

When Safety Is On The Line

SUBMITTING DIGITAL MAPPING FILES:
GUIDELINES

2013

LAST UPDATE: October 2013



SO YOU WANT TO SUBMIT DIGITAL SHAPE FILES...

This document serves as a basic guide on how to prepare your files. Using digital files to manage your database simplifies the entire process, making it more efficient and most of all - more **accurate** for everyone involved.

One Call Concepts' mapping system is based on lat/lon coordinates using NAD83 datum.

The preferred format for digital database submission is the ESRI Shape (.shp) standard. Other common data formats accepted are Google Earth (.kml), AutoCad (.dwg), MapInfo Mid/Mif (.mif), MapInfo Tab (.tab) and Tiger/Line (.rt1). If you would like to submit a different file format, please contact us first to confirm we can translate the data.

When submitting digital data, please supply all information necessary for processing: all associated files (i.e. .shp, .dbf, .shx, .prj for a shape file set, etc.), the coordinate system used (lat/lon, UTM, SPCS, etc.), the datum (Nad27, Nad83), the UTM/SPCS zone and Unit (meters, feet, etc.).



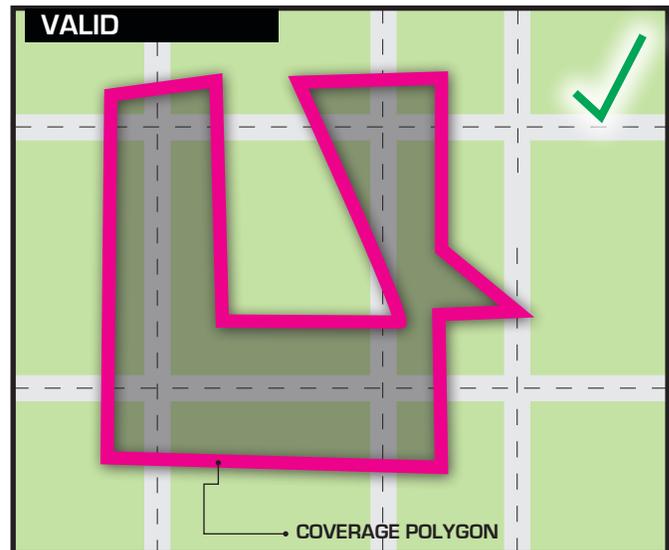
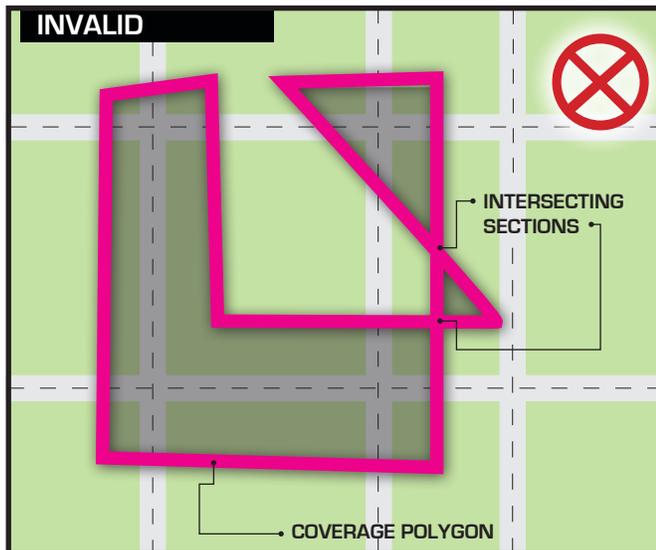
PLEASE CONSIDER THE FOLLOWING WHEN PREPARING YOUR SUBMITTAL:

List all counties covered by the data in the accompanying email. If you are submitting a single file that covers multiple counties, list EACH county in the email. If the files are for one county each, include the county's name in the filename.

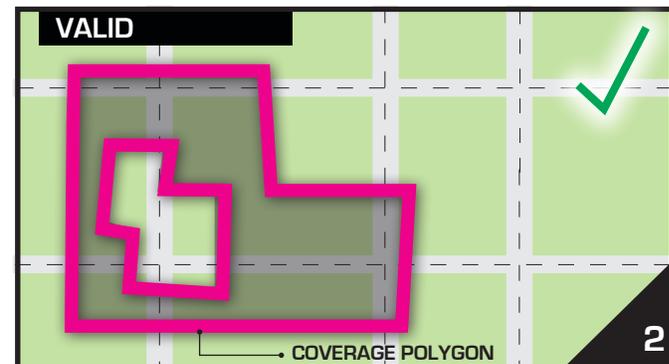
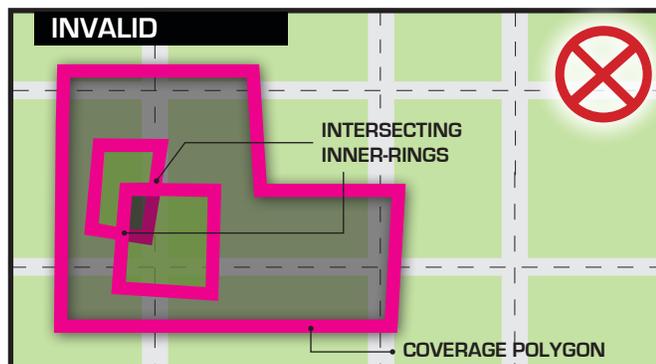
We can assign a specific reference code ("map reference") to each polygon in your coverage area. This code is displayed on the transmitted locate ticket. A map reference code is used to indicate which polygon generated the locate request. If you wish to use map reference codes, please limit them to one reference code of 29 characters (or less) per polygon. If using ESRI Shape format, please use the .dbf field name MAP_REF, or indicate which field should be used for reference purposes when submitting your data.

All data should contain polygons with the desired buffers for your coverage area. If you are unable to create polygons and wish to submit line data, indicate the desired buffer size when submitting your data. We'll apply the buffer you specify and create polygons when the data is processed.

The data should **not** contain any **invalid geometries** or **reentrant polygons**. A reentrant polygon is any polygon that contains one or more intersecting sections. (Below)



"Inner Ring" polygons (areas of exclusion) that intersect other inner rings or the parent outer ring are also considered invalid geometries.



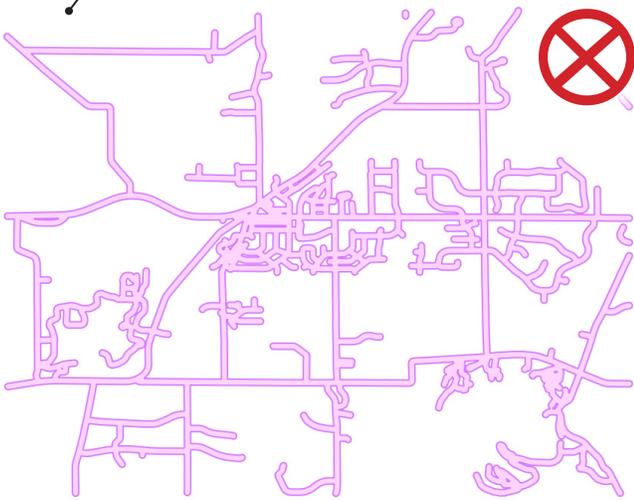
SUBMITTING DIGITAL MAPPING FILES

Minimize the number of polygons and points used to define your coverage area. Excessive data submissions may be returned to you for further editing and re-submission. Watch out for **any** of these conditions:

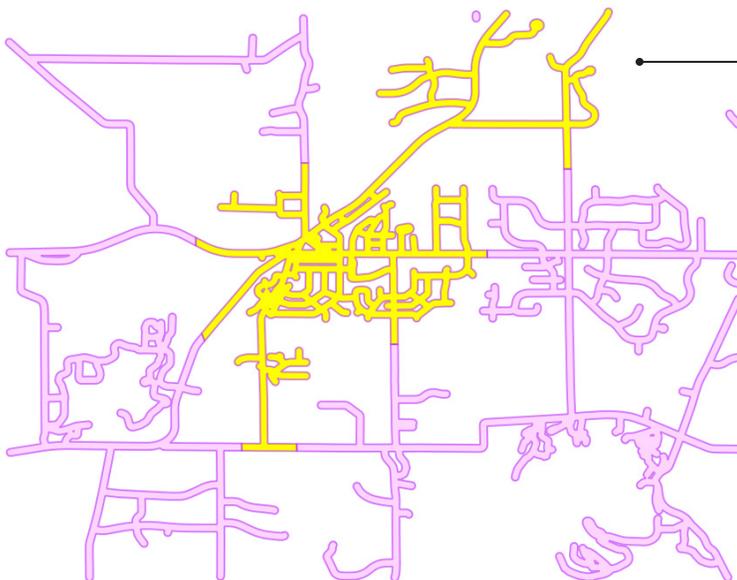
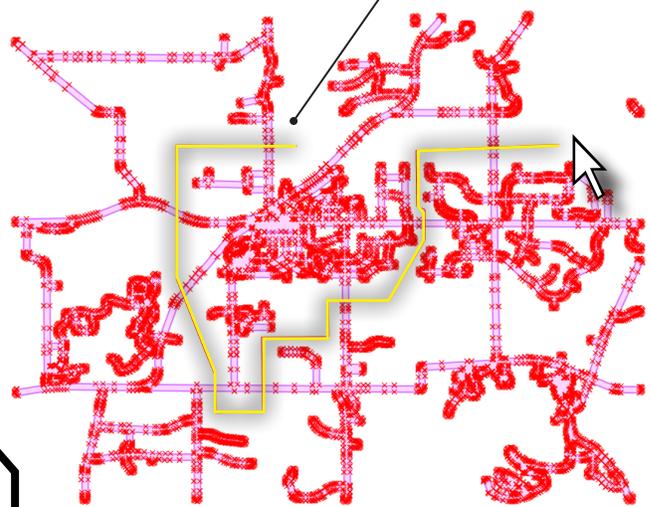
A. Limit each polygon to no more than 9000 points. Polygons with more points limit the ability of future modifications and prevent the export of the data to some formats like Tiger/Line. A simple split function can be performed in most map applications like ArcMap and QGIS to break these large polygons into a couple of smaller polygons.

TOO MANY POINTS FOR THIS POLYGON

- OVER 9000 POINTS



SPLITTING THE POLYGON

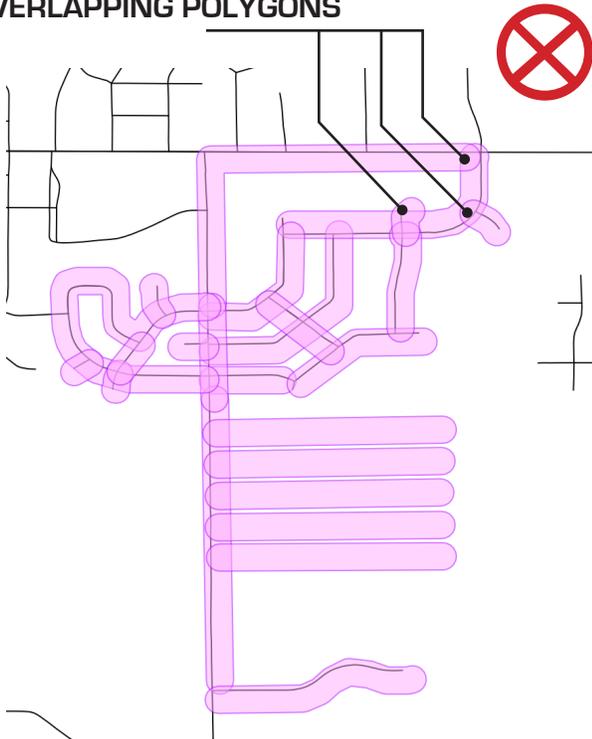


SUCCESSFULLY SPLIT POLYGON

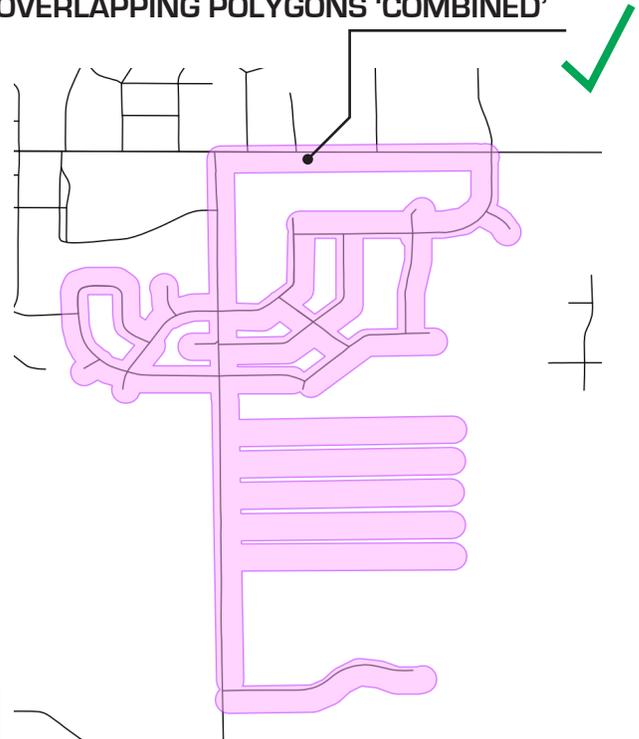
- NOW 3 POLYGONS
- EACH FEWER THAN 9000 POINTS

B. Limit duplicate or redundant polygon coverage. Overlapping polygons, unless using unique map reference codes, provide no coverage benefit and require storing additional unnecessary information. A **dissolve** or **combine** function can be performed to eliminate or reduce these areas of overlap

OVERLAPPING POLYGONS

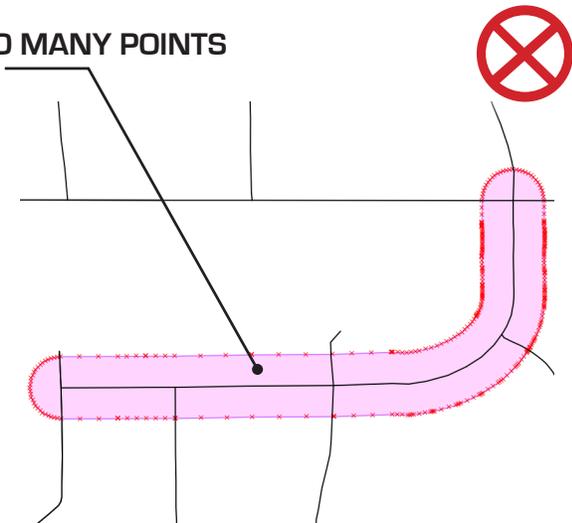


OVERLAPPING POLYGONS 'COMBINED'

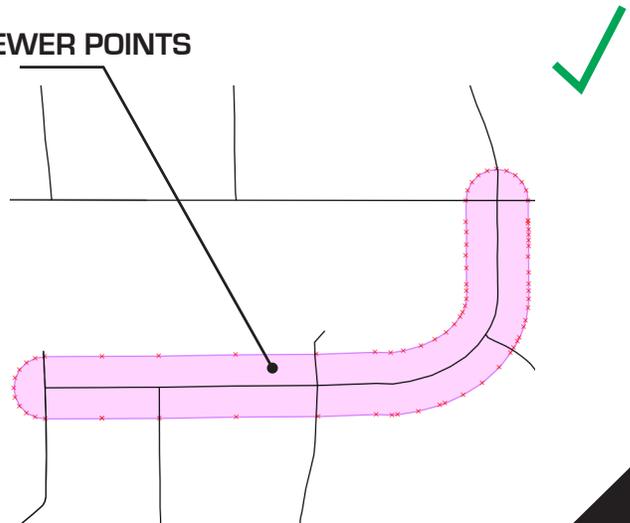


C. Limit multiple points in a straight line or when defining a curve. It's not necessary to have 25 points in a straight line when 2 points would define the same line. A **simplify** or **generalize** function can be performed to eliminate excess points.

TOO MANY POINTS

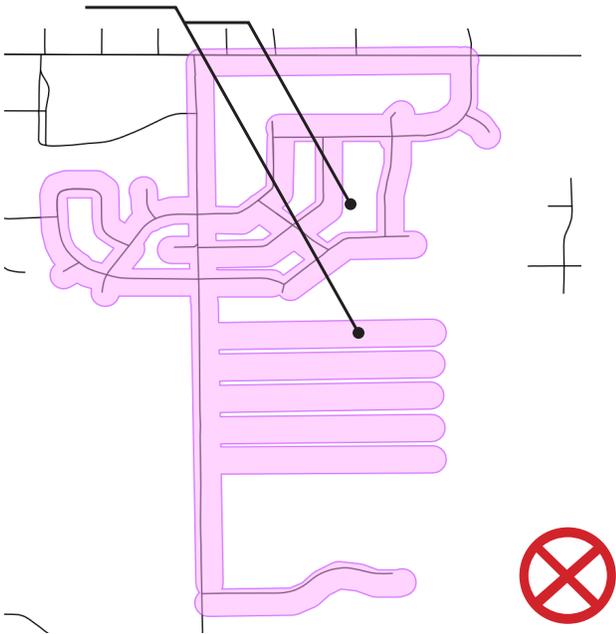


FEWER POINTS

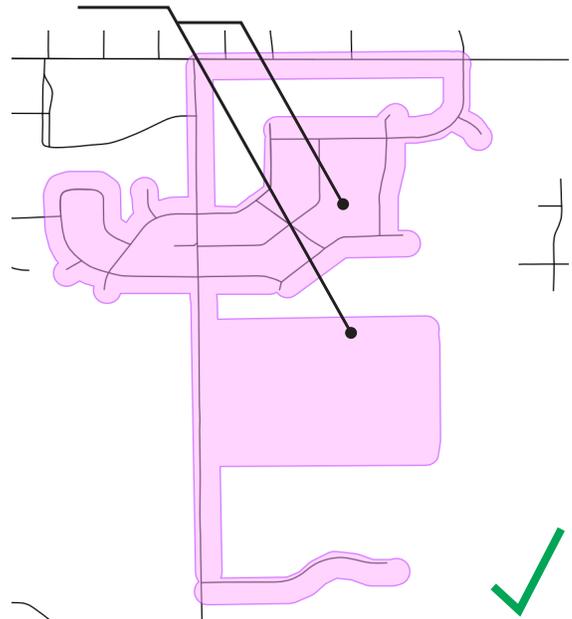


D. Limit tiny areas of exclusion. If the work site area on a locate request cannot be contained entirely within an area of exclusion you have defined, then it provides no benefit but still uses valuable system overhead. The most common examples of this are tiny inner ring polygons or 'sliver' like corridors created by the auto-buffering of line and/or point features. **Please note, inner ring polygons less than 200 sq ft may be discarded during processing.**

TINY AREAS OF EXCLUSION



AFTER AREAS ARE 'REMOVED'



Once the data has been processed, it will be placed on IMAP (OCC's online mapping application) for you to verify and approve. After you approve the proposed coverage area, your data will be applied to the live maps on or shortly after the specified activation date.

