

Managing roads in GIS



Confederated Tribes of the
Colville Reservation

Process to manage roads

- Know where the roads are
- Know what roads you are responsible for
- Collect the data necessary to manage roads
- An organized plan or a system to manage your road inventory efficiently and effectively

Collected Data

- Will be populated in the 'Attribute Table'
- For the Colville Tribes purpose 54 'Fields' will be collected but..
- Only 11 will be utilized in GIS.
(As of right now)

Attribute Table

OwnershipCod	ClassCode	Length (Feet)	SurTypeCode	SurWidth	ADT	TruckPercent	BedCondCode	LOM_Code
Other	Flat	1528	Gravel Surface	15	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
Other Federal	Flat	1918.98	Earth Road	15	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
Other Federal	Flat	513.1	Earth Road	15	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Mountainous	10567.62	Earth Road	10	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
Other Federal	Flat	788.13	Gravel Surface	15	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Flat	431.78	Earth Road	10	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Mountainous	1176.99	Earth Road	10	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Mountainous	697.49	Earth Road	10	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Flat	915.52	Earth Road	10	Low	0%	Minimum Built-up Roadbed	Little 0 - 9 %
County	Flat	2485.73	Bitumenous < 2"	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
State	Flat	8032.12	Bitumenous > 2"	20	High	60%	Good, No curbs	Optimum 90 - 100 %
County	Flat	2034.54	Bitumenous < 2"	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
County	Flat	1149.2	Bitumenous < 2"	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Urban	Flat	380.58	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Urban	Flat	326.36	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Urban	Flat	800.97	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	2471.14	Gravel Surface	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	1864.96	Gravel Surface	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	1715.75	Gravel Surface	15	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	2366.26	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	786.01	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	2153.68	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	200.32	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Other Federal	Flat	897.52	Bitumenous < 2"	20	Medium	0%	Good, No curbs	Occasional 10 - 49 %
Urban	Flat	1365.4	Bitumenous < 2"	20	Medium	0%	Good, 1 curb	Occasional 10 - 49 %
Urban	Flat	360.05	Bitumenous < 2"	20	Medium	0%	Good, 1 curb	Occasional 10 - 49 %
Urban	Flat	2658.6	Bitumenous < 2"	20	Medium	0%	Good, 2 curbs	Occasional 10 - 49 %

Fields

Collected Data

Attribute to visual products



Table

roads

OBJECTID*	SHAPE*	OwnershipCode	ClassCode	Length (Feet)	SurTypeCode	SurWidth	ADT	TruckPercent	BedCondCode			
15	Polyline	Urban	Flat	1149.6	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
16	Polyline	Urban	Flat	1122.17	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
17	Polyline	Urban	Flat	1170.36	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
18	Polyline	Urban	Flat	1365.4	Bitumenous < 2"	20	Medium	0	Good, 1 curb			
19	Polyline	Urban	Flat	1701.35	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
20	Polyline	Urban	Flat	360.05	Bitumenous < 2"	20	Medium	0	Good, 1 curb			
21	Polyline	Urban	Flat	849.61	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
22	Polyline	Urban	Flat	932.97	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
23	Polyline	Urban	Flat	278.59	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
24	Polyline	Urban	Flat	1071.22	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
25	Polyline	Urban	Flat	415.43	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
26	Polyline	Urban	Flat	491.82	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
27	Polyline	Urban	Flat	505.44	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
28	Polyline	Urban	Flat	1325.4	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
29	Polyline	Urban	Flat	1066.97	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
30	Polyline	Urban	Flat	1150.83	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
31	Polyline	Urban	Flat	668.06	Bitumenous < 2"	20	Medium	0	Good, 2 curbs			
32	Polyline	Urban	Flat	1442.14	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	439.565951
33	Polyline	Urban	Flat	1311.81	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	399.841586
34	Polyline	Urban	Flat	1318.51	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	401.882219
35	Polyline	Urban	Flat	1318.43	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	401.85766
36	Polyline	Urban	Flat	1322.38	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	403.061246
37	Polyline	Urban	Flat	1207.3	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	367.985047
38	Polyline	Urban	Flat	826.73	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	251.988989
39	Polyline	Urban	Flat	743.59	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	226.646616
40	Polyline	Urban	Flat	352.02	Bitumenous < 2"	20	Medium	0	Good, 2 curbs	Occasional 10 - 49 %	25	107.296023
41	Polyline	Urban	Flat	380.58	Bitumenous < 2"	20	Medium	0	Good, No curbs	Occasional 10 - 49 %	25	116.000333
42	Polyline	Urban	Flat	326.36	Bitumenous < 2"	20	Medium	0	Good, No curbs	Occasional 10 - 49 %	25	99.474318
43	Polyline	Urban	Flat	800.97	Bitumenous < 2"	20	Medium	0	Good, No curbs	Occasional 10 - 49 %	25	244.136742
44	Polyline	Other Federal	Flat	1918.98	Earth Road	15	Low	0	Minimum Built-up Roadbed	Little 0 - 9 %	20	584.906653
45	Polyline	Other Federal	Flat	513.1	Earth Road	15	Low	0	Minimum Built-up Roadbed	Little 0 - 9 %	20	156.393958
46	Polyline	Other Federal	Flat	2471.14	Gravel Surface	15	Medium	0	Good, No curbs	Occasional 10 - 49 %	20	753.205838
47	Polyline	Other Federal	Flat	1864.96	Gravel Surface	15	Medium	0	Good, No curbs	Occasional 10 - 49 %	20	568.441288
48	Polyline	Other Federal	Flat	1715.75	Gravel Surface	15	Medium	0	Good, No curbs	Occasional 10 - 49 %	20	522.961531
49	Polyline	Other Federal	Flat	2366.26	Bitumenous < 2"	20	Medium	0	Good, No curbs	Occasional 10 - 49 %	25	721.238796
50	Polyline	Other Federal	Flat	786.01	Bitumenous < 2"	20	Medium	0	Good, No curbs	Occasional 10 - 49 %	25	239.577481

35 | (1 out of 57 Selected)

roads

Attribute Table on a map

- Information collected in the Attribute Table is being shown as a visual product for the city of Coulee Dam.



Legend

Average Daily Traffic — High — Medium — Low

Attribute Table on a map

- Information collected in the Attribute Table is being shown as a visual product for the city of Coulee Dam.



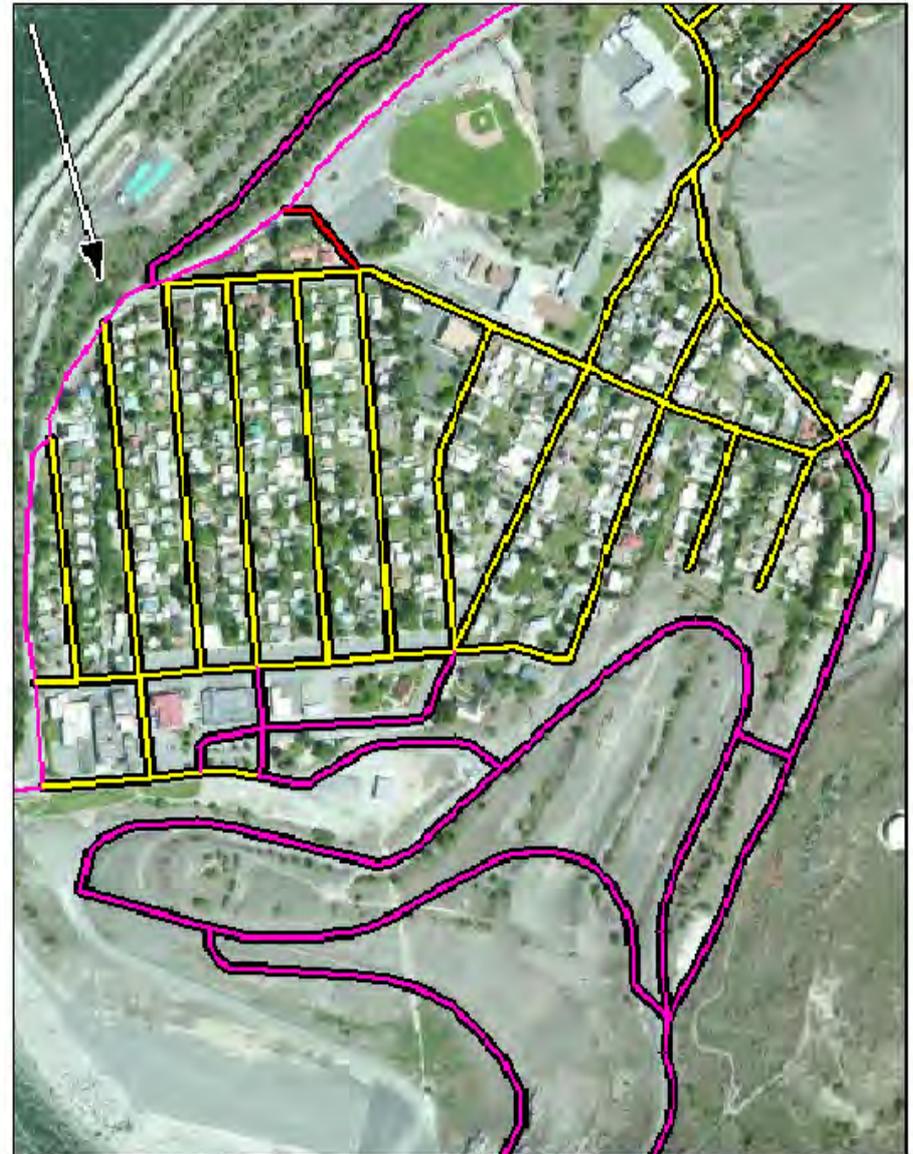
Legend

Average Daily Traffic — High — Medium — Low

Attribute Table on a map

- Information collected in the Attribute Table is being shown as a visual product for the city of Coulee Dam.

Notice the Highway is not a 'Medium' Traffic but you are able to see it doesn't have curbs.



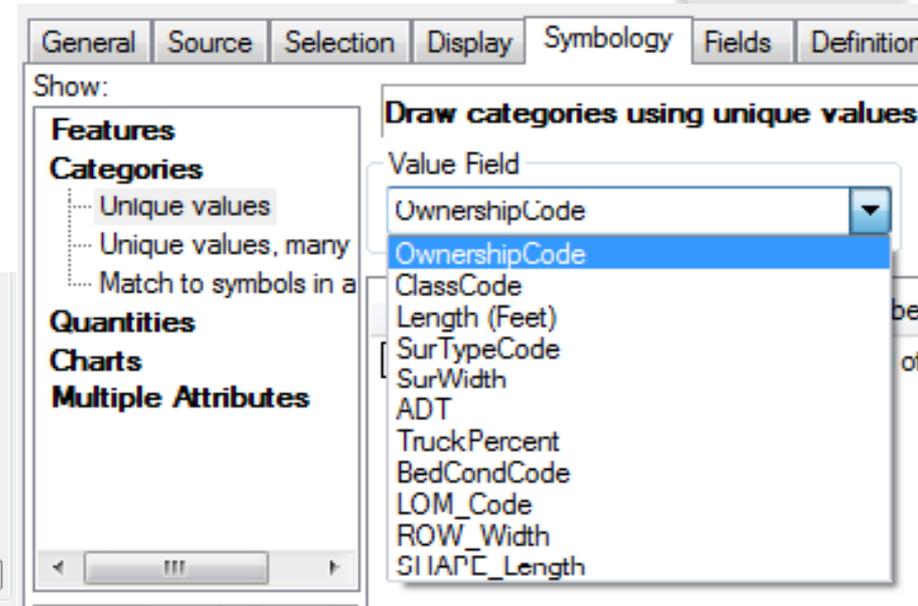
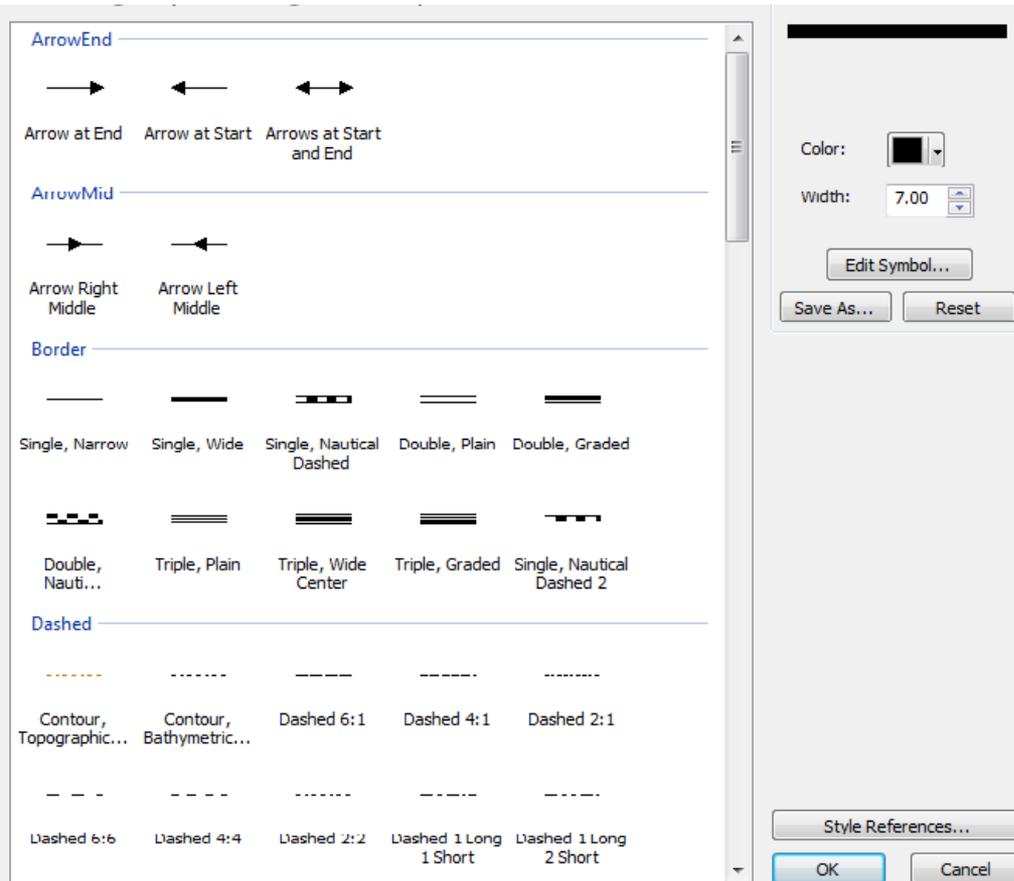
Legend

Average Daily Traffic Road Bed

	Road, 1 curb
	Road, 2 curbs
	Road, No curbs
	Medium

Representation

- Below are the many different ways you can represent the attribute information, in this case; Lines.



- Above is to visually show that different 'Fields' in any attribute table can be represented on a map.

Finished Product

- The Colville Tribes' goals once this project is finished are to:
 - Gather and create accurate road information and inventory
 - Maintain roads properly
 - Create a safer transportation system
 - Be more efficient and effective

***** The inputted data shown in this PowerPoint is not correct or accurate and only created for presentation purposes. However, the techniques and data manipulation used in this presentation, are examples of how the Colville Confederated Tribes plan to utilize GIS to manage their road data / inventory.**

Thank you

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