Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337

SILVER STAR TELEPHONE COMPANY
APPLICATION FOR REVIEW

Mary J. Sisak
Blooston, Mordkofsky, Dickens,
Duffy, & Prendergast, LLP
2120 L Street NW, Suite 300
Washington, DC 20037
Tel: 202-659-0830
Fax: 202-828-5568

Filed June 10, 2013

Table of Contents

Summary

The WCB claimed that it would correct errors in the data used in the regression model. However, in denying Silver Star's request to correct grossly inaccurate data concerning road miles and road crossings, the WCB failed to give serious consideration to the showing made by Silver Star of the significant errors in the ESRI Street Map road and road crossing data for its study areas. Rather, the WCB focused on an error made by Silver Star, which has no appreciable impact on the issues raised in the waivers, and an alleged error in Tiger Line data, which appears not to be an error at all.

In addition, although the WCB acknowledges that Silver Star asked that the density data be corrected, the WCB's Order does not discuss or address this issue. Because the WCB granted Silver Star's waiver to change the Idaho study area boundary, the density for Idaho must be recalculated under the WCB's own procedures. For the Wyoming study area, density calculated by WCB does not appear to be correct based on the square mileage and housing units in the regression model. In any event, the WCB is required to at least address this issue.

Therefore, Silver Star asks the Commission to reverse the WCB's findings as to the ESRI and Tiger Line data and to order the WCB to correct the density, road miles and road crossing data, as shown in the waiver petitions. Silver Star requests that these corrections be applied to the benchmark methodology effective July 1, 2012.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337

APPLICATION FOR REVIEW

Silver Star Telephone Company, Inc. (Silver Star), by its attorney, requests that the Commission review and reverse the Wireline Competition Bureau's (WCB's) May 9, 2013, *Order*[1] in which the WCB refused to correct the erroneous data used in the quantile regression analysis model concerning density, road miles and road crossings for Silver Star's Idaho and Wyoming study areas. As shown herein, review is merited because the WCB failed to address Silver Star's requests and arguments and the WCB made erroneous findings as to important and material questions of fact. Silver Star requests that the Commission correct the erroneous data and apply the corrections to the benchmark methodology effective July 1, 2012.

I. Background

On September 27, 2012, Silver Star filed Expedited Waiver Requests[2] pursuant to the procedure established by the WCB in the *HCLS Benchmarks Implementation Order*[3] to correct

[1] *Connect America Fund; High-Cost Universal Service Support*, Order, WC Docket Nos. 10-90, 05-337 (May 9, 2013) (*Order*).

[2] In the Matter of the Connect America Fund and High Cost Universal Service Support, WC Docket Nos. 10-90 and 05-337, Expedited Waiver Request of Silver Star Telephone Company, Inc., Idaho Study Area, 472295, filed Sept. 27, 2012; In the Matter of the Connect America Fund and High Cost Universal Service Support, WC Docket Nos. 10-90 and 05-337, Expedited Waiver Request of Silver Star Telephone Company, Inc., Wyoming Study Area 512295 (sic), filed Sept. 27, 2012.

erroneous data concerning density, road miles and road crossings for both its Idaho and Wyoming study areas and to correct erroneous study area boundary data for its Idaho study area. At that time, Silver Star believed that the number of road miles and road crossings used in the benchmark methodology did not match the data shown in the ESRI Street Map for each study area. Thereafter, Silver Star and the WCB staff engaged in discussions and communications to review the WCB's use of the ESRI Street Map data and Silver Star's analysis.

After this further review, Silver Star concluded that the number of road miles and road crossings used in the regression model did match the data shown in the ESRI 2010 Street Map for each study area but that this data is grossly inaccurate for Silver Star. Accordingly, Silver Star amended its Expedited Waiver Requests on January 2, 2013,[4] asking the WCB to correct the erroneous data on road miles and road crossings. Instead of the ESRI Street Map data, Silver Star asked the WCB to use the Tiger Line 2010 Census data to calculate road miles and road crossings for its Idaho and Wyoming study areas. Silver Star demonstrated that this data more accurately reflects the actual number of road miles and road crossings for Silver Star's Idaho and Wyoming study areas, as confirmed by Silver Star's own records and Idaho and Wyoming county maps.[5]

In its *Order*, the WCB granted Silver Star's request to correct the study area boundary for its Idaho study area. However, the WCB denied Silver Star's request to correct the data

---

[3] *Connect America Fund; High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Order, 27 Rcd 4235 (Wireline Comp. Bur. 2012) (*HCLS Benchmarks Implementation Order*).

[4] In the Matter of the Connect America Fund and High Cost Universal Service Support, WC Docket Nos. 10-90 and 05-337, Amendment to Expedited Waiver Request of Silver Star Telephone Company, Inc., Idaho Study Area, 472295, filed Jan. 2, 2013; In the Matter of the Connect America Fund and High Cost Universal Service Support, WC Docket Nos. 10-90 and 05-337, Amendment to Expedited Waiver Request of Silver Star Telephone Company, Inc., Wyoming Study Area 512295 (sic), filed Jan. 2, 2013.

[5] Silver Star is providing shapefiles of the county maps to allow for comparison to the ESRI and Tiger Line data. The shapefiles are being filed by hand on a CD-Rom.

concerning road miles and road crossings. The WCB did not address Silver Star's request to correct the erroneous density data for the Idaho and Wyoming study areas.

The WCB states that it declined to change the basis for the road information used in calculating Silver Star's caps for 2012 and 2013 because "Silver Star has not demonstrated that the Tiger Line 2010 data are superior to the ESRI data adopted by the Bureau in the *HCLS Benchmarks Implementation Order*."[6] In support of this conclusion, the WCB states that Silver Star's comparisons were based on ESRI 2010 Street Map version 9.3 "whereas the Bureau used the more recent version 10.0."[7] The WCB also states that although the example provided by Silver Star "shows that in some cases the ESRI data missed some roads, the Tiger data appear to be overly inclusive, in some cases including driveways and intra-property access routes."[8] In support of this statement, the WCB states the Tiger Line data for an area in the vicinity of Victor, Idaho, "appear to include a driveway and an intra-property access route that, according to maps, do not constitute actual roads or road crossings, whereas the ESRI data do not include these…".[9]

As shown herein, the WCB's *Order* contains errors of fact; the WCB failed to examine all relevant data; and the WCB failed to articulate a satisfactory explanation for its denial of Silver Star's waiver. Therefore, Silver Star asks the Commission to reverse the WCB's findings as to the ESRI and Tiger Line data and to order the WCB to correct the density, road miles and road crossing data, as shown in the waiver petitions.

[6] *Order* at ¶7.
[7] *Id*.
[8] *Id*.
[9] *Id*. at n.26.

II. The WCB Erred in its Conclusion that Silver Star Did not Demonstrate the Superiority of Tiger Line Data

The WCB contends that Silver Star failed to demonstrate that the Tiger Line 2010 data are superior to the ESRI data adopted by the Bureau in the *HCLS Benchmarks Implementation Order*. To reach this conclusion, the WCB ignores glaring errors in the ESRI data and focuses on insignificant errors in the waiver filings and Tiger Line data.

A. Silver Star Demonstrated that the ESRI Data is Grossly Inaccurate

In the amendments to the expedited waivers, Silver Star showed that the ESRI Street Map data undercounts road miles and road crossings by approximately one-third for these study areas. To support its position, Silver Star provided a shapefile showing the Tiger Line base map, roads and road crossings for each study area. Silver Star confirmed the Tiger Line data by comparing it to its own internal information on road miles and road crossings and publicly available road maps maintained by the county governments in Idaho and Wyoming that intersect with Silver Star's study areas. Based on its internal records and the county maps, Silver Star was able to determine that the Tiger Line data counts most of the road miles and road crossings in its study areas and that it includes far more road miles and road crossings than the ESRI data.

As an example of its findings, Silver Star provided an aerial photo of a portion of each study area and it overlaid the ESRI road data and the Tiger Line road data for the area, as a visual confirmation of the process it used to determine the discrepancy in road miles and to conclude that the Tiger Line data is far more accurate than the ESRI Street Map data. Silver Star provided a certification from an officer of the company, under penalty of perjury, as to the accuracy of the statements made and information presented in the waiver request.

B. The Use of ESRI Version 9.3 Instead of 10.0 is An Insignificant Error that Does Not Change the Result

There can be no reasonable argument that, as a matter of fact, the ESRI data is accurate for Silver Star or that the Tiger Line data is not superior to the ESRI data. As an initial matter, the WCB challenges Silver Star's findings because Silver Star based its analysis on ESRI version 9.3 and the WCB used version 10.0.[10] However, Silver Star has compared these two versions of ESRI Street Map and, as shown in Exhibit 1, there is almost no difference in the road mileage data for the Silver Star study areas. Thus, even version 10.0 shows that the ESRI Street Map data significantly undercounts road mileage and road crossings for Silver Star's study areas. Accordingly, this does not explain the gross inaccuracy of the data as found by Silver Star or justify the WCB's refusal to correct the inaccurate data.

C. Tiger Line Includes Local Roads That Are not Included in ESRI

A comparison of road miles from ESRI Street Map and Tiger Line, attached hereto as Exhibit 2,[11] clearly shows far more road miles in the Tiger Line data. One of the largest discrepancies in road miles is for roads identified as local roads, which are reflected in code S1400 for Tiger Line and codes A40 and A41 for ESRI.[12]

[10] Based on the road miles and road crossings used in the regression model, Silver Star believed that ESRI version 9.3, which Silver Star had, and version 10.0 were substantially the same. After spending over $12,000 to obtain version 10.0, Silver Star has confirmed that the difference is insignificant.

[11] The ESRI Street Map data is from version 10.0. In addition, the road miles reflect the Idaho study area boundary change approved in the Order. For Wyoming, the road miles reflect the study area boundary recently filed with the Commission, which is slightly smaller than the boundary originally used by the WCB in the regression model.

[12] ESRI identifies code A40 as "Local, neighborhood, and rural road, city street, major category" and code A41 as "Local, neighborhood, and rural road, city street, unseparated." Tiger Line identifies code S1400 as "Local Neighborhood Road, Rural Road, City Street." The coding for roads for each database is attached as Exhibit 3.

The superiority of the Tiger Line data is supported by the shapefiles provided by Silver Star in the January 2, 2013, amended waiver requests, showing all the roads identified by Tiger Line on a map of the entire study areas and the aerial photos also provided by Silver Star, which show an overlay of the roads that are included in Tiger Line and ESRI on a map of a portion of the study areas.[13] The shapefiles and the photos clearly show that ESRI does not include clusters of roads, many of which are some of or all of the local roads for housing subdivisions. Silver Star is attaching as Exhibit 5 two versions of the aerial photos previously provided in the January 2, 2013, amended waivers. The first version shows the original photo, except that the ESRI data reflects version 10.0. The second version shows the original photo, except that the ESRI data reflects version 10.0 and Silver Star has highlighted the many local roads associated with housing subdivisions that appear in Tiger Line and do not appear in ESRI. As stated in the waiver petitions, this is an example of how Silver Star determined that Tiger Line is superior to ESRI.

The photo for the Idaho study area shows 79 subdivisions and the associated local roads, missing in whole or in part from the ESRI data and included in the Tiger Line data. The photo for the Wyoming study area shows 34 subdivisions and the associated local roads, missing in whole or in part from the ESRI data and included in the Tiger Line data. Exhibit 6 identifies these subdivisions and the additional subdivisions and associated local roads missing from the ESRI data for the entire study area. Exhibit 6 identifies 298 subdivisions built before the year

[13] As Exhibit 4, Silver Star also is providing an overlay comparison of the roads and road crossings for the entire Idaho and Wyoming study area. The Commission should not consider this as new information, because the Tiger Line shapefiles showing the roads and road crossings were provided in the January 2, 2013 amendment to the waivers. The files provided herewith simply show that information and the ESRI information in the WCB's possession in a new format.

2010, with in excess of 6000 lots, containing numerous local roads that are missing in whole or in part from ESRI.

The WCB ignores this evidence and instead focuses on a driveway shown in the aerial photo in the vicinity of Victor, Idaho, to support its conclusion that while "in some cases the ESRI data missed some roads, the Tiger data appear to be overly inclusive, in some cases including driveways and intra-property access routes."[14] The conclusion that ESRI missed "some roads in some cases" ignores the extent of the errors in the ESRI data and is clearly incorrect... The Tiger Line shapefiles, the aerial photos, and the comparison of ESRI data to Tiger Line data, clearly show far more roads are missed by ESRI. Against this, the example of one road allegedly incorrectly included by Tiger Line cannot lead to a reasonable conclusion that the data errors in the two data sources are similar in scope or that Tiger Line is not superior..

This is not an insignificant error. Silver Star has constructed facilities and currently provides services to customers in every one of the identified subdivisions not counted in ESRI and the error in the ESRI data represents a significant percentage of Silver Star's capital and operational expense. Silver Star estimates that the error translates into an estimated loss of $1.8 million per year for Silver Star.

Further, it appears that the root cause of the error in the ESRI data is that the data does not represent results for Silver Star as of the year 2010. In the waivers, Silver Star contended that the ESRI Street Map data is grossly inaccurate, at least in part, because it appears that this data was not updated for Silver Star's study area in 2010. In other words, although the WCB's regression model purports to be based on 2010 data for all carriers, Silver Star contends that the ESRI Street Map data used for Silver Star is not 2010 data. The fact that the ESRI Street Map

[14] *Order* at ¶7.

data does not capture a significant portion of local roads in Silver Star's study areas associated with new housing subdivisions supports this contention. The WCB did not address this or examine the data as to the roads excluded in the ESRI data.

In the *HCLS Benchmarks Implementation Order*, the WCB states that "when considering whether there are special circumstances and the public interest is served by granting a waiver of the benchmark methodology, we will be focusing on ensuring that accurate data is used to perform the necessary computations, regardless of the extent of support reduction."[15] However, as shown, the WCB has failed to give serious consideration to Silver Star's showing that ESRI is not accurate for its study areas, including Silver Star's contention that ESRI data was not updated to the year 2010. The minor errors associated with Silver Star using ESRI version 9.3 instead of 10.0 and the alleged error in Tiger Line concerning driveways and intra-property roads does not change the fact that the ESRI data is grossly inaccurate. In sum, the WCB's *Order* reaches a conclusion that is contradicted by evidence and the WCB failed to examine the data as to the roads excluded in the ESRI data. Therefore, its action is arbitrary and capricious and should be reversed.[16]

III. The WCB has Granted a Similar Waiver Based on a Similar Showing

The WCB also has acted in an arbitrary and capricious manner by applying a different standard than the one applied in the *Arctic Slope Order* in a discriminatory manner.[17] In the *Arctic Slope Order*, the WCB granted a waiver to Arctic Slope Telephone Association Cooperative, Inc. (Arctic Slope) to correct road miles and road crossings. In granting the waiver, the WCB found that Arctic Slope "provided the Bureau detailed road information ... including

[15] *HCLS Benchmarks Implementation Order* at ¶ 31.
[16] *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983)
[17] *Connect America Fund; High-Cost Universal Service Support*, Order, WC Docket Nos. 10-90, 05-337, 27 FCC Rcd 14867 (Wireline Comp. Bur. 2012) (*Arctic Slope Order*).

certifications by an officer of the company under penalty of perjury that the filed information is accurate."[18] The WCB seeks to distinguish its finding in the *Arctic Slope Order*, by stating that "Arctic Slope identified and provided evidence that specific roads should be removed from the road miles calculation because these roads constituted caribou migration, foot, jeep, tractor, and winter trails as well as roads across tundra that are inaccessible by most vehicles."[19]

However, as shown herein, Silver Star also identified and provided evidence that specific roads should be included in the road calculation. Simply put, Silver Star claimed and continues to claim, that all of the roads identified in Tiger Line are, in fact, roads in Silver Star's study areas. And, like the process in the *Arctic Slope Order*, Silver Star confirmed that information by comparing it to its company information and county maps and Silver Star submitted an officer's certification under penalty of perjury as to the accuracy of its statements and data. Where, as here, an agency applies a different standard to similarly situated entities and it does not provide a "reasoned explanation and substantial evidence in the record" to support disparate treatment, the agency's action is arbitrary and capricious.[20]

IV. The WCB Erred In Its Conclusions Concerning the Inclusion or Exclusion of Certain Road Types

The WCB erred in denying Silver Star's waivers, in part, on the basis that "the Tiger data appear to be overly inclusive, in some cases including driveways and intra-property access routes." There is nothing in the WCB's *HCLS Benchmarks Implementation Order* or instructions for the regression model that identify any type of road or any ESRI road code that has been excluded from the calculation of road miles. The HCLS Geospatial Workflow 2012, attached at Exhibit 6, states at paragraph 3.6 that "[a]ll road types were included from the

[18] *Id.* at ¶3.
[19] *Id.*
[20] *Burlington N. & Santa Fe Ry. Co. v. Surface Transp. Bd.*, 403 F.3d 771, 777 (D.C. Cir. 2005).

following data sets." In addition, all of the ESRI road categories shown in Exhibit 3, including driveways, were actually included in the WCB's calculation of road miles that was used in the regression model for Silver Star. Since the ESRI data includes driveways, it cannot be said that Tiger Line is less accurate because it may include driveways in its calculation of road miles.

Silver Star asked the WCB to provide information and the data it used to determine road miles and road crossings, in an effort to determine whether the WCB made an adjustment to the ESRI data. However, the WCB would not do so.[21] Accordingly, to the extent the WCB made such adjustments, it should be precluded from relying on this as a basis to deny Silver Star's waiver request.

In any event, even if the WCB is correct that driveways or any other category of road should not be included, that it not a basis to reject correcting the road miles for Silver Star or to reject the use of the Tiger Line data. As shown in Exhibit 2, because local roads are the biggest driver in the difference between the two data sources, the WCB would have to argue that local roads should be deleted before its contention that Tiger Line is not superior to ESRI would have any basis. Accordingly, there is no support for the WCB's contention and it is nonsensical.

V. The WCB Did Not Address Silver Star's Request To Correct Density Data

In the September 27, 2013, Expedited Waiver Requests, Silver Star showed that the density used in the regression model is incorrect for both the Idaho and Wyoming study areas and asked the WCB to correct this factor. In its Order, although the WCB acknowledges that Silver Star asked that this data be corrected, the WCB's Order does not discuss or address this issue and, therefore, its Order is arbitrary and capricious.

[21] See, Electronic communications between Kevin Lewis of Silver Star and John Emmett, of the Wireline Competition Bureau, attached hereto as Exhibit 7.

In addition, the density for Idaho must be recalculated under the WCB's own procedures. The *HCLS Benchmarks Implementation Order* states that density is "the natural log of the following quotient: number of housing units in the study area divided by the size of the study area in square miles as reported by the Tele Atlas boundaries."[22] Because the WCB granted Silver Star's request to change the study area boundary for Idaho, which increased the square mileage and the number of housing units in the study area, the density factor must be adjusted.

For the Wyoming study area, density calculated by WCB does not appear to be correct based on the square mileage and housing units in the regression model. In any event, the WCB is required to at least address this issue.

VI. Conclusion

The WCB claimed that it would correct errors in the data used in the regression model. However, the WCB failed to give serious consideration to the showing made by Silver Star of the significant errors in the ESRI Street Map road and road crossing data for its study areas. Rather, the WCB focused on an error made by Silver Star, which has no appreciable impact on the issues raised in the waivers, and an alleged error in Tiger Line data, which appears not to be an error at all. Accordingly, Silver Star asks that the Commission reverse the WCB's findings, and direct the WCB to correct the road miles and road crossing data for Silver Star. Silver Star also asks the Commission to direct the WCB to correct the density figures used in the regression model. Silver Star requests that these corrections be applied to the benchmark methodology effective July 1, 2012.

[22] *HCLS Benchmarks Implementation Order* at 33 , para. 91.

Respectfully submitted,

SILVER STAR TELEPHONE
COMPANY, INC.

By: /s/ Mary J. Sisak

Blooston, Mordkofsky, Dickens, Duffy &
Prendergast, LLP
2120 L Street, NW, Suite 300
Washington, DC 20037
202-659-0830

Dated: June 10, 2013

EXHIBIT 1

Exchange 512295 StreetMAP 10.0 mileage

OBJECTID	FCC	FREQUENCY	SUM_Road_M
1	A21	154	47.85
2	A25	50	3.36
3	A30	24	6.52
4	A31	3	0.60
5	A40	803	209.32
6	A41	1,137	320.08
7	A50	7	4.55
8	A51	88	50.28
9	A60	1	0.11
10	A70	69	19.91
11	A71	1	0.56
12	A74	34	11.52
		TOTAL	674.67

Exchange 512295 StreetMAP 9.3 mileage

FCC	Count	Sum_Miles
A21	7	49.53
A30	4	6.53
A31	1	0.60
A40	316	212.22
A41	522	336.01
A50	8	21.73
A51	16	32.25
A60	1	0.11
A70	49	22.48
A71	1	0.56
	TOTAL	682.03

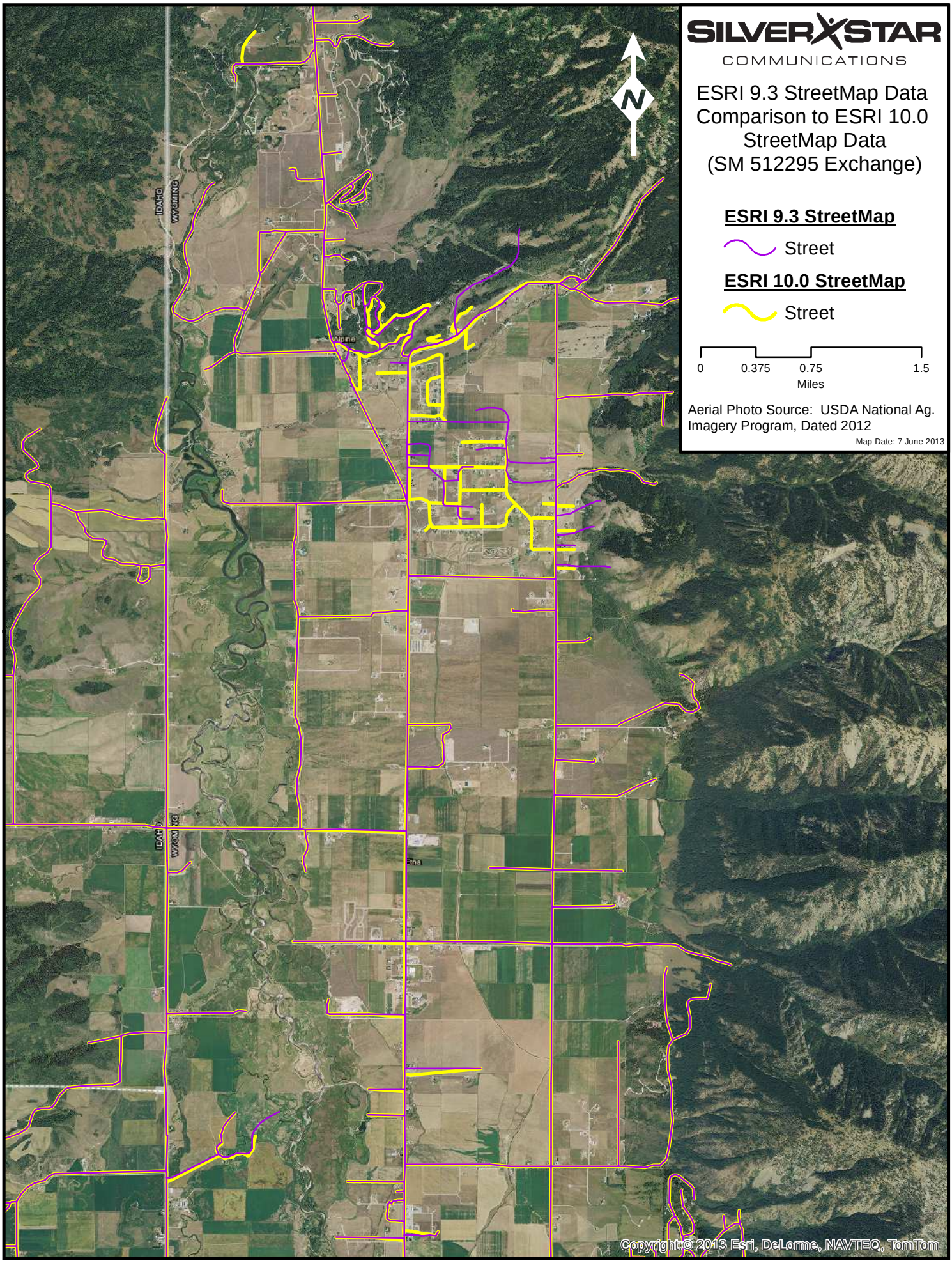
Exchange 472295 StreetMAP 10.0 mileage

OBJECTID	FCC	FREQUENCY	SUM_Road_M
1	A21	245	33.40
2	A30	454	138.33
3	A31	38	11.29
4	A40	1,132	292.71
5	A41	4,369	1,331.01
6	A50	81	33.94
7	A51	132	61.56
8	A60	3	0.31
9	A61	3	0.04
10	A70	534	183.86
11	A74	243	78.40
		TOTAL	2,164.85

Exchange 472295 StreetMAP 9.3 mileage

FCC	Count	Sum_Miles
A21	4	34.41
A30	18	138.53
A31	5	11.29
A40	635	310.28
A41	1,735	1,351.39
A50	27	33.60
A51	47	66.48
A60	3	0.31
A61	2	0.13
A70	455	245.56
	TOTAL	2,191.98

6/6/2013


SILVERXSTAR
COMMUNICATIONS
ESRI 9.3 StreetMap Data
Comparison to ESRI 10.0
StreetMap Data
(SM 512295 Exchange)
ESRI 9.3 StreetMap
Street
ESRI 10.0 StreetMap
Street
0
0.375
0.75
1.5
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2012
Map Date: 7 June 2013
N
IDAHO
WYOMING
Alpine
Etna
Copyright © 2013 Esri, DeLorme, NAVTEQ, TomTom

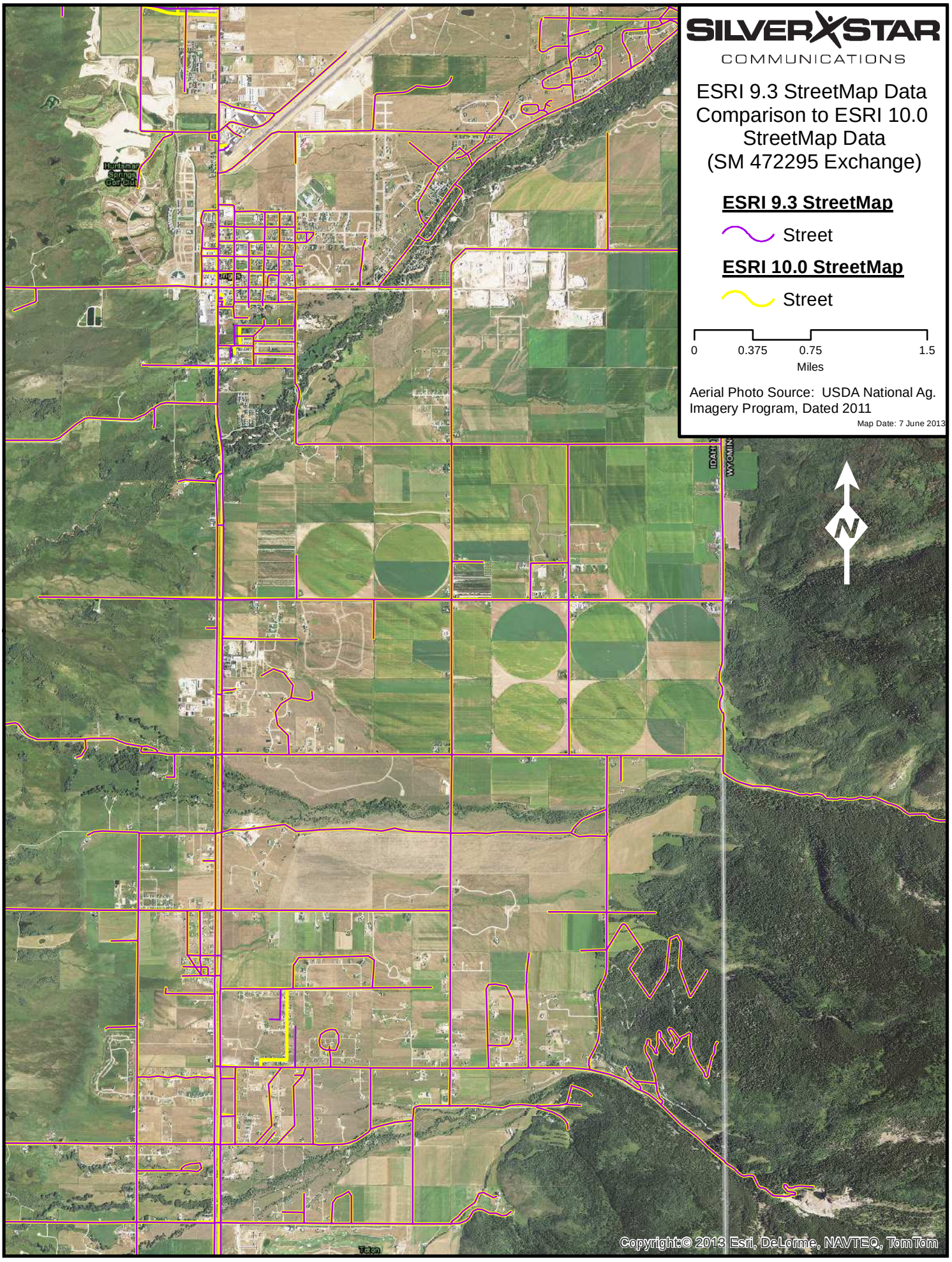

SILVERSTAR
COMMUNICATIONS
ESRI 9.3 StreetMap Data
Comparison to ESRI 10.0
StreetMap Data
(SM 472295 Exchange)
ESRI 9.3 StreetMap
Street
ESRI 10.0 StreetMap
Street
0
0.375
0.75
1.5
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2011
Map Date: 7 June 2013
Huntsman Springs Golf Club
IDAHO
WYOMING
N
Copyright© 2013 Esri, DeLorme, NAVTEQ, TomTom

EXHIBIT 2

Study Area 512295 StreetMAP mileage					Study Area 512295 TigerLINE mileage			
OBJECTID	CFCC	FREQUENCY	SUM_Road_M		OBJECTID	MTFCC	FREQUENC	SUM_Road_M
1	A21	154.00	47.85		1	S1200	1,426	55.69
2	A25	50.00	3.36		2	S1400	33,699	694.43
3	A30	24.00	6.52		3	S1500	2,516	65.30
4	A31	3.00	0.60		4	S1630	8	0.11
5	A40	803.00	209.32		5	S1640	35	0.24
6	A41	1,137.00	320.08		6	S1710	28	0.55
7	A50	7.00	4.55		7	S1740	1,271	20.43
8	A51	88.00	50.28		8	S1750	1,296	11.16
9	A60	1.00	0.11		9	S1780	187	1.91
10	A70	69.00	19.91					
11	A71	1.00	0.56					
12	A74	34.00	11.52					
		TOTAL	674.67				TOTAL	849.82

Study Area 472295 StreetMAP mileage					Study Area 472295 TigerLINE mileage			
OBJECTID	CFCC	FREQUENCY	SUM_Road_M		OBJECTID	MTFCC	FREQUENCY	SUM_Road_M
1	A21	245.00	33.40		1	S1100	52	0.24
2	A30	454.00	138.33		2	S1200	3,273	146.70
3	A31	38.00	11.29		3	S1400	131,406	2,625.73
4	A40	1,132.00	292.71		4	S1500	9,896	197.76
5	A41	4,369.00	1,331.01		5	S1710	318	9.73
6	A50	81.00	33.94		6	S1740	12,528	190.12
7	A51	132.00	61.56		7	S1750	114	0.84
8	A60	3.00	0.31		8	S1780	20	0.08
9	A61	3.00	0.04					
10	A70	534.00	183.86					
11	A74	243.00	78.40					
		TOTAL	2,164.85				Total	3,171.21

EXHIBIT 3

HowTo: CFCC code lookup table

Article ID:	11966
Software:	**ArcInfo Workstation** 8.0.1, 8.0.2, 8.1, 8.1.2, 8.2, 8.3, 9.0, 9.1, 9.2, 9.3, 9.3.1, 10 **ArcSDE** 8.0.1, 8.0.2, 8.1, 8.1.2, 8.2, 8.3, 9.0, 9.1, 9.2, 9.3, 9.3.1, 10, 10.1 **ArcGIS Server (10.0 and prior)** 9.0, 9.0.1, 9.1, 9.2, 9.3, 9.3.1, 10 **ArcGIS - ArcEditor** 8.1, 8.1.2, 8.2, 8.3, 9.0, 9.1, 9.2, 9.3, 9.3.1, 10 **ArcGIS - ArcInfo** 8.0.1, 8.0.2, 8.1, 8.1.2, 8.2, 8.3, 9.0, 9.1, 9.2, 9.3, 9.3.1, 10 **ArcIMS** 3.0, 3.1, 4.0, 4.0.1 **ArcGIS - ArcView** 8.1, 8.1.2, 8.2, 8.3, 9.0, 9.1, 9.2, 9.3, 9.3.1, 10 **ArcGIS for Desktop Advanced** 10.1 **ArcGIS for Desktop Standard** 10.1 **ArcGIS for Server** 10.1 **ArcGIS for Desktop Basic** 10.1
Platforms:	N/A

The U.S. Census Bureau's Census Feature Class Codes (CFCC) provide information on the classification of a feature. The Census Feature Class Codes (also called FCC) are used in many geodatasets. To display Census Feature Class Codes attributes, join the Census Feature Class Codes table to any table with FCC or CFCC as the common field.

Tele Atlas North America, Inc. provides some codes.

The table is located in ESRI Data & Maps media kits (since 2000) as part of the USA data. It is in dBASE (*.dbf) format prior to 2005 and SDC (*.sdc) format after 2004.

Question: What do the CFCC codes mean?

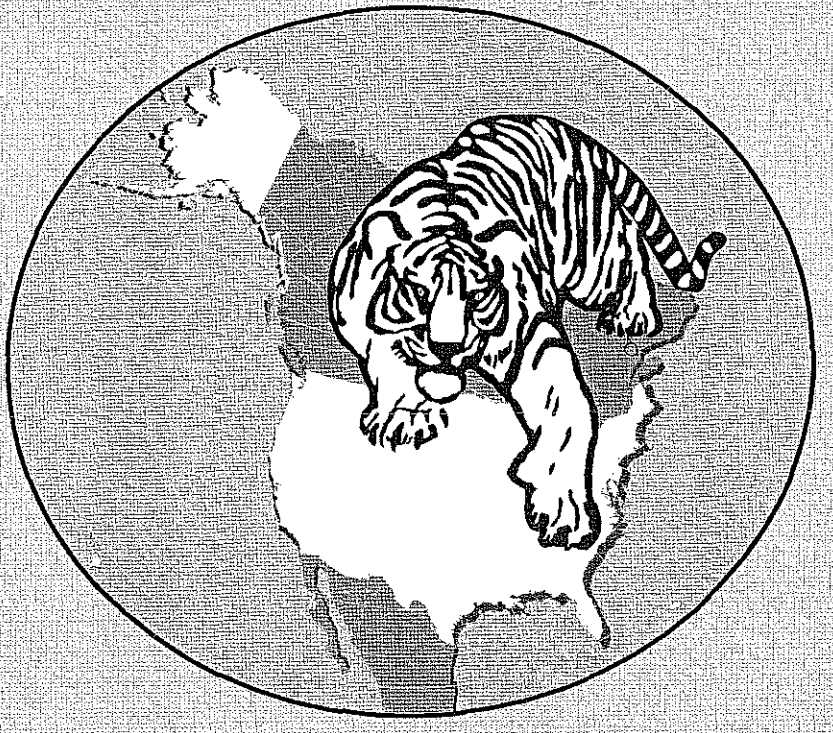
Answer: The codes are made up of an uppercase letter and a two-digit number followed by their one or two-line definition. The following information can also be found in the Census Feature Class Codes table. This table is located with the USA data sets under the census folder on the ESRI Data & Maps disks.

CFCC Description
A00 Road, major and minor categories unknown
A01 Road, unseparated
A02 Road, unseparated, in tunnel
A03 Road, unseparated, underpassing
A04 Road, unseparated, with rail line in center
A05 Road, separated
A06 Road, separated, in tunnel
A07 Road, separated, underpassing
A08 Road, separated, with rail line in center
A10 Primary road with limited access or interstate highway, major category
A11 Primary road with limited access or interstate highway, unseparated
A12 Primary road with limited access or interstate highway, unseparated, in tunnel
A13 Primary road with limited access or interstate highway, unseparated, underpassing
A14 Primary road with limited access or interstate highway, unseparated, with rail line in center
A15 Primary road with limited access or interstate highway, separated
A16 Primary road with limited access or interstate highway, separated, in tunnel
A17 Primary road with limited access or interstate highway, separated, underpassing
A18 Primary road with limited access or interstate highway, separated, with rail line in center
A20 Primary road without limited access, U.S. and state highway, major category
A21 Primary road without limited access, U.S. and state highways, unseparated
A22 Primary road without limited access, U.S. and state highways, unseparated, in tunnel

A23 Primary road without limited access, U.S. and state highways, unseparated, underpassing
A24 Primary road without limited access, U.S. and state highways, unseparated, with rail line in center
A25 Primary road without limited access, U.S. and state highways, separated
A26 Primary road without limited access, U.S. and state highways, separated, in tunnel
A27 Primary road without limited access, U.S. and state highways, separated, underpassing
A28 Primary road without limited access, U.S. and state highways, separated, with rail line in center
A30 Secondary and connecting road, state and county highways, major category
A31 Secondary and connecting road, state and county highways, unseparated
A32 Secondary and connecting road, state and county highways, unseparated, in tunnel
A33 Secondary and connecting road, state and county highways, unseparated, underpassing
A34 Secondary and connecting road, state and county highways, unseparated, with rail line in center
A35 Secondary and connecting road, state and county highways, separated
A36 Secondary and connecting road, state and county highways, separated, in tunnel
A37 Secondary and connecting road, state and county highways, separated, underpassing
A38 Secondary and connecting road, state and county highway, separated, with rail line in center
A40 Local, neighborhood, and rural road, city street, major category
A41 Local, neighborhood, and rural road, city street, unseparated
A42 Local, neighborhood, and rural road, city street, unseparated, in tunnel
A43 Local, neighborhood, and rural road, city street, unseparated, underpassing
A44 Local, neighborhood, and rural road, city street, unseparated, with rail line in center
A45 Local, neighborhood, and rural road, city street, separated
A46 Local, neighborhood, and rural road, city street, separated, in tunnel
A47 Local, neighborhood, and rural road, city street, separated, underpassing
A48 Local, neighborhood, and rural road, city street, separated, with rail line in center
A50 Vehicular trail, road passable only by four-wheel drive (4WD) vehicle, major category
A51 Vehicular trail, road passable only by 4WD vehicle, unseparated
A52 Vehicular trail, road passable only by 4WD vehicle, unseparated, in tunnel
A53 Vehicular trail, road passable only by 4WD vehicle, unseparated, underpassing
A60 Special road feature, major category used when the minor category could not be determined
A61 Cul-de-sac, the closed end of a road that forms a loop or turn around
A62 Traffic circle, the portion of a road or intersection of roads that form a roundabout
A63 Access ramp, the portion of a road that forms a cloverleaf or limited access interchange
A64 Service drive, road that provides access to businesses, facilities, and rest areas along limited-access highway
A65 Ferry crossing, the representation of a route over water that connects roads on opposite shores
A66 Ferry crossing, Passenger, Year Round
A68 Ferry Crossing, Vehicular, Seasonal
A69 Ferry Crossing, Vehicular, Year-Round
A70 Other thoroughfare, major category used when the minor category could not be determined
A71 Walkway, nearly level road for pedestrians, usually unnamed
A72 Stairway, stepped road for pedestrians, usually unnamed
A73 Alley, road for service vehicles, usually unnamed, located at the rear of buildings and property
A74 Driveway or service road, usually privately owned and unnamed, used as access to residences, etc., or as access to logging areas, etc.
A75 Road, Parking Area
B00 Railroad, major and minor categories unknown
B01 Railroad track, not in tunnel or underpassing
B02 Railroad track, in tunnel
B03 Railroad track, underpassing
B10 Railroad main track, major category
B11 Railroad main track, not in tunnel or underpassing
B12 Railroad main track, in tunnel
B13 Railroad main track, underpassing
B20 Railroad spur track, major category
B21 Railroad spur track, not in tunnel or underpassing
B22 Railroad spur track, in tunnel
B23 Railroad spur track, underpassing
B30 Railroad yard track, major category
B31 Railroad yard track, not in tunnel or underpassing
B32 Railroad yard track, in tunnel
B33 Railroad yard track, underpassing
B40 Railroad ferry crossing, route over water used by ships carrying train cars to connecting railroads on opposite shores, major category
B42 Subway or Metroline

TIGER/Line® Shapefiles 2010

Technical Documentation



U S C E N S U S B U R E A U

Helping You Make Informed Decisions

U.S. Department of Commerce
Geography Division
U.S. Census Bureau

MTFCC	FEATURE CLASS	SUPERCLASS	POINT	LINEAR	AREAL	FEATURE CLASS DESCRIPTION
L4125	Cliff/Escarpment	Miscellaneous Linear Features	N	Y	N	A very steep or vertical slope. [including bluff, crag, head, headland, nose, palisades, precipice, promontory, rim and rimrock]
L4130	Point-to-Point Line	Miscellaneous Linear Features	N	Y	N	A line defined as beginning at one location point and ending at another, both of which are in sight.
L4140	Property/Parcel Line (Including PLSS)	Miscellaneous Linear Features	N	Y	N	This feature class may denote a nonvisible boundary of either public or private lands (e.g., a park boundary) or it may denote a Public Land Survey System or equivalent survey line.
L4165	Ferry Crossing	Miscellaneous Linear Features	N	Y	N	The route used to carry or convey people or cargo back and forth over a waterbody in a boat.
R1011	Railroad Feature (Main, Spur, or Yard)	Rail Features	N	Y	N	A line of fixed rails or tracks that carries mainstream railroad traffic. Such a rail line can be a main line or spur line, or part of a rail yard.
R1051	Carline, Streetcar Track, Monorail, Other Mass Transit Rail	Rail Features	N	Y	N	Mass transit rail lines (including lines for rapid transit, monorails, streetcars, light rail, etc.) that are typically inaccessible to mainstream railroad traffic and whose tracks are not part of a road right-of-way.
R1052	Cog Rail Line, Incline Rail Line, Tram	Rail Features	N	Y	N	A special purpose rail line for climbing steep grades that is typically inaccessible to mainstream railroad traffic. Note that aerial tramways and streetcars (which may also be called "trams") are accounted for by other MTFCCs and do not belong in R1052.
S1100	Primary Road	Road/Path Features	N	Y	N	Primary roads are generally divided, limited-access highways within the interstate highway system or under state management, and are distinguished by the presence of interchanges. These highways are accessible by ramps and may include some toll highways.
S1200	Secondary Road	Road/Path Features	N	Y	N	Secondary roads are main arteries, usually in the U.S. Highway, State Highway or County Highway system. These roads have one or more lanes of traffic in each direction, may or may not be divided, and usually have at-grade intersections with many other roads and driveways. They often have both a local name and a route number.

MTFCC	FEATURE CLASS	SUPERCLASS	POINT	LINEAR	AREAL	FEATURE CLASS DESCRIPTION
S1400	Local Neighborhood Road, Rural Road, City Street	Road/Path Features	N	Y	N	Generally a paved non-arterial street, road, or byway that usually has a single lane of traffic in each direction. Roads in this feature class may be privately or publicly maintained. Scenic park roads would be included in this feature class, as would (depending on the region of the country) some unpaved roads.
S1500	Vehicular Trail (4WD)	Road/Path Features	N	Y	N	An unpaved dirt trail where a four-wheel drive vehicle is required. These vehicular trails are found almost exclusively in very rural areas. Minor, unpaved roads usable by ordinary cars and trucks belong in the S1400 category.
S1630	Ramp	Road/Path Features	N	Y	N	A road that allows controlled access from adjacent roads onto a limited access highway, often in the form of a cloverleaf interchange. These roads are unaddressable.
S1640	Service Drive usually along a limited access highway	Road/Path Features	N	Y	N	A road, usually paralleling a limited access highway, that provides access to structures along the highway. These roads can be named and may intersect with other roads.
S1710	Walkway/Pedestrian Trail	Road/Path Features	N	Y	N	A path that is used for walking, being either too narrow for or legally restricted from vehicular traffic.
S1720	Stairway	Road/Path Features	N	Y	N	A pedestrian passageway from one level to another by a series of steps.
S1730	Alley	Road/Path Features	N	Y	N	A service road that does not generally have associated addressed structures and is usually unnamed. It is located at the rear of buildings and properties and is used for deliveries.
S1740	Private Road for service vehicles (logging, oil fields, ranches, etc.)	Road/Path Features	N	Y	N	A road within private property that is privately maintained for service, extractive, or other purposes. These roads are often unnamed.
S1750	Internal U.S. Census Bureau use	Road/Path Features	N	Y	N	Internal U.S. Census Bureau use.
S1780	Parking Lot Road	Road/Path Features	N	Y	N	The main travel route for vehicles through a paved parking area.
S1820	Bike Path or Trail	Road/Path Features	N	Y	N	A path that is used for manual or small, motorized bicycles, being either too narrow for or legally restricted from vehicular traffic.
S1830	Bridle Path	Road/Path Features	N	Y	N	A path that is used for horses, being either too narrow for or legally restricted from vehicular traffic.
S2000	Road Median	Road/Path Features	N	N	Y	The unpaved area or barrier between the carriageways of a divided road.

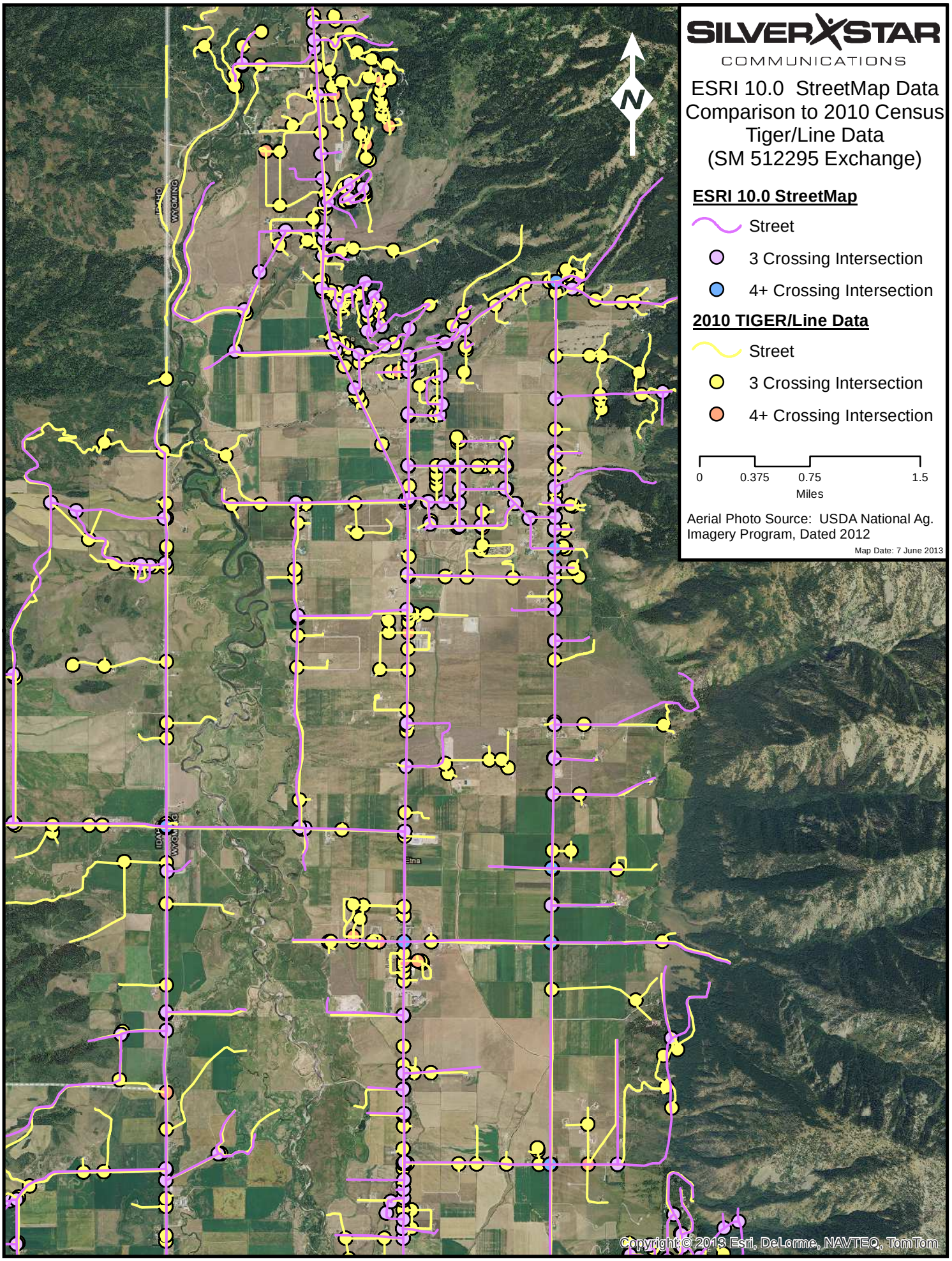
MTFCC	FEATURE CLASS	SUPERCLASS	POINT	LINEAR	AREAL	FEATURE CLASS DESCRIPTION
P0001	Nonvisible Linear Legal/Statistical Boundary	Bounding Edges	N	Y	N	A legal/statistical boundary line that does not correspond to a shoreline or other visible feature on the ground.
P0002	Perennial Shoreline	Bounding Edges	N	Y	N	The more-or-less permanent boundary between land and water for a water feature that exists year-round.
P0003	Intermittent Shoreline	Bounding Edges	N	Y	N	The boundary between land and water (when water is present) for a water feature that does not exist year-round.
P0004	Other non-visible bounding Edge (e.g., Census water boundary, boundary of an areal feature)	Bounding Edges	N	Y	N	A bounding Edge that does not represent a legal/statistical boundary, and does not correspond to a shoreline or other visible feature on the ground. Many such Edges bound area landmarks, while many others separate water features from each other (e.g., where a bay meets the ocean).

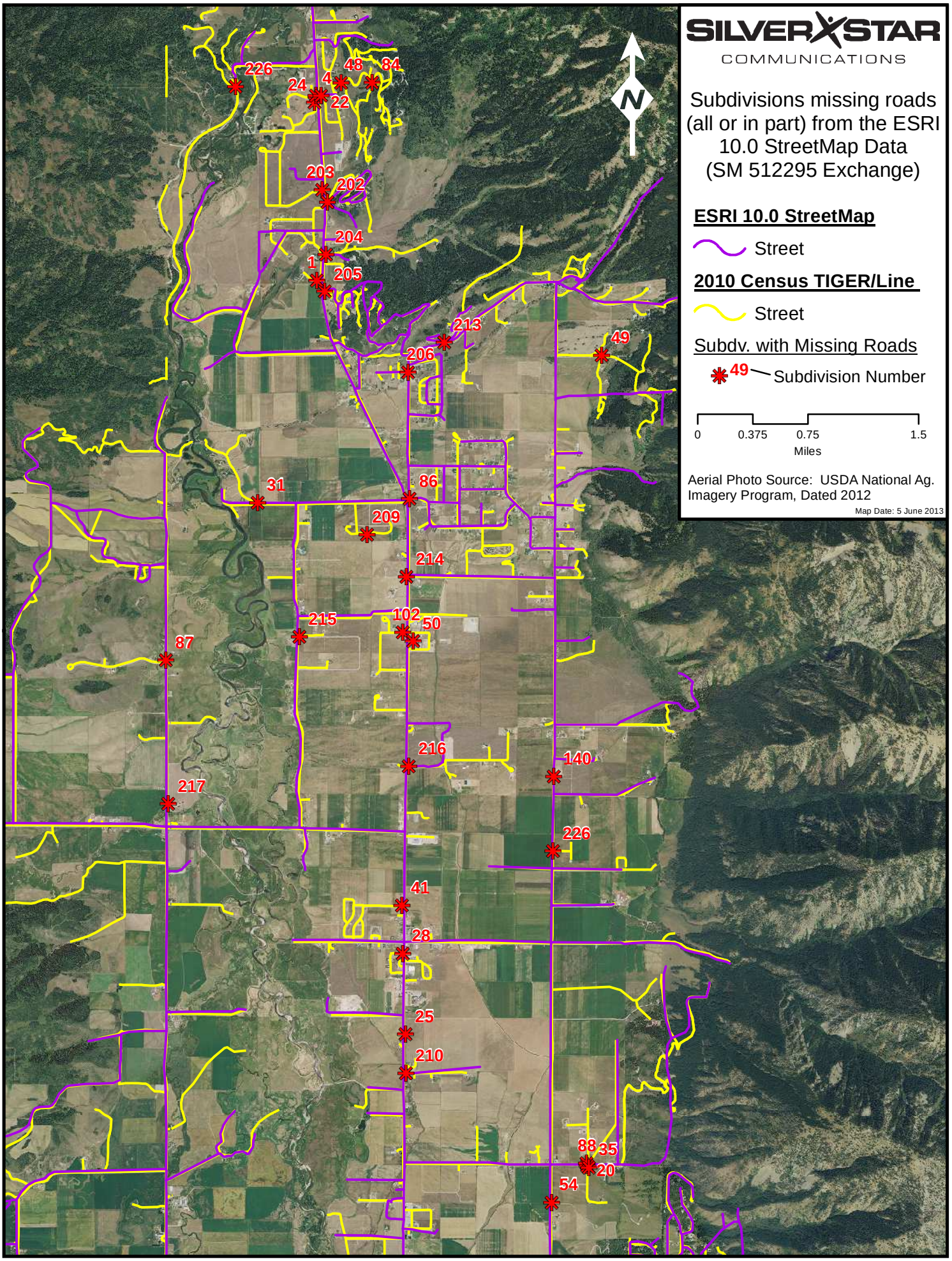
EXHIBIT 4

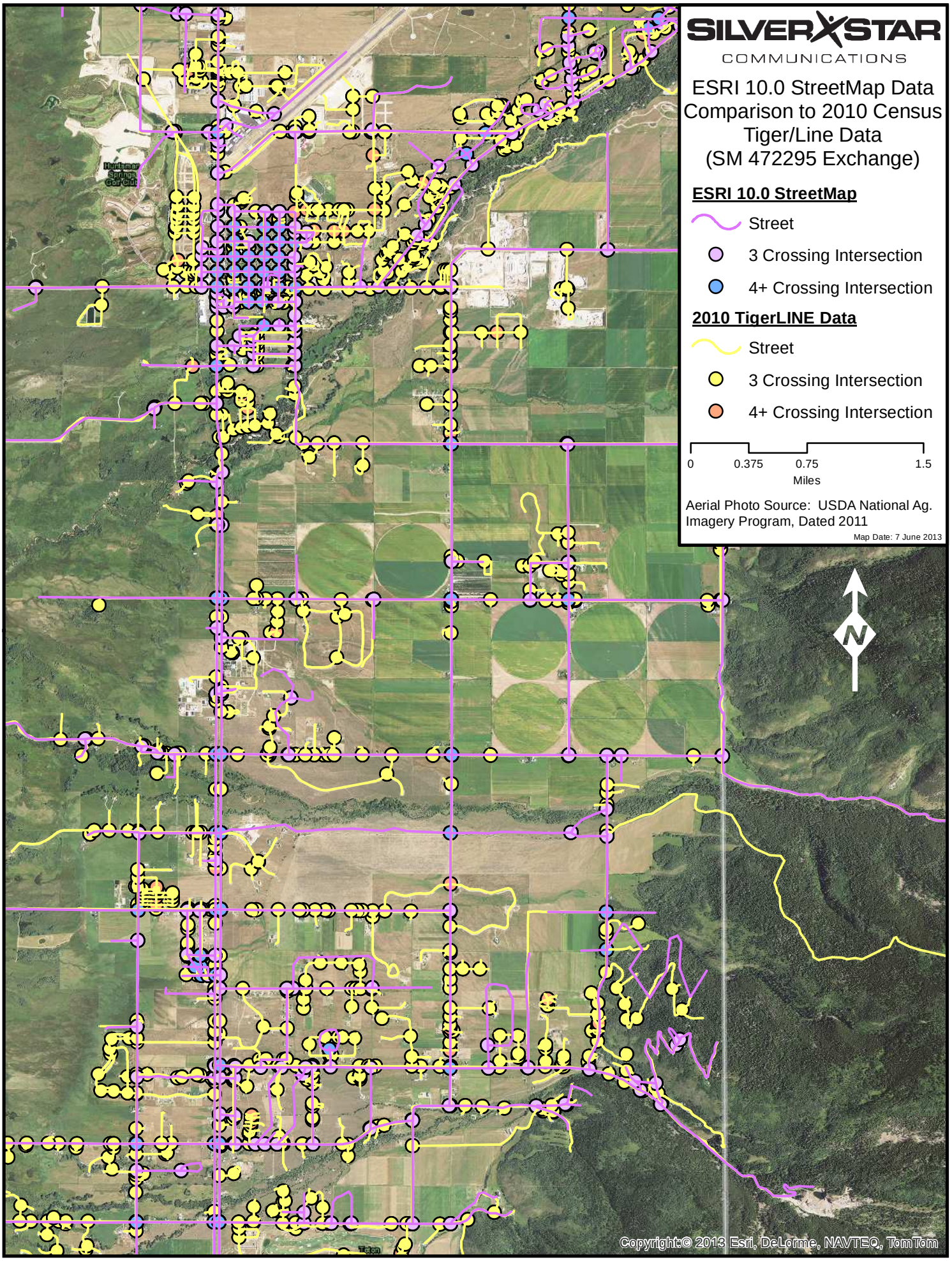
Please see hand-delivery CD-ROM attachment

(Files too large to be submitted via ECFS)

EXHIBIT 5


SILVERXSTAR
COMMUNICATIONS
ESRI 10.0 StreetMap Data
Comparison to 2010 Census
Tiger/Line Data
(SM 512295 Exchange)
ESRI 10.0 StreetMap
Street
3 Crossing Intersection
4+ Crossing Intersection
2010 TIGER/Line Data
Street
3 Crossing Intersection
4+ Crossing Intersection
0
0.375
0.75
1.5
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2012
Map Date: 7 June 2013
N
WYOMING
IDAHO
Etna
Copyright © 2013 Esri, DeLorme, NAVTEQ, TomTom


SILVERXSTAR
COMMUNICATIONS
Subdivisions missing roads (all or in part) from the ESRI 10.0 StreetMap Data (SM 512295 Exchange)
ESRI 10.0 StreetMap
Street
2010 Census TIGER/Line
Street
Subdv. with Missing Roads
49 Subdivision Number
0 0.375 0.75 1.5
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2012
Map Date: 5 June 2013
N
226
48
84
24
4
22
203
202
204
1
205
213
49
206
31
86
209
214
215
102
50
87
216
140
217
226
41
28
25
210
88
35
20
54


SILVERSTAR
COMMUNICATIONS
ESRI 10.0 StreetMap Data
Comparison to 2010 Census
Tiger/Line Data
(SM 472295 Exchange)
ESRI 10.0 StreetMap
Street
3 Crossing Intersection
4+ Crossing Intersection
2010 TigerLINE Data
Street
3 Crossing Intersection
4+ Crossing Intersection
0
0.375
0.75
1.5
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2011
Map Date: 7 June 2013
N
Huntsman Springs Golf Club
Tetonia
Copyright© 2013 Esri, DeLorme, NAVTEQ, TomTom

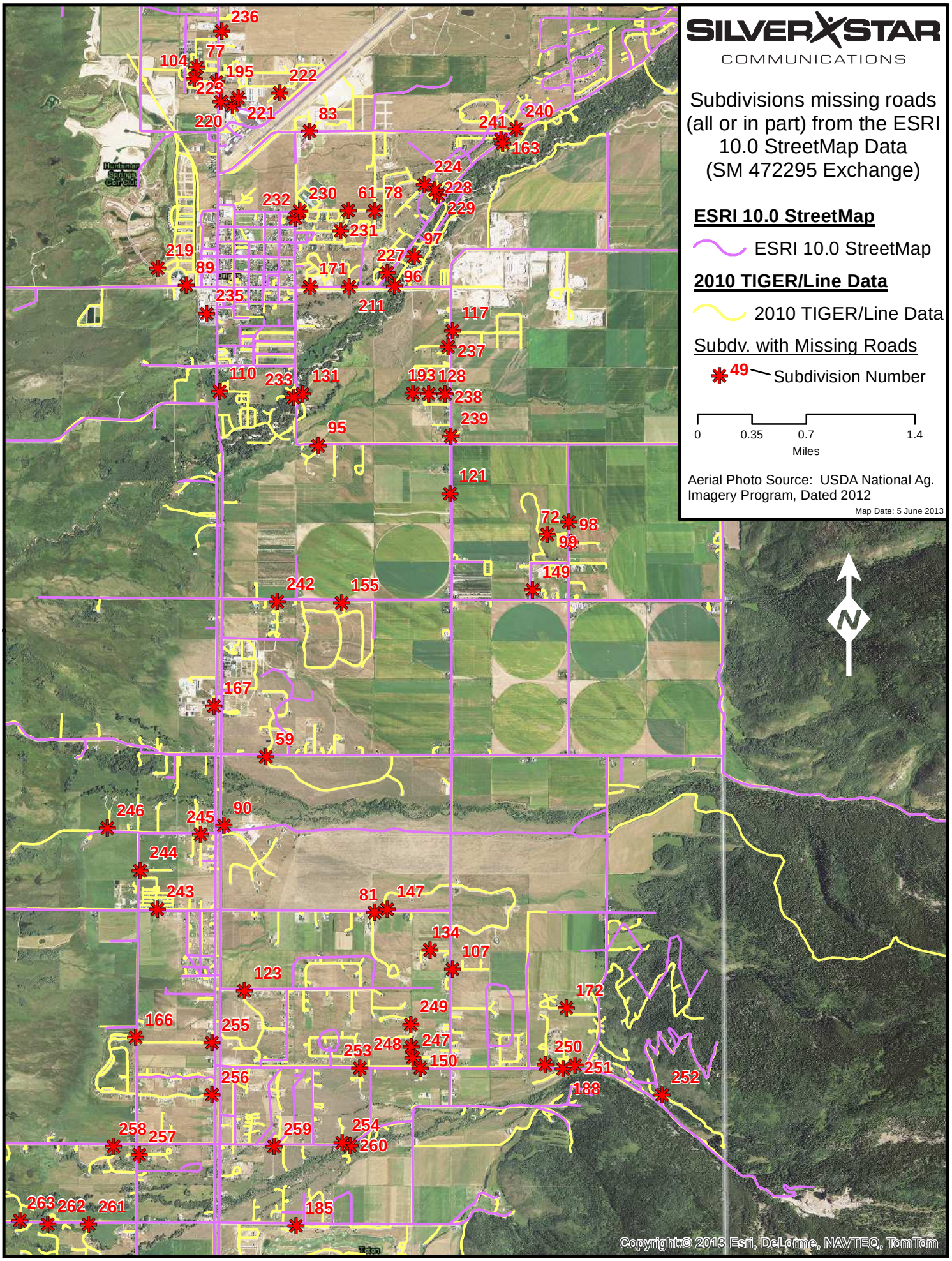

SILVERSTAR COMMUNICATIONS
Subdivisions missing roads (all or in part) from the ESRI 10.0 StreetMap Data (SM 472295 Exchange)
ESRI 10.0 StreetMap
ESRI 10.0 StreetMap
2010 TIGER/Line Data
2010 TIGER/Line Data
Subdv. with Missing Roads
49 Subdivision Number
0 0.35 0.7 1.4
Miles
Aerial Photo Source: USDA National Ag. Imagery Program, Dated 2012
Map Date: 5 June 2013
N
236 77 104 195 222 223 221 220 83 240 241 163 224 228 229 232 230 61 78 231 97 227 96 219 89 171 235 211 117 237 110 233 131 193 128 238 239 95 121 72 98 99 149 242 155 167 59 246 245 90 244 243 81 147 134 107 123 172 249 166 255 253 248 247 150 250 251 252 188 256 258 257 259 254 260 263 262 261 185
Huntsman Springs Golf Club
Copyright© 2013 Esri, DeLorme, NAVTEQ, TomTom

EXHIBIT 6

Ref #	Subdivision Name	exchange
1	Trail Creek	Freedom
2	Hay Stack Mountain Ranch	Freedom
3	Mckim sub Contract	Freedom
4	Salt River Cove	Alpine
5	JDB ASSC	Alpine
6	Bedford Block 12	Freedom
7	Blaze Estates	freedom
8	Norbess Estates	Freedom
9	Bald Mountain Trails	Freedom
10	State Line Estates	Freedom
11	Bedford Plat 2	Freedom
12	Country Vista	Freedom
13	Palisades Pines	Alpine
14	South Fork Ranch	Irwin
15	River View Ranchettes	Freedom
16	Double K Meadows	Alpine
17	Indian Creek Subdivision	Alpine
18	Sleepy J Cabin Subdivision	Irwin
19	Brierwood Estates	Alpine
20	Elk Ridge @ Henry's Mountain	Freedom
21	Stewart Country Club Estates	Freedom
22	Trail Ridge	Alpine
23	Dan Tyler Subdivision	freedom
24	Salt River Cover phase 2&3	Alpine
25	Sherwood Subdivision	Freedom
26	Stewart Country Club Estates phase 2	Freedom
27	Bear Hollow	Freedom
28	Clear View Village	Alpine
29	Morgan Meadows	freedom
30	Star Valley Ranch RV	Freedom
31	Double L Ranch	freedom
32	Packsaddle Subdivision	Tetonia
33	Aspens Ridge Meadows Estates	Alpine
34	Stage Horn Subdivision	Freedom
35	Elk Ridge	Irwin
36	Swan Springs	Alpine
37	Alpine Village	Alpine
38	Bedford Block 5 phase 3 & 4	Freedom
39	Paul addition town of Thayne	Freedom
40	Star Valley Ranch Plat 5	Freedom
41	Etna Village Estates Phase I	Freedom
42	River Bend Meadows	Alpine
43	Aspens at Clark Lane	freedom
44	Bedford Lot 2 Block 4	freedom
45	Rustic Ranch at Swan Valley Phase I	Irwin
46	Snake River Junction	Alpine
47	High Country Estates	Alpine
48	Trail Ridge phase 2	Alpine
49	Stewart Creek Subdivison	Freedom
50	Etna Trade Park Subdivison	Freedom
51	Alpine Junction	Freedom
52	Rainbow Meadows Subdivision Phase II	Freedom
53	The Palisades Bench	Irwin
54	Stonefly Ranch Phases I & II	Freedom
55	Deer Track Ranch Division #1	freedom
56	Suter Canyon Subdivision Phase I	Freedom
57	North Forty	freedom
58	Grouse Creek Ranch	Freedom
59	Teton Saddleback Vistas Subdivision Phase II	Driggs
60	Cedar Springs meadows	Freedom
61	The Settlements Subdivision Phase II	Victor

62	Calico Sky Phase IV Subdivision	Driggs
63	West Meadows Subdivision	Freedom
64	Timberline Ranch Subdivision	Victor
65	River Rim Ranch	tetonia
66	The Vistas at the Water's Edge	Tetonia
67	AUER FAMILY PROPERTY SUBDIVISION	TTNA
68	Golf Vista Phase III Subdivision	Freedom
69	Obsidian Meadows	Irwin
70	Mountainside Village Phase IIa	Victor
71	Overlook at Fox Creek Phase I	Driggs
72	Darby Ranch Subdivision	Driggs
73	The Vistas	Tetonia
74	Redtail Development	Freedom
75	West Ridge Subdivision	Tetonia
76	Chilly Water Subdivision	Freedom
77	Pioneer Subdivision	Driggs
78	Shoshoni Plains Phase 1-4 Subdivision	Driggs
79	Appaloosa Ridge PUD	Tetoina
80	Painted Skies	Victor
81	Barrel Roll Subdivision	Driggs
83	Alta View Airport Addition Phase I	Driggs
84	Shadow Dancer Subdivision	Freedom
85	Meadows Subdivision	Freedom
86	Nordic Ranchs phase 9-13	freedom
87	Black Mountain Subdivision	Freedom
88	Henry Mountain Subdivision	Freedom
89	Hunstman Springs	Driggs
90	Teton Saddleback Vistas Subdivision Phase I	Driggs
91	Kibby Parkway Sub	Alpine
92	Caribou Flat Estates	Freedom
93	Salt River Ranch	Freedom
94	Alpine Meadows Subdivision	Victor
95	ALPINE VIEW SUB	DRGS
96	ASPEN POINTE	Driggs
97	ASPEN POINTE PHASE II B	DRGS
98	ASPEN VIEW SUBDIVISION 1	DRGS
99	ASPEN VIEW Subdivision II	DRGS
100	Black Pine Subdivision	TTNA
101	Blue Indain Subdivision Phase I	DRGS
102	BUCKSKIN Crossing SUBDIVISION	VCTR
103	BUDGE LAND SPLIT	VCTR
104	BUFFALLO Junction subdivision	Driggs
105	CACHE TRACTS SUB/LAND SPLIT	TTNA
106	Coyotee Hills Subdivision	Freedom
107	CARSON'S CROSSING	VCTR
108	CREEK BOTTOM ESTATES	TTNA
109	Strawberry Hills Subdivision	Freedom
110	CREEKSIDE PHASE 1-5	DRGS
111	Palisades Creek Ranch	Irwin
112	Palisades Creek Estates	Irwin
113	DALLEY ROSE SUBDIVISION	DRGS
114	D-DIAMOND RANCH SUB FINISH	VCTR
115	SURPRISE VALLEY	Tetonia
116	DOUBLE F SUBDIVISION	TTNA
117	DRIGGS CENTRE BUSINESS PARK	DRGS
118	DRY CREEK RANCH	Freedom
119	DRY RIDGE ESTATES	Freedom
120	ELK VIEW	VCTR
121	FALL CREEK RESERVE SUBDIVISION	DRGS
122	STILLWATER RANCH	Driggs
123	FOX CREEK VILLAGE PHASE II	VCTR
124	FRONTIER RANCHES	Alpine

125	GOLF VISTA FIBER PH 1	VCTR
126	GOLF VISTA PHASE II	VCTR
127	GRAND TETON RESERVE	Driggs
128	GRASSEY CREEK	Driggs
129	GREEN MEADOWS	Freedom
130	LEIGH MEADOWS PUD	leigh
131	HORSEHAVEN SUBDIVISION	DRGS
132	HORSESHOE MEADOWS PUD	DRGS
133	LANDSTRUM ACRES	Irwin
134	LAZY V RANCH	Victor
135	LUCK E LEVEN ESTATES	TTNA
136	LUPINE MEADOWS SUBDIVISION	DRGS
137	MADELLINE MEADOWS PLACE MAIN	TTNA
138	MAJESTIC MOUNTAIN RANCH PH 1	Tetonia
139	MAJESTIC MTN PHASE II & III	TTNA
140	MOUNTAIN SHADOWS PASE II	Alpine
141	MOUNTAIN VALLEY ESTATES	Alpine
142	MOUNTAINSIDE VILLAGE FEED PHASE	VCTR
143	OVERLOOK AT FOX CREEK PHS II	VCTR
144	PARADISE SPRINGS	DRGS
145	PEACOCK FLATS-GOLDEN RIDGE FEED & MA	TTNA
146	PINE CREEK RANCHES	victor
147	CHERRY GROVE	DRGS
148	CROOKED CREEK	TTNA
149	DARBY TOWNSITE	DRGS
150	Deer Ridge Subdivision	VCTR
151	GOLF VISTA PH III	VCTR
152	HASTINGS FARM PHASE II	DRGS
153	HAYFIELD SUB	TTNA
154	HIDDEN WATERS PUD	VCTR
155	IRONWOOD PUD PH I, II, III	DRGS
156	MOUNTAINSIDE VILLAGE PH II CARRYOVER 08	VCTR
157	NORTH LEIGH CREEK RANCH	TTNA
158	OBCIDIAN MEADOWS	TTNA
159	PLACE CABLE VALLEY CENTRE APTS	DRGS
160	PONDS SUB FIBER-PHASE 1A	Victor
161	Poulsen Subdivision	ALTA
162	RAMMEL SUBDIVISION	TTNA
163	RED TAIL PUD FIBER CARRYOVER 08	DRGS
164	RENDEVZOUS MEADOWS	VCTR
165	RESERVE AT BADGER CR	TTNA
166	RIVER MEADOWS PH 1-3	VCTR
167	ROCKY RD COMMERCIAL SUB	Driggs
168	ROY MOULTON LAW OFFICE NEW KEY SYSTEM	DRGS
169	SADDLE BLUFF PUD	TTNA
170	SAGE GROUSE MEADOWS SUB	Freedom
171	SAGEWOOD EST PH I	DRGS
172	SHIRE SUBDIVISION	VCTR
174	SNOWCREST PUD	Tetonia
175	SOUTH LEIGH CREEK RANCHES	leigh
176	SOUTHERN SKIES SUB-DIVISION	Victor
177	SPRING CREEK FARMS PHASE II	Driggs
178	SPRING HOLLOW II	Tetonica
180	TARGHEE HILL ESTATES	Driggs
181	TARGHEE RIDGE ESTATES	Driggs
182	TETON AIR RANCH	Driggs
183	TETON CREEK RESORT PH. 2	Driggs
184	TETON MEADOWS	Driggs
185	TETON RESERVE PH1-5	Victor
186	TETON SPRINGS	Victor
187	TETON VEIW ESTATES-SAGE FLATS	Victor
188	THE OVERLOOK AT FOX CR	Victor

189	THE PONDS PHASE I	Victor
192	TRAIL CREEK TOWNHOMES PHASE II	Victor
193	TRENT DAYTON SUB	Driggs
194	TRL CREEK TOWNHOMES PH III	Victor
195	VALLEY CENTRE BLOCK	Driggs
196	VILLAGE AT TETON CREEK RESORT CARRYOVER 08	Driggs
197	VISTA AT THE WATERS EDGE CARRYOVER 08	Tetonia
201	River Ranch	Alpine
202	Broken Wheel Subdivision	Alpine
203	Long View Ranch	Alpine
204	Dell Creek Ranch	Freedom
205	Aspen Hill Sub	Alpine
206	Misty Meadows	Freedom
209	Buffallo Run	Freedom
210	Windy Acres	Freedom
211	Mountain Vista	Driggs
213	Ridgecrest Estates	Alpine
214	Waterline Road Subdivision	Freedom
215	Royal Meadows	Freedom
216	Rock Farm Road Subdivision	Freedom
217	Jacknife Creek Ranch	Freedom
218	Tincup meadows	Freedom
219	Huntsman Springs 2	Driggs
220	Hatch	Driggs
221	Flying Saddle Sub	Driggs
222	Flying T Subdivision	Driggs
223	Driggs Fly-in Parkway	Driggs
224	Cobble Crest Subdivision	Driggs
225	Alpine Retreat Subdivision	Alpine
226	Mountain Vista	Alpine
227	Aspen Meadows Subdivision	Driggs
228	Powder Valley PUD	Driggs
229	Shadow Brook Townhouses	Driggs
230	Calico Sky Phase 1-4 Subdivision	Driggs
231	Wallice Way phase 2	Driggs
232	Scott Green Subdivision	Driggs
233	Greg Subdivision	Driggs
234	Windy Owl Subdivision	Driggs
235	300 main Subdivision	Driggs
236	Teton Peaks View	Driggs
237	Fox Run Subdivision	Driggs
238	Grassey Meadows	Driggs
239	Twicheco Subdivision	Driggs
240	Ski Hill Ranch Subdivsion	Driggs
241	Miller Ranch Subdivision	Driggs
242	Moutian Meadows Subdivision	Driggs
243	Valley Vista Estates	Driggs
244	Nethercott Acres	Driggs
245	Twinspruce Subdivision	Driggs
246	Meadow View Estates	Driggs
247	Matheson Sage Acres	Victor
248	Crest View Estates Sub	Victor
249	Pinical Subdivision	Victor
250	Windmermere Estates Subdivision	Victor
251	Hamstead Subdivision	Victor
252	part of Shooting Star Sub phase 1	Victor
253	Ski Meister Subdivision	Victor
254	Lockspur Meadow Subdivision	Victor
255	Peak View Estates	Victor
256	Thistle Creek Division 2	Victor
257	Fox Creek Estates	Victor
258	Cottonwood Shadows subdivision	Victor

259	Horizon Park Ranch Subdivision	Victor
260	27 East 550 South Subdivision	Victor
261	Fox Meadows Subdivision	Victor
262	Fox Springs PUD	Victor
263	The Roost	Victor
264	Freedom Ridge Subdivision	Freedom
265	Rocky Point Bus. Park	Freedom
266	Hidden Creek Subdivision	Freedom
267	Robert Point Commercial Park	Freedom
268	Double Eagle Ranch	Freedom
269	Rayco Ranch Subdivision	Freedom
270	Eagle View Estates	Irwin
271	Lott Subdivision	Irwin
272	Grassy Banks	Irwin
273	Pine View Acres	Irwin
274	Jackalope Drive	Irwin
275	Wagon Wheel Ranch	Irwin
276	Circle J	Irwin
277	Flat Iron	Irwin
278	Bald Mountain Ceders	Irwin
279	Rainey Creek Meadows	Irwin
280	High 40 Ranch Subdivision	Irwin
281	Garden Creek	Irwin
282	Maple Grove	Irwin
283	Sleepy Meadows Plat A	Freedom
284	Grand Targhee Ski Ranches	Tetoinia
285	Summer Breige	Tetoinia
286	Dry Ridge Phase 3	Tetoinia
287	Gee Subdivision	Tetoinia
289	Gooseberry Subdivision	Tetoinia
290	Leigh Creek Estates	Tetoinia
291	Wild Horse Drive	Tetonia
292	Trouts Ranch	Tetonia
293	Perfect Drift	Tetoinia
294	Dream Catcher	Tetoinia
295	Los Pinos	Tetoinia
296	sage Creek	Tetoinia
297	South Fork Pines	Irwin
298	Alpine Meadows	Alpine

EXHIBIT 6

2 page Excerpt from
HCLSGeospatialWorkflow2012_05_31.doc

3.4.4. Used the ArcGIS Summary Statistics tool to sum Housing units (HOUSING10 attribute) of all Census Blocks to generate the number of housing units in the OcnSt polygon
3.4.5. Summed the values up to the study area level using the OcnSt-Study area cross reference published at http://transition.fcc.gov/wcb/iatd/neca.html.

3.5. Calculating PctUrban

Pcturban is the percentage of housing units in the study area that are in urban areas (the US Census Bureau's urbanized and urban clusters – URL below). "Urban Areas" layer comes from http://www2.census.gov/cgi-bin/shapefiles2009/national-files. Documentation on the urban areas can be found here: http://www.census.gov/geo/www/ua/urbanruralclass.html.

The calculation process used by Commission staff follows

3.5.1. Used the ArcGIS Clip tool to clip urban areas to the OcnSt polygon
3.5.2. Used ArcGIS Feature to Point tool to create a point data set generated from the representative locations of 2010 census blocks. In that tool, Commission staff used the "inside" option to force the census block centroids to be inside the census block.
3.5.3. Used the ArcGIS Clip tool to clip census block centroids to urban area polygons (from section 3.5.1)
3.5.4. Used the ArcGIS Summary Statistics tool to sum Housing units (HOUSING10 attribute) of all Census Blocks to generate the number of housing units in urban area polygons
3.5.5. Summed the values from all urban area polygons up to the study area level using the OcnSt-Study area cross reference published at http://transition.fcc.gov/wcb/iatd/neca.html.
3.5.6. Divided the sum by the number of the Total housing units (section 3.4) in the study area.

3.6. Calculating Roadmiles

Roadmiles is the number of road miles within the study area. The calculation process follows below. All road types were included from the following data sets. With the exception of study areas in US territories, the street layer of the esri street maps were used for all study areas. Documentation: http://resources.arcgis.com/content/community-maps/street-map

For study areas in American Samoa and Guam, Commission staff used the roads layer from Census tiger files. The Tiger files are available at http://www.census.gov/cgi-bin/geo/shapefiles2010/main.

The calculation process used by Commission staff follows:

3.6.1. Commission staff wrote a Python script to execute the following geoprocessing steps
3.6.2. Used the ArcGIS Clip tool to clip road segments to the OcnSt polygon
3.6.3. Used the ArcGIS function Calculate Geometry to calculate road length in miles
3.6.4. Used the ArcGIS Summary Statistics tool to sum road miles of all road segments in the OcnSt polygon

3.6.5. Summed the road miles up to the study area level using the OcnSt-Study area cross reference published at http://transition.fcc.gov/wcb/iatd/neca.html.

3.7. Calculating Roadcrossings

Roadcrossings is the number of road crossings within the study area. Each road intersection should have 3 or more road crossings

The calculation process used by Commission staff follows:

3.7.1. Commission staff wrote a Python script to execute the following geoprocessing steps
3.7.2. Used the ArcGIS Feature Vertices to Points tool to calculate all potential road crossings in each OcnSt polygon
3.7.3. Used the ArcGIS Intersect tool to calculate all potential road intersections
3.7.4. Used the ArcGIS Frequency tool to calculate number of road crossings for each road intersection
3.7.5. Saved road crossings of all real road intersections which have 3 or more road crossings
3.7.6. Used the ArcGIS Clip tool to clip the road crossings to the OcnSt polygon
3.7.7. Used the ArcGIS Summary Statistics tool to sum road crossings of all road intersections
3.7.8. Summed the road crossings up to the study area level using the OcnSt-Study area cross reference published at http://transition.fcc.gov/wcb/iatd/neca.html.

3.8. Calculating Streamcrossings

Streamcrossings is the number of road-stream crossings within the study area. The NHDFlowline layer of the National Hydrography Dataset (NHD) was used for all study areas. Documentation: http://nhd.usgs.gov/index.html.

The calculation process used by Commission staff follows:

3.8.1. Commission staff wrote a Python script to execute the following geoprocessing steps
3.8.2. Used the ArcGIS Intersect tool to locate all road-stream crossings in each OcnSt polygon
3.8.3. Used the ArcGIS Clip tool to clip the road-stream crossings to the OcnSt polygon
3.8.4. Used the ArcGIS Summary Statistics tool to compute total number of road-stream crossings
3.8.5. Summed the stream crossings up to the study area level using the OcnSt-Study area cross reference published at http://transition.fcc.gov/wcb/iatd/neca.html.

3.9. Calculating Climate

Climate is the weighted average climate index (based on USDA's plant hardiness index) along the roads in the study area, weighted by the length of the road segment. For each road segment, determine the plant hardiness value, then use a look up table to identify the climate index value for the given hardiness value, and multiply climate index value by the length of the road. Then sum all these values and divide that sum by total road miles in the study area.

The calculation process used by Commission staff follows:

EXHIBIT 7

Hi Kevin,

Just to check, what version of ArcGIS is being used for the analysis and what are you currently using for road data? The road data we are using is StreetMap that came with the install discs for ArcGIS - I will double check to confirm the version. We can not provide the extracted roads as it would be a license violation.

Also we cannot provide the Python script we used without legal/managerial approval. However, the process to calculate the road crossings can be performed using the ArcGIS processing tools outlined in the procedural document. The reason we scripted it was for efficiency as we had to process the entire country. When checking a few study areas, it should be able to be performed manually. Is there a particular step that is causing problems?

Best regards,
John

_____

From: Kevin Lewis [klewis@silverstar.net]
Sent: Friday, November 09, 2012 6:47 PM
To: John Emmett
Subject: Silver Star Communications Study Areas Road Crossings Data

John,
We are having trouble reconciling the Road Crossings and intersections using the data we have. Is it possible to obtain a copy of the python script used to calculate road miles and crossings? Also when we use the link shown in the Geospatial data Creation documentation for Street-map(http://resources.arcgis.com/content/community-maps/street-map), we get a graphic based version of Street-Map. Can you provide some guidance as to what version was used and where to obtain it? Is it possible to obtain a copy of the extracted roads used by the FCC for the 422295 and 572295 study areas?

Any help you can provide is appreciated.
Thanks

Kevin Lewis

Kevin Lewis
Network Engineer
SILVER STAR COMMUNICATIONS
o: 307 883 6640 | m: 307 880 6640 | f: 307 883 6600
PO Box 226 – Freedom, WY 83120 |
SilverStar.com<http://www.silverstar.com/>

Connecting Communities – Connecting Lives
Broadband | Communications | Wireless

[Description: Description: ssc_alt_pms-[Converted]]<http://www.silverstar.com/>

[Description: Description: Description: facebook_20]<http://www.facebook.com/pages/Silver-Star-Communications/188222464541763?v=wall>[Description: Description: Description: twitter_20]<http://twitter.com/silverstarcom> [Description:

Description: Description: linkedin_20]
<http://www.linkedin.com/company/1199690?trk=pro_other_cmpy>