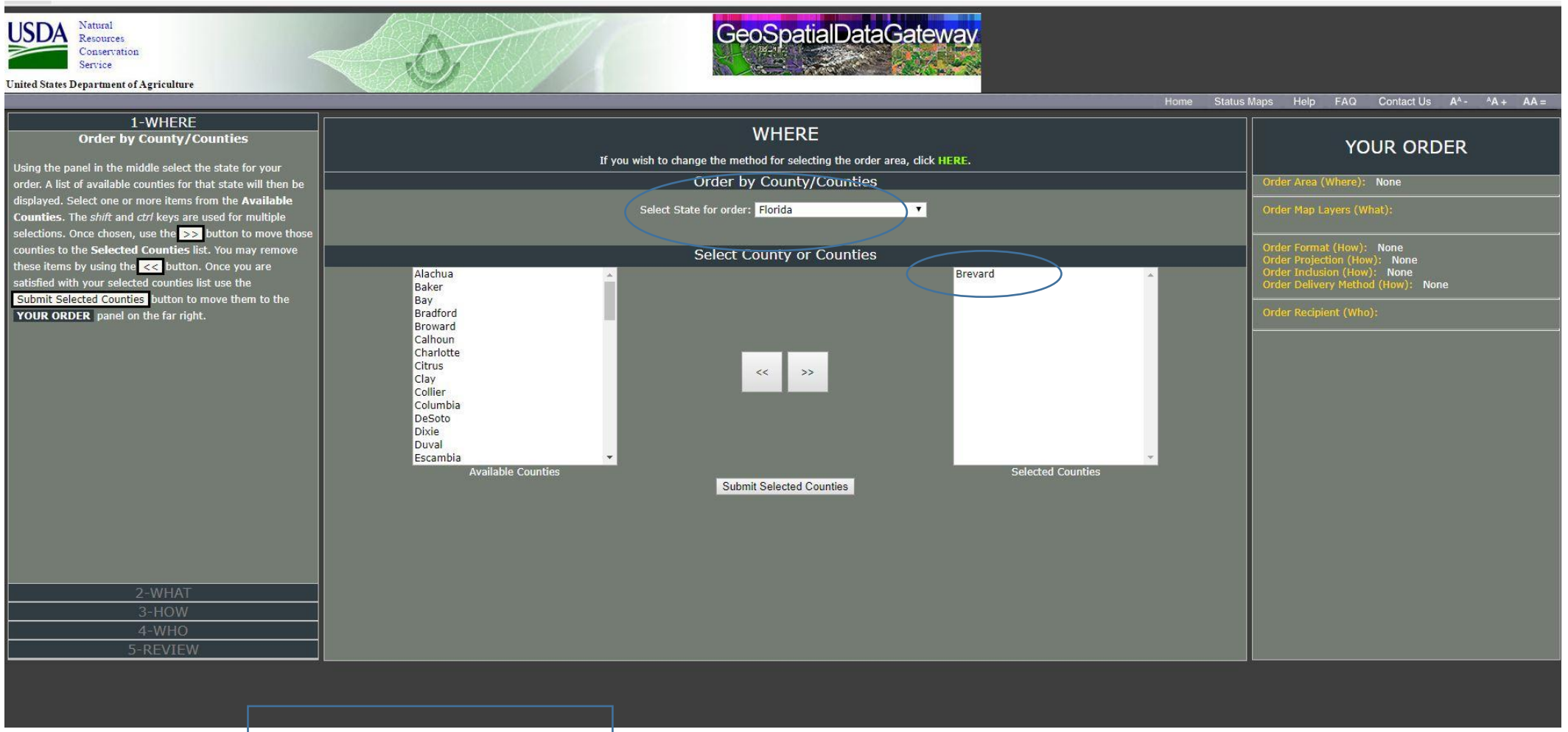
Most often I am ordering ortho-photos and contour information that are delivered on a county-wide basis.



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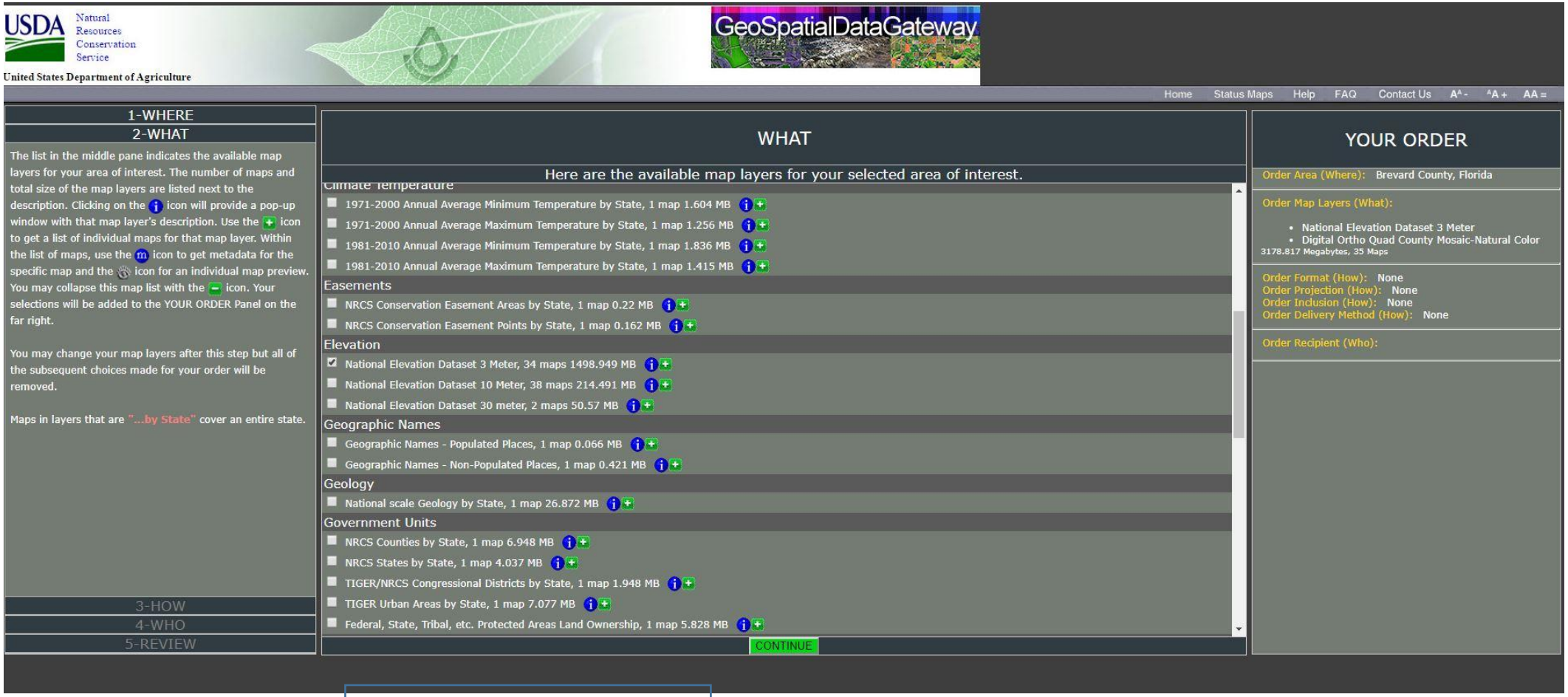
There is a wealth of information available. It varies a bit county by county.



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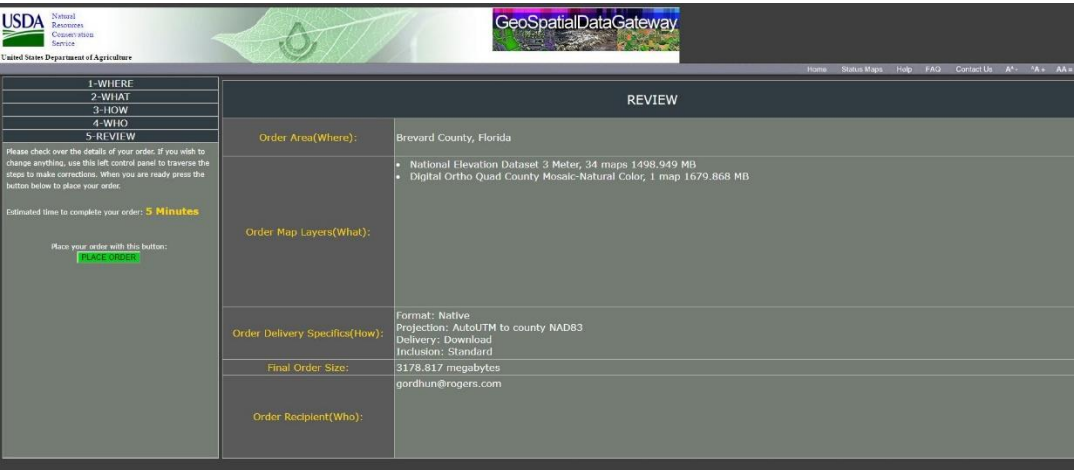
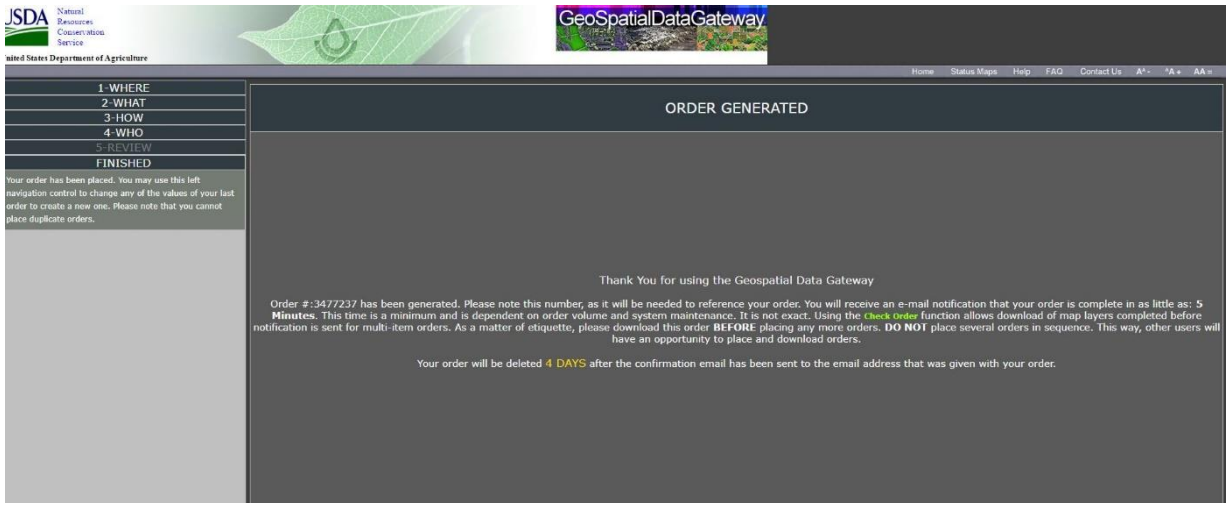
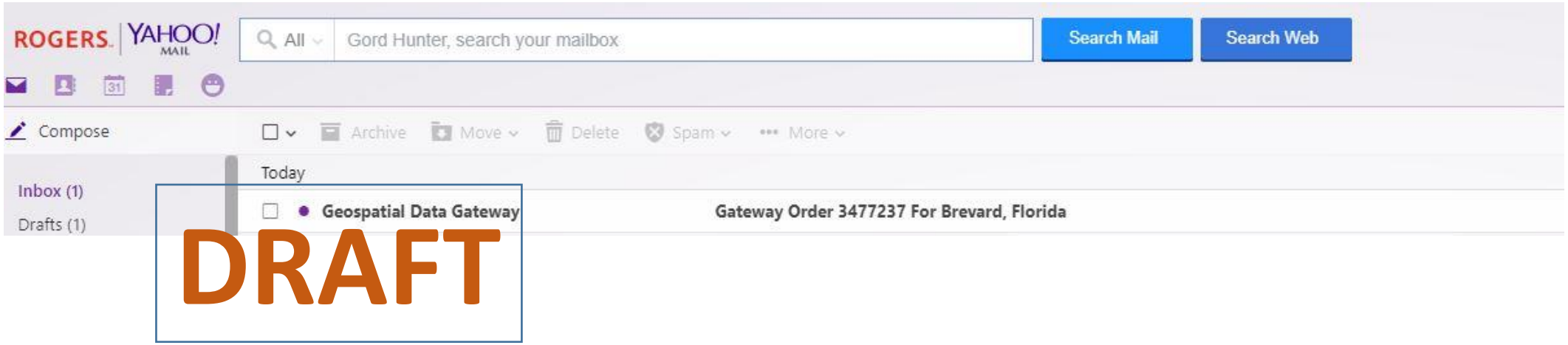
Select the information wanted



An order is generated



And an e-mail comes to your Inbox inviting you to download the order.



In this case I had two orders to download. They are large files and each took some time (+/-15 minutes)

****PLEASE DO NOT REPLY TO THIS SOFTWARE GENERATED EMAIL.****
****Click https://gdg.sc.egov.usda.gov/GDGHome_Contact.aspx for additional assistance.****

Dear GDG User,

Your Gateway order 3477237 has been processed and is ready for download.

Area for Order:
Brevard, Florida

Vector Format: ESRI Shape
Vector Projection: State Plane NAD83 26900
Image Format: Native
Vector Extent: Standard
Compression: Zip

!!! Important Note !!!
If you have problems completing downloads, please see
Gateway FAQ # 2: https://gdg.sc.egov.usda.gov/GDGHome_FAQ.aspx
If you would like to check the status or download your order, please use
Check Order: https://gdg.sc.egov.usda.gov/GDGHome_CheckOrder.aspx

Ordered Items:
National Elevation Dataset 3 Meter
Size: 1,498.98 megabytes (140 files). Download compressed size: 1,499.23 megabytes (34 maps).
https://gdg.sc.egov.usda.gov/GDGDL/3477237/elevation_NED03M_fl009_3477237_01.zip
Digital Ortho Quad County Mosaic-Natural Color
Size: 1,679.87 megabytes (6 files). Download compressed size: 1,680.13 megabytes (1 map).
https://gdg.sc.egov.usda.gov/GDGDL/3477237/ortho_imagery_MDOQ1M_N_fl009_3477237_02.zip

Total data package size is 3,178.85 megabytes (3,179.36 megabytes compressed)

Click on the link(s) to download.
Ensure the link is the full path because some it may be on subsequent line(s).
These files will be removed from their systems in 4 days (9/8/2017 4:57:29 AM).

Regards,
The Geospatial Data Gateway Staff
https://gdg.sc.egov.usda.gov

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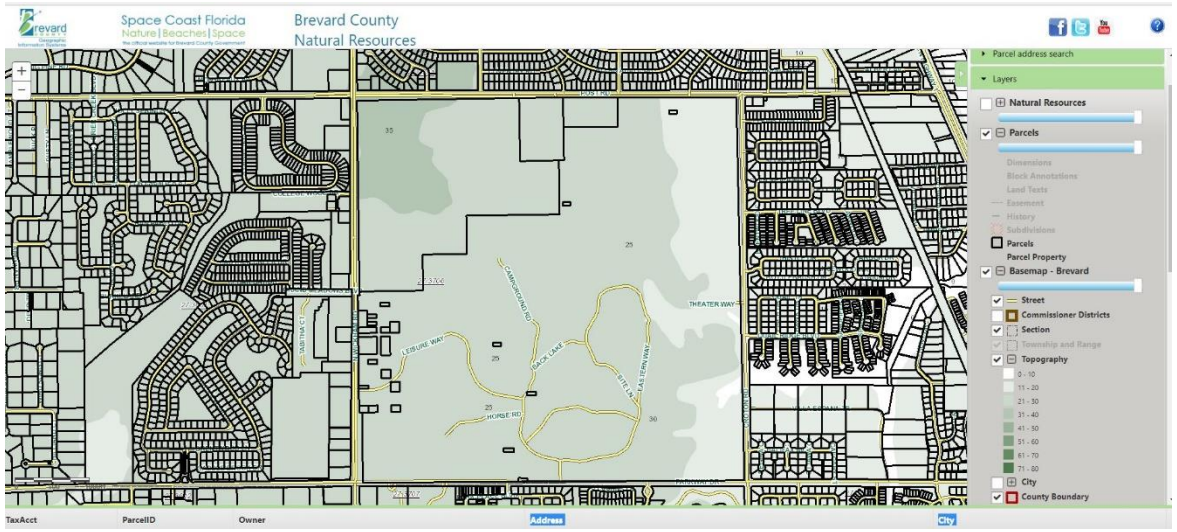
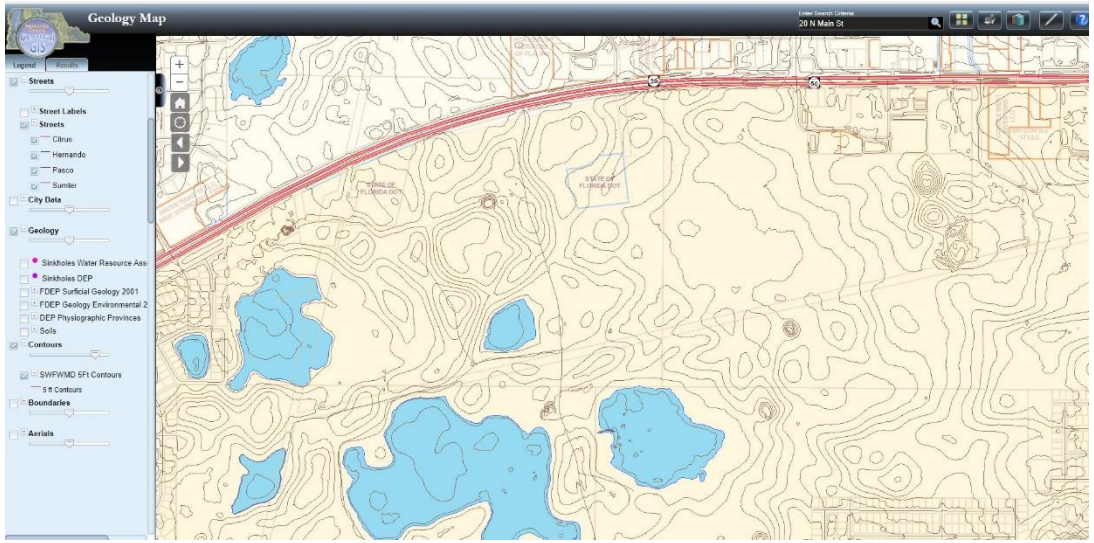
Check your county /city GIS web site for contour information. It is often hit and miss what they will provide and what they will provide for free.
On the right is Brevard County FL for the sample map. Brevard Is a flat county where contour detail is less important.



Below is Hernando County FL where the sand hills make a difference so they and the water management district have collaborated on contour mapping.



Hernando and many other counties provide these images for free which then can be captured using your computer's snipping tool. The next step is to trace the contours on to your map.
You can often acquire the GIS information from the county in a form which will allow direct import in to your mapping program.

States and counties have differing policies on how they treat their GIS information – public domain or cost recovery. The only way to find out is to look and to ask.

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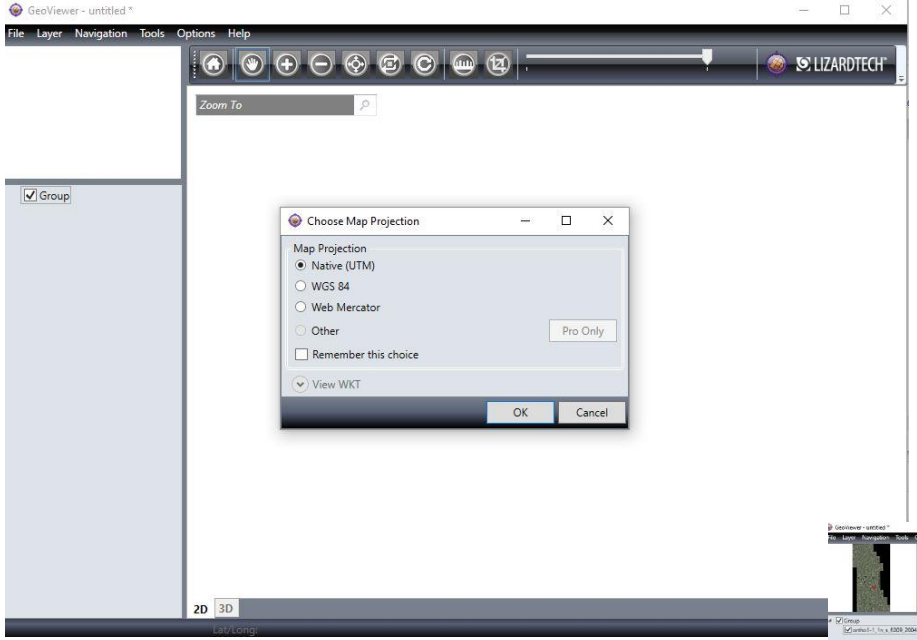
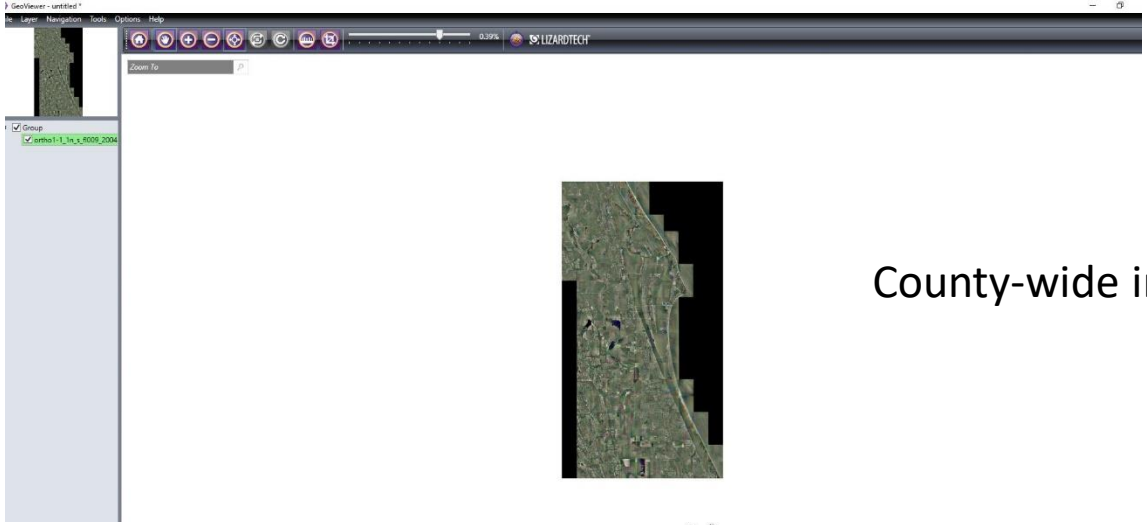
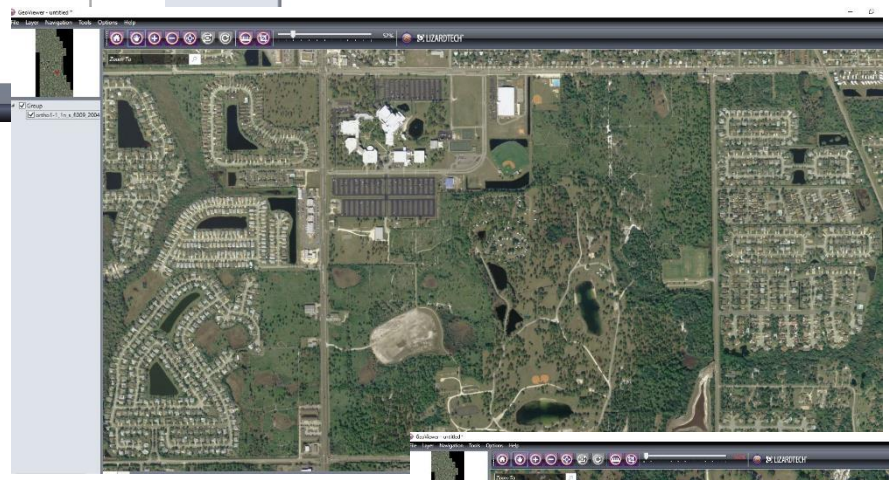


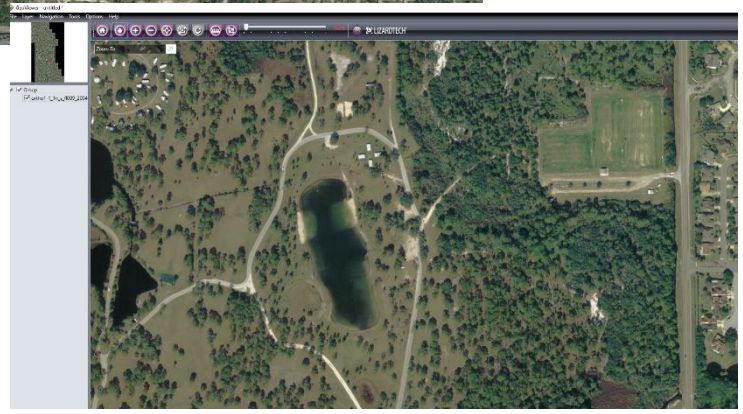


County-wide image

The orthophoto file comes as A county-wide image which can be enlarged to capture only the image desired.



Park image



Partial park image

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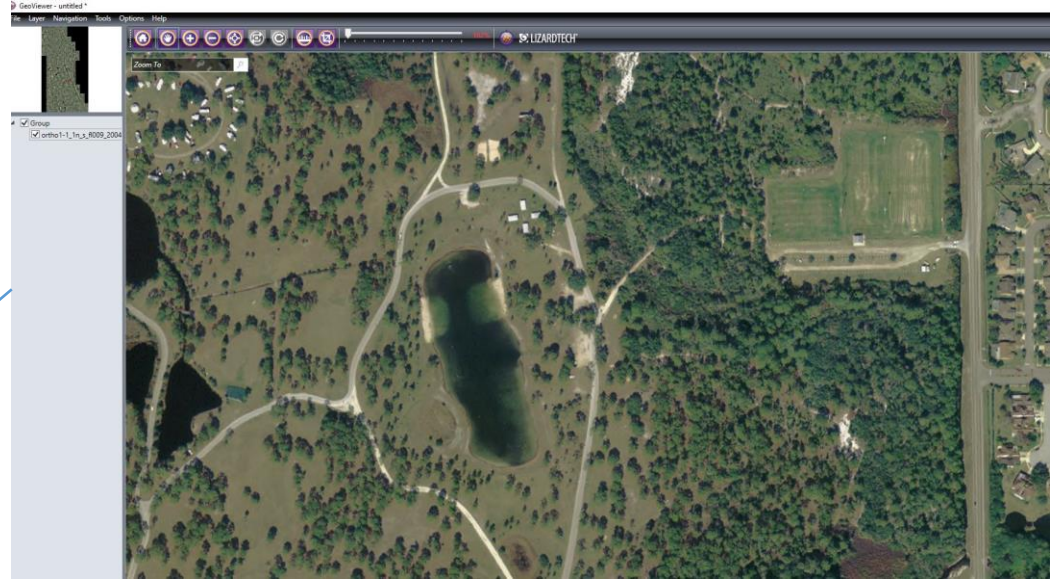
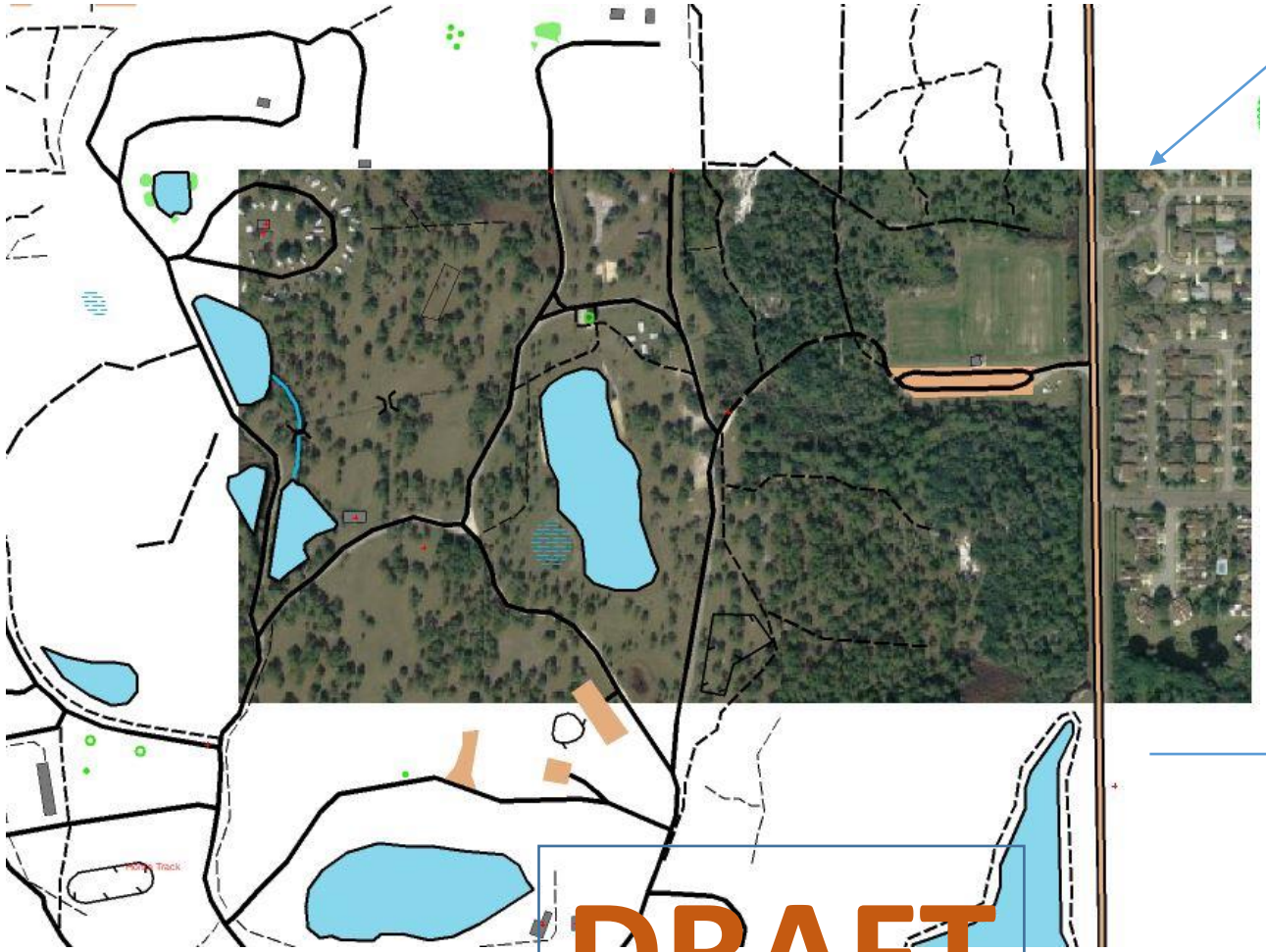
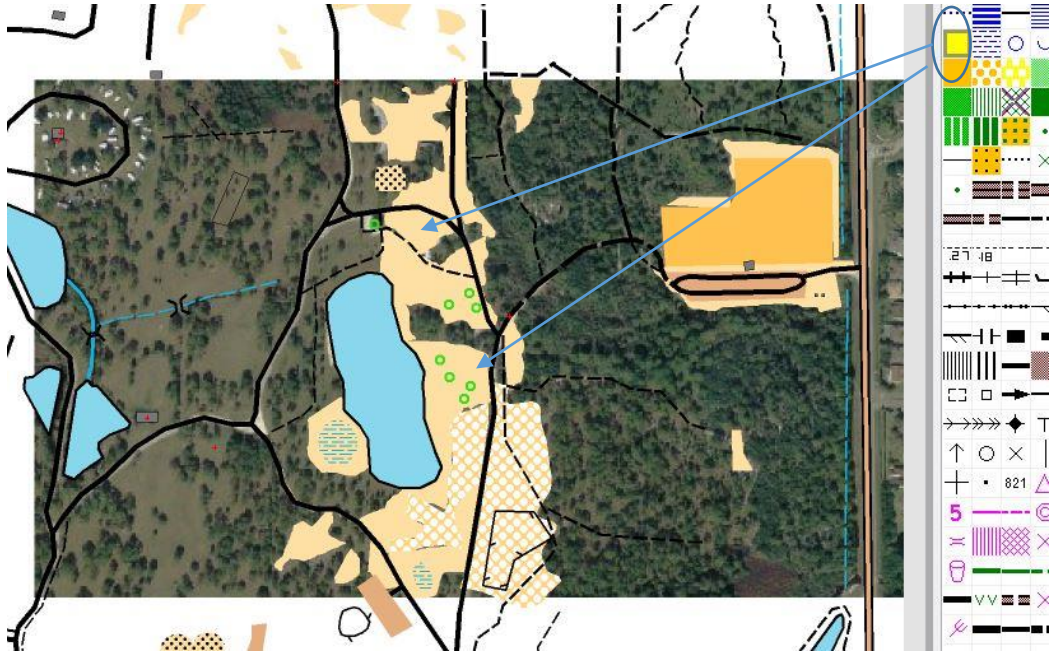
When imported as a template the orthophoto will sit exactly in place IF the map is properly geo-referenced.

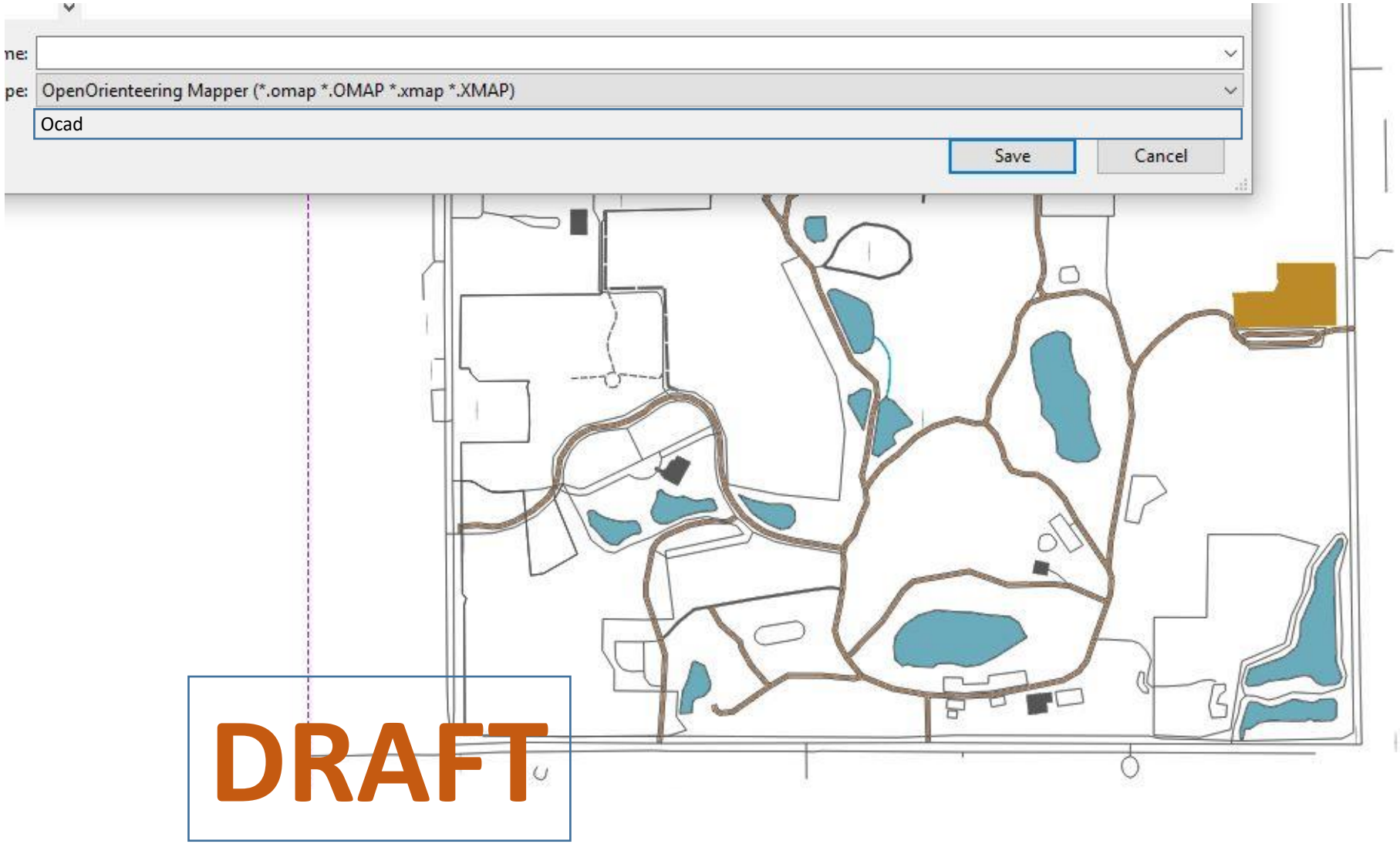




Add detail as found.



Your Open Orienteering Mapper file can be saved as an OCAD file at any time by using File- Save As and selecting Ocad.
It will save the file as OCAD 8 which your OCAD 9-12 can convert on demand.



Making an orienteering map from Open Street Map using OCAD 12

OCAD 12 introduces several time-saving features:
New map wizard
Batch conversion of symbols

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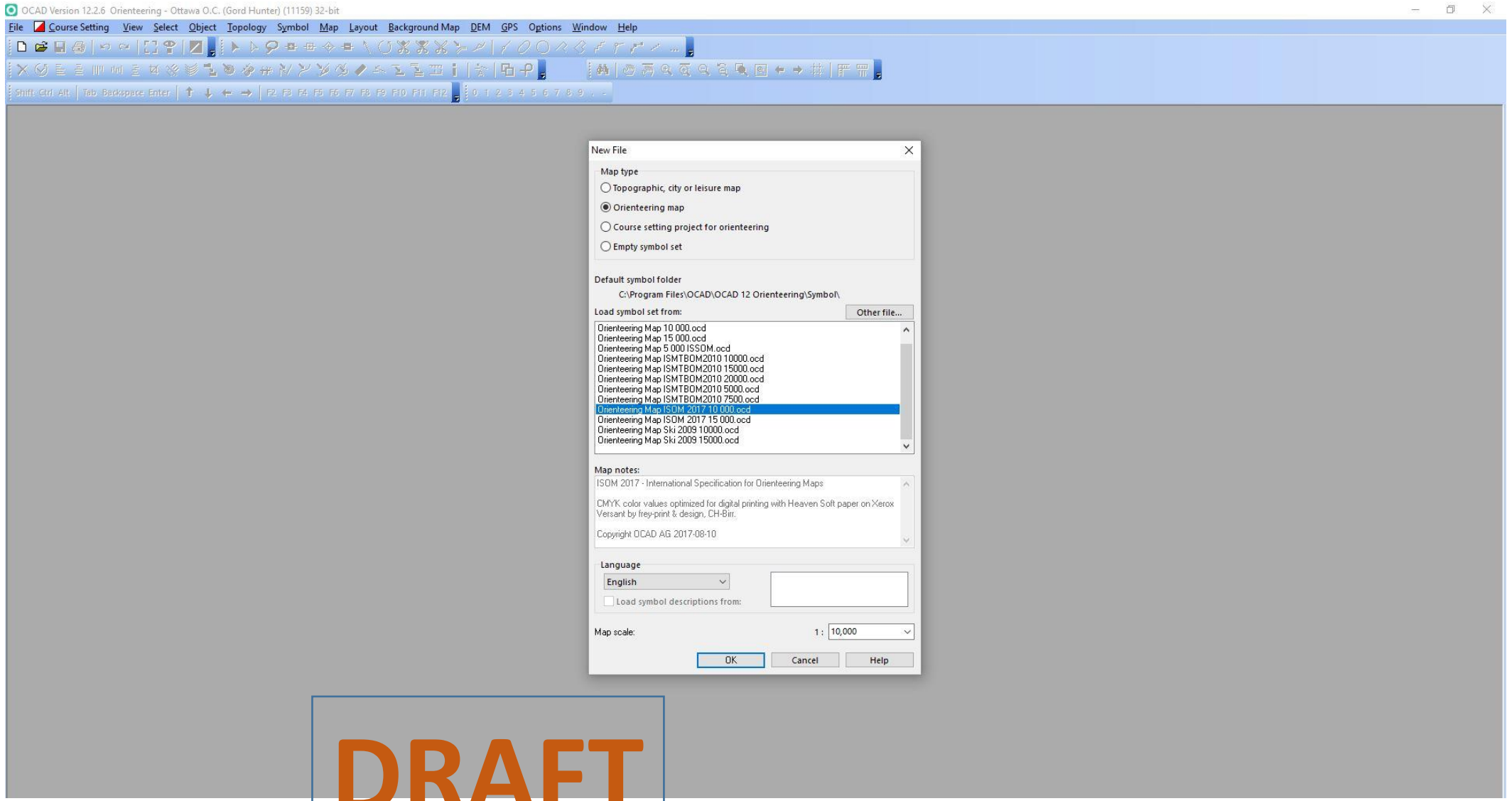
Step 1: Select the type of map you wish to make



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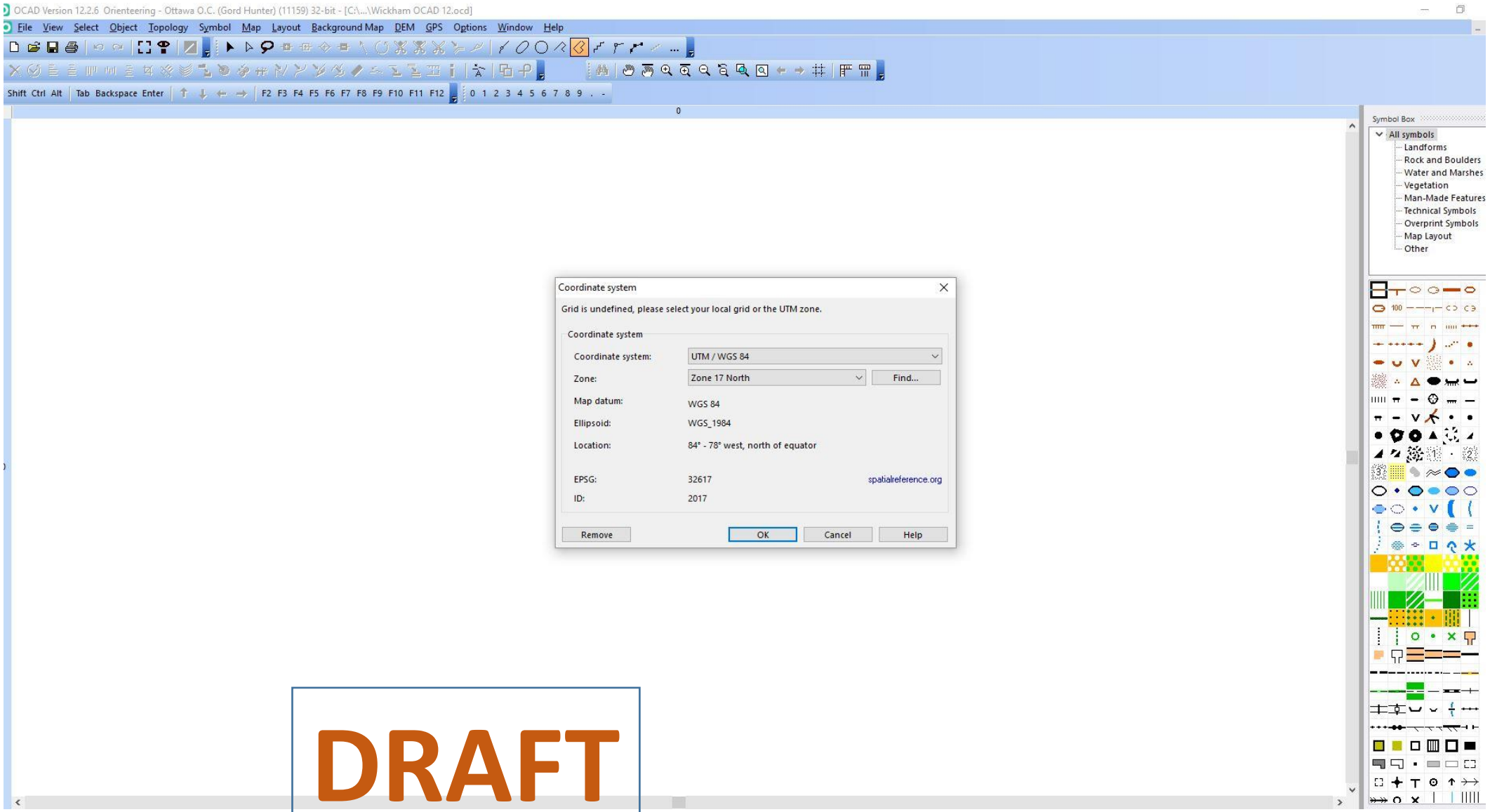
Step 2: It will ask you to confirm the correct UTM zone is selected.



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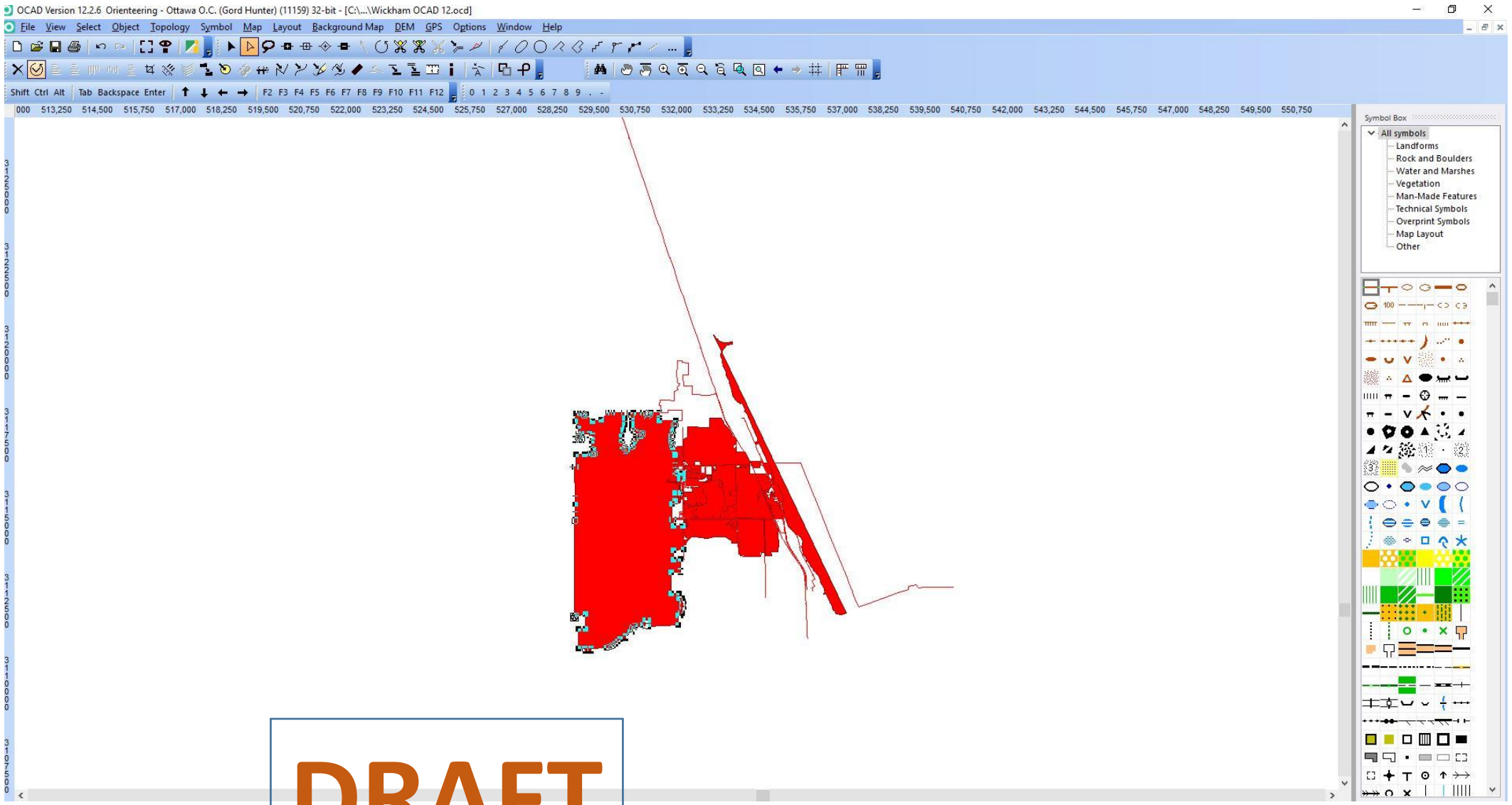
The imported information will look considerably different than OOM.
Most prominent differences are the red color and the area overlays.



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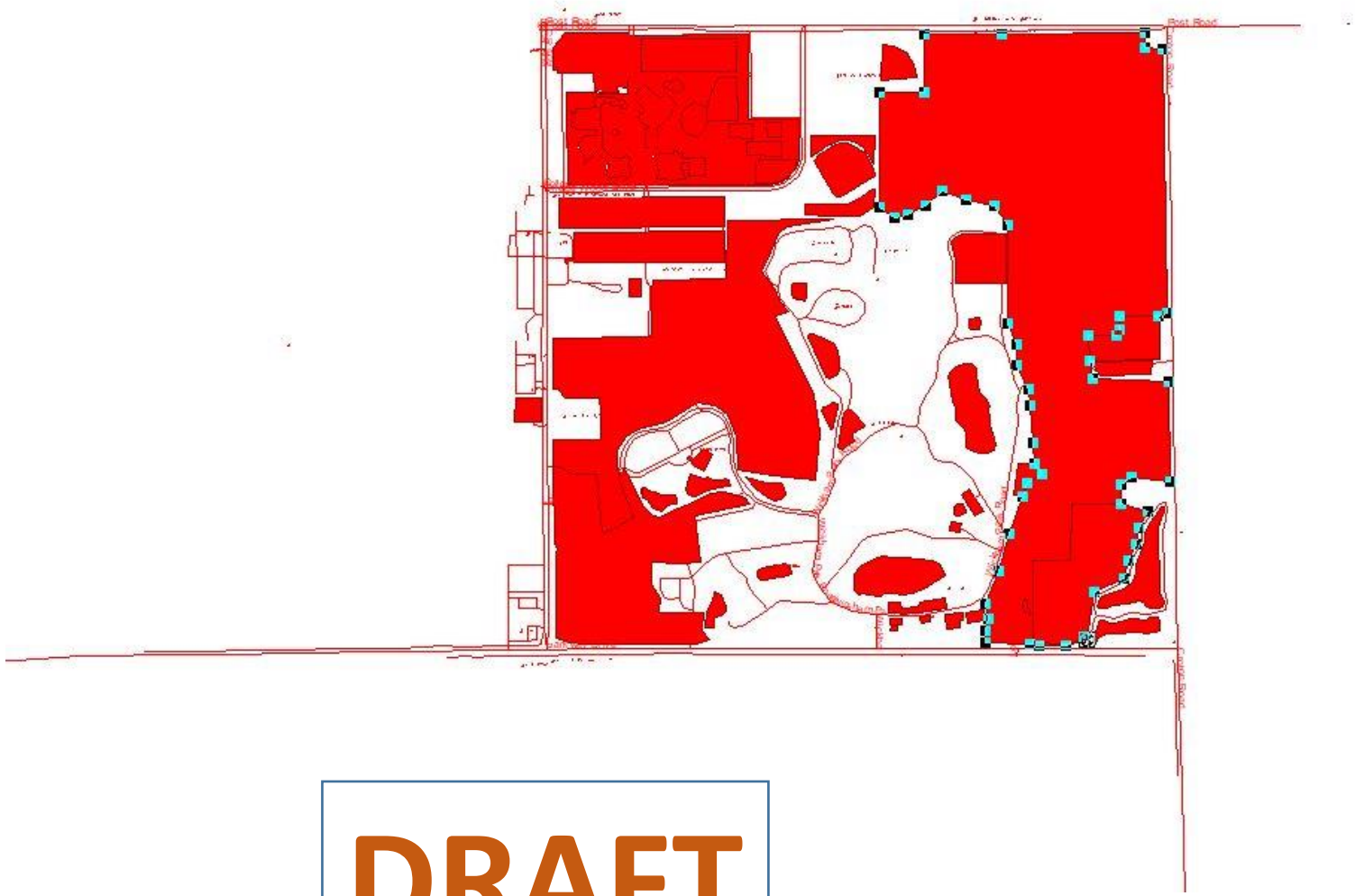
Strip away the excess parts of the map.



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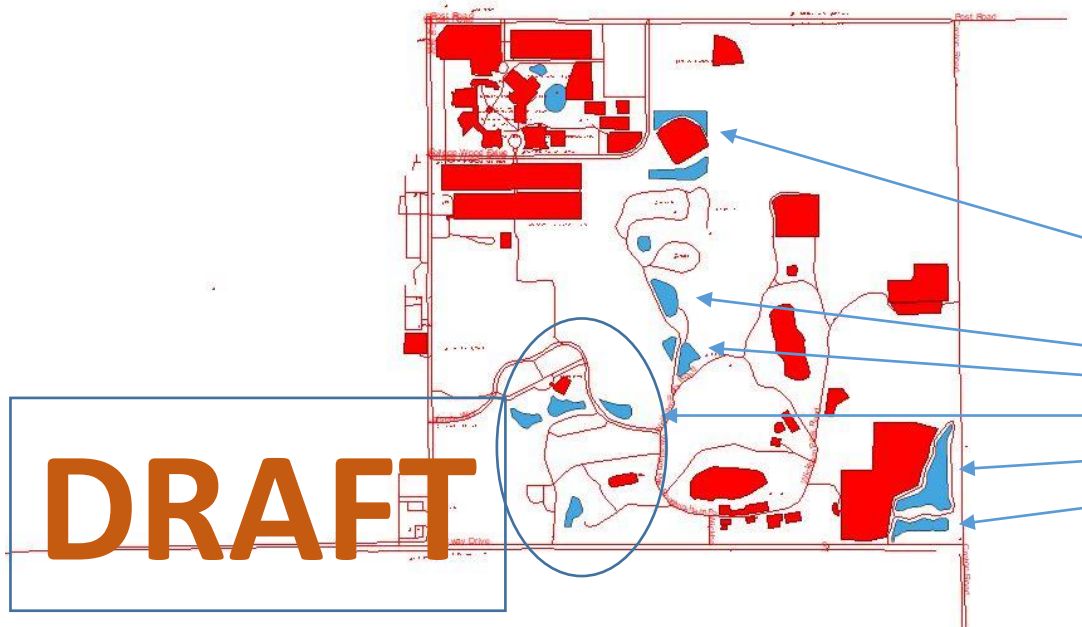
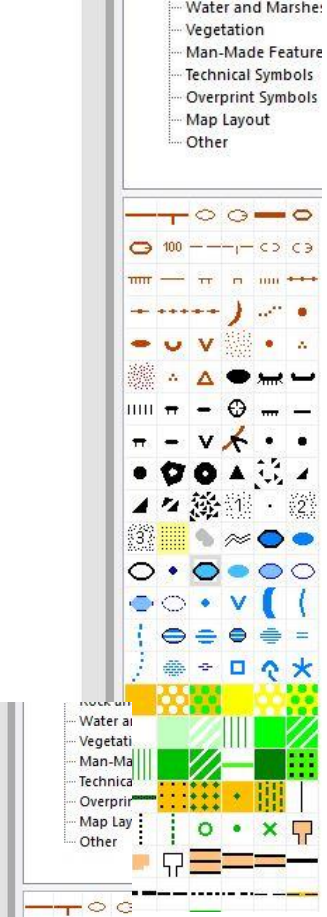
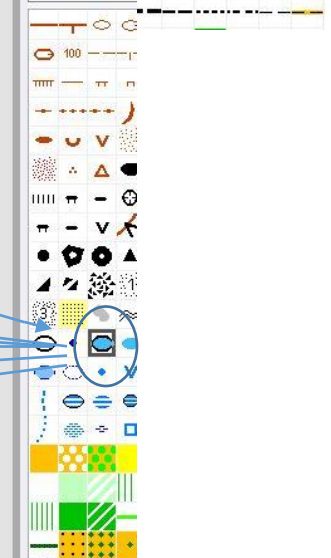
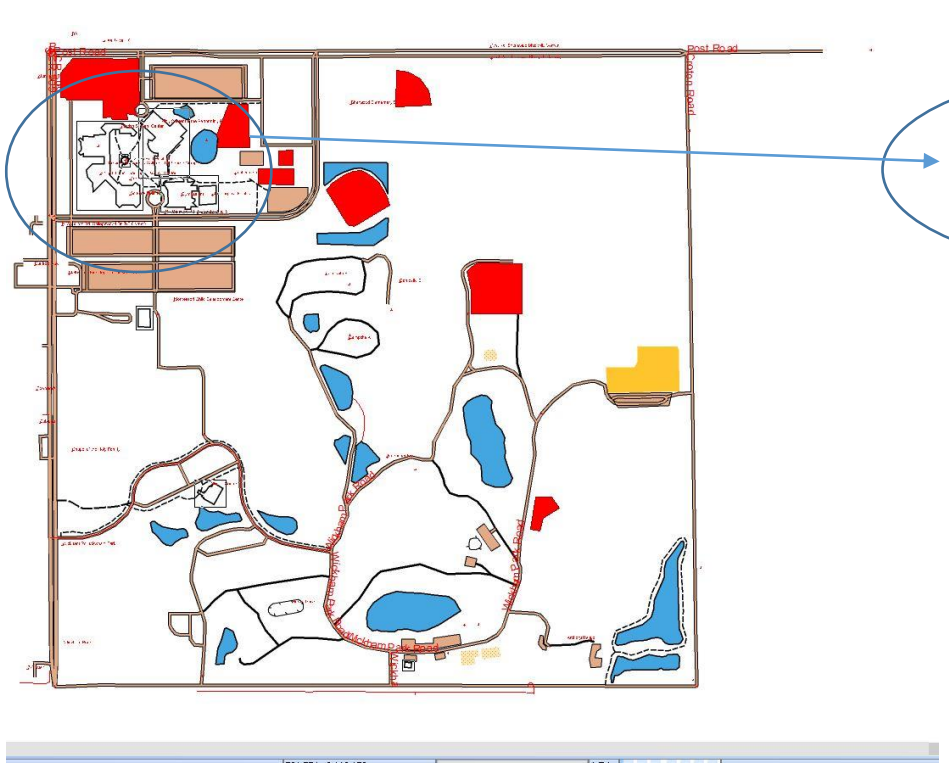
Batch Symbol Conversions:
Using ponds as an example
Highlight one of the symbol – it will be identified in the lower left corner.
Select the OCAD symbol you want.
Then selct Change All from the toolbar above.

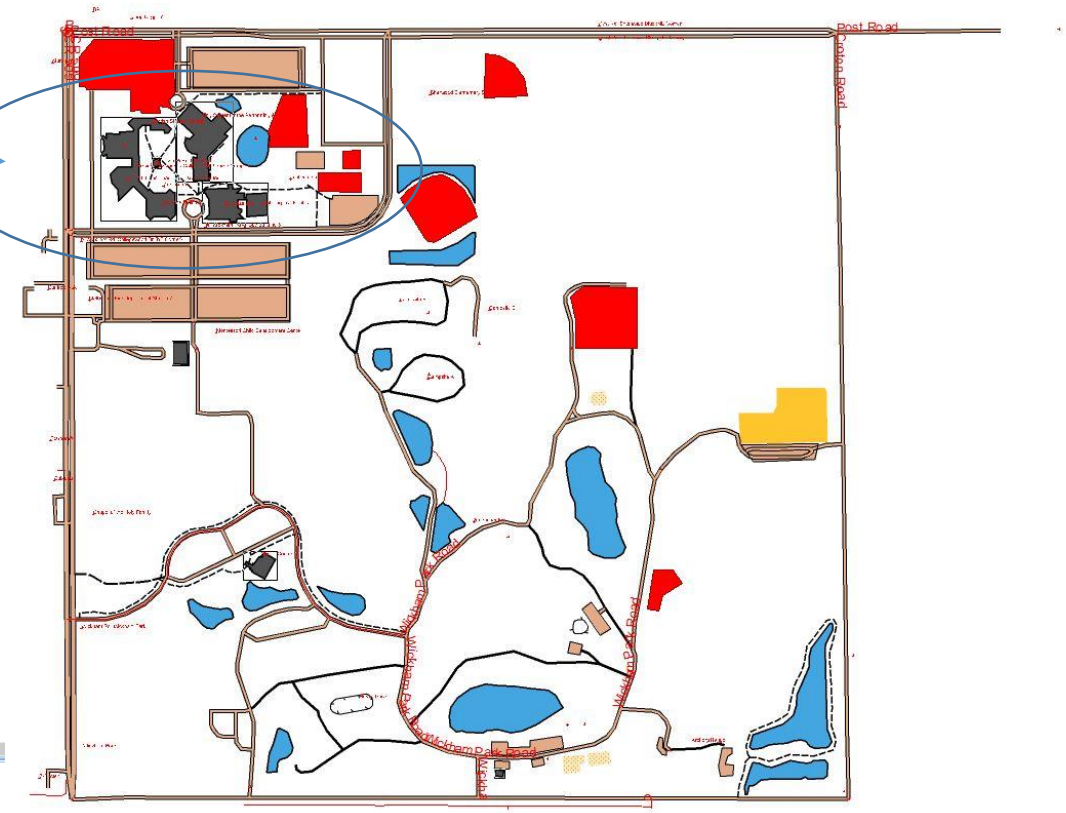


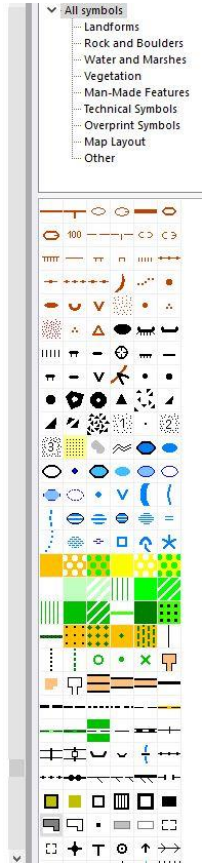




Another great time saver is the Select All function on the symbol drop down bar.
For instance by selecting all the building outlines we are then able to fill in all the buildings at once







DRAFT

Finally: Remember you started your map from some basic information from Open Street Map. No doubt you added to and perhaps corrected the Open Street Map information. You might want to consider paying it back or perhaps paying it forward by entering your information in the Open Street Map data base.

This **Beginners' Guide** will show you how to add data to OpenStreetMap:
http://wiki.openstreetmap.org/wiki/Beginners%27_guide

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