

INSTRUCTIONS FOR CREATING AND SUBMITTING A DIGITAL BOUNDARY FOR STATE COASTAL ZONE CONSISTENCY (CZC) DETERMINATIONS.

SCDES-BCM strongly encourages the submission of an AutoCAD .DWG file, ESRI shapefile, TXT or CSV file showing the project boundary for all Coastal Zone Consistency (CZC) applications associated with requests for coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities. The .DWG files or ESRI Shapefiles should be prepared and submitted using the protocols indicated below.

The requirements for a boundary submission in AutoCAD .DWG format are as follows:

- (1) The AutoCAD .DWG file should contain a closed polyline showing the limits of disturbed area or project boundary. In some instances, multiple closed polylines are acceptable if the individual project involves separate, noncontiguous areas of disturbance, which are of a relatively significant distance apart, or separated by permanent features such as a paved road or waterbody.
- (2) The polyline should be closed to its point of beginning, so that it forms a polygon when imported into GIS. List the properties of the boundary polygon before sending the file for review to ensure the polygon is closed to its point of beginning. Closing the project boundary using object osnap and selecting the POB endpoint DOES NOT CLOSE the polygon. To close the polygon completely, right click and select close when drawing the last line of the project boundary.
- (3) The closed polyline should be properly oriented North and properly scaled. This should not be an issue if all vertices are associated with verified state plane coordinates. See #5, below.
- (4) The “Named UCS” should be set to “World.” GIS software automatically interprets DWGs to be in the “World” UCS. When the .DWG is created, the supporting coordinate information that may have been used by add-on software packages to manage the coordinate geometry in AutoCAD is not transferred as part of the file. The result of which is that though the boundary may appear to be in state plane on your system, it is not when imported into our system. Often when this occurs, the Named UCS will appear as “Unnamed” when viewed in our system.
- (5) **MOST IMPORTANT – THE POLYLINE SHOULD BE CREATED IN OR ADJUSTED TO MATCH THE S.C. STATE PLANE COORDINATE SYSTEM (NAD 1983 – INTERNATIONAL FEET). EACH VERTEX SHOULD BE ASSOCIATED WITH A VERIFIED STATE PLANE COORDINATE. GENERALLY SPEAKING, THE “X” OR EASTING IS A 7-DIGIT NUMBER (NOT COUNTING DECIMAL PLACES) BETWEEN 1913700.00 – 2743157.00 AND THE “Y” OR NORTHING IS A 5 OR 6-DIGIT NUMBER (NOT COUNTING DECIMAL PLACES) BETWEEN 79142.00 – 902504.00. REGARDING THE NORTHING, IN PARTICULAR, IT IS MOST COMMONLY A 6-DIGIT NUMBER. IT IS ONLY A 5-DIGIT NUMBER IN THE MOST SOUTHERN PORTIONS OF BEAUFORT AND JASPER COUNTIES.**
- (6) The .DWG should be saved as AutoCAD 2014 (Software v. 19.1, Format v. 2013) or earlier. See automated system submission instructions below for details on how to submit your project.
- (7) See AutoCAD boundary details below for more details.

The requirements for a boundary submission in ESRI Shapefile format are as follows:

- (1) An ESRI Shapefile is actually made up of several distinct files (.dbf,.prj,.sbn,.sbx,.shp,.shp,.xml and .shx). Components of your Shapefile may vary, but to be readable by our GIS software a .dbf, .shp and .shx are REQUIRED, and unless the projected coordinate system of the Shapefile is NAD83, South Carolina StatePlane (FIPS 3900) International Feet, a .prj (projection) file is also required. For example, if a Shapefile is named “SCDESBCM_BOUND,” then the email should (at minimum) contain:

SCDESBCM_BOUND.dbf

SCDESBCM_BOUND.shp

SCDESBCM_BOUND.shx

(and preferably) SCDESBCM_BOUND.prj

One somewhat common issue when Shapefiles are sent by those unfamiliar with its components is the .shp.xml file is sent instead of the .shp. This typically occurs when the “Hide extensions for known file types” setting is active on Folder Option > View tab in Windows. Because .xml is typically a “known file type,” the .xml extension is hidden, and the user just sees the .shp and assumes it’s the correct file to send. To be safe, we recommend sending all components of the Shapefile, whether a required component or not.

- (2) The Shapefile should be a Polygon geometry type, containing a polygon feature (or multiple polygon features when appropriate) showing the limits of disturbance or project boundary.

The name of the shapefile should match the project name (shapefile name = project name) and be attached to an email. See automated system submission instructions below for details on how to submit your project. CDs, DVDs Floppy Disks and FTP links are no longer accepted.

For any data submission issues or questions, please contact Samuel Nyarkoh at samuel.nyarkoh@des.sc.gov.

BCM suggests that you periodically check for new versions of digital boundary instructions, as contact information and procedures may change.

AUTOMATED SYSTEM SUBMISSION INSTRUCTIONS.

SCDES-BCM have implemented an automation system that efficiently processes emails within 10 minutes. The system is designed to handle various file formats, including CSV, TXT, AutoCAD, and shapefiles. The steps enumerated below will direct you on how to successfully submit a project for processing.

- A. The requirements for a boundary submission in ESRI Shapefile format are as follows:
 - (1) Zip the shapefile content and rename it to your project name.
 - (2) The automation system will read the project name from the zip file.

- B. The requirements for a boundary submission in AutoCAD .DWG format are as follows:
 - (1) Rename AutoCAD file to your project name.
 - (2) The automation system will read the project name from the AutoCAD file.

- C. The requirements for a boundary submission in TEXT file format are as follows:
 - (1) Rename TEXT file to your project name.
 - (2) The automation system will read the project name from the TEXT file.
 - (3) Enter boundary vertices as shown below.

[Eastings, Northings].

```
File Edit Format View Help
399792.1866,2254269.4811
399802.0730,2254265.6960
399869.5280,2254204.7910
399912.1092,2254162.8939
399946.3323,2254126.4412
400035.2699,2254031.6241
400050.5036,2254015.5707
400056.1441,2254010.0738
400116.3833,2253945.1720
400122.4892,2253938.6407
400128.5950,2253932.1094
400134.8456,2253937.9829
400136.9283,2253942.5820
400142.7107,2253949.0505
400155.2082,2253961.2726
400148.5123,2253968.2786
```

- (4) If your project boundary is a multipart feature (Separate boundaries distant from each other). Your coordinate format should be as shown below.

NOTE: Part number can be a minimum of three (3) in a group to form a polygon.

[Part Number, Eastings, Northings].

File	Edit	Format	View	Help
1,	399792.1866,	2254269.4811		
1,	399802.0730,	2254265.6960		
1,	399869.5280,	2254204.7910		
1,	399912.1092,	2254162.8939		
2,	399946.3323,	2254126.4412		
2,	400035.2699,	2254031.6241		
2,	400050.5036,	2254015.5707		
3,	400056.1441,	2254010.0738		
3,	400116.3833,	2253945.1720		
3,	400122.4892,	2253938.6407		
3,	400128.5950,	2253932.1094		
3,	400134.8456,	2253937.9829		
3,	400136.9283,	2253942.5820		
4,	400142.7107,	2253949.0505		
4,	400155.2082,	2253961.2726		
4,	400148.5123,	2253968.2786		
4,	400141.8163,	2253975.2845		

D. The requirements for a boundary submission in CSV file format are as follows:

- (1) Rename CSV file to your project name.
- (2) The automation system will read the project name from the CSV file.
- (3) Enter boundary vertices as shown in step C above.

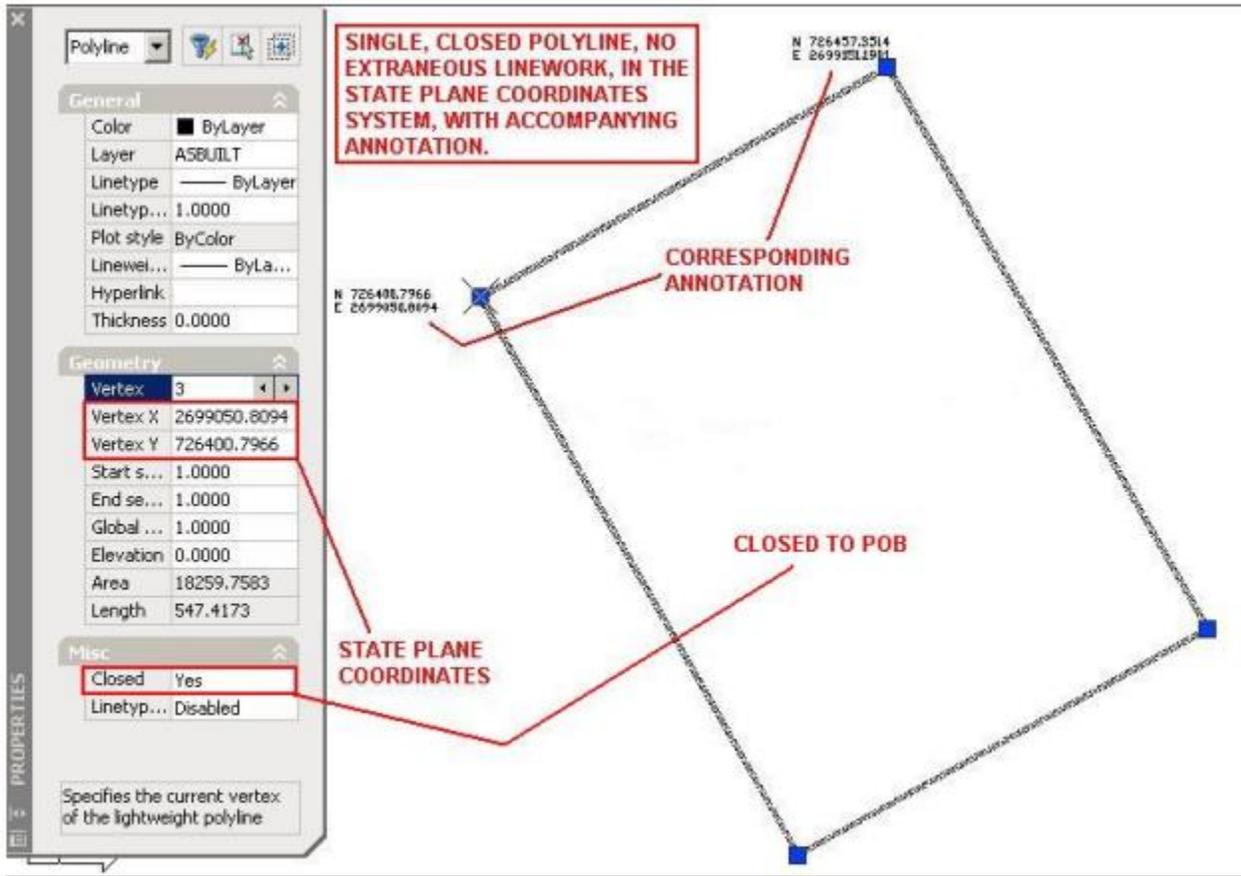
The attachment should be mailed to ocrmdigbound@des.sc.gov. The submission email subject line is expected to conform to a specific format. Failure to do so will result in project rejection.

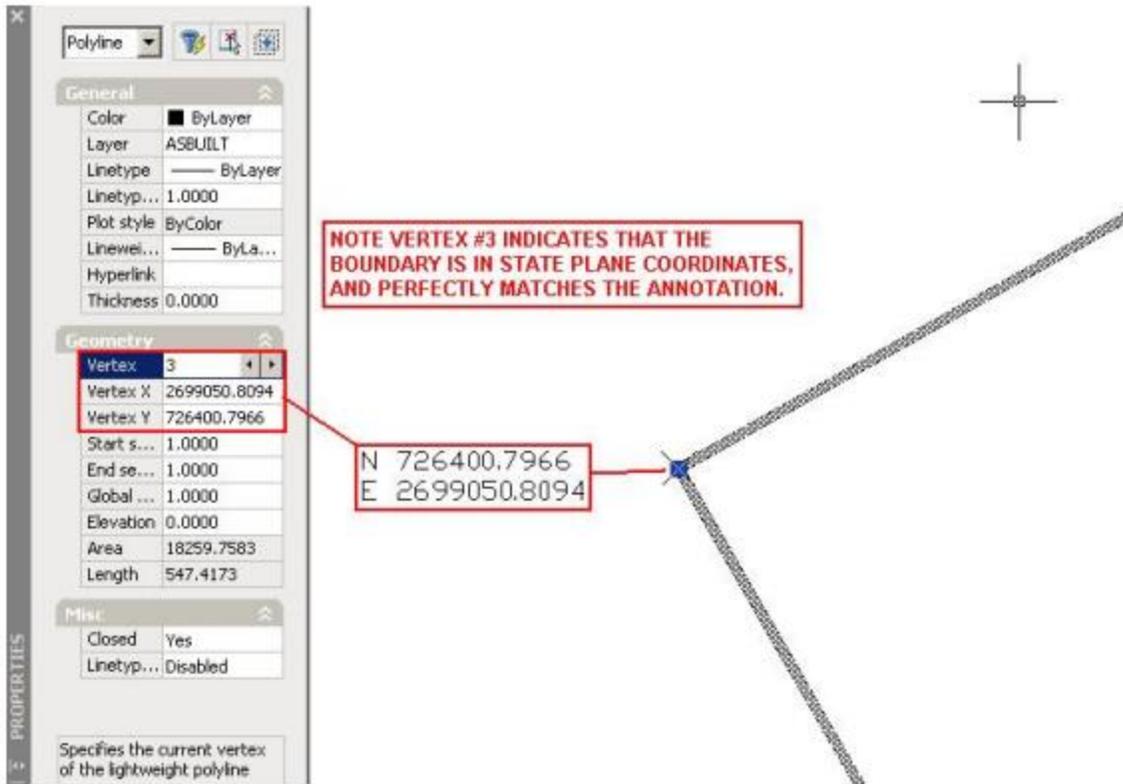
The table below shows the approved email subject line formats.

Action	Subject	Is Attachment Required?
New Project	Digital Boundary for Project Name #TMS# If no TMS use # N/A # Digital Boundary for Project Name #TMS#current	Yes
Update Project	Digital Boundary for Project Name # TMS # Boundary update Digital Boundary for Project Name # TMS # Boundary update#current	Yes
Rename Project	Rename Project ** Old Project Name ** New Project Name Rename Project ** Old Project Name ** New Project Name **current	No
<p>To update old projects (2019 and below), use this Web application to find the database that has your project. Then use the target database name to format your email subject as shown below.</p> <p>There are three (3) databases which include CURRENT (2020 to present), PREVIOUS (2017-2019) and ARCHIVE (2016). Options: [archive, previous, old, current] ->previous=old</p>		
Update Old Project	Digital Boundary for Project Name # TMS # Boundary update # old Digital Boundary for Project Name # TMS # Boundary update # Previous	Yes
Rename Old Project	Rename Project ** Old Project Name ** New Project Name ** Archive Rename Project ** Old Project Name ** New Project Name ** Previous	No

AUTOCAD BOUNDARY DETAILS

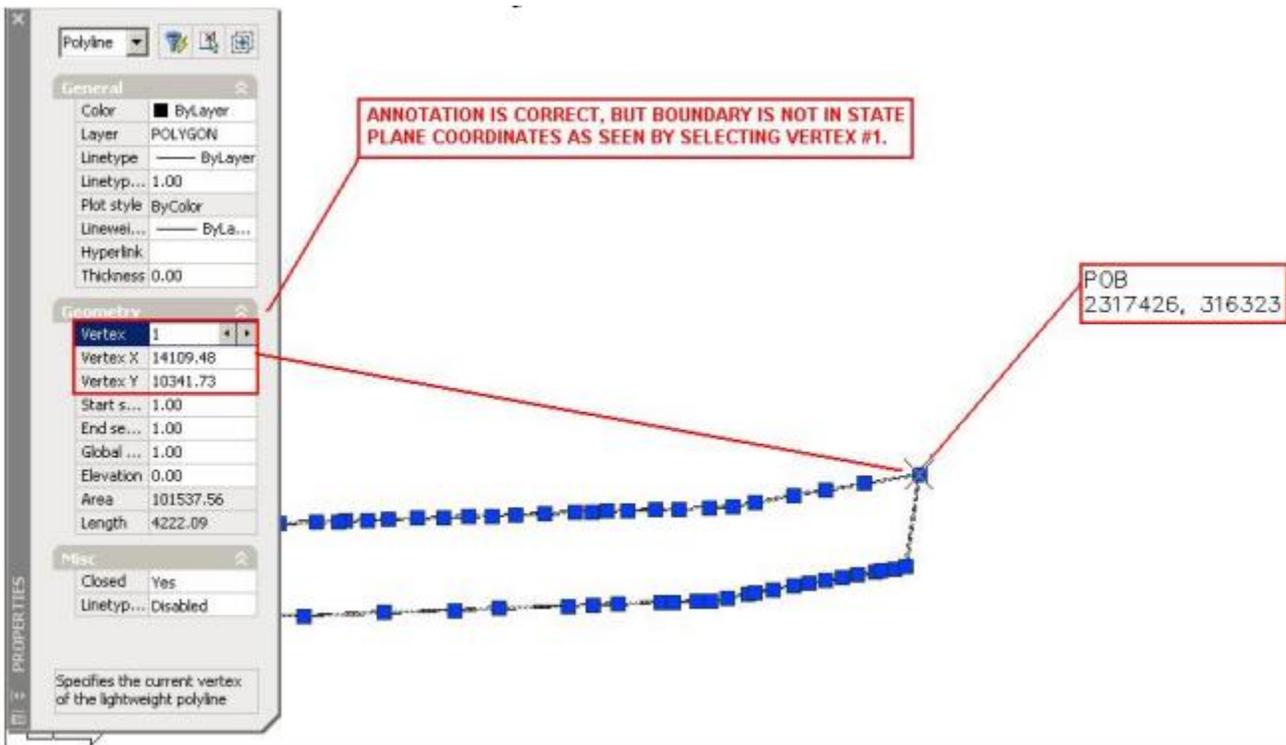
Below is an example of a preferred boundary submission.



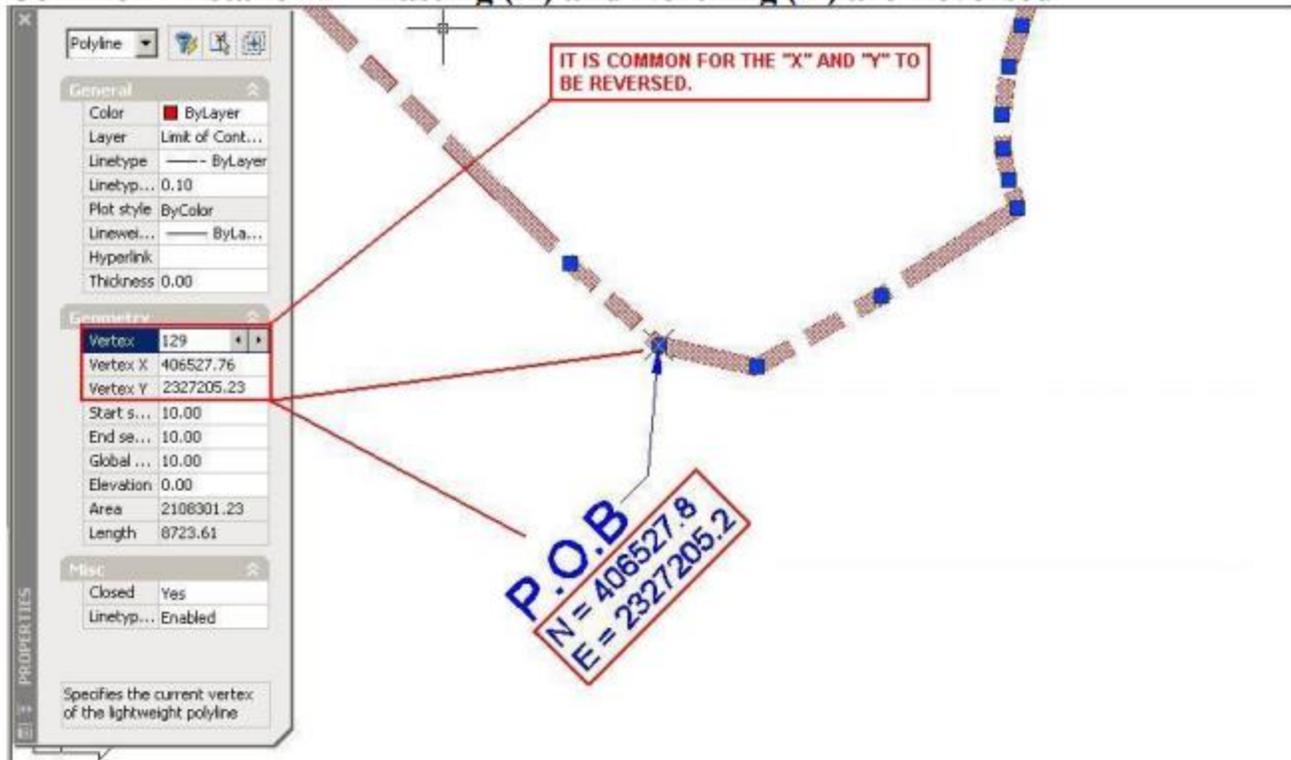


Below are common mistakes to avoid.

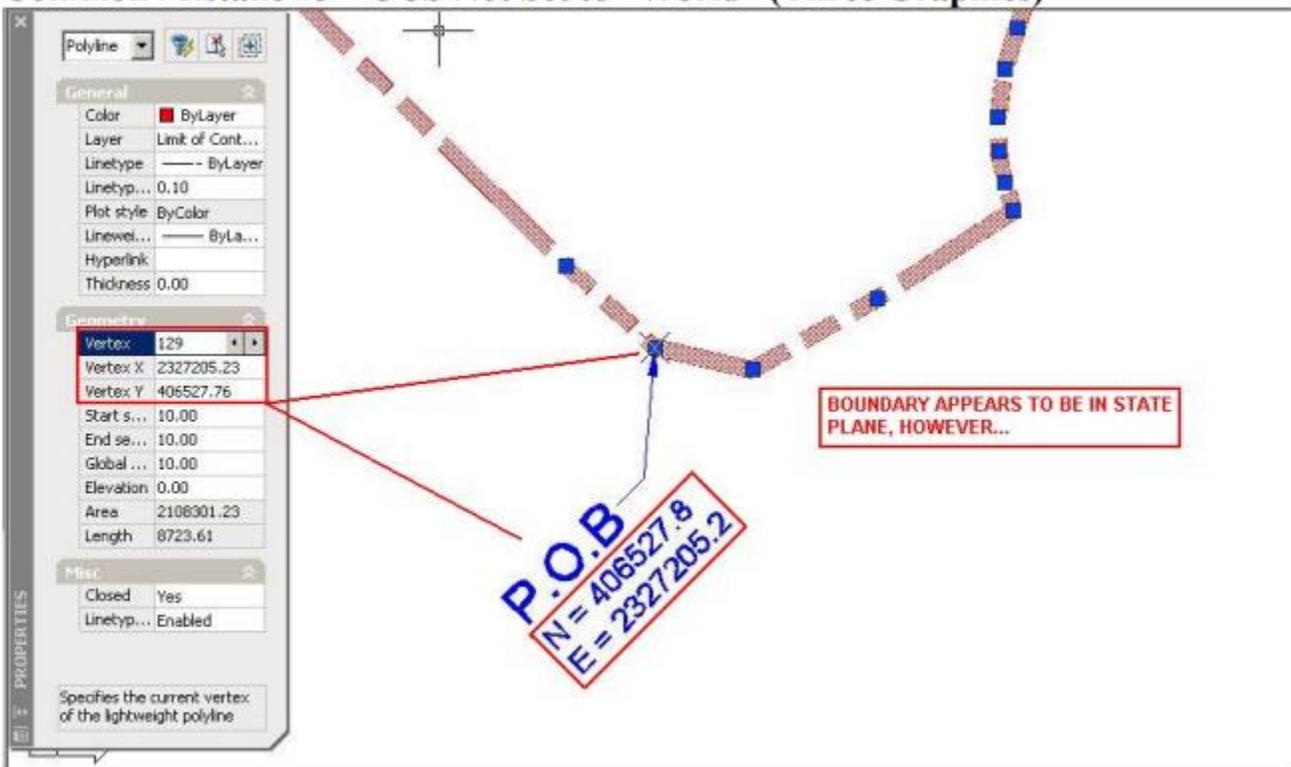
Common Mistake #1 – Boundary Not in State Plane Coordinates

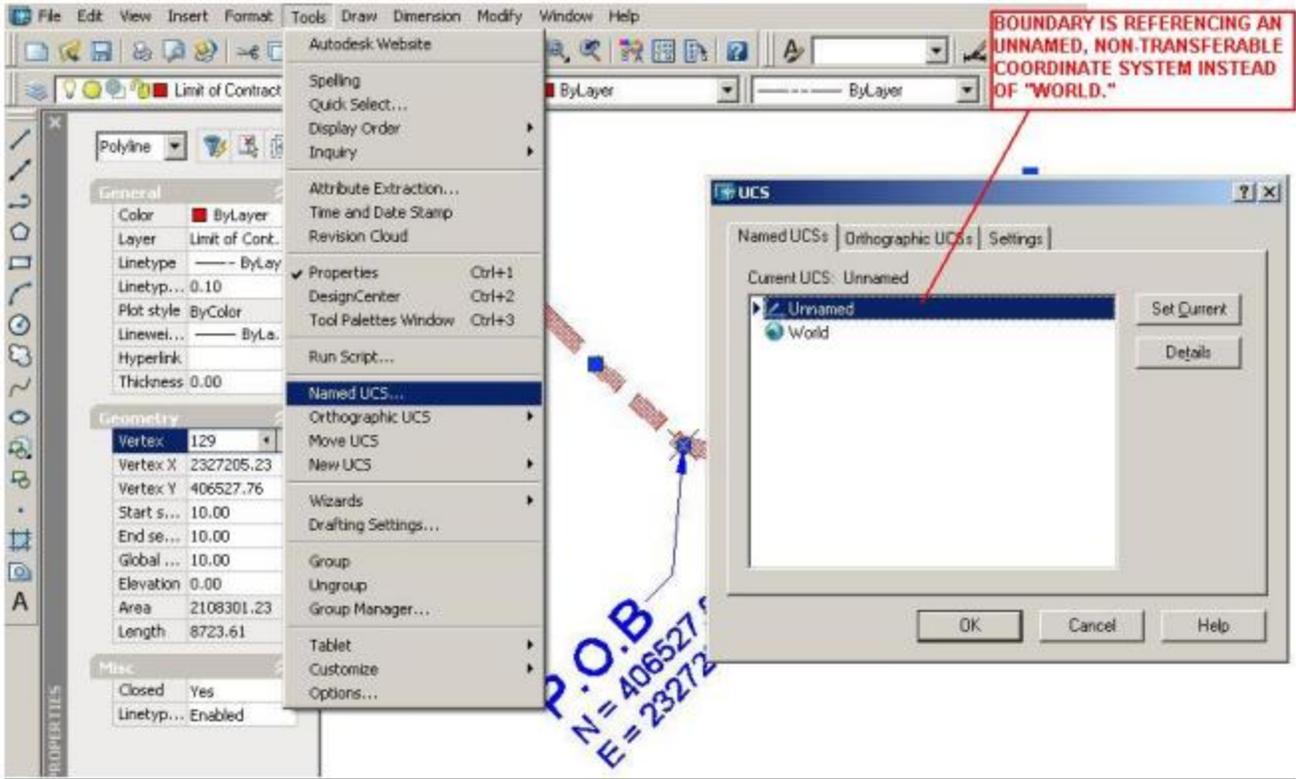


Common Mistake #2 – Easting (X) and Northing (Y) are Reversed



Common Mistake #3 – UCS Not Set to "World" (Three Graphics)





(Updated August 26, 2024)

ONCE UCS IS CHANGED FROM "UNNAMED" TO "WORLD", ACTUAL COORDINATES ARE VISIBLE. AS THEY ARE NOT VALID STATE PLANE COORDINATES, THE BOUNDARY DOES NOT DISPLAY IN THE CORRECT POSITION.

Vertex: 129
 Vertex X: 1358124.06
 Vertex Y: 1933041.13

P.O.B
 N = 406527.8
 E = 2327205.2

Common Mistake #4 – Extraneous Linework Included

EXTRANEOUS LINWORK PRESENT. SHOULD BE A SINGLE CLOSED POLYLINE.

Center X: 2327297.26
 Center Y: 406999.84