2013 HIS
HPMS / TRAFFIC Joint Session
Traffic Data Reviews

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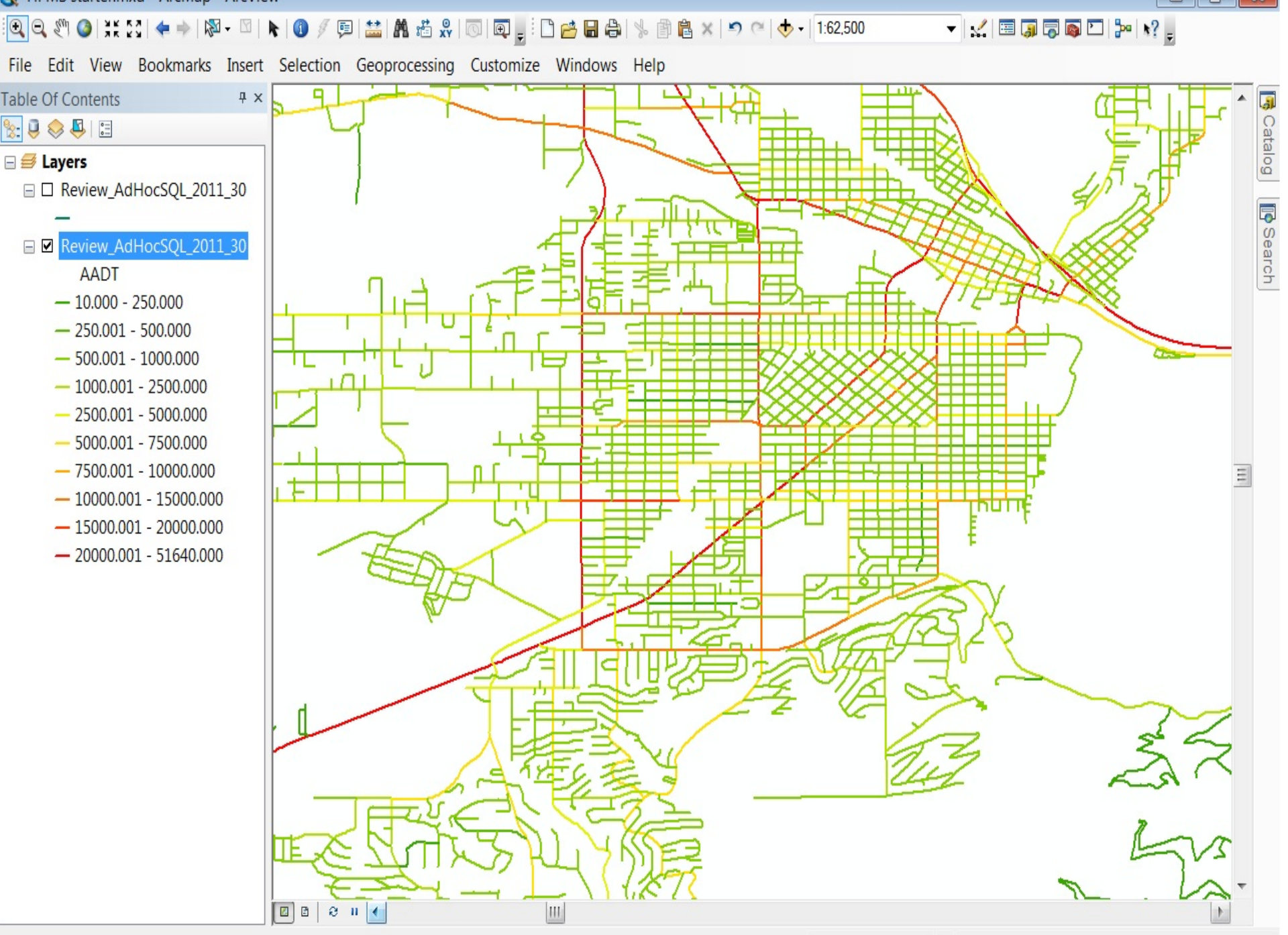
Traffic Monitoring and Surveys Division

HPMS GIS Traffic Data Review:

- Average Annual Daily Traffic (AADT) on full extent roadways
- K and D Factors on all samples
- Single Unit (SU) AADT and Combination Unit (CU) AADT on all samples and NHS/PAS roadways
- Ramp AADT
- Future AADT on all samples

- Travel by vehicle type in Vehicle Summary Table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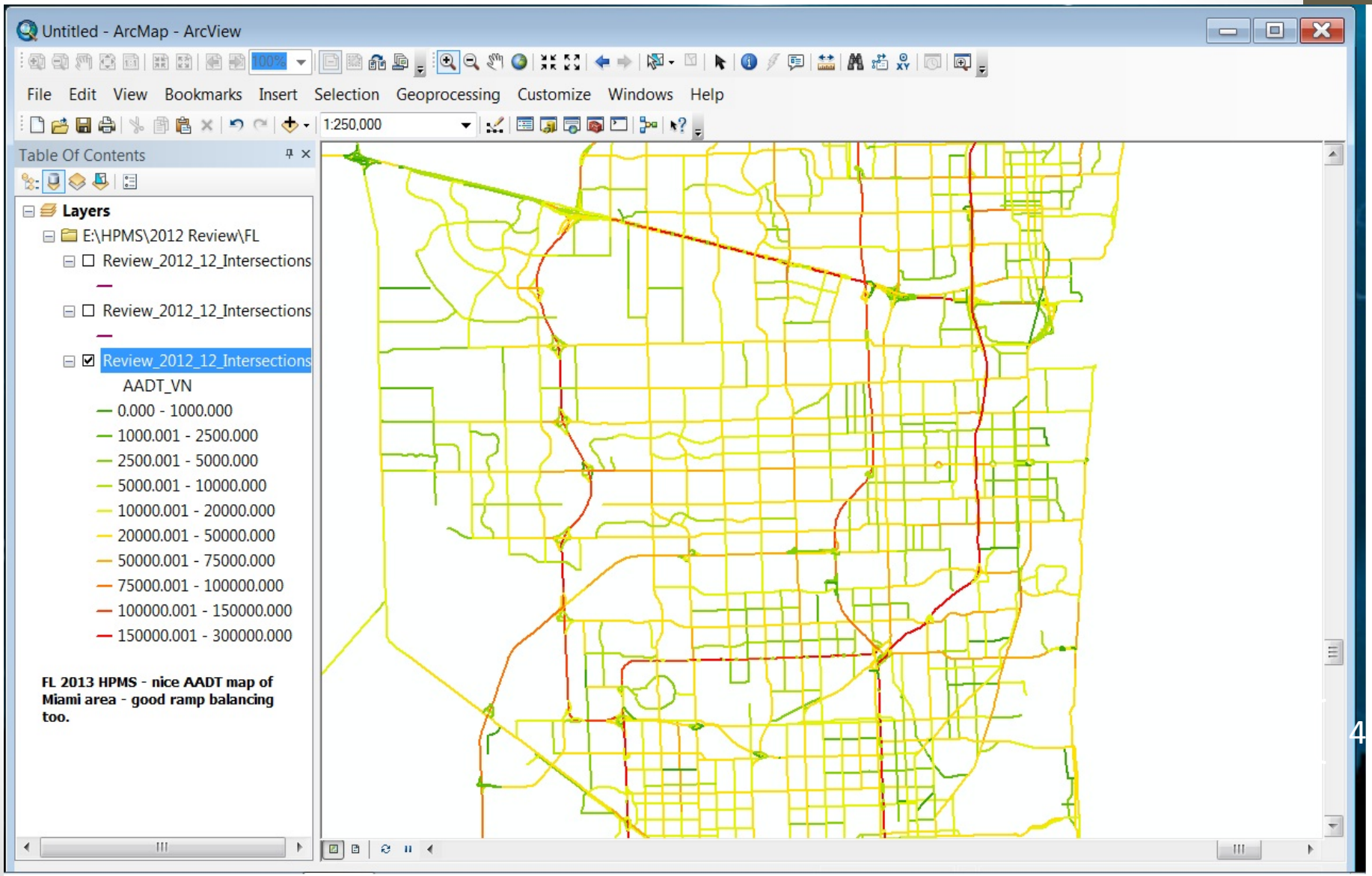
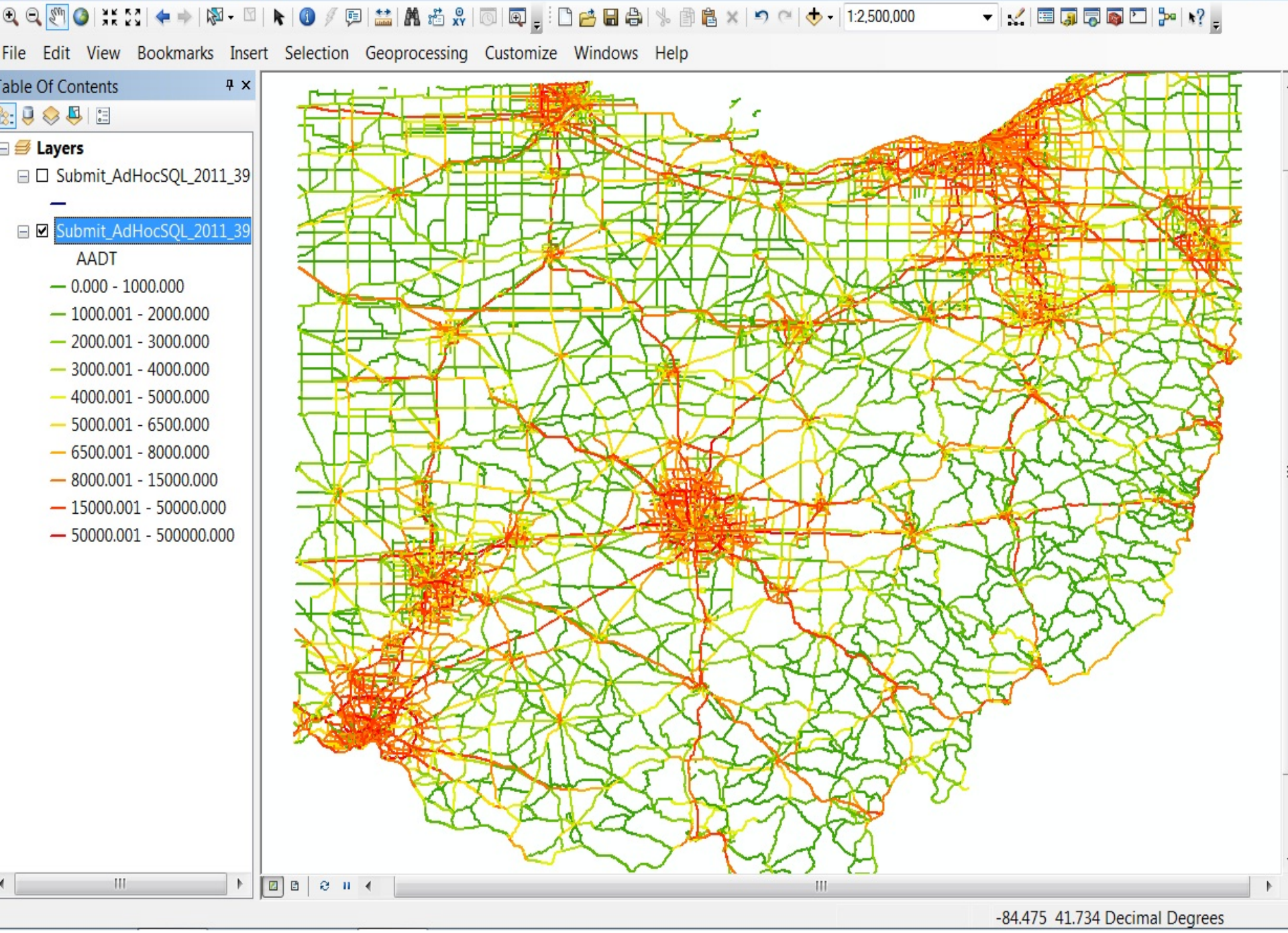
File
Edit
View
Bookmarks
Insert
Selection
Geoprocessing
Customize
Windows
Help
Table Of Contents
Layers
Review_AdHocSQL_2011_30
Review_AdHocSQL_2011_30
AADT
10.000 - 250.000
250.001 - 500.000
500.001 - 1000.000
1000.001 - 2500.000
2500.001 - 5000.000
5000.001 - 7500.000
7500.001 - 10000.000
10000.001 - 15000.000
15000.001 - 20000.000
20000.001 - 51640.000
Catalog
Search

Annual Average Daily Traffic (AADT) Flows:

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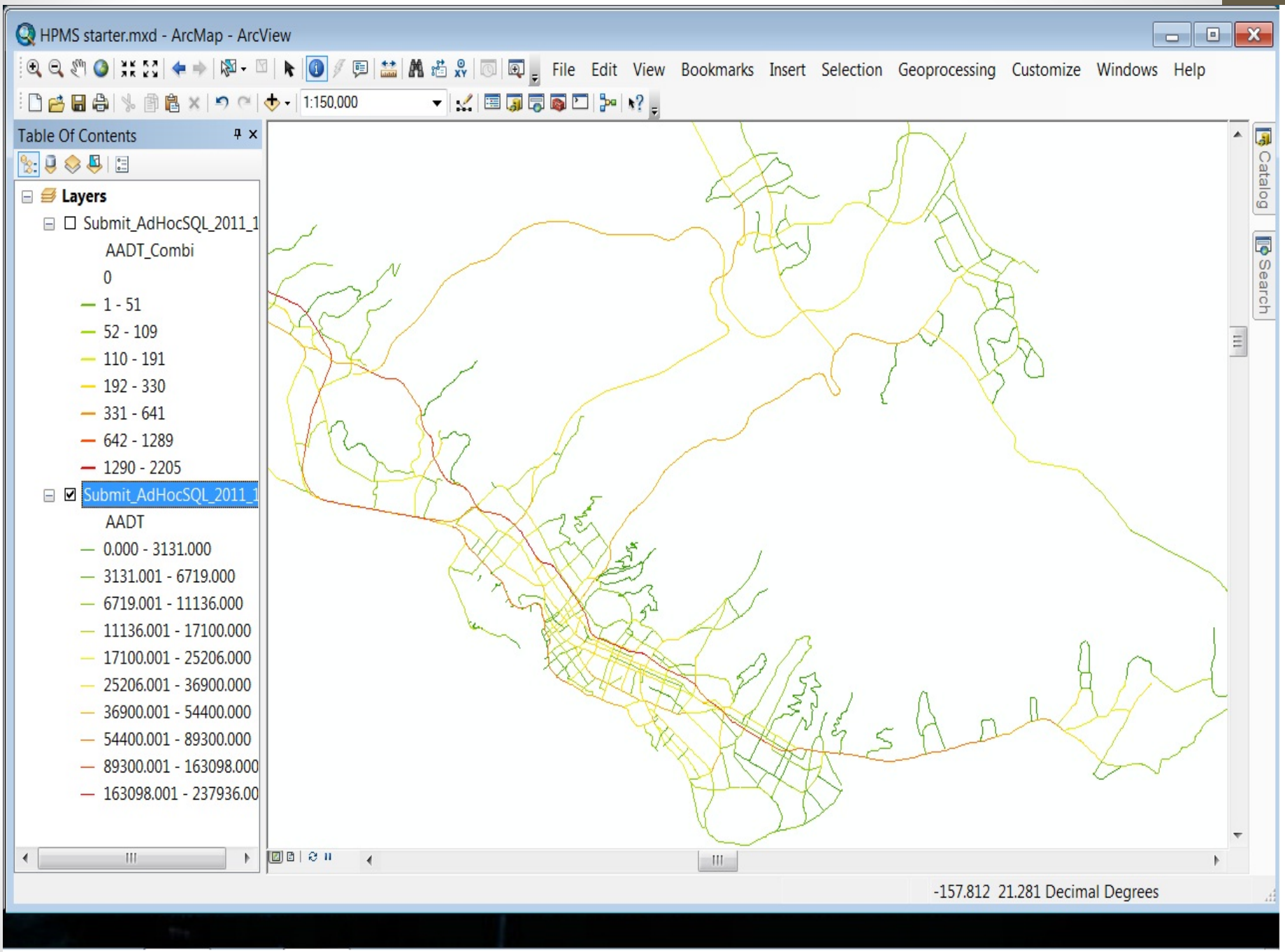
1000.001 - 2000.000
2000.001 - 3000.000
3000.001 - 4000.000
4000.001 - 5000.000
5000.001 - 6500.000
6500.001 - 8000.000
8000.001 - 15000.000
15000.001 - 50000.000
50000.001 - 500000.000
-84.475 41.734 Decimal Degrees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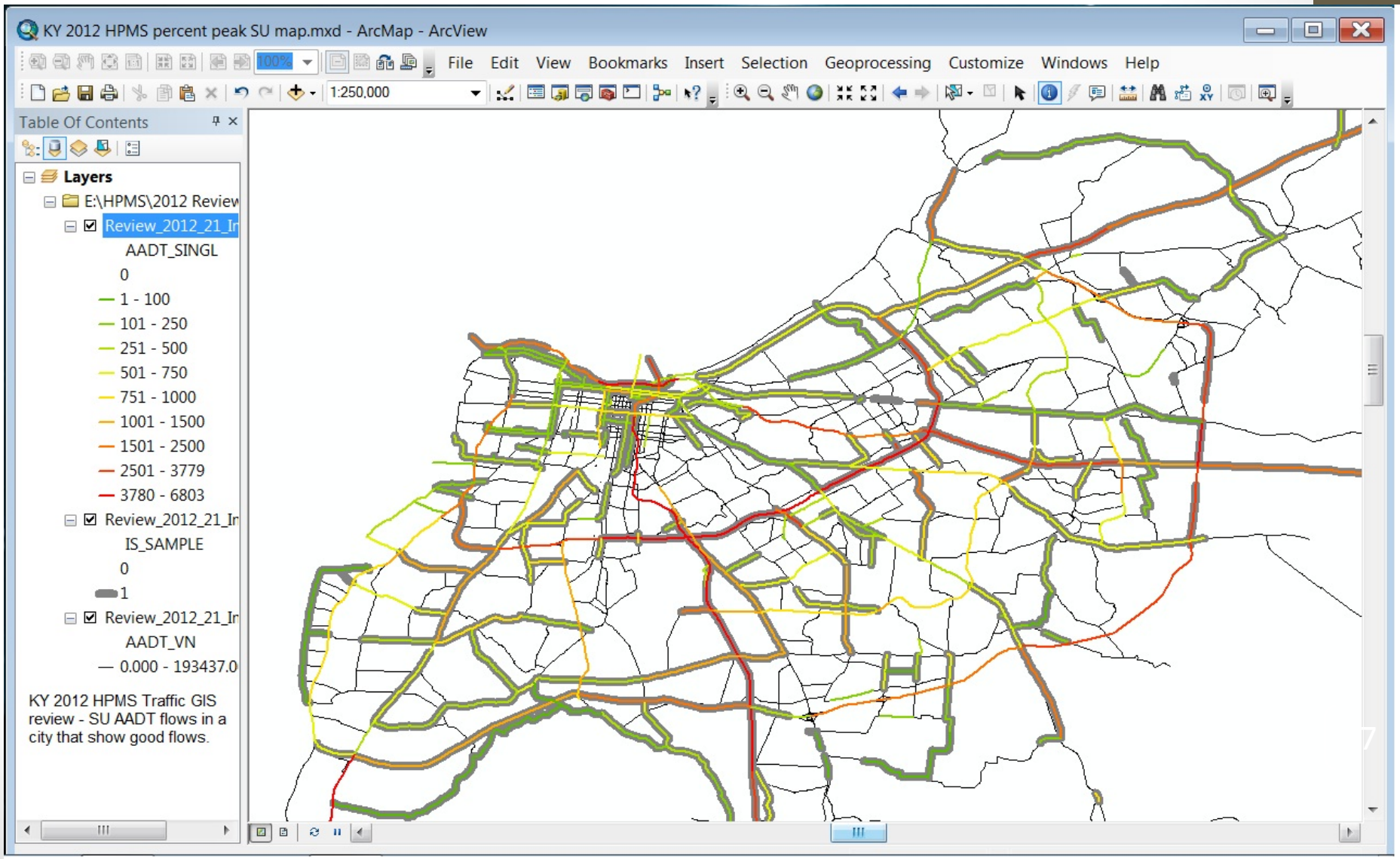
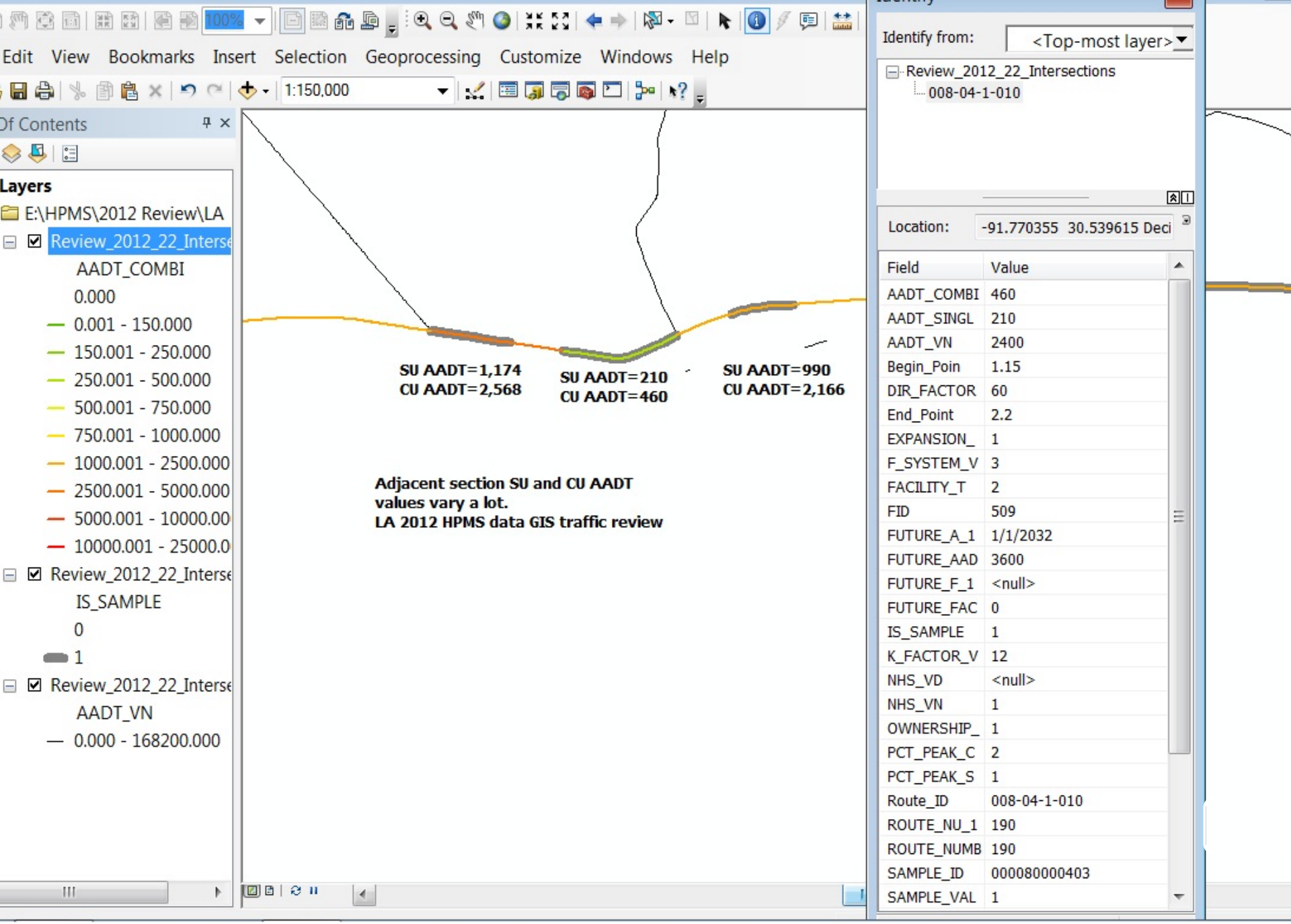
0
1 - 51
52 - 109
110 - 191
192 - 330
331 - 641
642 - 1289
1290 - 2205
Submit_AdHocSQL_2011_1
AADT
0.000 - 3131.000
3131.001 - 6719.000
6719.001 - 11136.000
11136.001 - 17100.000
17100.001 - 25206.000
25206.001 - 36900.000
36900.001 - 54400.000
54400.001 - 89300.000
89300.001 - 163098.000
163098.001 - 237936.00
Catalog
Search
-157.812 21.281 Decimal Degrees

Single Unit (SU) AADT Flows:

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Layers
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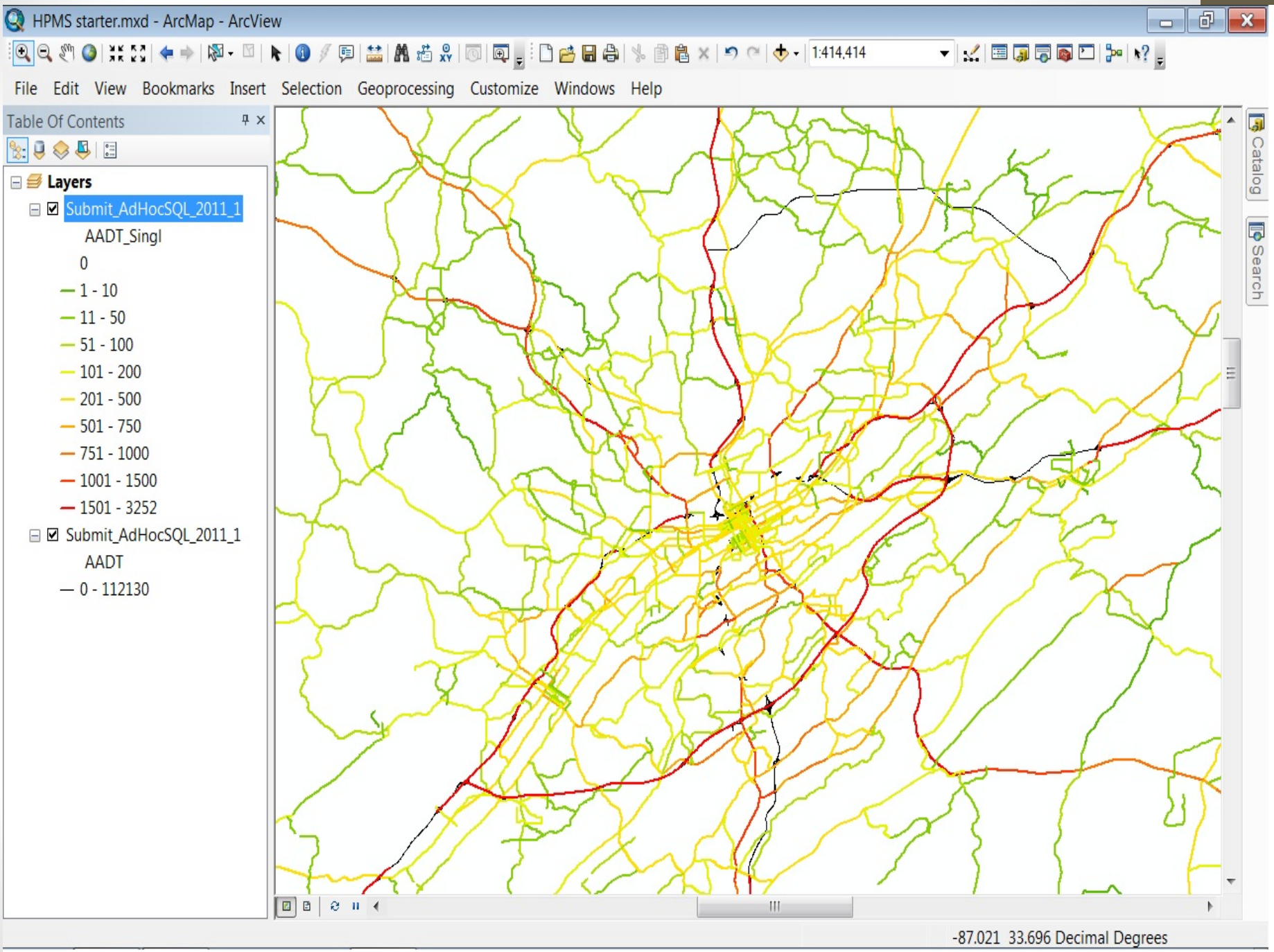
AADT_COMBI
0.000
0.001 - 150.000
150.001 - 250.000
250.001 - 500.000
500.001 - 750.000
750.001 - 1000.000
1000.001 - 2500.000
2500.001 - 5000.000
5000.001 - 10000.00
10000.001 - 25000.0
Review_2012_22_Intersec
IS_SAMPLE
0
1
Review_2012_22_Intersec
AADT_VN
0.000 - 168200.000
SU AADT=1,174
CU AADT=2,568
SU AADT=210
CU AADT=460
SU AADT=990
CU AADT=2,166
Adjacent section SU and CU AADT
values vary a lot.
LA 2012 HPMS data GIS traffic review
Identify from:
<Top-most layer>
Review_2012_22_Intersections
008-04-1-010
Location:
-91.770355 30.539615 Deci
Field
Value
AADT_COMBI 460
AADT_SINGL 210
AADT_VN 2400
Begin_Poin 1.15
DIR_FACTOR 60
End_Point 2.2
EXPANSION_ 1
F_SYSTEM_V 3
FACILITY_T 2
FID 509
FUTURE_A_1 1/1/2032
FUTURE_AAD 3600
FUTURE_F_1 <null>
FUTURE_FAC 0
IS_SAMPLE 1
K_FACTOR_V 12
NHS_VD <null>
NHS_VN 1
OWNERSHIP_ 1
PCT_PEAK_C 2
PCT_PEAK_S 1
Route_ID 008-04-1-010
ROUTE_NU_1 190
ROUTE_NUMB 190
SAMPLE_ID 000080000403
SAMPLE_VAL 1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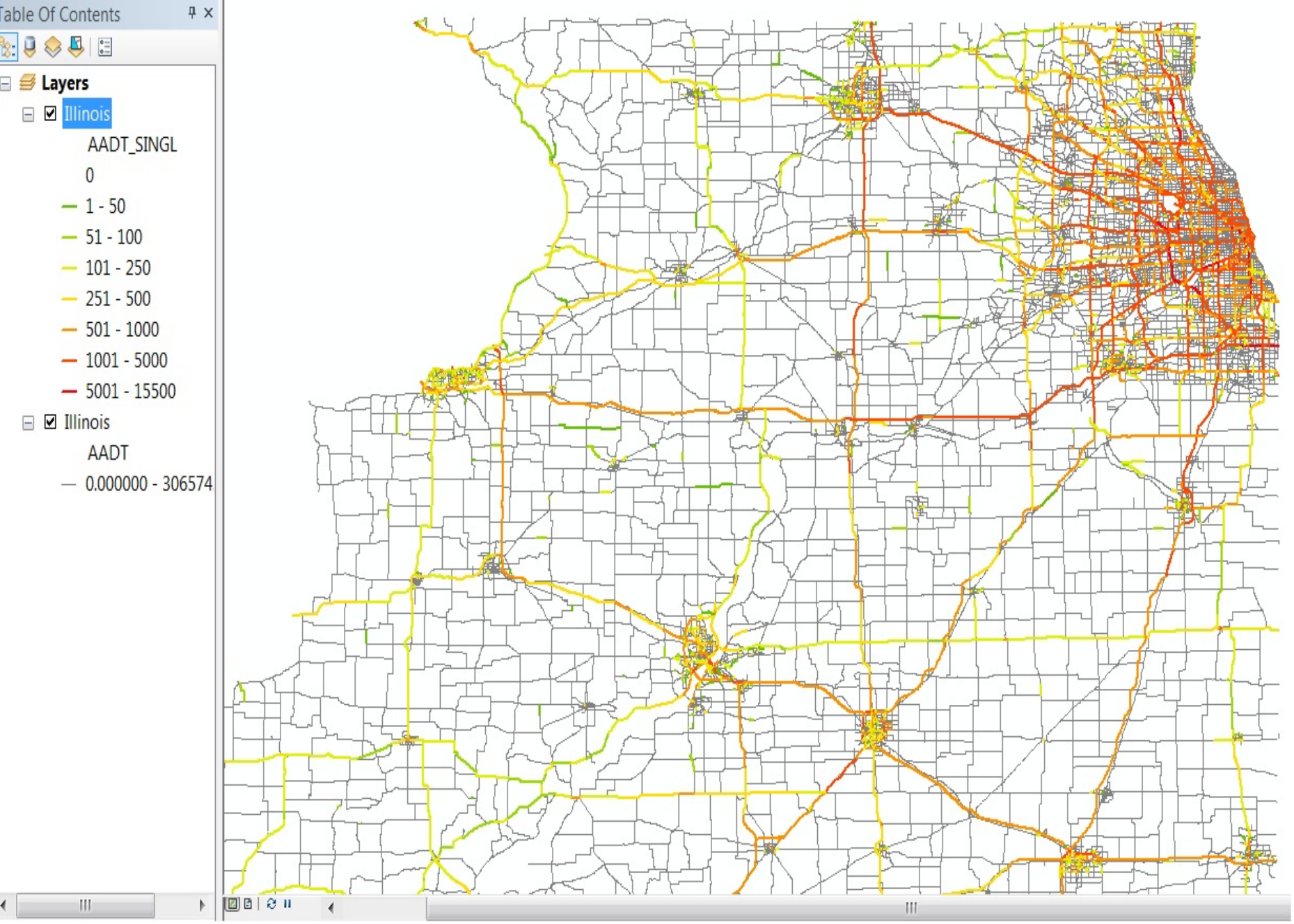
AADT_Singl
0
1 - 10
11 - 50
51 - 100
101 - 200
201 - 500
501 - 750
751 - 1000
1001 - 1500
1501 - 3252
Submit_AdHocSQL_2011_1
AADT
0 - 112130
Catalog
Search
-87.021 33.696 Decimal Degrees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0
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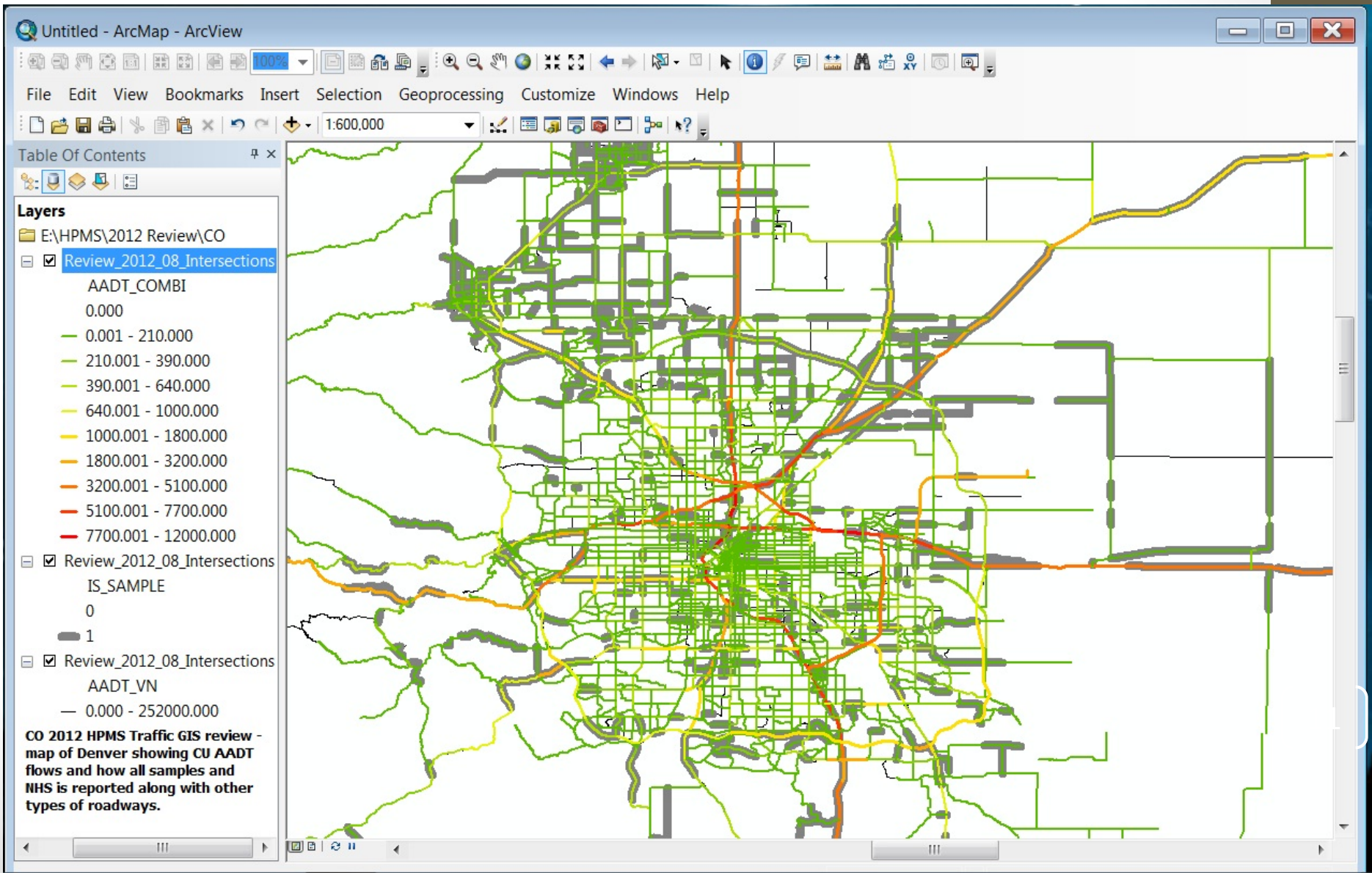
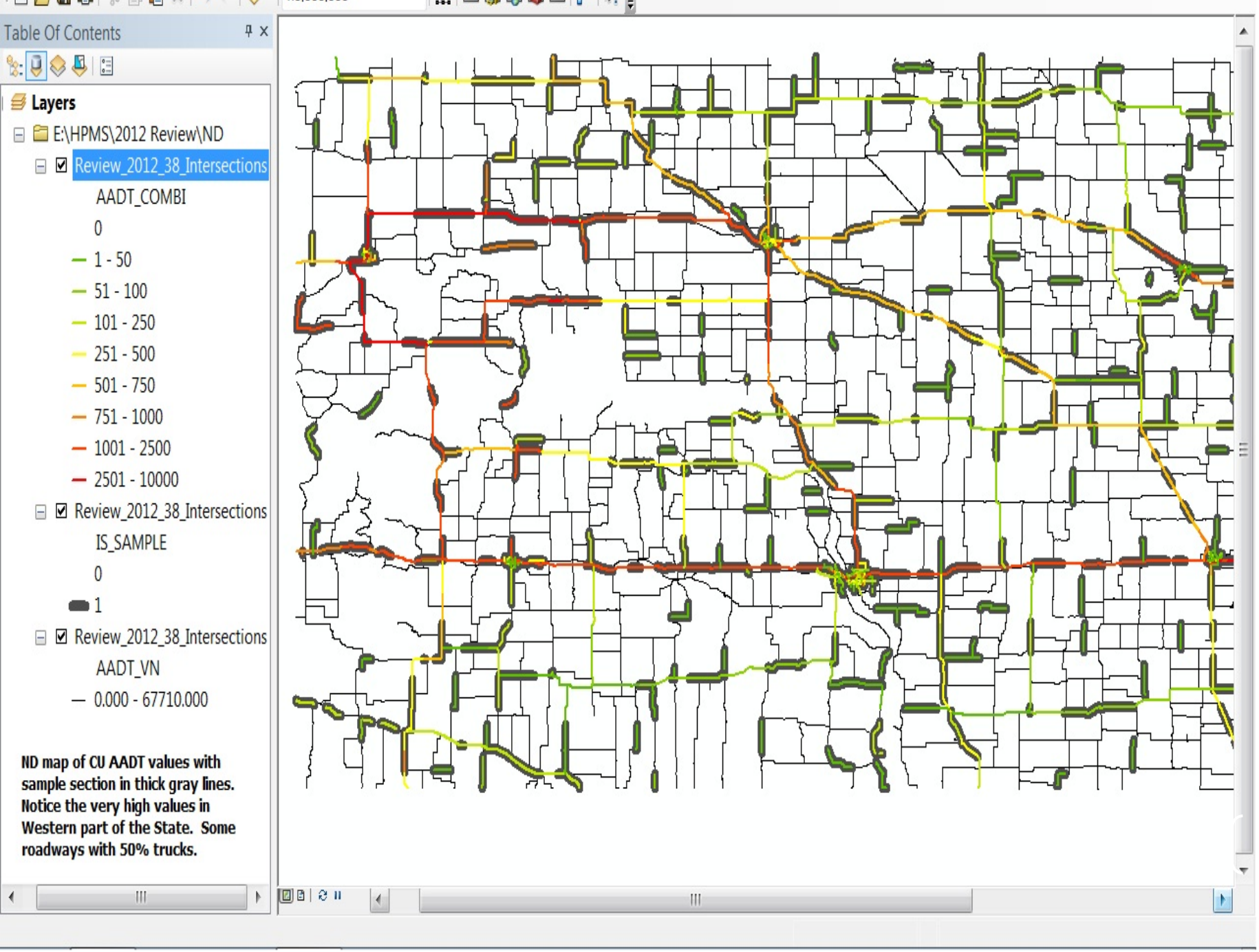
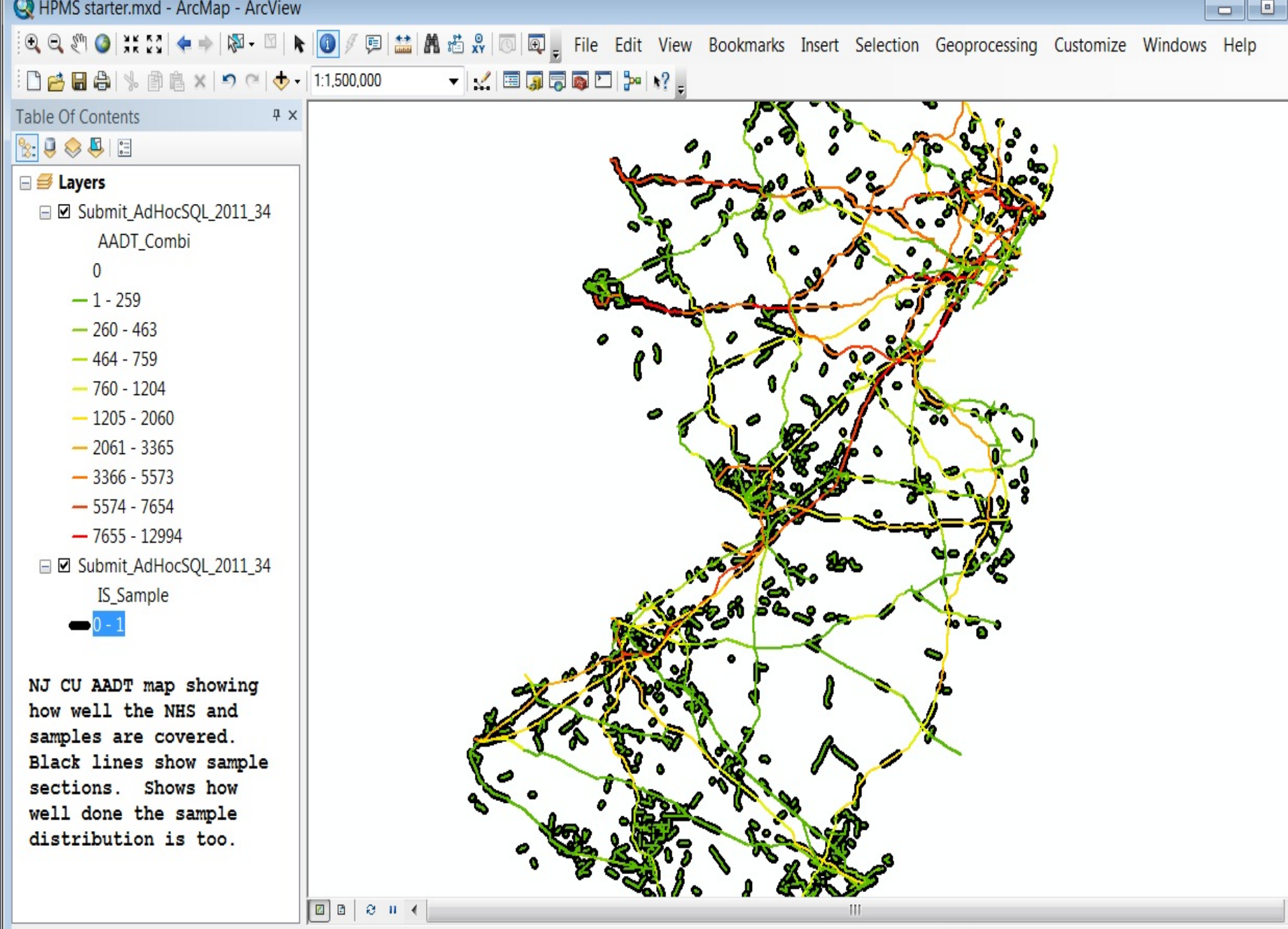
51 - 100
101 - 250
251 - 500
501 - 1000
1001 - 5000
5001 - 15500
Illinois
AADT
0.000000 - 306574

Combination Unit (CU) Flows:





ND map of CU AADT values with sample section in thick gray lines. Notice the very high values in Western part of the State. Some roadways with 50% trucks.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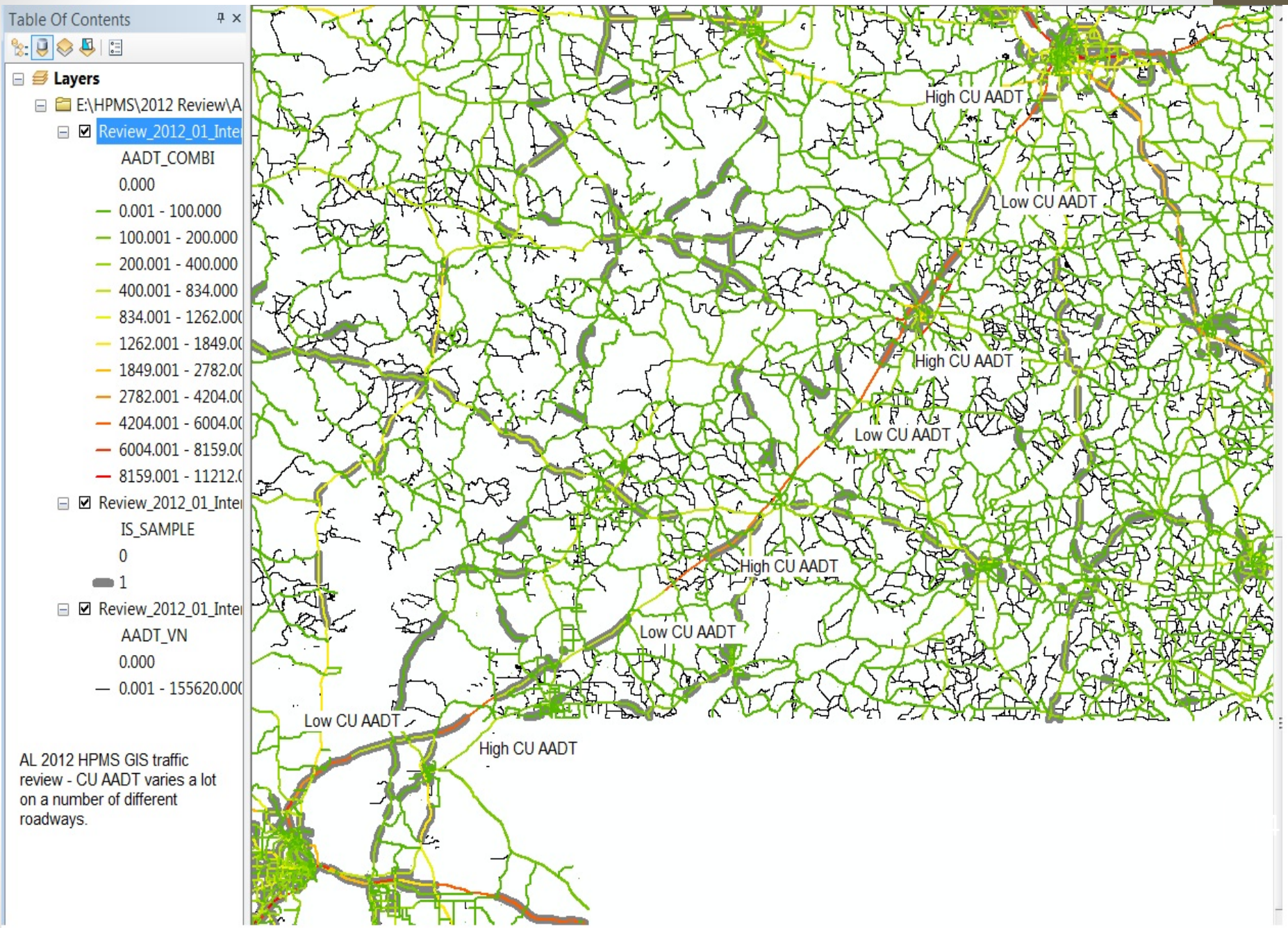
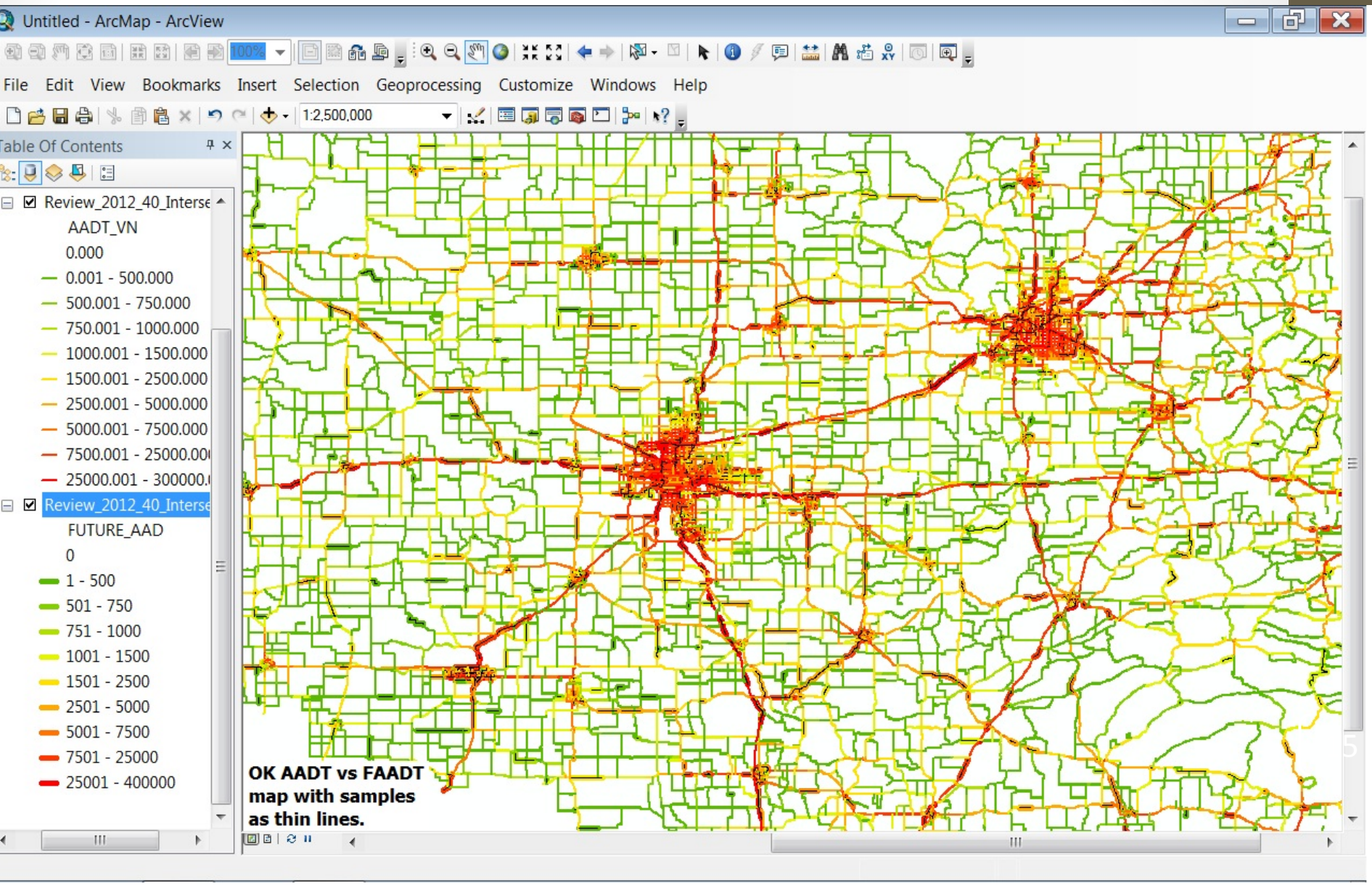
0
1 - 259
260 - 463
464 - 759
760 - 1204
1205 - 2060
2061 - 3365
3366 - 5573
5574 - 7654
7655 - 12994
Submit_AdHocSQL_2011_34
IS_Sample
0 - 1
NJ CU AADT map showing how well the NHS and samples are covered. Black lines show sample sections. Shows how well done the sample distribution is too.



AL 2012 HPMS GIS traffic review - CU AADT varies a lot on a number of different roadways.

Future AADT Values:



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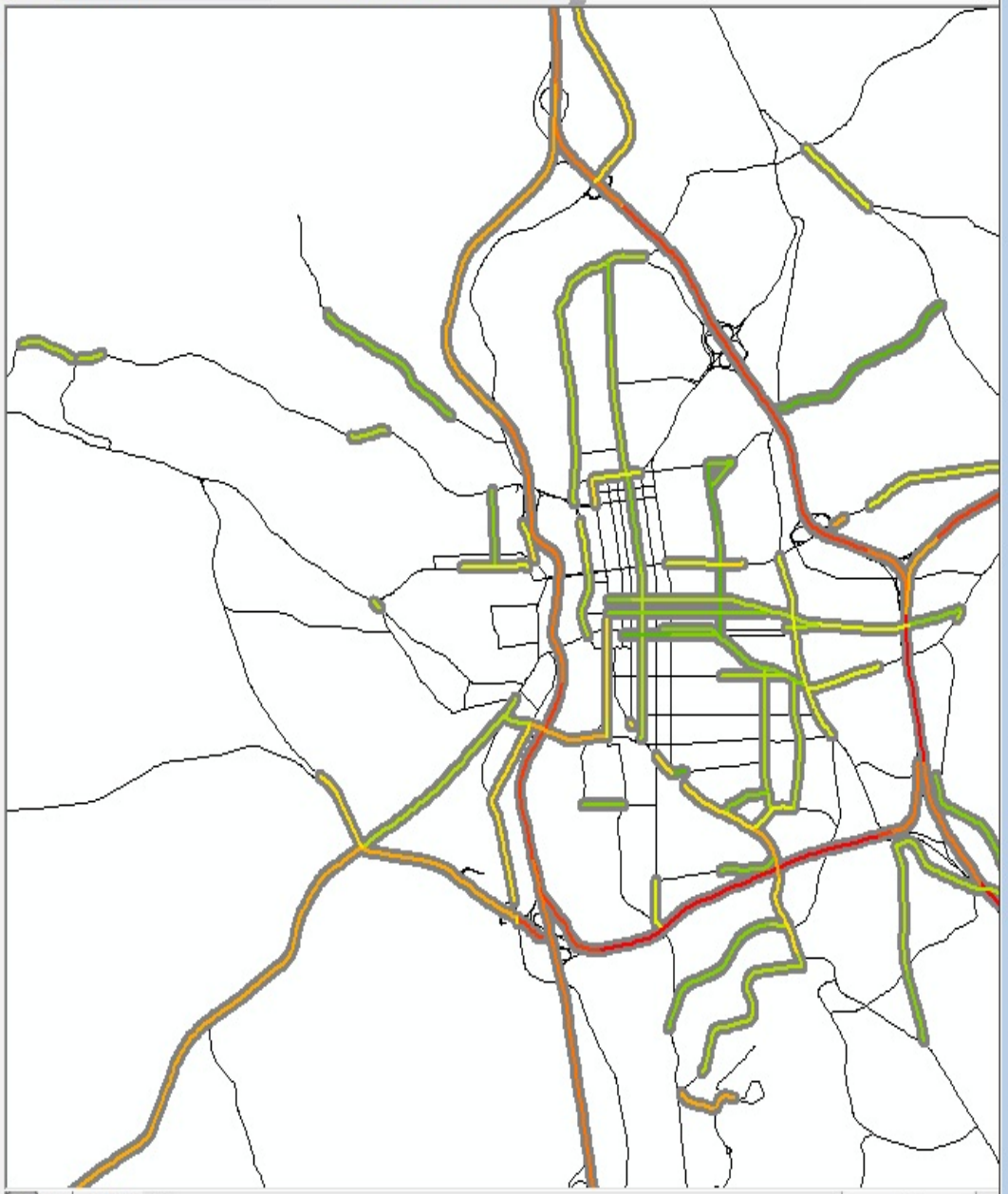
      - 2001 - 5000
      - 5001 - 10000
      - 10001 - 15000
      - 15001 - 25000
      - 25001 - 50000
      - 50001 - 75000
      - 75001 - 100000
      - 100001 - 250000
    - Review_2012_33_Intersec
      - IS_SAMPLE
      - 0
      - 1
    - Review_2012_33_Intersec
      - AADT_VN
      - 0.000 - 116328.000

NH 2012 HPMS - a number of samples in this city show FAADT being less than current AADT values.



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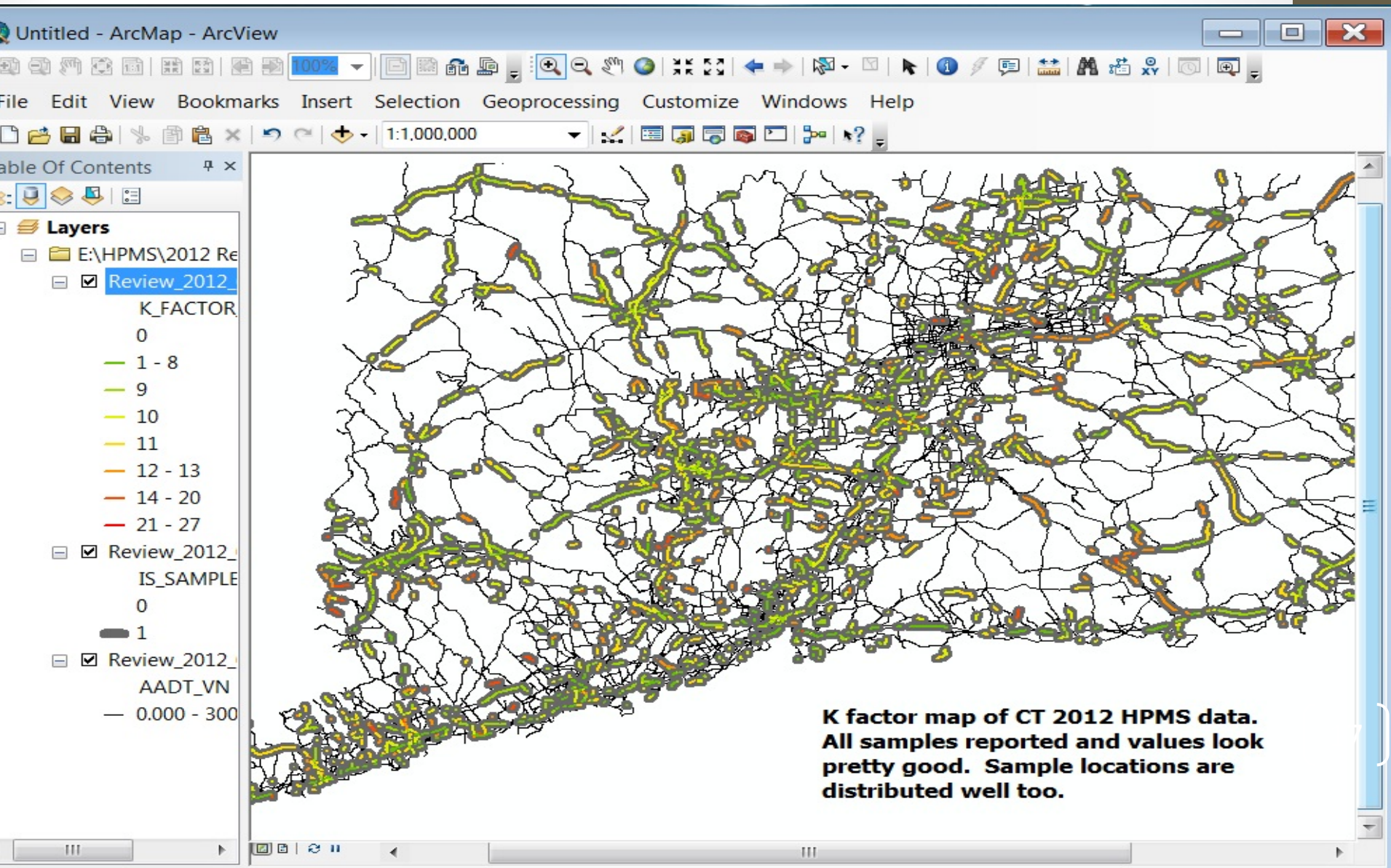
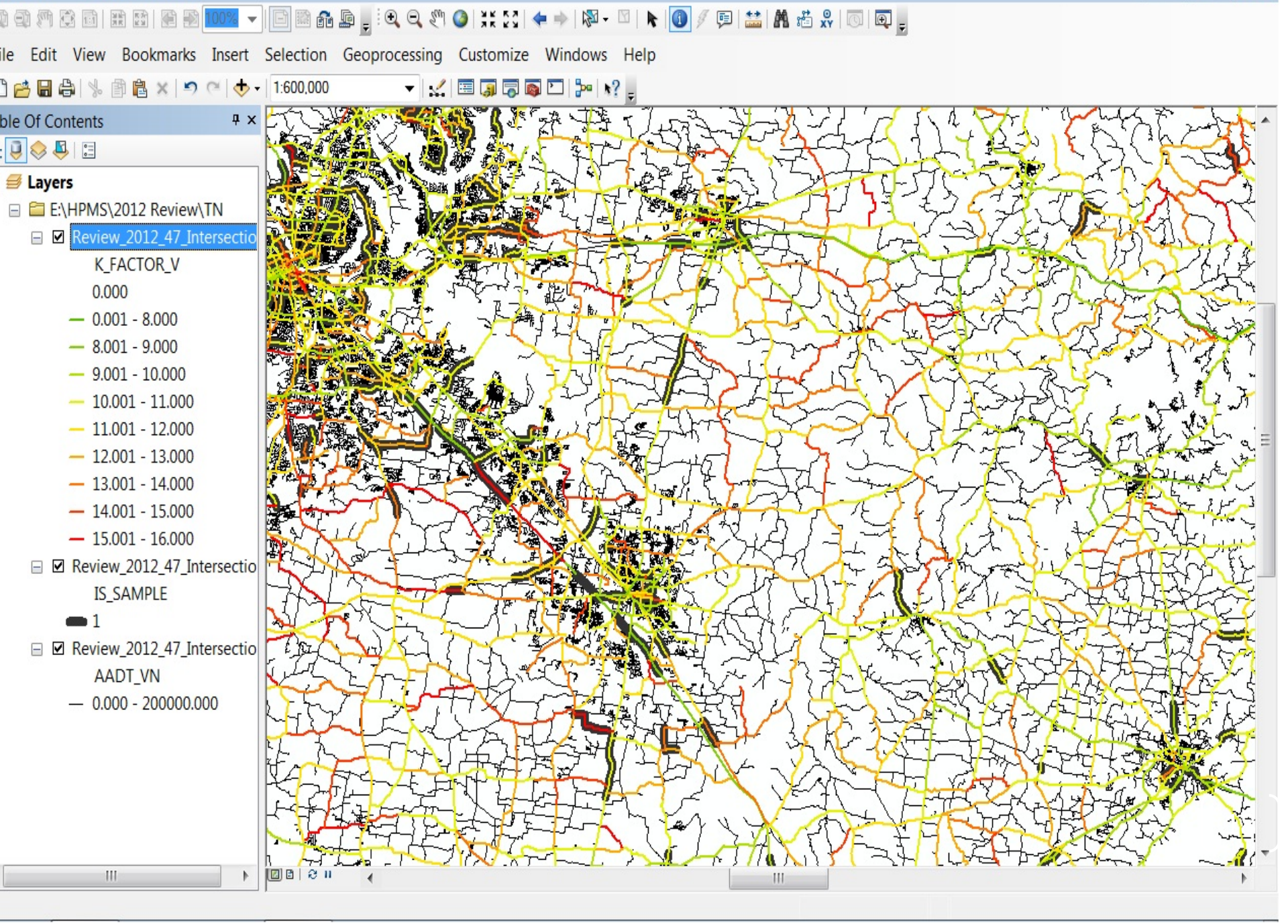
- Review_2012_33_Intersections
  - L2850048__

Location: -71.500830 43.012440 De

Field	Value
AADT_COMBI	68
AADT_SINGL	306
AADT_VN	6851
Begin_Poin	1.302
DIR_FACTOR	55
End_Point	1.597
EXPANSION_	3
F_SYSTEM_V	4
FACILITY_T	2
FID	2431
FUTURE_A_1	1/1/2032
FUTURE_AAD	6234
FUTURE_F_1	<null>
FUTURE_FAC	0
IS_SAMPLE	1
K_FACTOR_V	9
NHS_VD	<null>
NHS_VN	0
OWNERSHIP_	4
PCT_PEAK_C	0
PCT_PEAK_S	0
Route_ID	L2850048__
ROUTE_NU_1	
ROUTE_NUMB	0
SAMPLE_ID	407
SAMPLE_VAL	1

K Factor Values:

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K_FACTOR_V
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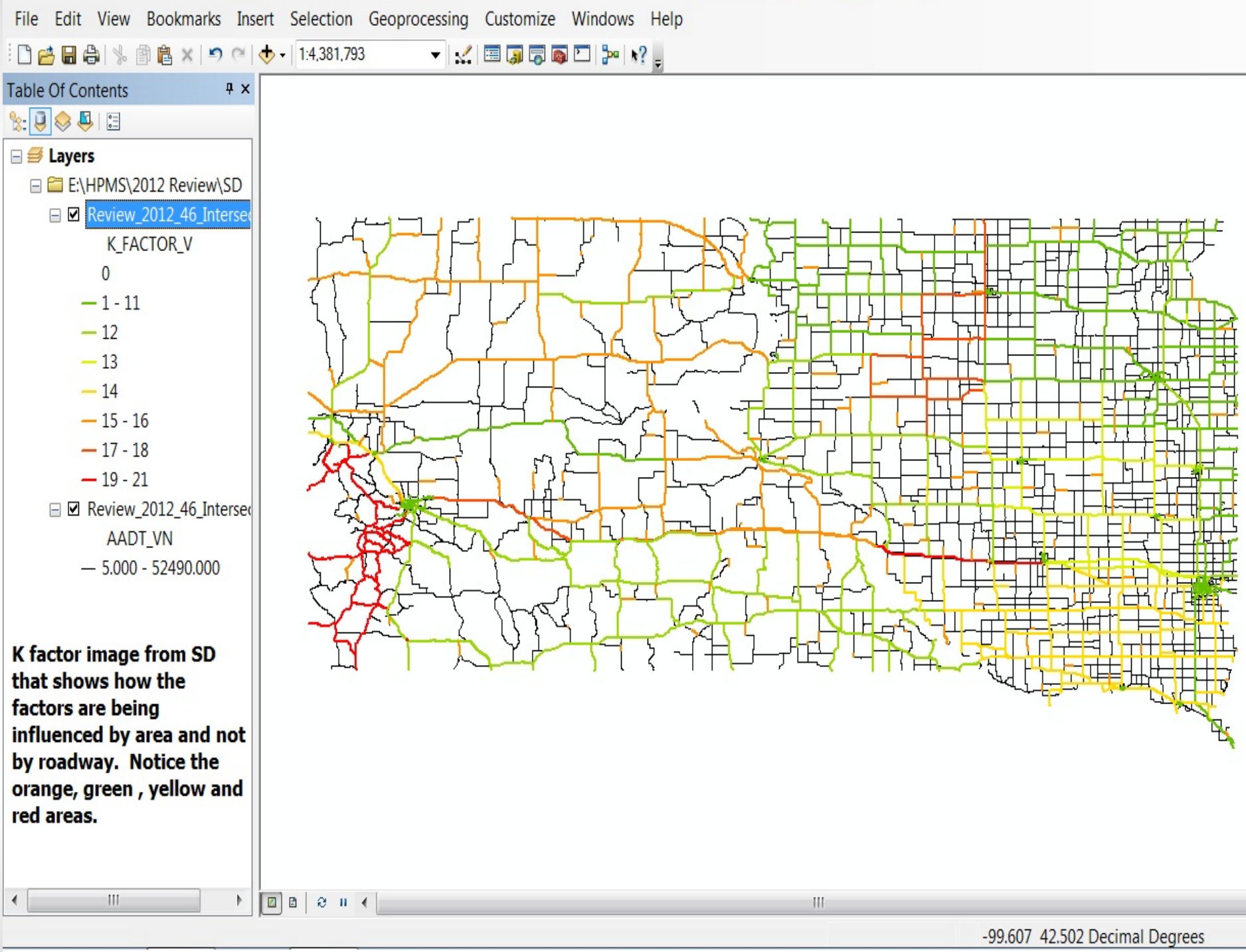
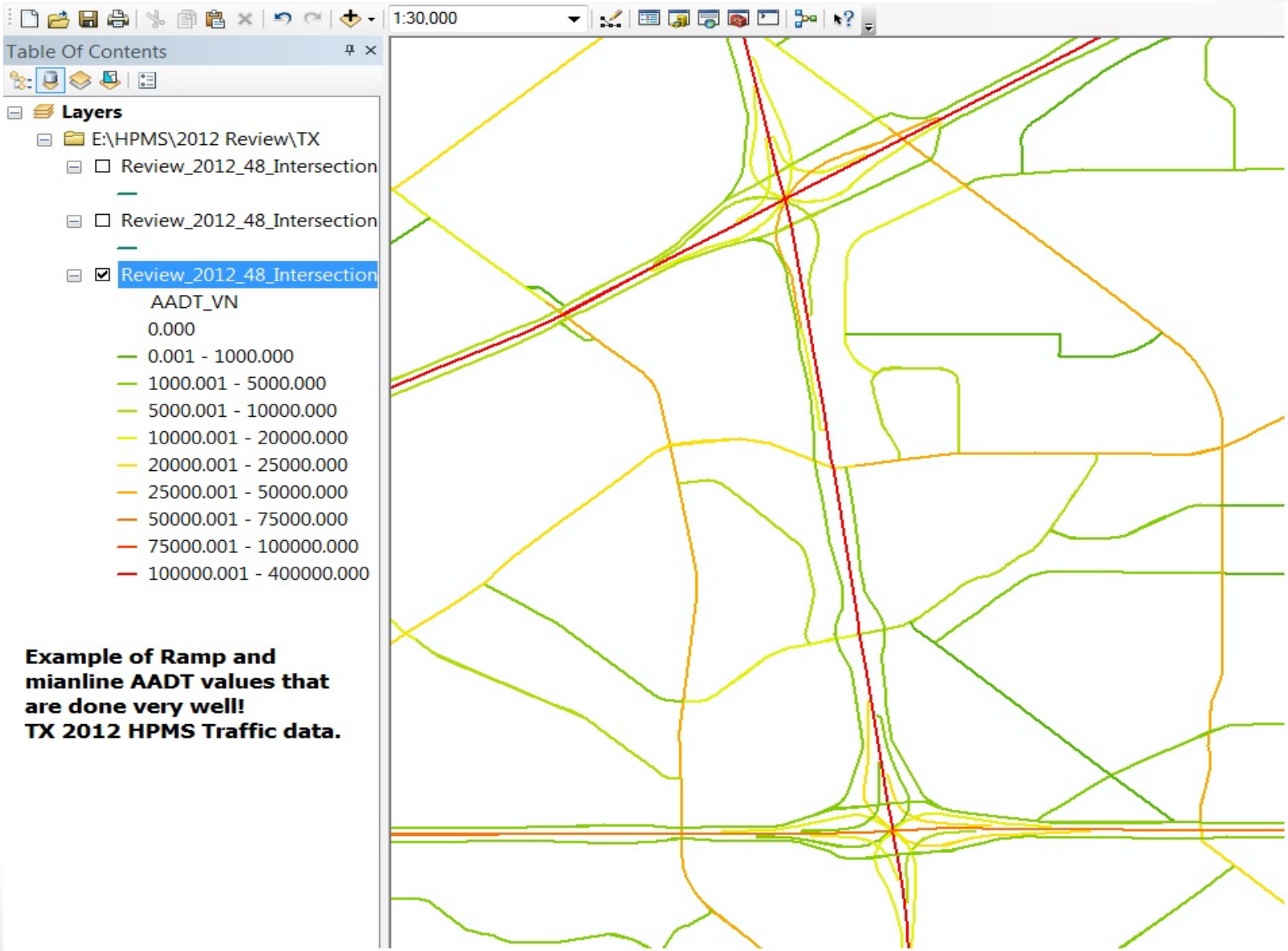
0.001 - 8.000
8.001 - 9.000
9.001 - 10.000
10.001 - 11.000
11.001 - 12.000
12.001 - 13.000
13.001 - 14.000
14.001 - 15.000
15.001 - 16.000
Review_2012_47_Intersectio
IS_SAMPLE
1
Review_2012_47_Intersectio
AADT_VN
0.000 - 200000.000

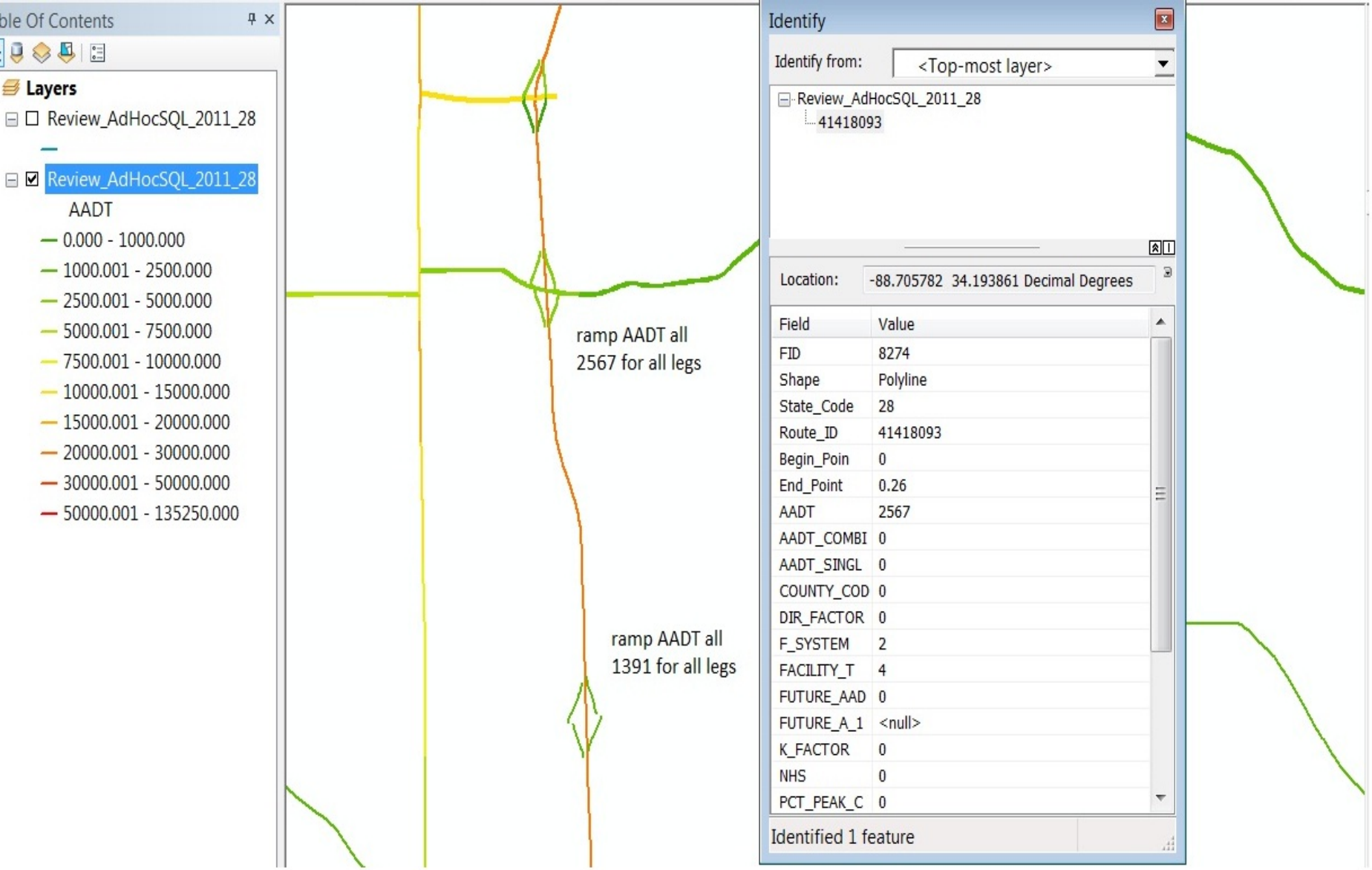


K factor image from SD that shows how the factors are being influenced by area and not by roadway. Notice the orange, green , yellow and red areas.

Ramp AADT - balancing



Example of Ramp and mianline AADT values that are done very well!
TX 2012 HPMS Traffic data.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Review_AdHocSQL_2011_28
AADT
0.000 - 1000.000
1000.001 - 2500.000
2500.001 - 5000.000
5000.001 - 7500.000
7500.001 - 10000.000
10000.001 - 15000.000
15000.001 - 20000.000
20000.001 - 30000.000
30000.001 - 50000.000
50000.001 - 135250.000
ramp AADT all
2567 for all legs
ramp AADT all
1391 for all legs
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Identify from:
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41418093
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Value
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Shape Polyline
State_Code 28
Route_ID 41418093
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End_Point 0.26
AADT 2567
AADT_COMBI 0
AADT_SINGL 0
COUNTY_COD 0
DIR_FACTOR 0
F_SYSTEM 2
FACILITY_T 4
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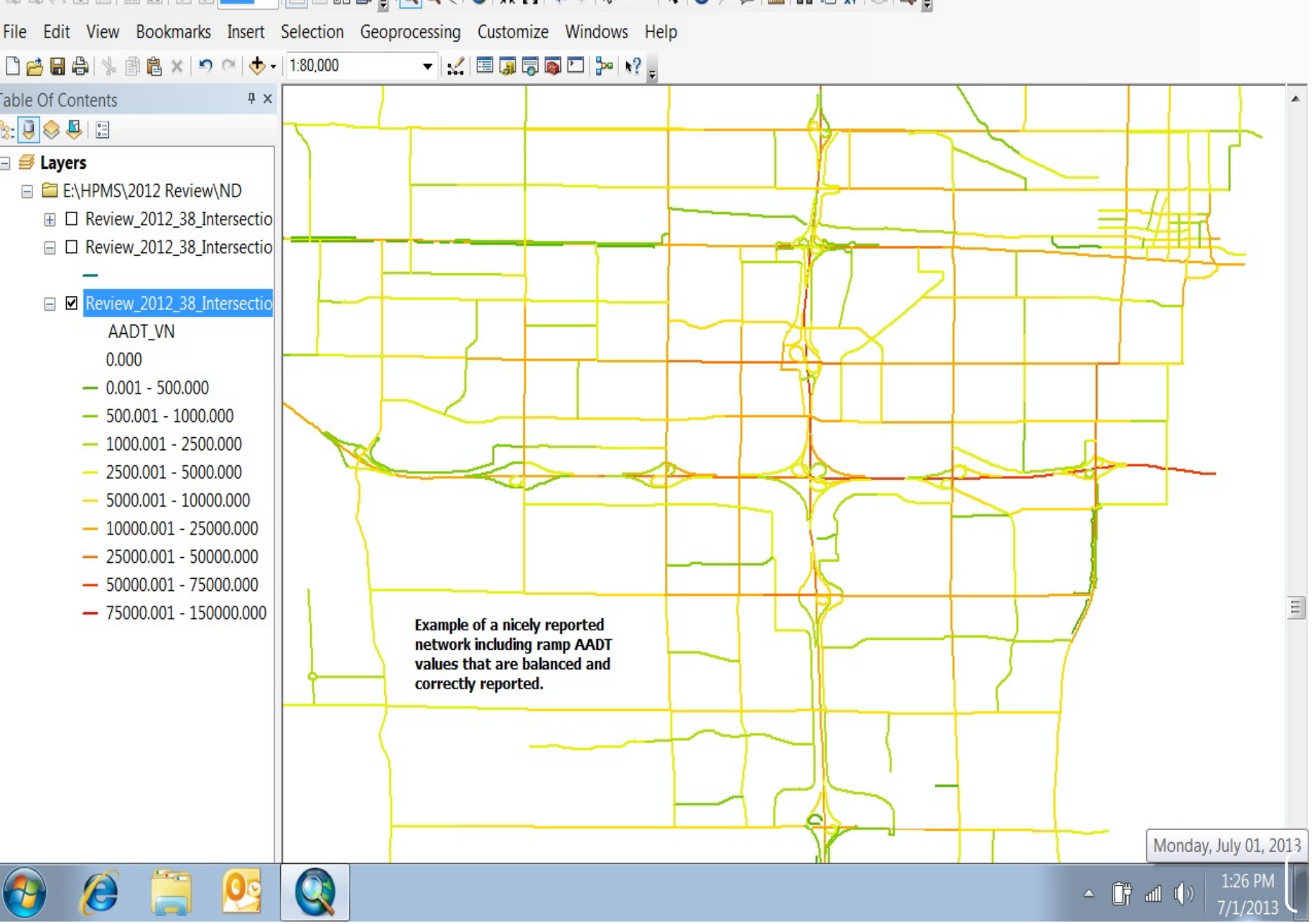
K_FACTOR 0
NHS 0
PCT_PEAK_C 0
Identified 1 feature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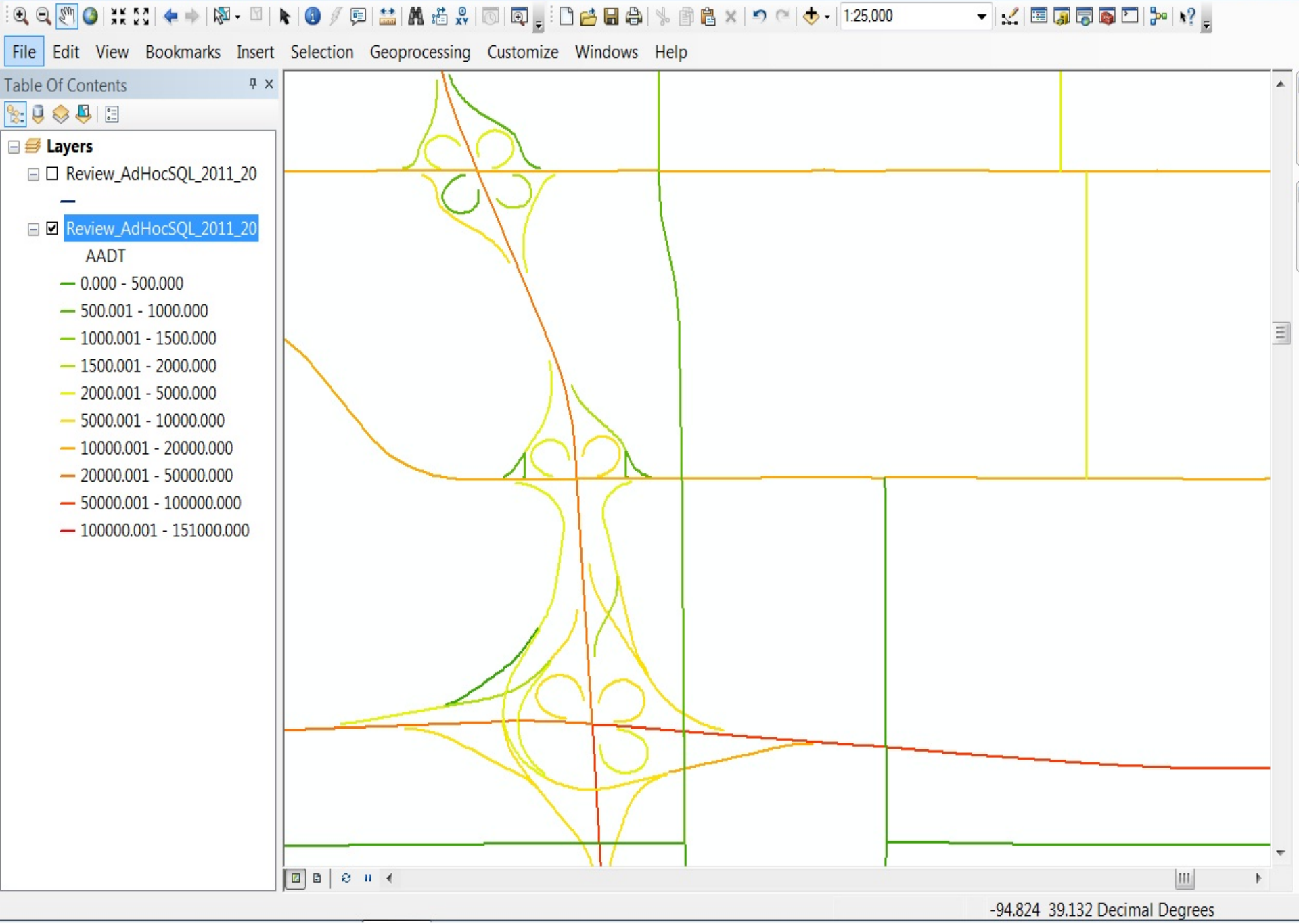
Review_2012_38_Intersectio
Review_2012_38_Intersectio
AADT_VN
0.000
0.001 - 500.000
500.001 - 1000.000
1000.001 - 2500.000
2500.001 - 5000.000
5000.001 - 10000.000
10000.001 - 25000.000
25000.001 - 50000.000
50000.001 - 75000.000
75000.001 - 150000.000
Example of a nicely reported network including ramp AADT values that are balanced and correctly reported.
Monday, July 01, 2013
1:26 PM
7/1/2013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File
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View
Bookmarks
Insert
Selection
Geoprocessing
Customize
Windows
Help
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Layers
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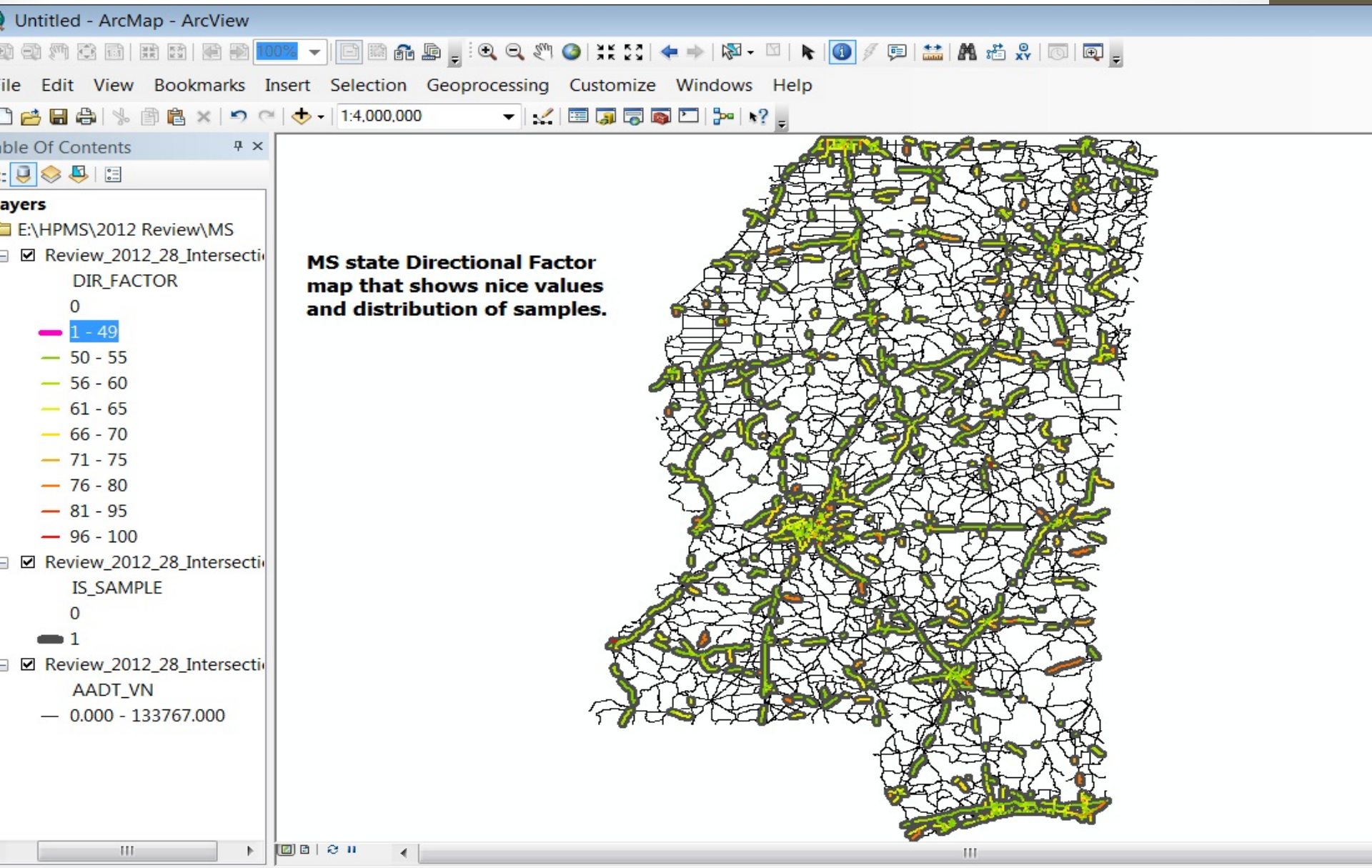
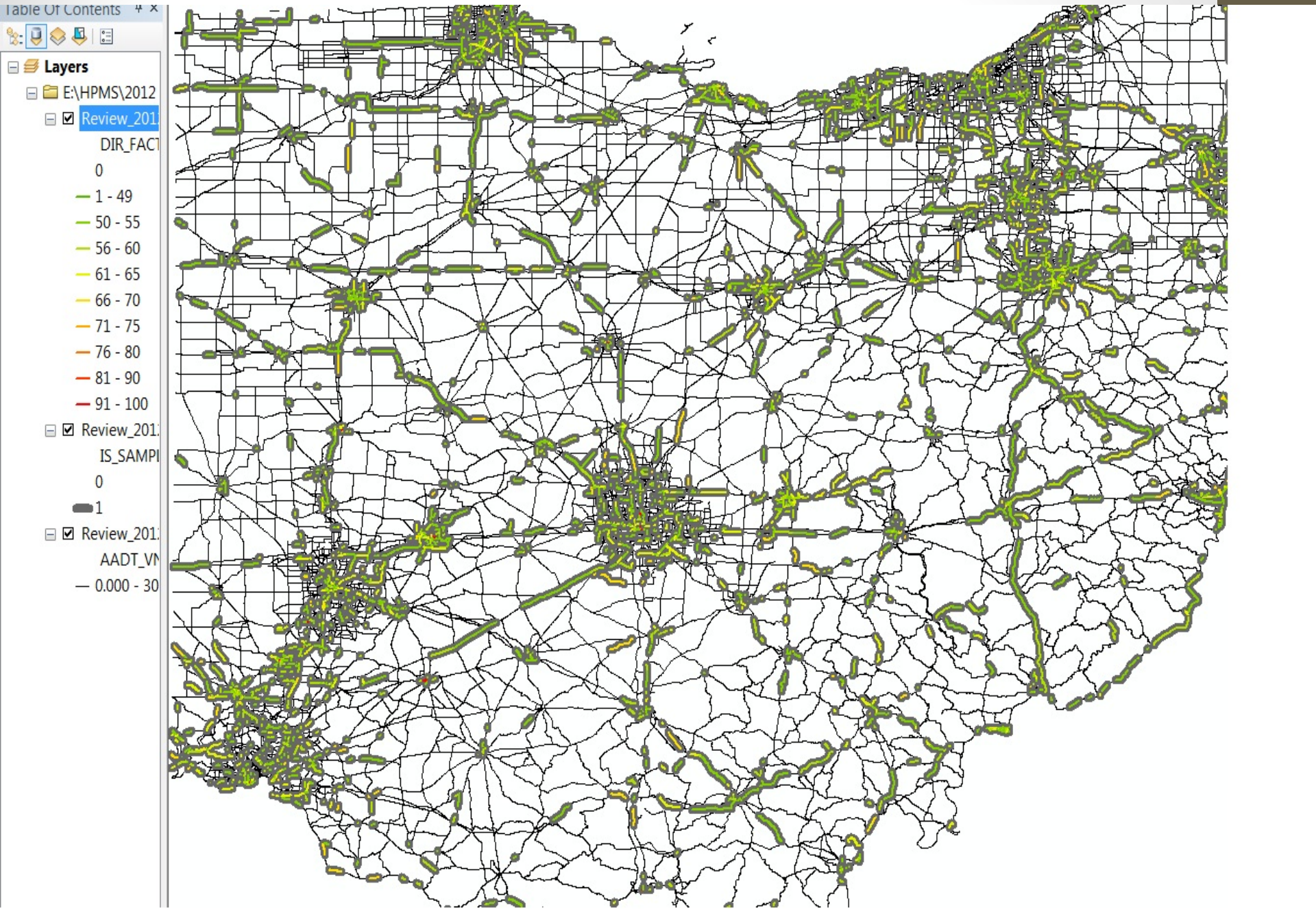
Review_AdHocSQL_2011_20
AADT
0.000 - 500.000
500.001 - 1000.000
1000.001 - 1500.000
1500.001 - 2000.000
2000.001 - 5000.000
5000.001 - 10000.000
10000.001 - 20000.000
20000.001 - 50000.000
50000.001 - 100000.000
100000.001 - 151000.000
-94.824 39.132 Decimal Degrees

Directional (D) Factor Values:

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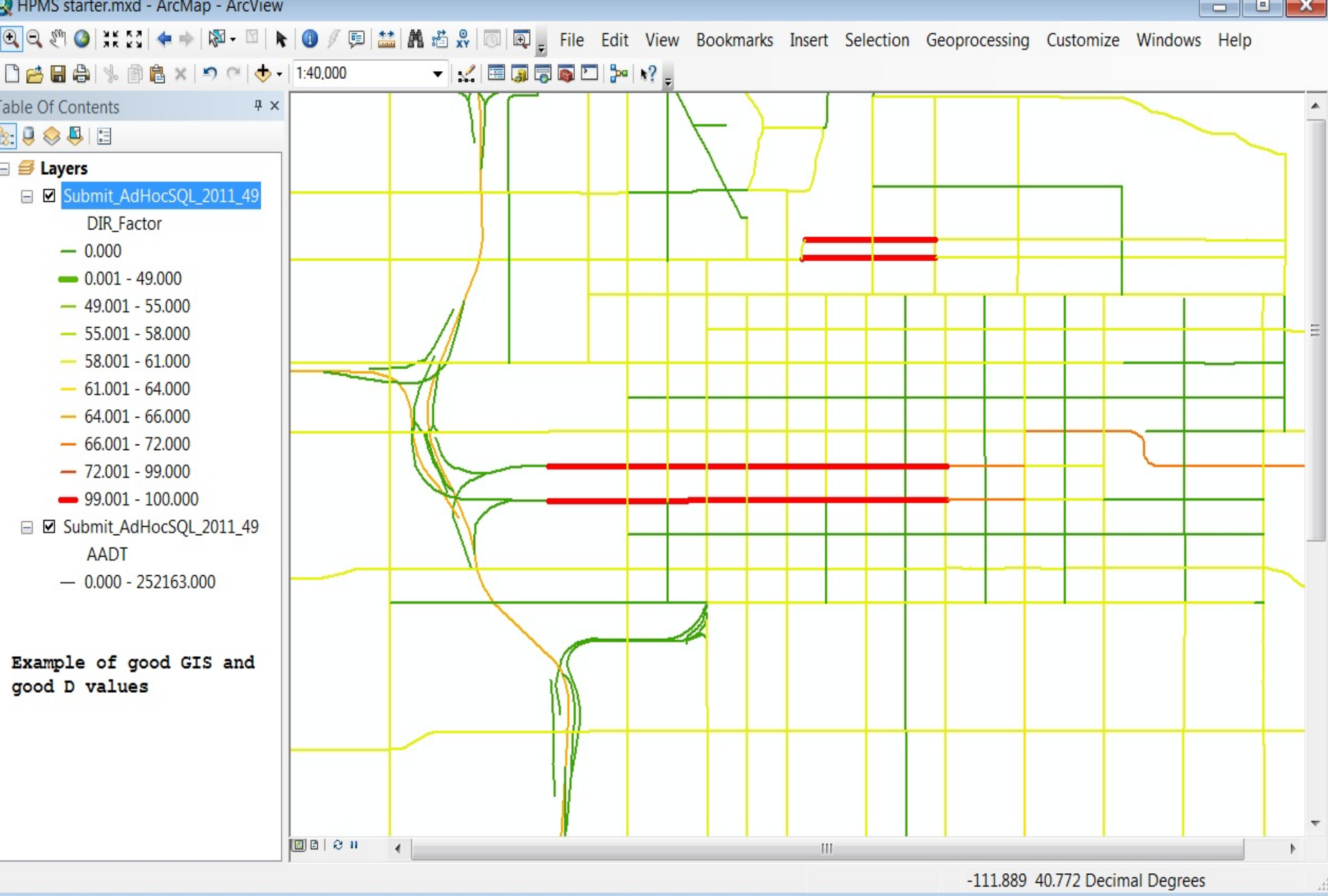
50 - 55
56 - 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 90
91 - 100
Review_201
IS_SAMPI
0
1
Review_201
AADT_VN
0.000 - 30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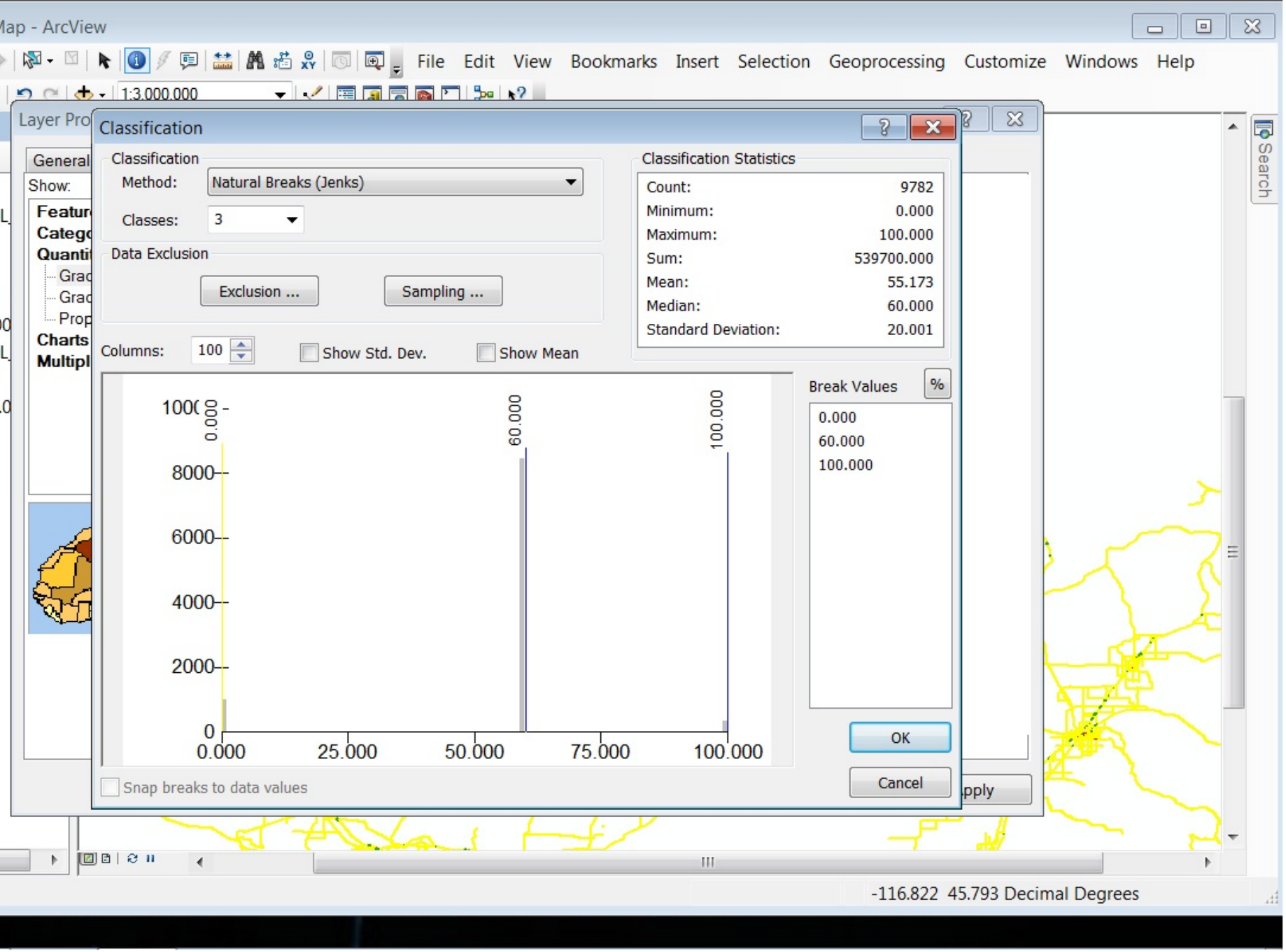
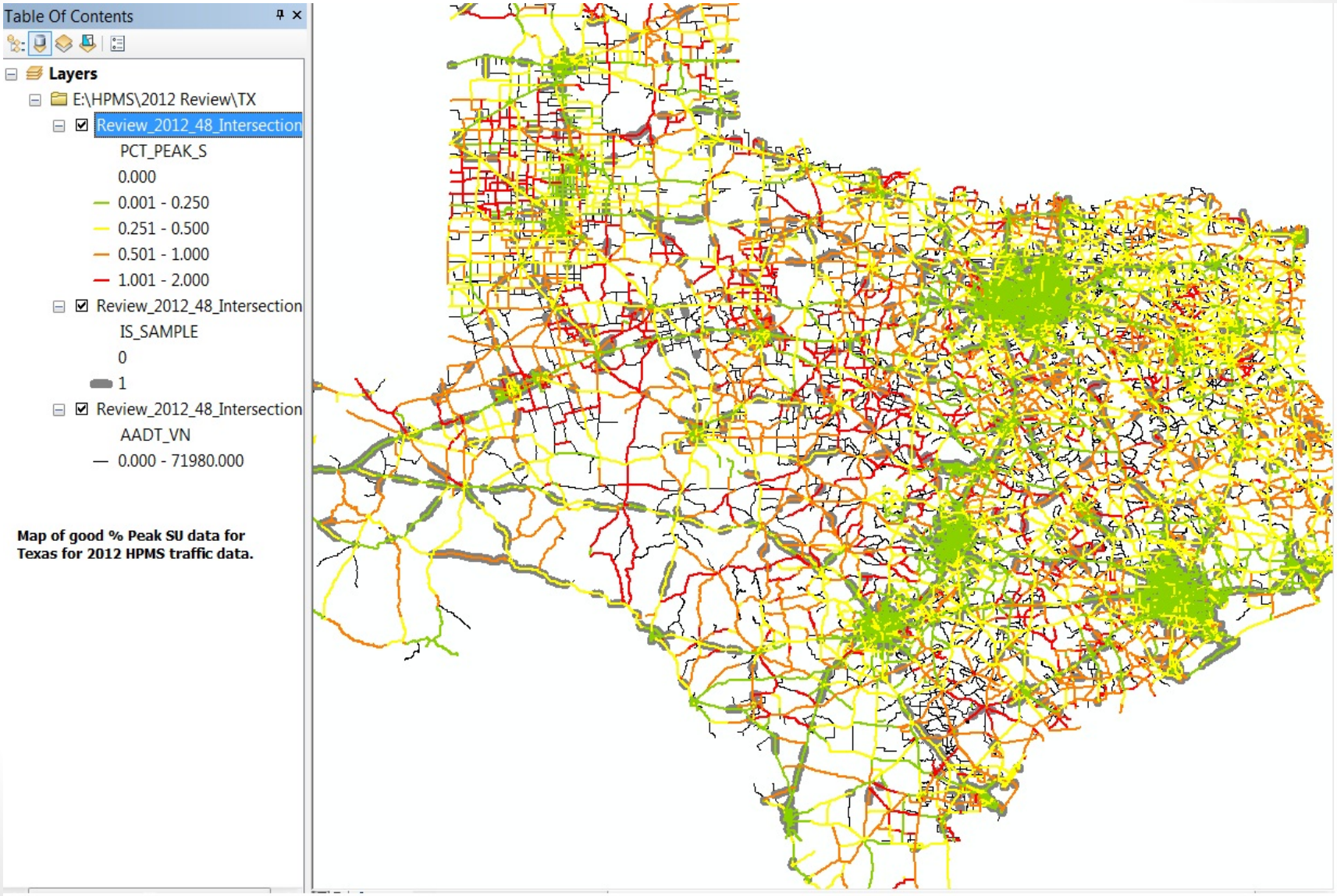
DIR_Factor
0.000
0.001 - 49.000
49.001 - 55.000
55.001 - 58.000
58.001 - 61.000
61.001 - 64.000
64.001 - 66.000
66.001 - 72.000
72.001 - 99.000
99.001 - 100.000
Submit_AdHocSQL_2011_49
AADT
0.000 - 252163.000
Example of good GIS and good D values
-111.889 40.772 Decimal Degrees


Map - ArcView
File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
1:3,000,000
Layer Pro
General
Show:
Featur
Categ
Quanti
Grad
Grad
Prop
Charts
Multipl
Classification
Classification
Method:
Natural Breaks (Jenks)
Classes:
3
Data Exclusion
Exclusion ...
Sampling ...
Columns:
100
Show Std. Dev.
Show Mean
Classification Statistics
Count: 9782
Minimum: 0.000
Maximum: 100.000
Sum: 539700.000
Mean: 55.173
Median: 60.000
Standard Deviation: 20.001
Break Values
%
0.000
60.000
100.000
OK
Cancel
Snap breaks to data values
0.000
60.000
100.000
8000
6000
4000
2000
0
0.000
25.000
50.000
75.000
100.000
Search
-116.822 45.793 Decimal Degrees

Percent Peak Single Unit (SU) Values:



Map of good % Peak SU data for Texas for 2012 HPMS traffic data.

Untitled - ArcMap - ArcView

File Edit View Bookmarks Insert Selection Geoprocessing Customize

1:174,370

Table Of Contents

Layers

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Review_2012_45_Intersectior

PCT_PEAK_S

0

1

2

3

4

5

6

Review_2012_45_Intersectior

IS_SAMPLE

0

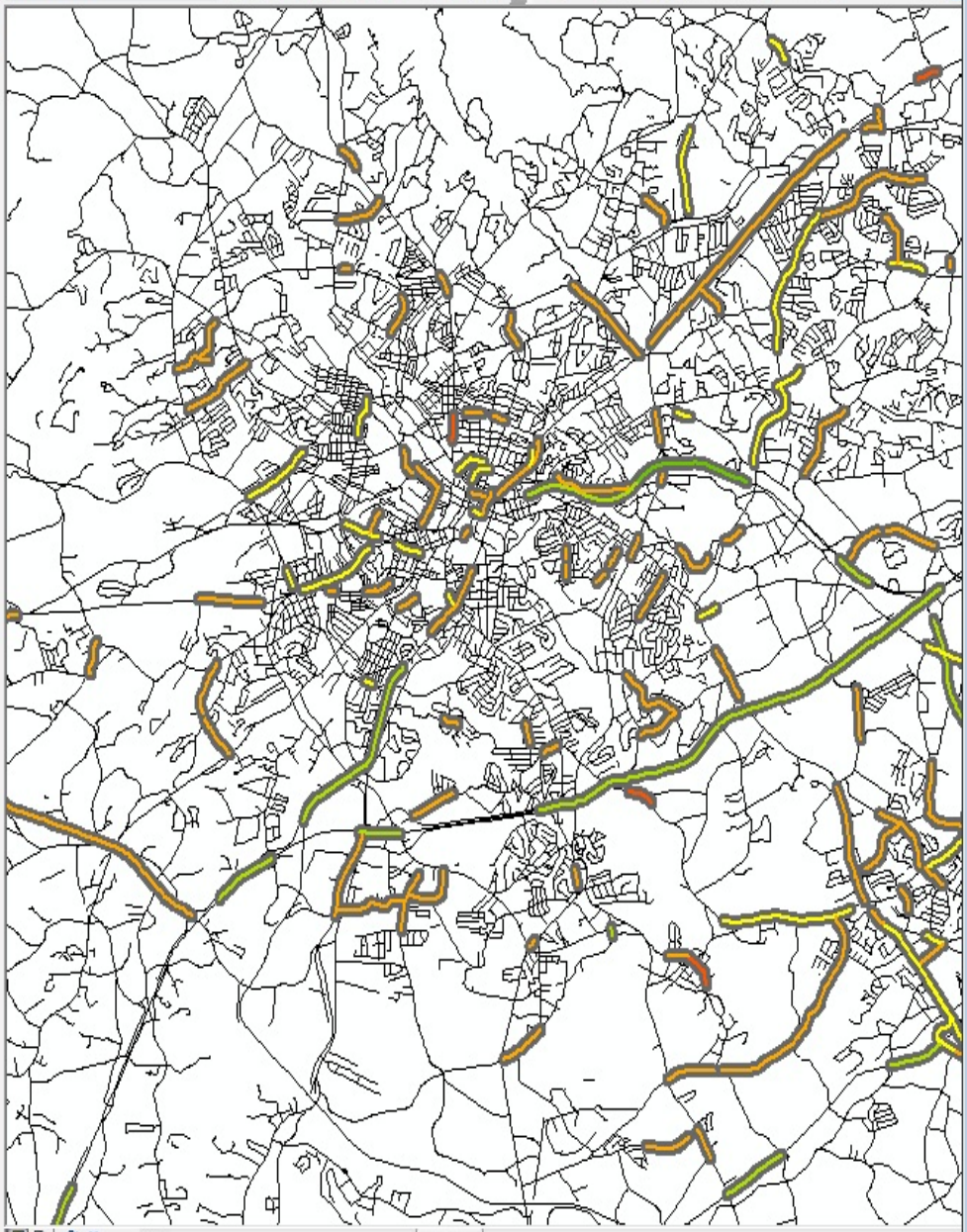
1

Review_2012_45_Intersectior

AADT_VN

0.000 - 151400.000

SC 2012 HPMS Traffic GIS review shows this sample based on % Peak SU being at 5% that all SU's are in the peak hour with an AADT of 23,800 and a SU AADT=1,308.



Identify

Identify from: <Top-most laye

Review_2012_45_Intersections

23070010700N

Location: -82.362197 34.797869 D

Field	Value
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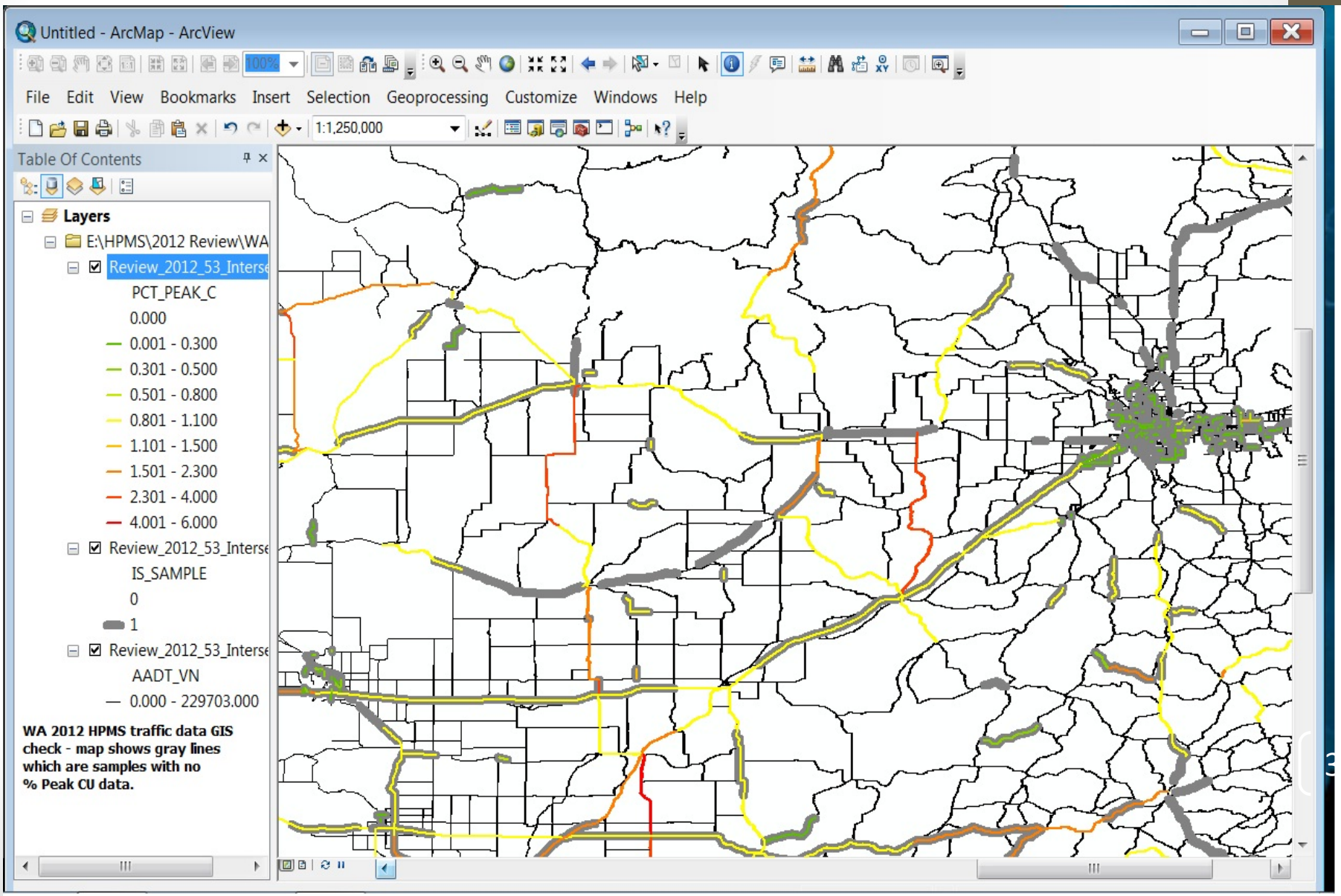
AADT_SINGL	1308
AADT_VN	23800
Begin_Poin	7.79
DIR_FACTOR	51
End_Point	8.13
EXPANSION_	3
F_SYSTEM_V	4
FACILITY_T	2
FID	40024
FUTURE_A_1	1/1/2032
FUTURE_AAD	28560
FUTURE_F_1	<null>
FUTURE_FAC	0
IS_SAMPLE	1
K_FACTOR_V	8
NHS_VD	<null>
NHS_VN	0
OWNERSHIP_	1
PCT_PEAK_C	2
PCT_PEAK_S	5
Route_ID	23070010700N
ROUTE_NU_1	107N

Identified 1 feature

Percent Peak Combination Unit (CU) Values:



How to best improve your HPMS Traffic Data:

- Review the findings from last 2-3 years
- Use the HPMS QC built in the software as part of your own State's QC methods
- Have your traffic staff review your data after it is put into the HPMS dataset or in the HPMS software
- Question odd results and do independent verification when possible

Questions or Thoughts:

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Travel Monitoring and Surveys Section