Converting From Both Sides of the Fence

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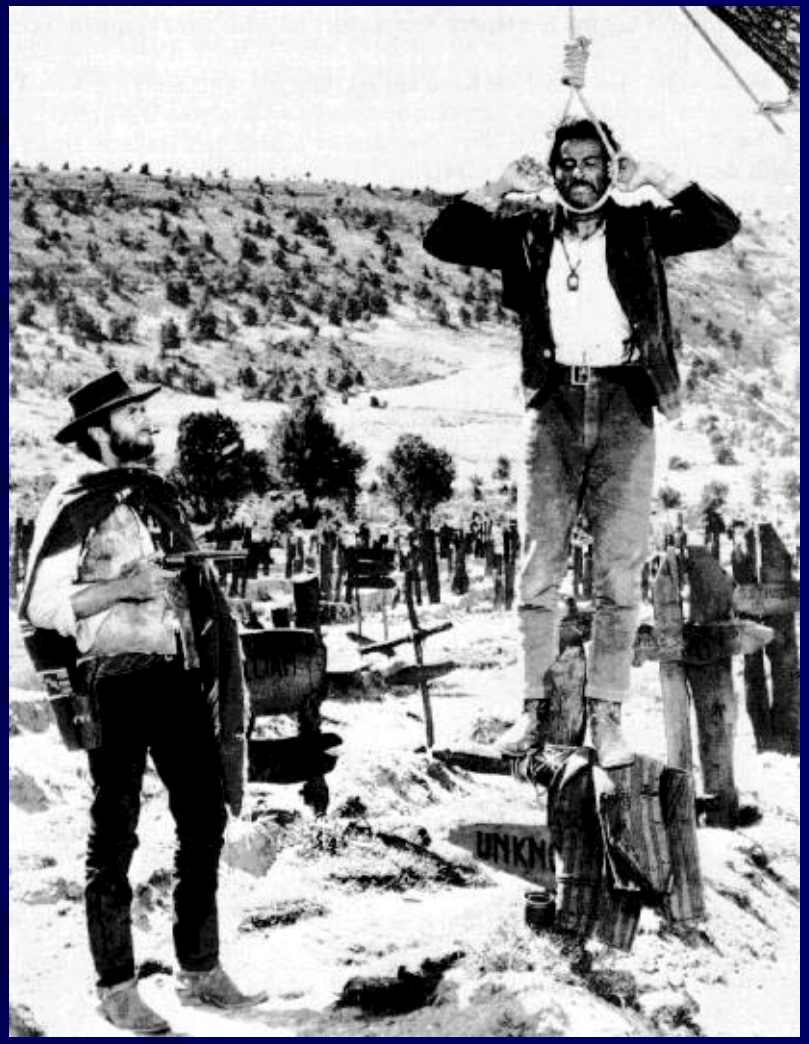
The Good, The Bad, and The Ugly



Communicate and Educate

That’s What I Said, But Its Not What I Meant!

- Communicate
- Understand the other side of the fence
- Don’t think you are hiring a savior unless you are paying for it
- Don’t think you are working with a mind-reader

How Communication is Typically Viewed

The Difference Between What You Want and What You Get

- The “look and feel” of the data
- Accuracy requirements
- Industry standards
- Industry trends
- Visual quality
- Database integrity

Accuracy Defined

For the 1”=100’scale mapping (i.e. two-foot contours) the RMS is 1.0 foot in X/Y and 0.67 foot in Z. For the 1"=50' scale mapping (i.e. one-foot contours) the RMS is 0.5 foot in X/Y and 0.33' in Z. The vertical accuracy (i.e. RMS) for the spots is 0.33 foot for 1"=100' and 0.17 foot for 1"=50'. These accuracy specifications are RMS values and not to be used on each individual features.

Accuracy Redefined

Horizontal Accuracy (1"=50', one-foot contours)

- 66% of all well defined points should be within 0.5' of their true location.
- 95% of all well defined points should be within 1.0' of their true location.

Vertical Accuracy (1"=50', one-foot contours)

- 66% of all well defined points should be within 0.33' of their true location.
- 95% of all well defined points should be within 0.67' of their true location.

QC Plan

QC Toolbox

- Existing software - $10,000
- Shrink-wrapped software - $12,000
- Customized software - $20,000
- Common Sense - Priceless

Existing QC Tools

- Visual checks
- Append/mapjoin/dissolve processes
- Librarian
  - All data falls within the tile boundary
  - Data consistency - all layers comply with the data definition (i.e. correct coverage type and item definitions)

Shrinkwrapped Software Evaluation

	Dog Creek	Farragut	ESRI
INFO Format Checks	●	●	
Oracle Format Checks			●
Pseudo Node Validity		●	
Precision			●
Projection			●
Redlivery Check	●		
Region Errors			●
Relate(s)			●
Relate (Primary Key 1:1)	●	●	
Relate (1:Many)	●	●	
Sort Order (FAT and INFO)			
Temp Files	●		
Tic Validity		●	
Tile Check			●
Topology	●		●
Unique Value	●	●	●
Value Range	●	●	●
Workspace	●		
Zero Record Count			●

Shrinkwrapped Software Evaluation

	Dog Creek	Farragut	ESRI
ADF			●
Anno Standards		●	●
ArcView Arc/INFO			●
Code Frequency			●
Coincident Line		●	
Coincident Node		●	
Coincident Point		●	
Cover Exist	●		●
Cusomization			●
Dangle		●	●
Edit Masks	●		
FAT	●	●	●
Field Population			●
Fuzzy		●	●
Grid Support	●		
Intersecterrs	●		●
Labelerrors	●		●
Logical Consistency	●		●
Map Limit	●		●
Node errors	●		●

Shrinkwrapped QC Tools

- correct projection
- proper feature type [point, line, polygon, annotation, net(polygon and line)]
- correct INFO table definition - field name, start column, input width, output width, type, and number of decimal places
- proper annotation subclass, level, symbol, size, justification, and rotation angle

Shrinkwrapped QC Tools

- Correct edit standards - precision, allowable node errors (i.e. pseudo or dangle), maximum fuzzy tolerance, maximum dangle length
- Existence of edit masks (.msk and .pff files)
- Topological correctness - label, intersection, and node errors
- Existence of non-standard files within the coverage
- Existence of non-standard tables within the coverage

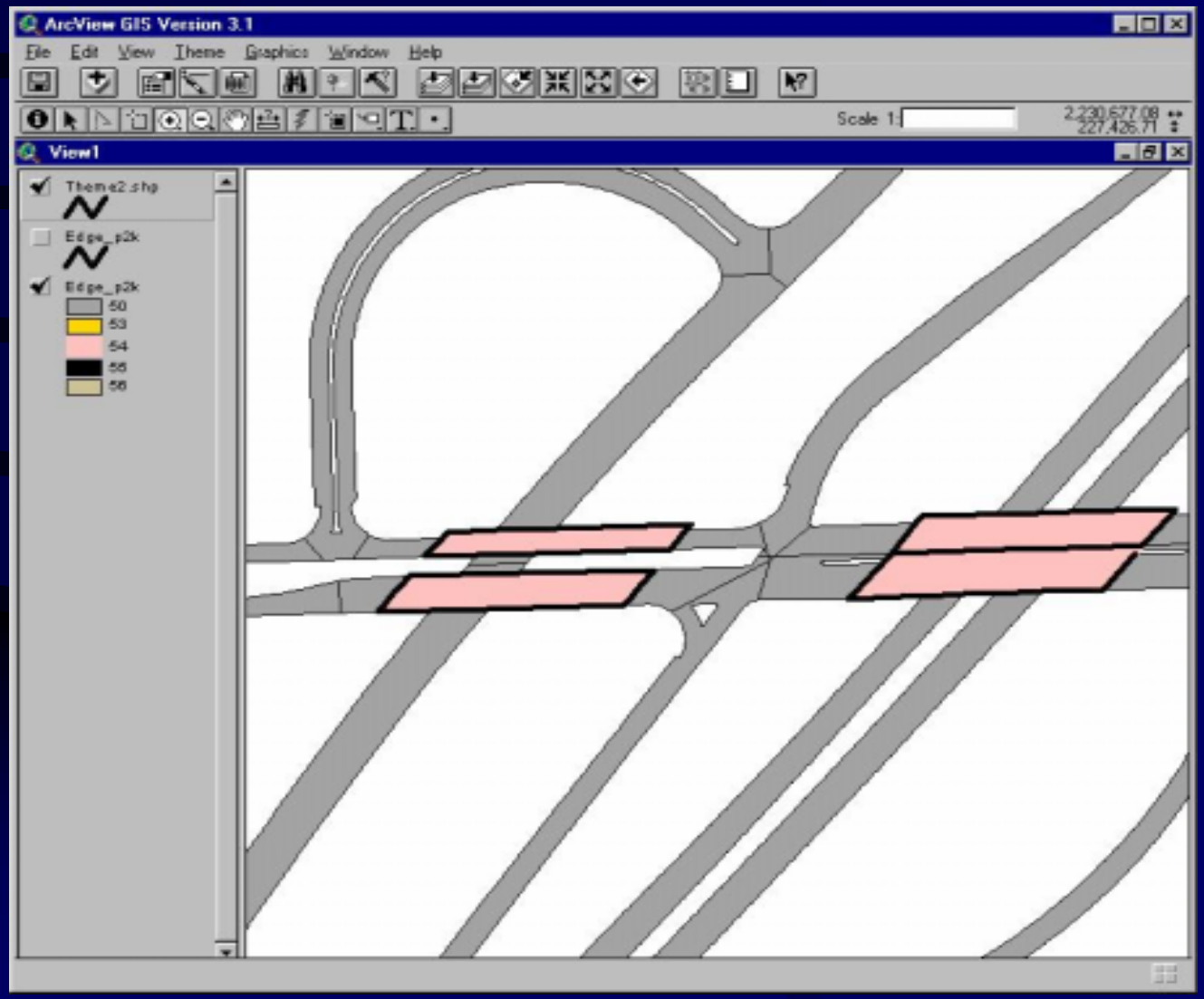
Shrinkwrapped QC Tools

- Valid values - either specific values (i.e. feature codes) or value ranges (i.e. elevation)
- Existence of unpopulated fields in a record
- Existence of tile directories and coverage
- Existence of features outside the tile boundary
- Existence of layers with no features

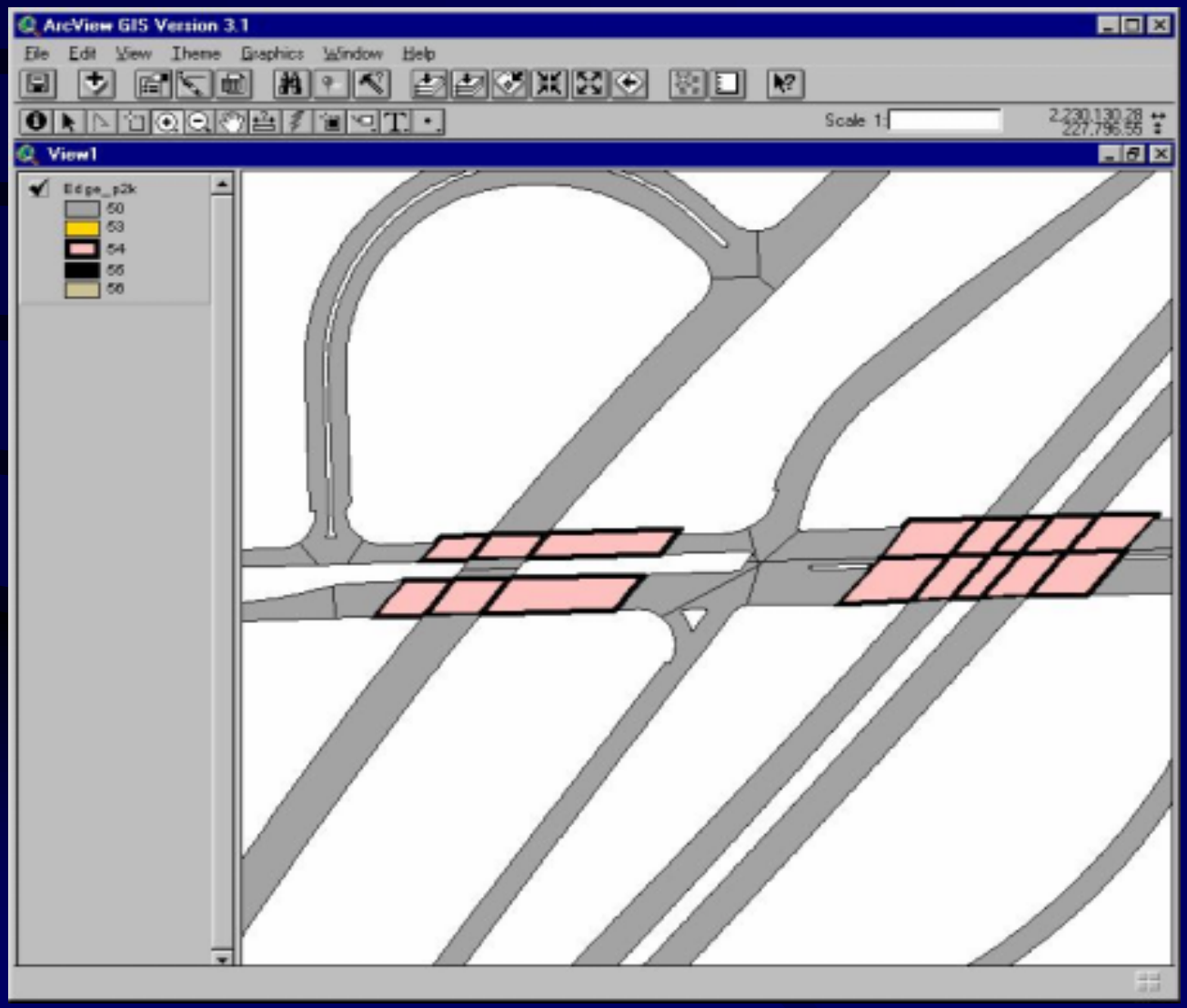
Customized Routines

- Dangles/undershoots and overshoots - internal and tile boundary
- Arcs that connect with differing attributes - internal and tile boundary
- Proper arc directionality
- Arcs that cross

What I Wanted



What I Got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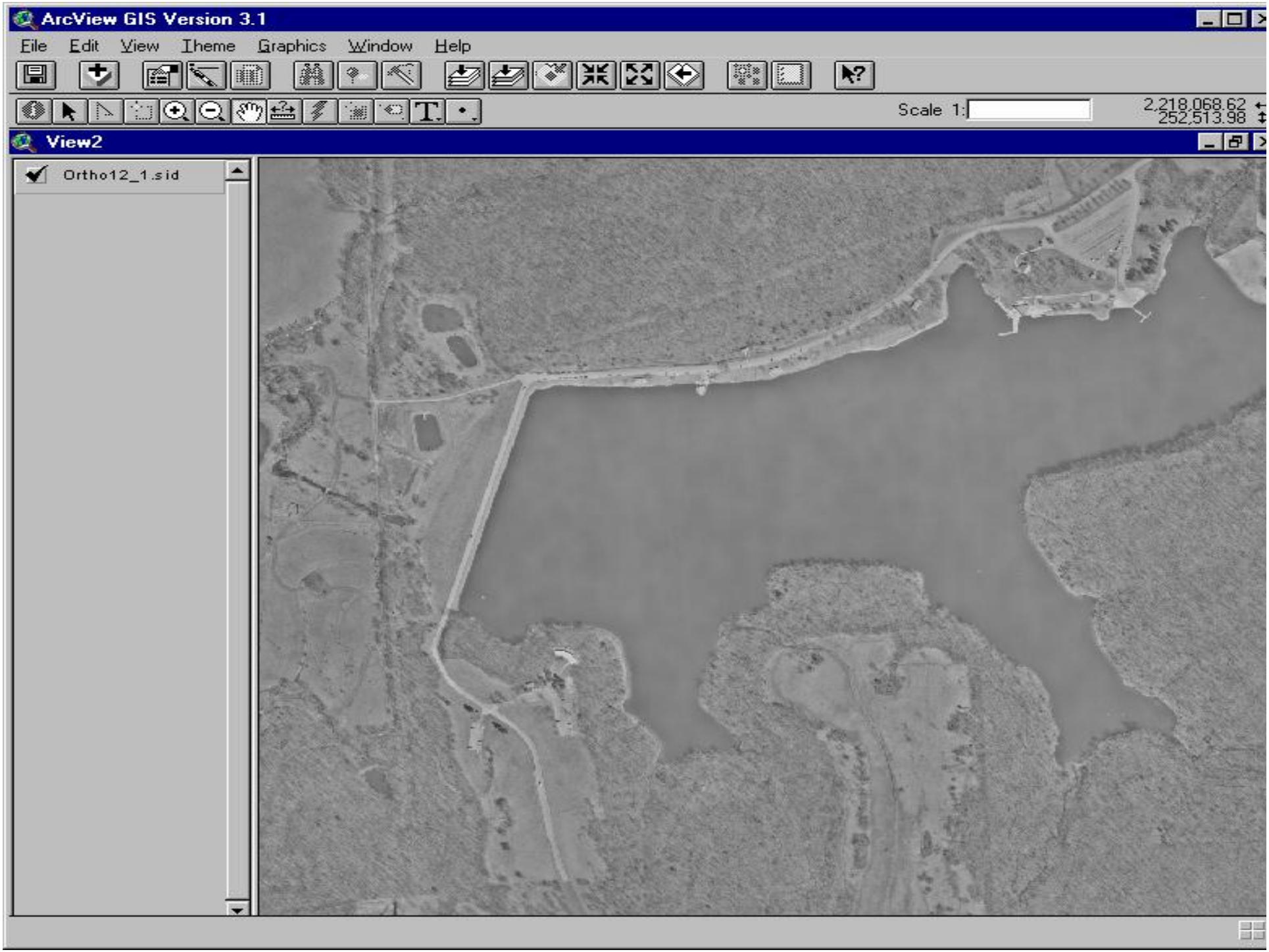
Scale 1:
View1
Edge_p2k
50
53
54
55
56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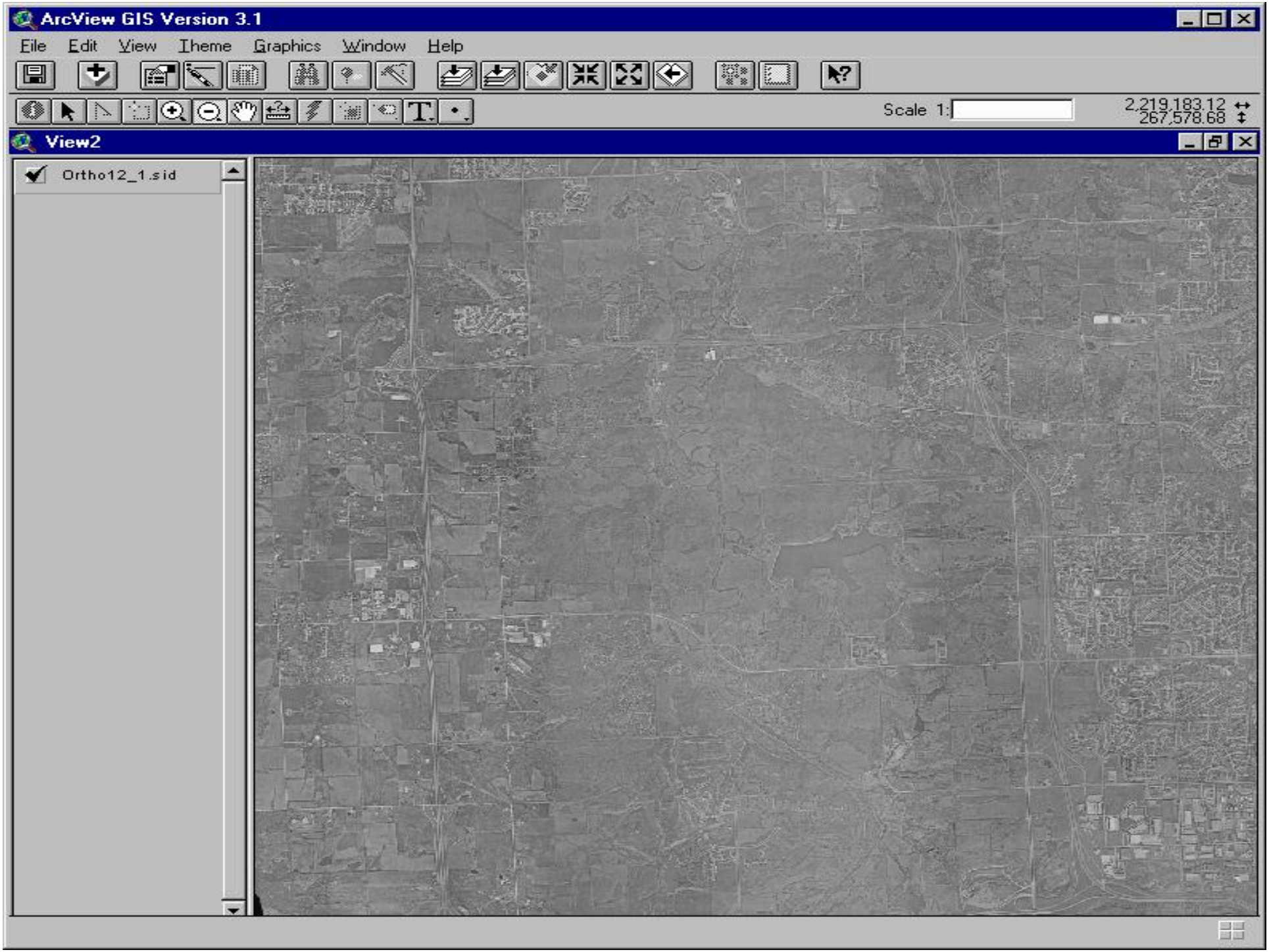
252,513.98
View2
Ortho12_1.sid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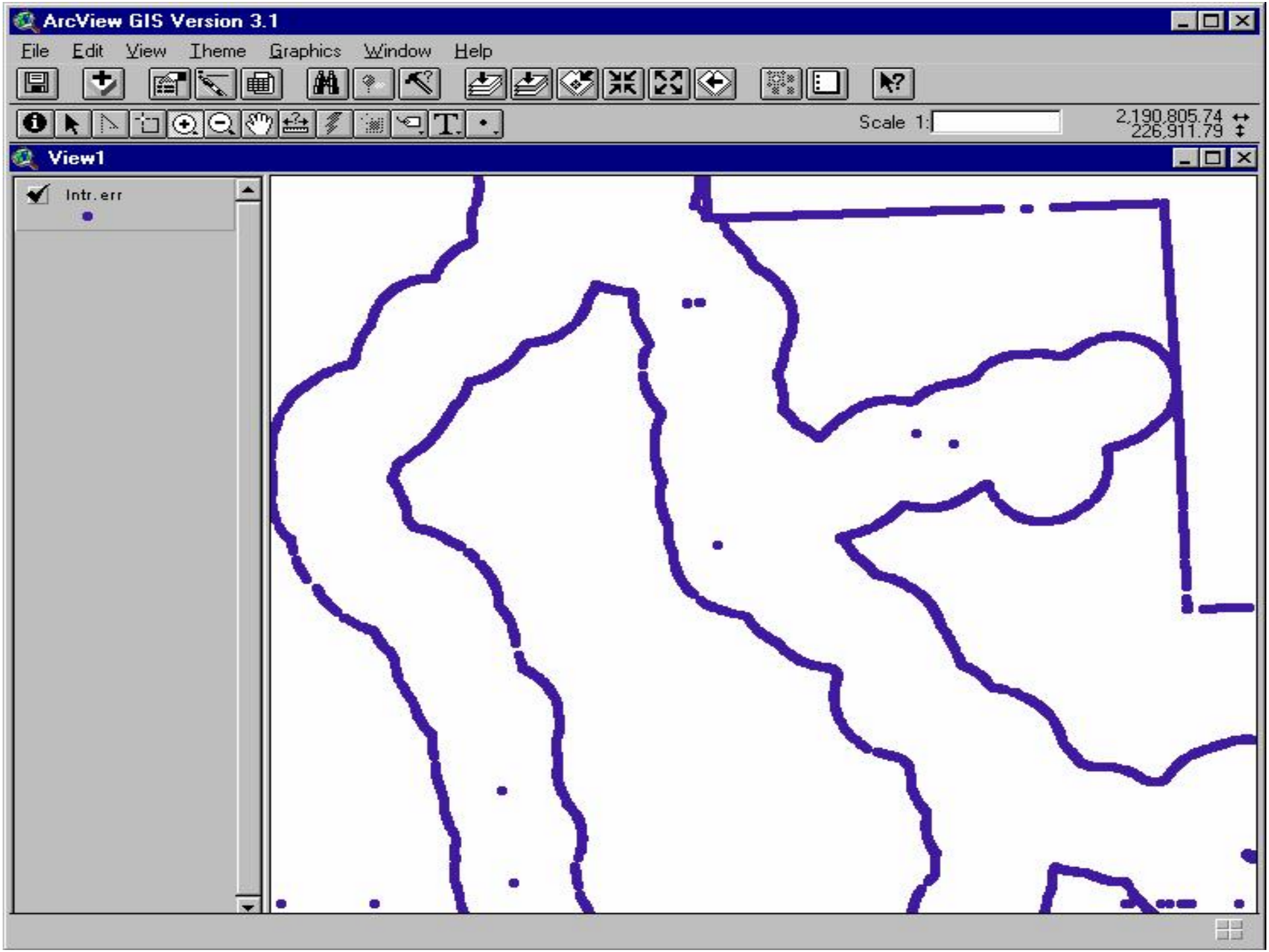
267,578.68
View2
Ortho12_1.sid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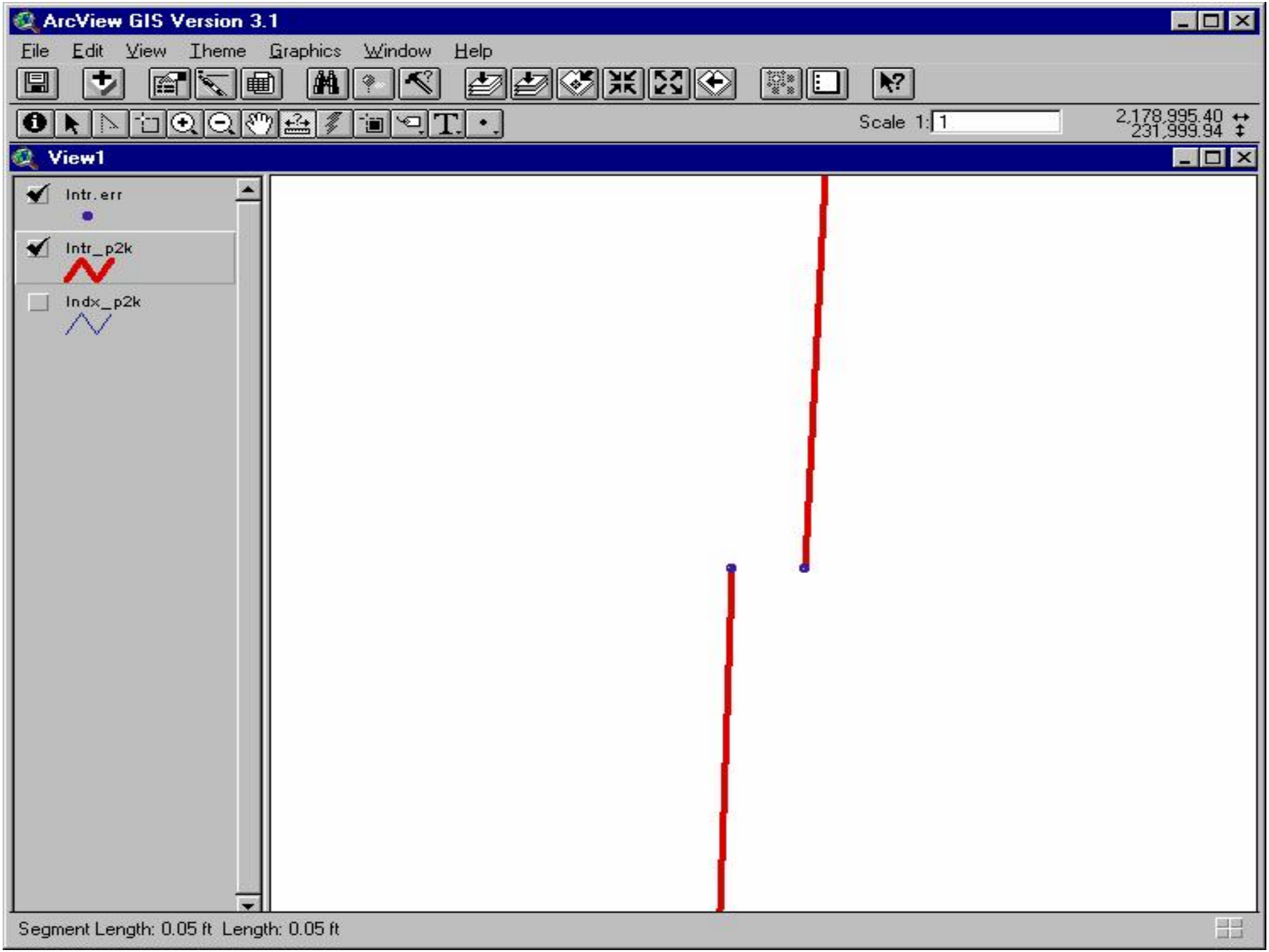
2,190,805.74
226,911.79
View1
Intr.err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2,178,995.40
231,999.94
View1
Intr.err
Intr_p2k
Indx_p2k
Segment Length: 0.05 ft Length: 0.05 ft

ArcView GIS Version 3.1
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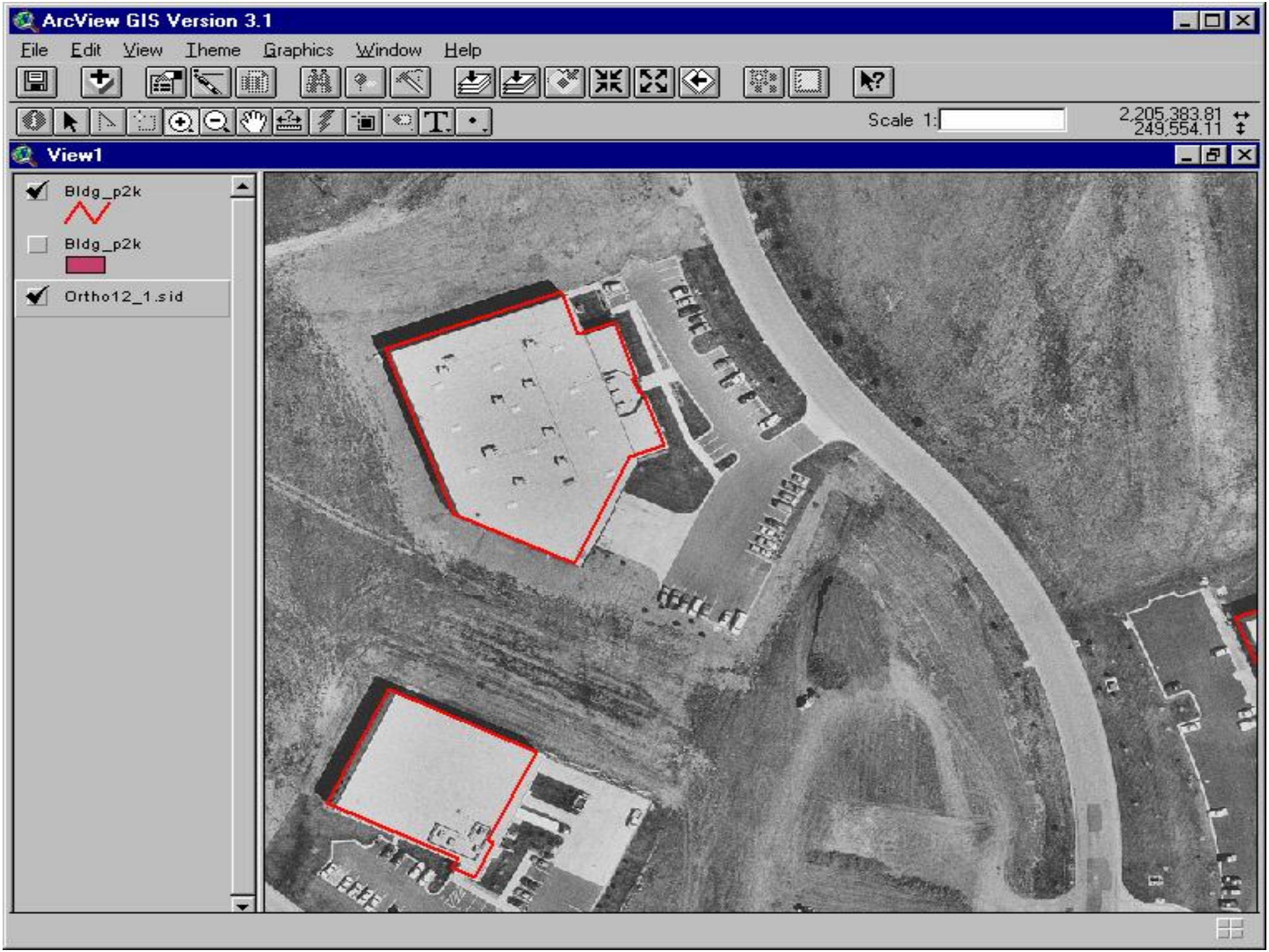
View1
Bldg_p2k
Bldg_p2k
Ortho12_1.sid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File Edit View Theme Graphics Window Help
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249,554.11
View1
Bldg_p2k
Bldg_p2k
Ortho12_1.sid

What Worked Well

- Commitment/Trust
- Hardware/Software
- Staff
- QC Tools
- Design & conversion team was the same
- Good communication
- Meeting of the minds

What Worked Well

- Review of existing designs
- User community to review design
- “Been there done that” contact list
- Consultant prepared RFP
- Vendor’s tile layout
- No moving target

Next Time ….

Next Time….

- Get detailed list of Arc/Info QC routines
- More attention to detail
- Have all arc coverages converted as polygons
- Get more feedback from the “experienced”
- More detailed questions to references about errors and commitment

Next Time….

- Use the data more
- Implement cleanup maintenance immediately
- Have better implementation/integration plan
- Don’t thaw the data until QC is finished
- Don’t circumvent/bypass the pilot
- Have errors fixed on site

Next Time….

- Have option to fix errors or reduce price
- Have “slush-fund” to pay for ad-hoc support
- Have people in place to use data immediately
- Expect delays
- Look at multiple examples prior to freezing the design