

TRAGIS OUTPUT FOR NUREG 2125

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: ID NATL ENG LAB U20 LOCL ID Leaving : 09/08/09 09:16
TO : HANFORD WA Arriving : 09/08/09 19:26

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			ID NATL ENG LAB		U20 LOCL	ID	0.0	0:00	09/08/09	09:16
3.6	U20	U26	ATOMIC CITY	NW	U20 U26	ID	3.6	0:04	09/08/09	09:20
34.0	U26		BLACKFOOT	NW	I15 X92	ID	37.7	0:45	09/08/09	10:01
20.6	I15		CHUBBUCK	E	I15 I86	ID	58.2	1:04	09/08/09	10:20
62.5	I86		RAFT RIVER	W	I84 I86	ID	120.7	2:03	09/08/09	11:19
			Rest 30 minutes							
218.8	I84		FRUITLAND	S	I84 X3	ID	339.5	5:55	09/08/09	15:11
2.9	I84		crossing state border		ID/OR	BD	342.3	5:58	09/08/09	15:14
			Rest 30 minutes							
197.9	I84		HERMISTON	SW	I82 I84	OR	540.2	10:04	09/08/09	18:20
9.6	I82		UMATILLA		I82 X1	OR	549.8	10:14	09/08/09	18:30
1.0	I82		crossing state border		OR/WA	BD	550.8	10:15	09/08/09	18:31
30.3	I82		WEST RICHLAND	S	I182I82	WA	581.2	10:46	09/08/09	19:02
5.3	I182		RICHLAND	SE	I182X5	WA	586.5	10:51	09/08/09	19:07
5.2	S240		RICHLAND	N	S240LR4S	WA	591.7	11:01	09/08/09	19:17
4.0	LR4S		HANFORD			WA	595.7	11:10	09/08/09	19:26

Total elapsed time: 11:10 Total trip mileage: 595.7 Impedance: 1952.1

Mileage by State :
ID: 342.3 OR: 208.5 WA: 44.9

Mileage by Sign Type:
1-INTERSTATE: 548.8 2-US: 37.7 3-STATE: 5.2 6-LOCAL: 4.0

Mileage by Lane Type:
1-Multi-Lane Controlled Access: 548.8 5-Principle Road: 42.8
7-Other: 4.0

Mileage by Tribal Lands:
Total Outside Tribal Lands : 543.1
Total Inside Tribal Lands : 52.6

Fort Hall Reservation : 25.7 Umatilla Reservation : 26.9

TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=ID NATL ENG LAB U20 LOCL

From STATE=ID

From SUBNET=

To CITY=HANFORD

To STATE=WA

To SUBNET=

[ID]

Rural - KM= 441.4
Suburban - KM= 100.9
Urban - KM= 8.6
Total - KM= 550.9
Rural Pop Density= 11.2
Suburban Pop Density= 287.0
Urban Pop Density=2193.3

[OR]

Rural - KM= 301.0
Suburban - KM= 32.2
Urban - KM= 2.3
Total - KM= 335.5
Rural Pop Density= 8.2
Suburban Pop Density= 313.2
Urban Pop Density=1976.3

[WA]

Rural - KM= 60.9
Suburban - KM= 7.2
Urban - KM= 4.2
Total - KM= 72.2
Rural Pop Density= 4.8
Suburban Pop Density= 441.1
Urban Pop Density=2281.6

[Total]

Rural - KM= 803.3
Suburban - KM= 140.3
Urban - KM= 15.1
Total - KM= 958.6
Rural Pop Density= 9.6
Suburban Pop Density= 300.9
Urban Pop Density=2184.1

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: ID NATL ENG LAB U20 LOCL ID Leaving : 09/08/09 09:19
TO : ORNL TN Arriving : 09/09/09 21:23

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		ID NATL ENG LAB		U20 LOCL	ID	0.0	0:00	09/08/09	09:19
3.6	U20	U26 ATOMIC CITY	NW	U20 U26	ID	3.6	0:04	09/08/09	09:23
34.0	U26	BLACKFOOT	NW	I15 X92	ID	37.7	0:45	09/08/09	10:04
56.8	I15	VIRGINIA		I15 X36	ID	94.5	1:38	09/08/09	10:57
36.1	I15	crossing state border		ID/UT	BD	130.6	2:11	09/08/09	11:30
21.0	I15	TREMONTON	W	I15 I84	UT	151.6	2:28	09/08/09	11:47
39.4	I15	I84 OGDEN	S	I15 I84	UT	191.0	3:02	09/08/09	12:21
38.5	I84	ECHO		I80 I84	UT	229.5	3:33	09/08/09	12:52
29.4	I80	crossing state border		UT/WY	BD	258.9	3:57	09/08/09	13:16
		Rest 30 minutes							
		Rest 30 minutes							
357.6	I80	CHEYENNE	SW	I25 I80	WY	616.6	9:43	09/08/09	19:02
8.9	I25	crossing state border		CO/WY	BD	625.5	9:51	09/08/09	19:10
83.3	I25	COMMERCE CITY	W	I25 I76	CO	708.8	11:03	09/08/09	20:22
1.2	I76	COMMERCE CITY	NW	I270I76	CO	710.0	11:04	09/08/09	20:23
4.9	I270	DENVER	NE	I270I70	CO	714.9	11:09	09/08/09	20:28
		Rest 30 minutes							
158.2	I70	BURLINGTON	E	I70 X438	CO	873.1	13:53	09/08/09	23:12
11.3	I70	crossing state border		CO/KS	BD	884.4	14:02	09/08/09	23:21
		Rest 30 minutes							
352.4	I70	TOPEKA	W	I470I70	KS	1236.8	19:34	09/09/09	05:53
6.8	I470	TOPEKA	S	I335I470	KS	1243.6	19:48	09/09/09	06:07
5.4	I470	TKST\$ TOPEKA	E	I470S4	KS	1249.0	19:54	09/09/09	06:13
43.1	I70	TKST\$ BONNER SPRINGS	N	I70 X224	KS	1292.1	20:31	09/09/09	06:50
3.9	I70	KANSAS CITY	W	I435I70	KS	1296.0	20:34	09/09/09	06:53
		Rest 30 minutes							
17.4	I435	OVERLAND PARK	S	I435X79	KS	1313.4	21:23	09/09/09	07:42
3.3	I435	crossing state border		KS/MO	BD	1316.6	21:27	09/09/09	07:46
13.0	I435	KANSAS CITY	SE	I435I70	MO	1329.6	21:40	09/09/09	07:59
222.5	I70	ST LOUIS	NW	I270I70	MO	1552.1	25:06	09/09/09	11:25
		Rest 30 minutes							
11.7	I270	BELLEFONTAINE	NW	I270X31	MO	1563.8	25:18	09/09/09	11:37
3.6	I270	crossing state border		IL/MO	BD	1567.4	25:51	09/09/09	12:10
7.1	I270	EDWARDSVILLE	SW	I255I270	IL	1574.6	25:59	09/09/09	12:18
10.9	I255	WASHINGTON PK	SE	I255I64	IL	1585.5	26:11	09/09/09	12:30
65.9	I64	MT VERNON	NW	I57 I64	IL	1651.3	27:23	09/09/09	13:42
4.6	I57	MT VERNON	SW	I57 I64	IL	1655.9	27:28	09/09/09	13:47
48.4	I57	PULLEYS MILL	W	I24 I57	IL	1704.3	28:21	09/09/09	14:40
36.5	I24	METROPOLIS	E	I24 X37	IL	1740.8	29:00	09/09/09	15:19
1.6	I24	crossing state border		IL/KY	BD	1742.4	29:02	09/09/09	15:21
		Rest 30 minutes							
85.3	I24	OAK GROVE	NW	I24 X86	KY	1827.7	30:51	09/09/09	17:10
7.7	I24	crossing state border		KY/TN	BD	1835.5	30:58	09/09/09	17:17
44.6	I24	INGLEWOOD	W	I24 I65	TN	1880.1	31:36	09/09/09	17:55
1.9	I24	I65 NASHVILLE	N	I24 I65	TN	1882.0	31:38	09/09/09	17:57
3.1	I24	NASHVILLE	SE	I24 I40	TN	1885.1	31:42	09/09/09	18:01
1.8	I24	I40 NASHVILLE	E	I24 I40	TN	1886.9	31:44	09/09/09	18:03
150.3	I40	LENOIR CITY	NW	I40 X364	TN	2037.2	33:55	09/09/09	21:14
3.4	S95	X-10	W	S95 LOCL	TN	2040.6	34:01	09/09/09	21:20

2.3 LOCAL ORNL TN 2042.9 34:04 09/09/09 21:23

Total elapsed time: 34:04 Total trip mileage: 2042.9 Impedance: 3078.9

Mileage by State :

CO: 258.9 ID: 130.6 IL: 175.0 KS: 432.2 KY: 93.1 MO: 250.8
TN: 207.4 UT: 128.3 WY: 366.5

Mileage by Sign Type:

1-INTERSTATE: 1999.6 2-US: 37.7 3-STATE: 3.4 6-LOCAL: 2.3

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1999.6 5-Principle Road: 37.7
7-Other: 5.6

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2028.1
Total Inside Tribal Lands : 14.7

Fort Hall Reservation : 14.7

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data *Not HRCQ

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: ID NATL ENG LAB U20 LOCL ID
TO : ORNL TN

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CO 258.9 84.37 69.94 44.83 21.44 13.50 9.38 5.90 3.52 3.41 2.12 0.53
ID 130.6 50.30 18.70 28.31 15.11 6.30 5.22 3.36 2.04 0.93 0.29 0.00
IL 175.0 17.67 40.93 30.61 28.25 26.20 18.75 8.26 2.94 1.36 0.00 0.00
KS 432.2 146.94 100.54 93.15 34.65 22.01 13.60 9.28 5.96 4.23 1.58 0.29
KY 93.1 9.91 21.95 19.24 19.63 11.45 6.06 3.47 1.18 0.13 0.00 0.00
MO 250.8 25.51 48.67 43.92 35.34 22.29 20.97 22.45 15.24 11.84 3.73 0.80
TN 207.4 11.63 25.81 47.00 46.17 32.12 21.94 12.06 5.49 3.20 1.40 0.55
UT 128.3 33.15 14.59 30.18 16.22 16.12 9.67 4.91 2.50 0.74 0.16 0.05
WY 366.5 196.64 99.25 43.38 9.62 5.48 4.79 3.35 2.52 1.31 0.12 0.06

TOTALS

2042.9 576.12 440.38 380.62 226.43 155.47 110.38 73.04 41.39 27.15 9.40 2.28

PERCENTAGES

28.20 21.56 18.63 11.09 7.61 5.40 3.58 2.03 1.33 0.46 0.11

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 27.3 801.4 5755.4
People/sq. km. 10.5 309.4 2222.1

DISTANCE

	TOTALS		
Miles	1623.6	380.3	38.8
Kilometers	2612.8	612.0	62.5
Percentages	79.5	18.6	1.9

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 57333 ID 17084 IL 37937 KS 72140 KY 13961 MO 172745 TN 77470 UT 23185
WY 22213

Total Population within 800 meter Buffer Zone: 494068

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H
 Network Version=4.0
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=ID NATL ENG LAB U20 LOCL
 From STATE=ID
 From SUBNET=
 To CITY=ORNL
 To STATE=TN
 To SUBNET=
 [CO]
 Rural - KM= 355.0
 Suburban - KM= 52.0
 Urban - KM= 9.8
 Total - KM= 416.7
 Rural Pop Density= 8.7
 Suburban Pop Density= 305.5
 Urban Pop Density=2432.2
 [ID]
 Rural - KM= 180.9
 Suburban - KM= 27.2
 Urban - KM= 2.0
 Total - KM= 210.2
 Rural Pop Density= 10.1
 Suburban Pop Density= 325.3
 Urban Pop Density=2070.7
 [IL]
 Rural - KM= 189.0
 Suburban - KM= 90.4
 Urban - KM= 2.2
 Total - KM= 281.6
 Rural Pop Density= 15.2
 Suburban Pop Density= 244.4
 Urban Pop Density=1764.7
 [KS]
 Rural - KM= 603.9
 Suburban - KM= 81.8
 Urban - KM= 9.8
 Total - KM= 695.6
 Rural Pop Density= 8.9
 Suburban Pop Density= 309.9
 Urban Pop Density=2216.2
 [KY]
 Rural - KM= 113.8
 Suburban - KM= 35.7
 Urban - KM= 0.2
 Total - KM= 149.8
 Rural Pop Density= 16.6
 Suburban Pop Density= 241.3
 Urban Pop Density=1764.7
 [MO]
 Rural - KM= 246.9
 Suburban - KM= 130.3
 Urban - KM= 26.3
 Total - KM= 403.6
 Rural Pop Density= 15.1
 Suburban Pop Density= 414.2
 Urban Pop Density=2179.4
 [TN]
 Rural - KM= 210.2
 Suburban - KM= 115.2
 Urban - KM= 8.3
 Total - KM= 333.7
 Rural Pop Density= 20.3
 Suburban Pop Density= 272.1
 Urban Pop Density=2379.8
 [UT]
 Rural - KM= 151.5
 Suburban - KM= 53.4

Urban - KM= 1.5
Total - KM= 206.5
Rural Pop Density= 12.5
Suburban Pop Density= 260.1
Urban Pop Density=2112.2
[WY]
Rural - KM= 561.5
Suburban - KM= 26.0
Urban - KM= 2.4
Total - KM= 589.8
Rural Pop Density= 4.6
Suburban Pop Density= 360.0
Urban Pop Density=1968.3
[Total]
Rural - KM=2612.8
Suburban - KM= 612.0
Urban - KM= 62.5
Total - KM=3287.6
Rural Pop Density= 10.5
Suburban Pop Density= 309.4
Urban Pop Density=2222.1

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: ID NATL ENG LAB U20 LOCL ID Leaving : 09/08/09 09:21
 TO : SKULL VALLEY IR UT Arriving : 09/08/09 14:30

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
 Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		ID NATL ENG LAB		U20 LOCL	ID	0.0	0:00	09/08/09	09:21
3.6	U20	U26 ATOMIC CITY	NW	U20 U26	ID	3.6	0:04	09/08/09	09:25
34.0	U26	BLACKFOOT	NW	I15 X92	ID	37.7	0:45	09/08/09	10:06
56.8	I15	VIRGINIA		I15 X36	ID	94.5	1:38	09/08/09	10:59
36.1	I15	crossing state border		ID/UT	BD	130.6	2:11	09/08/09	11:32
21.0	I15	TREMONTON	W	I15 I84	UT	151.6	2:28	09/08/09	11:49
39.4	I15	I84 OGDEN	S	I15 I84	UT	191.0	3:02	09/08/09	12:23
27.2	I15	N SALT LAKE		I15 I215	UT	218.2	3:27	09/08/09	12:48
6.3	I215	SALT LAKE CITY	W	I215I80	UT	224.5	3:32	09/08/09	12:53
		Rest 30 minutes							
40.8	I80	TIMPIE		I80 X77	UT	265.2	4:07	09/08/09	13:28
24.5	LOCAL	SKULL VALLEY		IR	UT	289.7	5:09	09/08/09	14:30

Total elapsed time: 5:09 Total trip mileage: 289.7 Impedance: 2065.4

Mileage by State :
 ID: 130.6 UT: 159.1

Mileage by Sign Type:
 1-INTERSTATE: 227.6 2-US: 37.7 6-LOCAL: 24.5

Mileage by Lane Type:
 1-Multi-Lane Controlled Access: 227.6 5-Principle Road: 37.7
 7-Other: 24.5

Mileage by Tribal Lands:
 Total Outside Tribal Lands : 274.2
 Total Inside Tribal Lands : 15.5

Fort Hall Reservation : 14.7 Skull Valley Reservation : 0.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: ID NATL ENG LAB U20 LOCL ID
 TO : SKULL VALLEY IR UT

>0.0	22.7	59.7	139	326	821	1861	3326	5815			
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996

ID	130.6	50.30	18.70	28.31	15.11	6.30	5.22	3.36	2.04	0.93	0.29	0.00
UT	159.1	53.41	13.32	22.35	16.74	16.30	11.03	7.83	7.31	6.03	4.04	0.72

TOTALS
 289.7 103.71 32.02 50.66 31.85 22.60 16.25 11.19 9.35 6.96 4.33 0.72
 PERCENTAGES

35.81 11.06 17.49 11.00 7.80 5.61 3.86 3.23 2.40 1.49 0.25

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION
People/sq. mi. 26.1 906.4 6158.3
People/sq. km. 10.1 349.9 2377.7

DISTANCE	TOTALS			
Miles	218.2	59.4	12.0	289.7
Kilometers	351.2	95.6	19.3	466.2
Percentages	75.3	20.5	4.1	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
ID 17084 UT 85257

Total Population within 800 meter Buffer Zone: 102341

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=ID NATL ENG LAB U20 LOCL

From STATE=ID

From SUBNET=

To CITY=SKULL VALLEY IR

To STATE=UT

To SUBNET=

[ID]

Rural - KM= 180.9

Suburban - KM= 27.2

Urban - KM= 2.0

Total - KM= 210.2

Rural Pop Density= 10.1

Suburban Pop Density= 325.3

Urban Pop Density=2070.7

[UT]

Rural - KM= 170.3

Suburban - KM= 68.3

Urban - KM= 17.4

Total - KM= 256.0

Rural Pop Density= 10.1

Suburban Pop Density= 359.8

Urban Pop Density=2412.4

[Total]

Rural - KM= 351.2

Suburban - KM= 95.6

Urban - KM= 19.3

Total - KM= 466.2

Rural Pop Density= 10.1

Suburban Pop Density= 349.9

Urban Pop Density=2377.7

RAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: ID NATL ENG LAB U20 LOCL ID Leaving : 09/08/09 09:23
TO : DEAF SMITH CTY TX Arriving : 09/09/09 09:13

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		ID NATL ENG LAB		U20 LOCL ID	ID	0.0	0:00	09/08/09	09:23
3.6	U20	U26 ATOMIC CITY	NW	U20 U26 ID	ID	3.6	0:04	09/08/09	09:27
34.0	U26	BLACKFOOT	NW	I15 X92 ID	ID	37.7	0:45	09/08/09	10:08
56.8	I15	VIRGINIA		I15 X36 ID	ID	94.5	1:38	09/08/09	11:01
36.1	I15	crossing state border		ID/UT BD	BD	130.6	2:11	09/08/09	11:34
21.0	I15	TREMONTON	W	I15 I84 UT	UT	151.6	2:28	09/08/09	11:51
39.4	I15 I84	OGDEN	S	I15 I84 UT	UT	191.0	3:02	09/08/09	12:25
38.5	I84	ECHO		I80 I84 UT	UT	229.5	3:33	09/08/09	12:56
29.4	I80	crossing state border		UT/WY BD	BD	258.9	3:57	09/08/09	13:20
		Rest 30 minutes							
		Rest 30 minutes							
357.6	I80	CHEYENNE	SW	I25 I80 WY	WY	616.6	9:43	09/08/09	19:06
8.9	I25	crossing state border		CO/WY BD	BD	625.5	9:51	09/08/09	19:14
		Rest 30 minutes							
287.6	I25	TRINIDAD		I25 X13 CO	CO	913.1	14:30	09/08/09	23:53
13.7	I25	crossing state border		CO/NM BD	BD	926.8	14:41	09/09/09	00:04
		Rest 30 minutes							
235.1	I25	ALBUQUERQUE	E	I25 I40 NM	NM	1161.9	18:38	09/09/09	04:01
		Rest 30 minutes							
178.3	I40	TCC AIRPORT		I40 X339 NM	NM	1340.2	21:32	09/09/09	06:55
34.2	I40	crossing state border		NM/TX BD	BD	1374.4	21:59	09/09/09	07:22
36.2	I40	VEGA	S	I40 X36 TX	TX	1410.6	22:31	09/09/09	08:54
9.8	U385	VEGA	S	U385F258 TX	TX	1420.4	22:43	09/09/09	09:06
3.4	F2587	DEAF SMITH CTY		TX	TX	1423.8	22:50	09/09/09	09:13

Total elapsed time: 22:50 Total trip mileage: 1423.8 Impedance: 2683.4

Mileage by State :

CO: 301.3 ID: 130.6 NM: 447.6 TX: 49.4 UT: 128.3 WY: 366.5

Mileage by Sign Type:

1-INTERSTATE: 1372.9 2-US: 47.4 7-OTHER: 3.4

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1372.9 5-Principle Road: 47.4
7-Other: 3.4

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1383.8
Total Inside Tribal Lands : 40.0

Fort Hall Reservation : 14.7 San Felipe Pueblo : 9.4
Sandia Pueblo : 7.2 Santa Ana Pueblo : 2.2
Santo Domingo Pueblo : 6.4

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: ID NATL ENG LAB U20 LOCL ID

TO : DEAF SMITH CTY TX

```
-----
>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996
-----
```

```
CO 301.3 60.96 57.22 48.57 32.63 23.37 21.89 22.55 14.43 11.72 5.87 2.08
ID 130.6 50.30 18.70 28.31 15.11 6.30 5.22 3.36 2.04 0.93 0.29 0.00
NM 447.6 197.35 135.14 48.80 20.41 15.07 9.60 7.60 4.75 5.68 2.66 0.55
TX 49.4 30.74 17.35 0.61 0.07 0.00 0.34 0.28 0.00 0.00 0.00 0.00
UT 128.3 33.15 14.59 30.18 16.22 16.12 9.67 4.91 2.50 0.74 0.16 0.05
WY 366.5 196.64 99.25 43.38 9.62 5.48 4.79 3.35 2.52 1.31 0.12 0.06
```

TOTALS

1423.8 569.14 342.25 199.85 94.06 66.34 51.51 42.05 26.24 20.38 9.10 2.74

PERCENTAGES

39.98 24.04 14.04 6.61 4.66 3.62 2.95 1.84 1.43 0.64 0.19

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 18.5 910.1 6059.2

People/sq. km. 7.1 351.4 2339.5

```
DISTANCE TOTALS
Miles 1205.3 186.1 32.2 1423.8
Kilometers 1939.7 299.6 51.9 2291.3
Percentages 84.7 13.1 2.3
```

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 167778 ID 17084 NM 79499 TX 592 UT 23185 WY 22213

Total Population within 800 meter Buffer Zone: 310351

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=ID NATL ENG LAB U20 LOCL

From STATE=ID

From SUBNET=

To CITY=DEAF SMITH CTY

To STATE=TX

To SUBNET=

[CO]

Rural - KM= 320.9

Suburban - KM= 132.3

Urban - KM= 31.7

Total - KM= 484.9

Rural Pop Density= 11.7

Suburban Pop Density= 402.1

Urban Pop Density=2411.4

[ID]

Rural - KM= 180.9

Suburban - KM= 27.2

Urban - KM= 2.0

Total - KM= 210.2

Rural Pop Density= 10.1

Suburban Pop Density= 325.3

Urban Pop Density=2070.7

[NM]

Rural - KM= 646.5
 Suburban - KM= 59.6
 Urban - KM= 14.3
 Total - KM= 720.4
 Rural Pop Density= 5.7
 Suburban Pop Density= 328.7
 Urban Pop Density=2303.5

[TX]

Rural - KM= 78.5
 Suburban - KM= 1.0
 Urban - KM= 0.0
 Total - KM= 79.5
 Rural Pop Density= 2.2
 Suburban Pop Density= 355.3
 Urban Pop Density= 0.0

[UT]

Rural - KM= 151.5
 Suburban - KM= 53.4
 Urban - KM= 1.5
 Total - KM= 206.5
 Rural Pop Density= 12.5
 Suburban Pop Density= 260.1
 Urban Pop Density=2112.2

[WY]

Rural - KM= 561.5
 Suburban - KM= 26.0
 Urban - KM= 2.4
 Total - KM= 589.8
 Rural Pop Density= 4.6
 Suburban Pop Density= 360.0
 Urban Pop Density=1968.3

[Total]

Rural - KM=1939.7
 Suburban - KM= 299.6
 Urban - KM= 51.9
 Total - KM=2291.3
 Rural Pop Density= 7.1
 Suburban Pop Density= 351.4
 Urban Pop Density=2339.5

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:00
 TO : AMARILLO TX UP Arriving : 09/10/09 12:06

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R3221115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:00
UP	162104311	POCATELLO	ID	76.2	7:40	09/08/09	19:40
UP	162104564	MCCAMMON	ID	98.1	8:51	09/08/09	20:51
UP	562106752	GRANGER	WY	288.9	14:49	09/09/09	02:49
UP	562106162	RAWLINS	WY	451.9	20:24	09/09/09	08:24
UP	562107501	LARAMIE	WY	566.6	24:29	09/09/09	12:29
UP	562108103	SPEER	WY	624.7	26:18	09/09/09	14:18
UP	82109853	GREELEY	CO	671.0	28:37	09/09/09	16:37
UP	82110046	LASALLE	CO	676.9	28:55	09/09/09	16:55
UP	82111385	DENVER	CO	723.5	31:14	09/09/09	19:14
UP	82112996	COLORADO SPRINGS	CO	799.0	33:38	09/09/09	21:38

UP 82113812-PUEBLO JCT CO 842.5 35:06 09/09/09 23:06
 UP 82114288-LA JUNTA JCT CO 904.1 37:01 09/10/09 01:01
 UP 482116509-STRATFORD TX 1076.3 43:34 09/10/09 07:34
 UP 482116812-DALHART TX 1107.2 44:41 09/10/09 08:41
 UP 482118129-AMARILLO TX 1188.7 48:06 09/10/09 12:06

Length: 1188.7 miles Transit Time: 48:06 Impedance: 1353.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
UP	1188.7	1014.3	122.8	7.0	44.7
Total	1188.7	1014.3	122.8	7.0	44.7

Mileage by State :

CO: 389.1 ID: 197.3 OK: 43.1 TX: 127.2 WY: 432.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1172.8
 Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
 TO : AMARILLO TX UP

	>0.0	22.7	59.7	139	326	821	1861	3326	5815			
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996	
CO	389.1	117.86	81.34	52.48	32.60	19.96	25.07	24.37	16.76	12.09	4.74	1.84
ID	197.3	88.34	40.81	34.50	13.55	5.12	4.51	3.37	3.37	2.41	0.91	0.34
OK	43.1	28.95	12.86	0.33	0.37	0.25	0.04	0.28	0.00	0.00	0.00	0.00
TX	127.2	79.19	31.56	7.12	1.74	1.91	0.99	2.02	1.88	0.72	0.04	0.07
WY	432.0	314.83	76.78	18.53	5.87	3.74	3.82	3.91	2.45	1.52	0.45	0.00

TOTALS

1188.7 629.17 243.35 112.96 54.13 30.98 34.43 33.95 24.46 16.74 6.14 2.25

PERCENTAGES

52.94 20.47 9.50 4.55 2.61 2.90 2.86 2.06 1.41 0.52 0.19

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 12.9 1097.7 5961.0
 People/sq. km. 5.0 423.8 2301.5

DISTANCE

	TOTALS			
Miles	1039.6	123.8	25.1	1188.7
Kilometers	1673.0	199.3	40.4	1913.0
Percentages	87.5	10.4	2.1	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 172878 ID 30906 OK 450 TX 9918 WY 21437

Total Population within 800 meter Buffer Zone: 235589

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:00
 TO : AMARILLO TX UP Arriving : 09/10/09 12:06

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:00
UP	162104311	POCATELLO	ID	76.2	7:40	09/08/09	19:40
UP	162104564	MCCAMMON	ID	98.1	8:51	09/08/09	20:51
UP	562106752	GRANGER	WY	288.9	14:49	09/09/09	02:49
UP	562106162	RAWLINS	WY	451.9	20:24	09/09/09	08:24
UP	562107501	LARAMIE	WY	566.6	24:29	09/09/09	12:29
UP	562108103	SPEER	WY	624.7	26:18	09/09/09	14:18
UP	82109853	GREELEY	CO	671.0	28:37	09/09/09	16:37
UP	82110046	LASALLE	CO	676.9	28:55	09/09/09	16:55
UP	82111385	DENVER	CO	723.5	31:14	09/09/09	19:14
UP	82112996	COLORADO SPRINGS	CO	799.0	33:38	09/09/09	21:38
UP	82113812	PUEBLO JCT	CO	842.5	35:06	09/09/09	23:06
UP	82114288	LA JUNTA JCT	CO	904.1	37:01	09/10/09	01:01
UP	482116509	STRATFORD	TX	1076.3	43:34	09/10/09	07:34
UP	482116812	DALHART	TX	1107.2	44:41	09/10/09	08:41
UP	482118129	AMARILLO	TX	1188.7	48:06	09/10/09	12:06

Length: 1188.7 miles Transit Time: 48:06 Impedance: 1353.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
UP	1188.7	1014.3	122.8	7.0	44.7
Total	1188.7	1014.3	122.8	7.0	44.7

Mileage by State :

CO: 389.1 ID: 197.3 OK: 43.1 TX: 127.2 WY: 432.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1172.8
 Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
 TO : AMARILLO TX UP

ST MILES	>0.0	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996
CO	389.1	117.86	81.34	52.48	32.60	19.96	25.07	24.37	16.76	12.09	4.74	1.84
ID	197.3	88.34	40.81	34.50	13.55	5.12	4.51	3.37	3.37	2.41	0.91	0.34
OK	43.1	28.95	12.86	0.33	0.37	0.25	0.04	0.28	0.00	0.00	0.00	0.00
TX	127.2	79.19	31.56	7.12	1.74	1.91	0.99	2.02	1.88	0.72	0.04	0.07
WY	432.0	314.83	76.78	18.53	5.87	3.74	3.82	3.91	2.45	1.52	0.45	0.00

TOTALS

1188.7 629.17 243.35 112.96 54.13 30.98 34.43 33.95 24.46 16.74 6.14 2.25

PERCENTAGES

52.94 20.47 9.50 4.55 2.61 2.90 2.86 2.06 1.41 0.52 0.19

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 12.9 1097.7 5961.0

People/sq. km. 5.0 423.8 2301.5

DISTANCE

TOTALS

Miles 1039.6 123.8 25.1 1188.7

Kilometers 1673.0 199.3 40.4 1913.0

Percentages 87.5 10.4 2.1

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 172878 ID 30906 OK 450 TX 9918 WY 21437

Total Population within 800 meter Buffer Zone: 235589

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:03

TO : TOOELE ORDNANCE DEPO UT UP Arriving : 09/09/09 05:26

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0

Transfer Time for P points = 240.0 Transfer Time for M points = 240.0

Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR NODE NAME STATE DIST TIME DATE HOUR

```

-----
UP 162103327-INEEL ID 0.0 00:00 09/08/09 12:03
UP 162104311-POCATELLO ID 76.2 7:40 09/08/09 19:43
UP 162104564-MCCAMMON ID 98.1 8:51 09/08/09 20:54
UP 492107644-OGDEN UT 208.9 13:59 09/09/09 02:02
UP 492108786-SALT LAKE CITY UT 245.4 15:38 09/09/09 03:41
UP 492108987-SMELTER UT 262.5 16:40 09/09/09 04:43
UP 492108991-SMELTER UT 262.5 16:40 09/09/09 04:43
UP 492109686-TOOELE ORDNANCE DEPO UT 282.4 17:23 09/09/09 05:26

```

Length: 282.4 miles Transit Time: 17:23 Impedance: 439.7

Mileage Summary by Railroad:

RR Total A-M B-M A-Br B-Br

```

-----
UP 282.4 145.5 85.3 7.0 44.7

```

```

-----
Total 282.4 145.5 85.3 7.0 44.7

```

Mileage by State :

ID: 147.4 UT: 135.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 266.4

Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
TO : TOOELE ORDNANCE DEPO UT UP

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 147.4 54.19 36.59 26.42 12.10 4.09 4.36 3.17 2.83 2.41 0.91 0.34
UT 135.0 16.53 20.66 26.36 18.13 12.51 11.96 8.83 7.78 7.28 4.44 0.54

TOTALS

282.4 70.72 57.25 52.78 30.23 16.60 16.32 12.00 10.61 9.69 5.35 0.88
PERCENTAGES
25.04 20.27 18.69 10.70 5.88 5.78 4.25 3.76 3.43 1.89 0.31

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 28.3 1023.4 6046.6
People/sq. km. 10.9 395.1 2334.6

DISTANCE	TOTALS			
Miles	211.0	55.5	15.9	282.4
Kilometers	339.5	89.4	25.6	454.4
Percentages	74.7	19.7	5.6	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 28646 UT 91976

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:05
TO : OAK RIDGE TN CSXT Arriving : 09/12/09 03:52

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:05
UP	162104311	POCATELLO	ID	76.2	7:40	09/08/09	19:45
UP	162104564	MCCAMMON	ID	98.1	8:51	09/08/09	20:56
UP	562106752	GRANGER	WY	288.9	14:49	09/09/09	02:54
UP	562106162	RAWLINS	WY	451.9	20:24	09/09/09	08:29
UP	562107501	LARAMIE	WY	566.6	24:29	09/09/09	12:34
UP	562107931	CHEYENNE	WY	623.0	26:15	09/09/09	14:20
UP	312107887	SIDNEY	NE	725.3	29:57	09/09/09	18:02
UP	82108276	JULESBURG	CO	766.7	31:15	09/09/09	19:20
UP	312107841	O FALLONS	NE	831.0	33:15	09/09/09	21:20
UP	312107904	NORTH PLATTE	NE	847.2	34:16	09/09/09	22:21
UP	312108885	GIBBON JCT	NE	955.9	37:39	09/10/09	01:44
UP	202111160	MARYSVILLE	KS	1095.5	42:01	09/10/09	06:06
UP	202112626	MENOKEN	KS	1170.4	44:52	09/10/09	08:57
UP	202112679	TOPEKA	KS	1175.3	45:01	09/10/09	09:06
UP	202112627	KANSAS CITY	KS	1240.3	47:03	09/10/09	11:08

UP 292112548-CONGO MO 1249.6 47:20 09/10/09 11:25
 UP 292112515-MARSHALL MO 1331.1 49:53 09/10/09 13:58
 UP 292113387-JEFFERSON CITY MO 1407.4 52:16 09/10/09 16:21
 UP 292113257-ST LOUIS MO 1526.9 56:30 09/10/09 20:35
 UP 172113341-VALLEY JCT IL 1532.6 56:42 09/10/09 20:47
 UP 172113338-VALLEY JCT IL 1532.8 58:42 09/10/09 22:47

----- TRANSFER
 <TR> 172113338-VALLEY JCT IL 1532.8 58:42 09/10/09 22:47
 <TR> 172113354-EAST ST LOUIS IL 1534.7 60:47 09/11/09 00:52

----- TRANSFER
 NS 172113354-EAST ST LOUIS IL 1534.7 60:47 09/11/09 00:52
 NS 172113463-CENTRALIA IL 1593.6 63:14 09/11/09 03:19
 NS 172113738-MOUNT VERNON IL 1615.5 64:39 09/11/09 04:44
 NS 172113584-MOUNT CARMEL IL 1677.2 67:13 09/11/09 07:18
 NS 182113695-PRINCETON IN 1689.3 68:13 09/11/09 08:18
 NS 182113714-OAKLAND CITY IN 1702.7 68:47 09/11/09 08:52
 NS 182113754-HUNTINGBURG IN 1726.4 69:46 09/11/09 09:51
 NS 212113819-LOUISVILLE KY 1797.7 73:14 09/11/09 13:19
 NS 212114834-DANVILLE KY 1887.5 76:56 09/11/09 17:01
 NS 472116983-HARRIMAN JCT TN 2028.8 82:22 09/11/09 22:27
 NS 472116993-HARRIMAN TN 2029.8 86:24 09/12/09 02:29

----- TRANSFER
 CSXT 472116993-HARRIMAN TN 2029.8 86:24 09/12/09 02:29
 CSXT 472116821-DOSSETT TN 2053.0 87:44 09/12/09 03:49
 CSXT 472116839-OAK RIDGE TN 2054.3 87:47 09/12/09 03:52

Length: 2054.3 miles Transit Time: 87:47 Impedance: 2277.7

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<TR>	1.9	1.9	0.0	0.0	0.0
CSXT	24.4	15.4	0.0	9.0	0.0
NS	495.1	494.9	0.2	0.0	0.0
UP	1532.8	1457.4	23.7	7.0	44.7
Total	2054.3	1969.7	23.9	16.0	44.7

Mileage by State :

CO: 8.8 ID: 197.3 IL: 148.5 IN: 117.2 KS: 170.6 KY: 176.0
 MO: 288.3 NE: 395.3 TN: 82.5 WY: 469.6

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2038.3
 Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
 TO : OAK RIDGE TN CSXT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CO	8.8	1.76	1.94	3.11	1.07	0.23	0.28	0.00	0.45	0.00	0.00	0.00
ID	197.3	88.34	40.81	34.50	13.55	5.12	4.51	3.37	3.37	2.41	0.91	0.34
IL	148.5	15.44	44.42	27.08	20.20	8.94	8.01	9.73	8.31	5.06	1.33	0.06
IN	117.2	6.64	32.81	34.27	18.98	6.88	6.50	5.47	3.16	1.92	0.59	0.00
KS	170.6	57.68	56.77	24.49	10.25	5.78	6.46	4.80	2.06	2.05	0.23	0.05
KY	176.0	4.33	25.24	45.31	35.70	16.92	15.68	13.59	9.01	5.84	3.81	0.56
MO	288.3	84.44	76.42	45.01	21.70	12.57	12.28	12.37	10.59	7.86	3.92	1.15
NE	395.3	144.37	91.63	104.63	21.86	7.60	7.11	7.14	6.24	3.86	0.74	0.16
TN	82.5	9.42	15.63	16.13	16.91	8.03	8.52	5.58	1.75	0.48	0.05	0.00
WY	469.6	323.28	85.21	29.72	7.46	5.16	6.17	5.84	3.78	2.40	0.55	0.00

TOTALS

2054.3 735.70 470.88 364.25 167.68 77.23 75.52 67.89 48.72 31.88 12.13 2.32
 PERCENTAGES
 35.81 22.92 17.73 8.16 3.76 3.68 3.30 2.37 1.55 0.59 0.11

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION
 People/sq. mi. 22.0 1034.5 5765.6
 People/sq. km. 8.5 399.4 2226.1

DISTANCE TOTALS
 Miles 1738.5 269.4 46.3 2054.3
 Kilometers 2797.8 433.5 74.6 3305.9
 Percentages 84.6 13.1 2.3

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
 CO 1034 ID 30906 IL 68017 IN 29782 KS 27528 KY 102234 MO 127799 NE 57552
 TN 18783 WY 33921

Total Population within 800 meter Buffer Zone: 497556 Total Population within 800 meter Buffer Zone: 120622

RAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:08
 TO : HANFORD SITE WA UP Arriving : 09/09/09 17:58

Dedicated Train Routing Constraints Used

Altered Delay Times
 Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:
 R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:08
UP	162103400	NAMPA	ID	313.3	15:03	09/09/09	03:11
UP	412102124	LA GRANDE	OR	494.9	21:13	09/09/09	09:21
UP	412101807	HINKLE	OR	600.6	25:01	09/09/09	13:09
UP	532101637	WALLULA JCT	WA	631.5	26:34	09/09/09	14:42
UP	532101513	RICHLAND	WA	657.2	29:29	09/09/09	17:37
UP	532101501	HANFORD SITE	WA	660.1	29:50	09/09/09	17:58

Length: 660.1 miles Transit Time: 29:50 Impedance: 881.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
UP	660.1	526.2	53.6	14.3	65.9
Total	660.1	526.2	53.6	14.3	65.9

Mileage by State :
 ID: 380.9 OR: 241.7 WA: 37.5

Mileage by Tribal Lands:
 Total Outside Tribal Lands : 609.3
 Total Inside Tribal Lands : 50.8

Fort Hall Reservation : 26.8 Umatilla Reservation : 24.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
TO : HANFORD SITE WA UP

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 380.9 158.12 75.75 72.16 32.72 11.94 9.41 7.48 6.79 4.12 2.15 0.24
OR 241.7 136.96 38.25 32.72 10.61 5.61 6.02 4.88 3.97 2.06 0.63 0.00
WA 37.5 18.09 2.94 1.72 1.46 2.32 3.27 2.23 2.19 2.23 0.73 0.30

TOTALS

660.1 313.17 116.94 106.60 44.79 19.87 18.70 14.59 12.95 8.41 3.51 0.54

PERCENTAGES

47.44 17.72 16.15 6.79 3.01 2.83 2.21 1.96 1.27 0.53 0.08

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 18.0 1036.1 5788.6

People/sq. km. 6.9 400.0 2235.0

DISTANCE	TOTALS			
Miles	581.5	66.1	12.5	660.1
Kilometers	935.8	106.4	20.1	1062.2
Percentages	88.1	10.0	1.9	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 64305 OR 32124 WA 26077

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INEEL

From STATE=ID

From SUBNET=UP

To CITY=HANFORD SITE

To STATE=WA

To SUBNET=UP

[ID]

Rural - KM= 545.2

Suburban - KM= 57.3

Urban - KM= 10.5

Total - KM= 612.9

Rural Pop Density= 8.3

Suburban Pop Density= 388.2

Urban Pop Density=2281.4

[OR]

Rural - KM= 351.7

Suburban - KM= 33.0

Urban - KM= 4.3

Total - KM= 388.9

Rural Pop Density= 5.2

Suburban Pop Density= 407.2

Urban Pop Density=2066.2

[WA]

Rural - KM= 39.0

Suburban - KM= 16.1

Urban - KM= 5.2
Total - KM= 60.4
Rural Pop Density= 4.1
Suburban Pop Density= 427.6
Urban Pop Density=2281.5
[Total]
Rural - KM= 935.8
Suburban - KM= 106.4
Urban - KM= 20.1
Total - KM=1062.2
Rural Pop Density= 6.9
Suburban Pop Density= 400.0
Urban Pop Density=2235.0

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:32
TO : HANFORD WA Arriving : 09/10/09 10:35

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			INDIAN POINT NP			NY	0.0	0:00	09/08/09	12:32
0.8	LOCAL		BUCHANAN	N	U9 LOCL	NY	0.8	0:01	09/08/09	12:33
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:51
17.5	I287	\$ I87	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:09
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:10
0.1	I287				crossing state border NJ/NY	BD	35.0	0:38	09/08/09	13:10
25.7	I287		PARSPNY-TROY	N	I287I80	NJ	60.6	1:02	09/08/09	13:34
43.4	I80		PAHAQUARRY	S	I80 X1	NJ	104.1	1:42	09/08/09	14:14
0.1	I80 #				crossing state border NJ/PA	BD	104.1	1:42	09/08/09	14:14
2.0	I80 #		E STROUDSBURG	E	I80 X309	PA	106.2	1:45	09/08/09	14:17
					Rest 30 minutes					
303.3	I80		WEST MIDDLESEX	NE	I80 X4	PA	409.5	6:56	09/08/09	19:28
4.0	I80				crossing state border OH/PA	BD	413.5	7:00	09/08/09	19:32
17.9	I80		NORTH JACKSON	NE	I76 I80	OH	431.4	7:19	09/08/09	19:51
					Rest 30 minutes					
76.0	I80 \$		ELYRIA	NW	I80 I90	OH	507.4	9:12	09/08/09	21:44
128.7	I80 \$	I90 \$	WEST JEFFERSON	N	I80 X13	OH	636.1	11:33	09/09/09	00:05
13.1	I80 \$	I90 \$			crossing state border IN/OH	BD	649.2	11:47	09/09/09	00:19
					Rest 30 minutes					
135.4	I80 \$	I90 \$	PORTAGE	W	I80 I90	IN	784.5	14:32	09/09/09	02:04
0.5	I80		LAKE STATION	NE	I80 I94	IN	785.0	14:33	09/09/09	02:05
14.5	I80	I94	HAMMOND	W	I80 X1	IN	799.5	14:49	09/09/09	02:21
0.9	I80	I94			crossing state border IL/IN	BD	800.4	14:49	09/09/09	02:21
3.0	I80	I94	LANSING	W	I294I94	IL	803.4	14:53	09/09/09	02:25
4.9	I294	\$ I80 \$	HOMEWOOD	NW	I294I80	IL	808.3	14:58	09/09/09	02:30
					Rest 30 minutes					
154.4	I80		RAPIDS CITY	W	I80 X1	IL	962.7	18:17	09/09/09	05:49
0.3	I80				crossing state border IA/IL	BD	963.0	18:17	09/09/09	05:49
168.0	I80		DES MOINES	N	I235I35	IA	1131.0	20:52	09/09/09	08:24
14.2	I35	I80	DES MOINES	W	I235I35	IA	1145.2	21:07	09/09/09	08:39
					Rest 30 minutes					
95.7	I80		MINDEN	NW	I680I80	IA	1240.8	23:05	09/09/09	10:37
16.5	I680		LOVELAND	SW	I29 I680	IA	1257.3	23:20	09/09/09	10:52
9.7	I29	I680	CRESCENT	W	I29 I680	IA	1267.0	23:29	09/09/09	11:01
3.0	I680				crossing state border IA/NE	BD	1270.1	23:32	09/09/09	11:04
13.4	I680		OMAHA	SW	I680I80	NE	1283.4	23:46	09/09/09	11:18
					Rest 30 minutes					
422.7	I80		KIMBALL	S	I80 X20	NE	1706.1	29:56	09/09/09	16:28
20.6	I80				crossing state border NE/WY	BD	1726.7	30:13	09/09/09	16:45
					Rest 30 minutes					
					Rest 30 minutes					
382.4	I80		EVANSTON	NE	I80 X18	WY	2109.0	36:19	09/09/09	22:51
18.2	I80				crossing state border UT/WY	BD	2127.2	36:33	09/09/09	23:05
29.4	I80		ECHO		I80 I84	UT	2156.6	36:57	09/09/09	23:29
38.5	I84		OGDEN	S	I15 I84	UT	2195.2	37:27	09/09/09	23:59
39.4	I15	I84	TREMONTON	W	I15 I84	UT	2234.5	38:02	09/10/09	00:34
					Rest 30 minutes					
37.4	I84		SNOWVILLE	W	I84 X5	UT	2272.0	38:33	09/10/09	01:05
4.4	I84				crossing state border ID/UT	BD	2276.3	39:06	09/10/09	01:38

Rest 30 minutes
 272.8 I84 FRUITLAND S I84 X3 ID 2549.1 43:49 09/10/09 06:21
 2.9 I84 crossing state border ID/OR BD 2551.9 43:52 09/10/09 06:24
 Rest 30 minutes
 197.9 I84 HERMISTON SW I82 I84 OR 2749.8 47:57 09/10/09 09:29
 9.6 I82 UMATILLA I82 X1 OR 2759.4 48:08 09/10/09 09:40
 1.0 I82 crossing state border OR/WA BD 2760.4 48:09 09/10/09 09:41
 30.3 I82 WEST RICHLAND S I182I82 WA 2790.8 48:39 09/10/09 10:11
 5.3 I182 RICHLAND SE I182X5 WA 2796.1 48:45 09/10/09 10:17
 5.2 S240 RICHLAND N S240LR4S WA 2801.3 48:55 09/10/09 10:27
 4.0 LR4S HANFORD WA 2805.3 49:03 09/10/09 10:35

Total elapsed time: 49:03 Total trip mileage: 2805.3 Impedance: 3357.1

Mileage by State :

IA: 307.1 ID: 275.6 IL: 162.6 IN: 151.2 NE: 456.6 NJ: 69.2
 NY: 35.0 OH: 235.7 OR: 208.5 PA: 309.4 UT: 149.1 WA: 44.9
 WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 2779.3 2-US: 16.0 3-STATE: 5.2 6-LOCAL: 4.8

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2787.2 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 12.3 7-Other: 4.8

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2778.4
 Total Inside Tribal Lands : 26.9

Umatilla Reservation : 26.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INDIAN POINT NP NY
 TO : HANFORD WA

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 275.6 66.98 64.43 58.19 32.26 21.75 15.09 8.29 4.14 3.23 1.01 0.31
 IL 162.6 19.10 37.80 30.07 23.86 18.01 12.57 9.39 5.42 3.67 2.24 0.40
 IN 151.2 1.73 19.97 37.40 25.85 28.69 17.16 8.92 5.71 3.55 1.89 0.41
 IA 307.1 26.27 73.66 93.61 51.14 25.99 18.72 10.70 3.86 2.30 0.64 0.20
 NE 456.6 167.07 80.87 107.72 49.64 24.69 10.77 7.27 4.24 2.75 1.02 0.59
 NJ 69.2 1.93 6.56 8.51 9.52 7.30 10.12 10.25 7.44 4.92 2.38 0.23
 NY 35.0 3.14 1.02 1.31 1.83 2.10 3.01 6.27 6.07 5.85 2.20 2.17
 OH 235.7 5.72 33.46 51.22 42.02 37.15 29.12 17.51 10.25 6.65 1.89 0.68
 OR 208.5 87.03 39.49 44.10 16.40 8.10 5.98 3.59 2.36 1.22 0.24 0.00
 PA 309.4 30.21 67.45 62.50 59.36 42.71 29.03 12.48 3.49 1.78 0.29 0.06
 UT 149.1 51.32 23.29 26.14 15.30 15.41 9.73 4.60 2.35 0.74 0.16 0.05
 WA 44.9 27.34 3.72 4.34 2.46 1.39 1.07 0.81 1.18 1.72 0.72 0.17
 WY 400.5 207.08 105.56 52.54 12.14 6.48 6.02 4.33 4.26 1.86 0.22 0.06

TOTALS

2805.3 694.92 557.28 577.65 341.78 239.77 168.39 104.41 60.77 40.24 14.90 5.33
 PERCENTAGES

24.77 19.86 20.59 12.18 8.55 6.00 3.72 2.17 1.43 0.53 0.19

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION

People/sq. mi. 30.1 784.8 5959.0
 People/sq. km. 11.6 303.0 2300.8

DISTANCE	TOTALS			
Miles	2171.6	573.3	60.5	2805.3
Kilometers	3494.8	922.7	97.3	4514.6
Percentages	77.4	20.4	2.2	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 55406 IL 72678 IN 79041 IA 60053 NE 59486 NJ 69023 NY 81427 OH 123201
OR 20611 PA 59108 UT 22778 WA 15804 WY 32573

Total Population within 800 meter Buffer Zone: 751189

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=HANFORD

To STATE=WA

To SUBNET=

[ID]

Rural - KM= 357.0

Suburban - KM= 79.3

Urban - KM= 7.3

Total - KM= 443.5

Rural Pop Density= 11.3

Suburban Pop Density= 278.7

Urban Pop Density=2219.6

[IL]

Rural - KM= 178.4

Suburban - KM= 73.0

Urban - KM= 10.2

Total - KM= 261.7

Rural Pop Density= 14.4

Suburban Pop Density= 323.6

Urban Pop Density=2379.1

[IN]

Rural - KM= 136.7

Suburban - KM= 97.3

Urban - KM= 9.4

Total - KM= 243.4

Rural Pop Density= 19.9

Suburban Pop Density= 276.3

Urban Pop Density=2354.7

[IA]

Rural - KM= 393.8

Suburban - KM= 95.4

Urban - KM= 5.1

Total - KM= 494.1

Rural Pop Density= 15.7

Suburban Pop Density= 268.0

Urban Pop Density=2185.2

[NE]

Rural - KM= 652.2

Suburban - KM= 75.6

Urban - KM= 7.0

Total - KM= 734.8

Rural Pop Density= 10.0

Suburban Pop Density= 268.5

Urban Pop Density=2401.8

[NJ]

Rural - KM= 42.7

Suburban - KM= 56.5
 Urban - KM= 12.1
 Total - KM= 111.3
 Rural Pop Density= 20.2
 Suburban Pop Density= 445.8
 Urban Pop Density=2247.5
 [NY]
 Rural - KM= 11.7
 Suburban - KM= 28.1
 Urban - KM= 16.4
 Total - KM= 56.2
 Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9
 [OH]
 Rural - KM= 213.1
 Suburban - KM= 151.3
 Urban - KM= 14.8
 Total - KM= 379.3
 Rural Pop Density= 19.7
 Suburban Pop Density= 309.6
 Urban Pop Density=2211.7
 [OR]
 Rural - KM= 301.0
 Suburban - KM= 32.2
 Urban - KM= 2.3
 Total - KM= 335.5
 Rural Pop Density= 8.2
 Suburban Pop Density= 313.2
 Urban Pop Density=1976.3
 [PA]
 Rural - KM= 353.3
 Suburban - KM= 141.2
 Urban - KM= 3.4
 Total - KM= 497.9
 Rural Pop Density= 16.5
 Suburban Pop Density= 230.5
 Urban Pop Density=2009.9
 [UT]
 Rural - KM= 186.8
 Suburban - KM= 51.6
 Urban - KM= 1.5
 Total - KM= 240.0
 Rural Pop Density= 9.7
 Suburban Pop Density= 257.8
 Urban Pop Density=2112.2
 [WA]
 Rural - KM= 60.9
 Suburban - KM= 7.2
 Urban - KM= 4.2
 Total - KM= 72.2
 Rural Pop Density= 4.8
 Suburban Pop Density= 441.1
 Urban Pop Density=2281.6
 [WY]
 Rural - KM= 607.2
 Suburban - KM= 33.9
 Urban - KM= 3.4
 Total - KM= 644.6
 Rural Pop Density= 4.9
 Suburban Pop Density= 399.4
 Urban Pop Density=1966.6
 [Total]
 Rural - KM=3494.8
 Suburban - KM= 922.7
 Urban - KM= 97.3
 Total - KM=4514.6
 Rural Pop Density= 11.6
 Suburban Pop Density= 303.0
 Urban Pop Density=2300.8

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:33
 TO : SKULL VALLEY IR UT Arriving : 09/10/09 01:57

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
 Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			INDIAN POINT NP			NY	0.0	0:00	09/08/09	12:33
0.8	LOCAL		BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:34
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:52
17.5	I287\$	I87 \$	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:10
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:11
0.1	I287		crossing state border		NJ/NY	BD	35.0	0:38	09/08/09	13:11
25.7	I287		PARSPNY-TROY	N	I287I80	NJ	60.6	1:02	09/08/09	13:35
43.4	I80		PAHAQUARRY	S	I80 X1	NJ	104.1	1:42	09/08/09	14:15
0.1	I80 #		crossing state border		NJ/PA	BD	104.1	1:42	09/08/09	14:15
2.0	I80 #		E STROUDSBURG	E	I80 X309	PA	106.2	1:45	09/08/09	14:18
			Rest 30 minutes							
303.3	I80		WEST MIDDLESEX	NE	I80 X4	PA	409.5	6:56	09/08/09	19:29
4.0	I80		crossing state border		OH/PA	BD	413.5	7:00	09/08/09	19:33
17.9	I80		NORTH JACKSON	NE	I76 I80	OH	431.4	7:19	09/08/09	19:52
			Rest 30 minutes							
76.0	I80 \$		ELYRIA	NW	I80 I90	OH	507.4	9:12	09/08/09	21:45
128.7	I80 \$	I90 \$	WEST JEFFERSON	N	I80 X13	OH	636.1	11:33	09/09/09	00:06
13.1	I80 \$	I90 \$	crossing state border		IN/OH	BD	649.2	11:47	09/09/09	00:20
			Rest 30 minutes							
135.4	I80 \$	I90 \$	PORTAGE	W	I80 I90	IN	784.5	14:32	09/09/09	02:05
0.5	I80		LAKE STATION	NE	I80 I94	IN	785.0	14:33	09/09/09	02:06
14.5	I80	I94	HAMMOND	W	I80 X1	IN	799.5	14:49	09/09/09	02:22
0.9	I80	I94	crossing state border		IL/IN	BD	800.4	14:49	09/09/09	02:22
3.0	I80	I94	LANSING	W	I294I94	IL	803.4	14:53	09/09/09	02:26
4.9	I294\$	I80 \$	HOMEWOOD	NW	I294I80	IL	808.3	14:58	09/09/09	02:31
			Rest 30 minutes							
154.4	I80		RAPIDS CITY	W	I80 X1	IL	962.7	18:17	09/09/09	05:50
0.3	I80		crossing state border		IA/IL	BD	963.0	18:17	09/09/09	05:50
168.0	I80		DES MOINES	N	I235I35	IA	1131.0	20:52	09/09/09	08:25
14.2	I35	I80	DES MOINES	W	I235I35	IA	1145.2	21:07	09/09/09	08:40
			Rest 30 minutes							
95.7	I80		MINDEN	NW	I680I80	IA	1240.8	23:05	09/09/09	10:38
16.5	I680		LOVELAND	SW	I29 I680	IA	1257.3	23:20	09/09/09	10:53
9.7	I29	I680	CRESCENT	W	I29 I680	IA	1267.0	23:29	09/09/09	11:02
3.0	I680		crossing state border		IA/NE	BD	1270.1	23:32	09/09/09	11:05
13.4	I680		OMAHA	SW	I680I80	NE	1283.4	23:46	09/09/09	11:19
			Rest 30 minutes							
422.7	I80		KIMBALL	S	I80 X20	NE	1706.1	29:56	09/09/09	16:29
20.6	I80		crossing state border		NE/WY	BD	1726.7	30:13	09/09/09	16:46
			Rest 30 minutes							
			Rest 30 minutes							
382.4	I80		EVANSTON	NE	I80 X18	WY	2109.0	36:19	09/09/09	22:52
18.2	I80		crossing state border		UT/WY	BD	2127.2	36:33	09/09/09	23:06
68.4	I80		HOLLADAY	N	I215I80	UT	2195.6	37:28	09/10/09	00:01
21.2	I215		SALT LAKE CITY	W	I215I80	UT	2216.8	37:47	09/10/09	00:20
			Rest 30 minutes							
40.8	I80		TIMPIE		I80 X77	UT	2257.6	38:22	09/10/09	00:55
24.5	LOCAL		SKULL VALLEY IR			UT	2282.0	39:24	09/10/09	01:57

Total elapsed time: 39:24 Total trip mileage: 2282.0 Impedance: 3281.6

Mileage by State :

IA: 307.1 IL: 162.6 IN: 151.2 NE: 456.6 NJ: 69.2 NY: 35.0
OH: 235.7 PA: 309.4 UT: 154.8 WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 2240.7 2-US: 16.0 6-LOCAL: 25.3

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2248.7 3-Multi-Lane Divided Highway: 0.9
5-Principle Road: 7.1 7-Other: 25.3

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2281.3
Total Inside Tribal Lands : 0.8

Skull Valley Reservation : 0.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INDIAN POINT NP NY
TO : SKULL VALLEY IR UT

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

IL	162.6	19.10	37.80	30.07	23.86	18.01	12.57	9.39	5.42	3.67	2.24	0.40
IN	151.2	1.73	19.97	37.40	25.85	28.69	17.16	8.92	5.71	3.55	1.89	0.41
IA	307.1	26.27	73.66	93.61	51.14	25.99	18.72	10.70	3.86	2.30	0.64	0.20
NE	456.6	167.07	80.87	107.72	49.64	24.69	10.77	7.27	4.24	2.75	1.02	0.59
NJ	69.2	1.93	6.56	8.51	9.52	7.30	10.12	10.25	7.44	4.92	2.38	0.23
NY	35.0	3.14	1.02	1.31	1.83	2.10	3.01	6.27	6.07	5.85	2.20	2.17
OH	235.7	5.72	33.46	51.22	42.02	37.15	29.12	17.51	10.25	6.65	1.89	0.68
PA	309.4	30.21	67.45	62.50	59.36	42.71	29.03	12.48	3.49	1.78	0.29	0.06
UT	154.8	69.51	20.41	19.54	12.87	7.71	5.40	5.49	4.78	5.00	3.62	0.50
WY	400.5	207.08	105.56	52.54	12.14	6.48	6.02	4.33	4.26	1.86	0.22	0.06

TOTALS

2282.0 531.76 446.76 464.42 288.23 200.83 141.92 92.61 55.52 38.33 16.39 5.30

PERCENTAGES

23.30 19.58 20.35 12.63 8.80 6.22 4.06 2.43 1.68 0.72 0.23

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION

People/sq. mi.	31.2	807.3	6049.0
People/sq. km.	12.0	311.7	2335.5

DISTANCE

	TOTALS			
Miles	1731.2	490.9	60.0	2282.0
Kilometers	2786.0	790.0	96.6	3672.5
Percentages	75.9	21.5	2.6	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 72678 IN 79041 IA 60053 NE 59486 NJ 69023 NY 81427 OH 123201 PA 59108
UT 68580 WY 32573

Total Population within 800 meter Buffer Zone: 705170

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H
 Network Version=4.0
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=INDIAN POINT NP
 From STATE=NY
 From SUBNET=
 To CITY=SKULL VALLEY IR
 To STATE=UT
 To SUBNET=
 [IL]
 Rural - KM= 178.4
 Suburban - KM= 73.0
 Urban - KM= 10.2
 Total - KM= 261.7
 Rural Pop Density= 14.4
 Suburban Pop Density= 323.6
 Urban Pop Density=2379.1
 [IN]
 Rural - KM= 136.7
 Suburban - KM= 97.3
 Urban - KM= 9.4
 Total - KM= 243.4
 Rural Pop Density= 19.9
 Suburban Pop Density= 276.3
 Urban Pop Density=2354.7
 [IA]
 Rural - KM= 393.8
 Suburban - KM= 95.4
 Urban - KM= 5.1
 Total - KM= 494.1
 Rural Pop Density= 15.7
 Suburban Pop Density= 268.0
 Urban Pop Density=2185.2
 [NE]
 Rural - KM= 652.2
 Suburban - KM= 75.6
 Urban - KM= 7.0
 Total - KM= 734.8
 Rural Pop Density= 10.0
 Suburban Pop Density= 268.5
 Urban Pop Density=2401.8
 [NJ]
 Rural - KM= 42.7
 Suburban - KM= 56.5
 Urban - KM= 12.1
 Total - KM= 111.3
 Rural Pop Density= 20.2
 Suburban Pop Density= 445.8
 Urban Pop Density=2247.5
 [NY]
 Rural - KM= 11.7
 Suburban - KM= 28.1
 Urban - KM= 16.4
 Total - KM= 56.2
 Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9
 [OH]
 Rural - KM= 213.1
 Suburban - KM= 151.3
 Urban - KM= 14.8
 Total - KM= 379.3
 Rural Pop Density= 19.7
 Suburban Pop Density= 309.6
 Urban Pop Density=2211.7
 [PA]
 Rural - KM= 353.3
 Suburban - KM= 141.2

Urban - KM= 3.4
Total - KM= 497.9
Rural Pop Density= 16.5
Suburban Pop Density= 230.5
Urban Pop Density=2009.9
[UT]
Rural - KM= 196.9
Suburban - KM= 37.6
Urban - KM= 14.7
Total - KM= 249.2
Rural Pop Density= 7.5
Suburban Pop Density= 407.0
Urban Pop Density=2411.9
[WY]
Rural - KM= 607.2
Suburban - KM= 33.9
Urban - KM= 3.4
Total - KM= 644.6
Rural Pop Density= 4.9
Suburban Pop Density= 399.4
Urban Pop Density=1966.6
[Total]
Rural - KM=2786.0
Suburban - KM= 790.0
Urban - KM= 96.6
Total - KM=3672.5
Rural Pop Density= 12.0
Suburban Pop Density= 311.7
Urban Pop Density=2335.5

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:35
 TO : DEAF SMITH CTY TX Arriving : 09/09/09 20:05

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
 Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			INDIAN POINT NP			NY	0.0	0:00	09/08/09	12:35
0.8	LOCAL		BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:36
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:54
17.5	I287	I87 \$	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:12
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:13
0.1	I287		crossing state border		NJ/NY	BD	35.0	0:38	09/08/09	13:13
46.6	I287		PLUCKEMIN	W	I287I78	NJ	81.6	1:21	09/08/09	13:56
26.7	I78		ALPHA	NE	I78 X3	NJ	108.3	1:46	09/08/09	14:21
2.6	I78 #		crossing state border		NJ/PA	BD	110.8	1:48	09/08/09	14:23
0.2	I78 #		EASTON	SE	I78 X75	PA	111.1	1:48	09/08/09	14:23
76.4	I78		BORDNERSVILLE	SE	I78 I81	PA	187.5	2:59	09/08/09	15:34
Rest 30 minutes										
83.8	I81		GREENCASTLE	E	I81 X5	PA	271.3	4:49	09/08/09	17:24
4.8	I81		crossing state border		MD/PA	BD	276.1	4:53	09/08/09	17:28
8.5	I81		HALFWAY	W	I70 I81	MD	284.6	5:01	09/08/09	17:36
3.6	I81		crossing state border		MD/WV	BD	288.1	5:04	09/08/09	17:39
21.1	I81		INWOOD	W	I81 X5	WV	309.2	5:22	09/08/09	17:57
5.1	I81		crossing state border		VA/WV	BD	314.2	5:27	09/08/09	18:02
103.2	I81		STAUNTON	SE	I64 I81	VA	417.4	7:02	09/08/09	19:37
30.4	I64	I81	LEXINGTON	E	I64 I81	VA	447.8	7:30	09/08/09	20:05
Rest 30 minutes										
109.4	I81		FT CHISWELL	E	I77 I81	VA	557.2	9:42	09/08/09	22:17
8.8	I77	I81	WYTHEVILLE	E	I77 I81	VA	566.0	9:50	09/08/09	22:25
71.7	I81		BRISTOL	W	I81 X1	VA	637.7	10:57	09/08/09	23:32
0.9	I81		crossing state border		TN/VA	BD	638.6	10:58	09/08/09	23:33
74.9	I81		DANDRIDGE	NE	I40 I81	TN	713.5	12:02	09/09/09	00:37
28.5	I40		KNOXVILLE	NE	I40 I640	TN	741.9	12:27	09/09/09	01:02
6.9	I640		KNOXVILLE	NW	I640I75	TN	748.8	12:34	09/09/09	01:09
Rest 30 minutes										
3.6	I640	I75	KNOXVILLE	W	I40 I640	TN	752.5	12:38	09/09/09	01:13
17.3	I40	I75	FARRAGUT	W	I40 I75	TN	769.8	13:26	09/09/09	02:01
154.2	I40		NASHVILLE	E	I24 I40	TN	924.0	15:40	09/09/09	03:15
1.1	I24		NASHVILLE	SE	I24 I440	TN	925.1	15:41	09/09/09	03:16
7.5	I440		NASHVILLE	W	I40 I440	TN	932.6	15:49	09/09/09	03:24
Rest 30 minutes										
206.2	I40		MEMPHIS		I240I40	TN	1138.7	19:20	09/09/09	06:55
2.6	I40		crossing state border		AR/TN	BD	1141.4	19:23	09/09/09	06:58
4.7	I40		WEST MEMPHIS	E	I40 I55	AR	1146.1	19:27	09/09/09	07:02
2.4	I40	I55	WEST MEMPHIS	N	I40 I55	AR	1148.5	19:29	09/09/09	07:04
Rest 30 minutes										
270.8	I40		VAN BUREN	N	I40 X5	AR	1419.3	24:11	09/09/09	11:46
5.3	I40		crossing state border		AR/OK	BD	1424.5	24:16	09/09/09	11:51
Rest 30 minutes										
165.2	I40		OKLAHOMA CITY	SE	I240I40	OK	1589.7	27:07	09/09/09	14:42
16.2	I240		OKLAHOMA CITY	SW	I240I44	OK	1606.0	27:22	09/09/09	14:57
4.9	I44		OKLAHOMA CITY	W	I40 I44	OK	1610.9	27:27	09/09/09	15:02
125.3	I40		SAYRE	S	I40 X20	OK	1736.2	29:17	09/09/09	16:52
20.7	I40		crossing state border		OK/TX	BD	1756.9	29:34	09/09/09	17:09
Rest 30 minutes										

139.6 I40 VEGA S I40 X36 TX 1896.5 32:12 09/09/09 19:47
 9.8 U385 VEGA S U385F258 TX 1906.3 32:23 09/09/09 19:58
 3.4 F2587 DEAF SMITH CTY TX 1909.7 32:30 09/09/09 20:05

Total elapsed time: 32:30 Total trip mileage: 1909.7 Impedance: 2604.8

Mileage by State :

AR: 283.1 MD: 12.0 NJ: 75.9 NY: 35.0 OK: 332.4 PA: 165.2
 TN: 502.8 TX: 152.9 VA: 324.3 WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 1879.7 2-US: 25.8 6-LOCAL: 0.8 7-OTHER: 3.4

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1887.6 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 16.9 7-Other: 4.3

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1905.7
 Total Inside Tribal Lands : 4.1

Absentee-Shawnee Tribe Trust Land : 0.3 Cheyenne-Arapahoe Trust Land : 2.0
 Kickapoo Tribe Trust Land : 0.9 Sac and Fox Nation Trust Land : 0.5
 Thlopthlocco Tribal Town (Creek) : 0.5

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=DEAF SMITH CTY

To STATE=TX

To SUBNET=

[AR]

Rural - KM= 317.4

Suburban - KM= 130.0

Urban - KM= 8.4

Total - KM= 455.7

Rural Pop Density= 14.4

Suburban Pop Density= 273.4

Urban Pop Density=2060.2

[MD]

Rural - KM= 5.7

Suburban - KM= 12.3

Urban - KM= 1.4

Total - KM= 19.4

Rural Pop Density= 18.8

Suburban Pop Density= 380.0

Urban Pop Density=1764.7

[NJ]

Rural - KM= 40.2

Suburban - KM= 67.6

Urban - KM= 14.2

Total - KM= 122.1

Rural Pop Density= 19.7

Suburban Pop Density= 478.5

Urban Pop Density=2338.2

[NY]

Rural - KM= 11.7

Suburban - KM= 28.1

Urban - KM= 16.4

Total - KM= 56.2

Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9
 [OK]
 Rural - KM= 428.4
 Suburban - KM= 98.2
 Urban - KM= 8.4
 Total - KM= 534.9
 Rural Pop Density= 11.9
 Suburban Pop Density= 311.5
 Urban Pop Density=2338.8
 [PA]
 Rural - KM= 134.5
 Suburban - KM= 120.4
 Urban - KM= 11.0
 Total - KM= 265.9
 Rural Pop Density= 22.6
 Suburban Pop Density= 335.4
 Urban Pop Density=2257.0
 [TN]
 Rural - KM= 496.4
 Suburban - KM= 281.4
 Urban - KM= 31.3
 Total - KM= 809.2
 Rural Pop Density= 18.1
 Suburban Pop Density= 314.3
 Urban Pop Density=2171.5
 [TX]
 Rural - KM= 220.1
 Suburban - KM= 18.8
 Urban - KM= 7.2
 Total - KM= 246.0
 Rural Pop Density= 5.2
 Suburban Pop Density= 400.0
 Urban Pop Density=2148.0
 [VA]
 Rural - KM= 282.1
 Suburban - KM= 230.1
 Urban - KM= 9.7
 Total - KM= 522.0
 Rural Pop Density= 18.0
 Suburban Pop Density= 280.0
 Urban Pop Density=2191.7
 [WV]
 Rural - KM= 12.6
 Suburban - KM= 28.8
 Urban - KM= 0.7
 Total - KM= 42.0
 Rural Pop Density= 29.5
 Suburban Pop Density= 342.3
 Urban Pop Density=1979.3
 [Total]
 Rural - KM=1949.1
 Suburban - KM=1015.7
 Urban - KM= 108.6
 Total - KM=3073.4
 Rural Pop Density= 15.1
 Suburban Pop Density= 325.1
 Urban Pop Density=2260.4

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:48
TO : ORNL TN Arriving : 09/09/09 02:27

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			INDIAN POINT NP			NY	0.0	0:00	09/08/09	12:48
0.8	LOCAL		BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:49
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	13:07
17.5	I287\$ I87 \$		SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:25
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:26
0.1	I287		crossing state border		NJ/NY	BD	35.0	0:38	09/08/09	13:26
46.6	I287		PLUCKEMIN	W	I287I78	NJ	81.6	1:21	09/08/09	14:09
26.7	I78		ALPHA	NE	I78 X3	NJ	108.3	1:46	09/08/09	14:34
2.6	I78 #		crossing state border		NJ/PA	BD	110.8	1:48	09/08/09	14:36
0.2	I78 #		EASTON	SE	I78 X75	PA	111.1	1:48	09/08/09	14:36
76.4	I78		BORDNERSVILLE	SE	I78 I81	PA	187.5	2:59	09/08/09	15:47
Rest 30 minutes										
83.8	I81		GREENCASTLE	E	I81 X5	PA	271.3	4:49	09/08/09	17:37
4.8	I81		crossing state border		MD/PA	BD	276.1	4:53	09/08/09	17:41
8.5	I81		HALFWAY	W	I70 I81	MD	284.6	5:01	09/08/09	17:49
3.6	I81		crossing state border		MD/WV	BD	288.1	5:04	09/08/09	17:52
21.1	I81		INWOOD	W	I81 X5	WV	309.2	5:22	09/08/09	18:10
5.1	I81		crossing state border		VA/WV	BD	314.2	5:27	09/08/09	18:15
103.2	I81		STAUNTON	SE	I64 I81	VA	417.4	7:02	09/08/09	19:50
30.4	I64		I81 LEXINGTON	E	I64 I81	VA	447.8	7:30	09/08/09	20:18
Rest 30 minutes										
109.4	I81		FT CHISWELL	E	I77 I81	VA	557.2	9:42	09/08/09	22:30
8.8	I77	I81	WYTHEVILLE	E	I77 I81	VA	566.0	9:50	09/08/09	22:38
71.7	I81		BRISTOL	W	I81 X1	VA	637.7	10:57	09/08/09	23:45
0.9	I81		crossing state border		TN/VA	BD	638.6	10:58	09/08/09	23:46
74.9	I81		DANDRIDGE	NE	I40 I81	TN	713.5	12:02	09/09/09	00:50
28.5	I40		KNOXVILLE	NE	I40 I640	TN	741.9	12:27	09/09/09	01:15
6.9	I640		KNOXVILLE	NW	I640I75	TN	748.8	12:34	09/09/09	01:22
Rest 30 minutes										
3.6	I640	I75	KNOXVILLE	W	I40 I640	TN	752.5	12:38	09/09/09	01:26
17.3	I40	I75	FARRAGUT	W	I40 I75	TN	769.8	13:26	09/09/09	02:14
3.9	I40		LENOIR CITY	NW	I40 X364	TN	773.7	13:29	09/09/09	02:17
3.4	S95	X-10	W S95	LOCL	TN	777.1	13:36	09/09/09	02:24	
2.3	LOCAL		ORNL			TN	779.3	13:39	09/09/09	02:27

Total elapsed time: 13:39 Total trip mileage: 779.3 Impedance: 1374.8

Mileage by State :

MD: 12.0 NJ: 75.9 NY: 35.0 PA: 165.2 TN: 140.8 VA: 324.3
WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 756.8 2-US: 16.0 3-STATE: 3.4 6-LOCAL: 3.1

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 764.8 3-Multi-Lane Divided Highway: 0.9
5-Principle Road: 7.1 7-Other: 6.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 779.3
 Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INDIAN POINT NP NY
 TO : ORNL TN

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

MD 12.0 0.36 0.74 1.38 1.06 1.57 2.99 2.06 1.04 0.85 0.00 0.00
 NJ 75.9 1.54 6.36 8.76 8.32 6.02 11.50 15.54 8.96 5.27 3.19 0.39
 NY 35.0 3.14 1.02 1.31 1.83 2.10 3.01 6.27 6.07 5.85 2.20 2.17
 PA 165.2 1.96 11.33 38.68 31.63 25.98 24.32 14.80 9.69 4.67 1.69 0.48
 TN 140.8 6.11 10.29 24.80 27.67 23.39 22.05 17.04 5.60 3.55 0.25 0.00
 VA 324.3 16.54 54.94 49.81 54.01 55.18 50.24 28.26 9.32 4.36 1.28 0.37
 WV 26.1 0.28 0.28 2.19 5.06 4.86 6.89 4.08 2.04 0.35 0.07 0.00

TOTALS

779.3 29.93 84.96 126.93 129.58 119.10 121.00 88.05 42.72 24.90 8.68 3.41

PERCENTAGES

3.84 10.90 16.29 16.63 15.28 15.53 11.30 5.48 3.20 1.11 0.44

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 51.9 878.9 5945.8
 People/sq. km. 20.0 339.3 2295.7

DISTANCE TOTALS
 Miles 371.4 370.9 37.0 779.3
 Kilometers 597.7 596.8 59.5 1254.2
 Percentages 47.7 47.6 4.7

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

MD 8804 NJ 84424 NY 81427 PA 91341 TN 65075 VA 119000 WV 13999

Total Population within 800 meter Buffer Zone: 464070

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=ORNL

To STATE=TN

To SUBNET=

[MD]

Rural - KM= 5.7

Suburban - KM= 12.3

Urban - KM= 1.4

Total - KM= 19.4

Rural Pop Density= 18.8

Suburban Pop Density= 380.0

Urban Pop Density=1764.7
 [NJ]
 Rural - KM= 40.2
 Suburban - KM= 67.6
 Urban - KM= 14.2
 Total - KM= 122.1
 Rural Pop Density= 19.7
 Suburban Pop Density= 478.5
 Urban Pop Density=2338.2
 [NY]
 Rural - KM= 11.7
 Suburban - KM= 28.1
 Urban - KM= 16.4
 Total - KM= 56.2
 Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9
 [PA]
 Rural - KM= 134.5
 Suburban - KM= 120.4
 Urban - KM= 11.0
 Total - KM= 265.9
 Rural Pop Density= 22.6
 Suburban Pop Density= 335.4
 Urban Pop Density=2257.0
 [TN]
 Rural - KM= 110.8
 Suburban - KM= 109.6
 Urban - KM= 6.1
 Total - KM= 226.5
 Rural Pop Density= 21.9
 Suburban Pop Density= 314.5
 Urban Pop Density=1849.4
 [VA]
 Rural - KM= 282.1
 Suburban - KM= 230.1
 Urban - KM= 9.7
 Total - KM= 522.0
 Rural Pop Density= 18.0
 Suburban Pop Density= 280.0
 Urban Pop Density=2191.7
 [WV]
 Rural - KM= 12.6
 Suburban - KM= 28.8
 Urban - KM= 0.7
 Total - KM= 42.0
 Rural Pop Density= 29.5
 Suburban Pop Density= 342.3
 Urban Pop Density=1979.3
 [Total]
 Rural - KM= 597.7
 Suburban - KM= 596.8
 Urban - KM= 59.5
 Total - KM=1254.2
 Rural Pop Density= 20.0
 Suburban Pop Density= 339.3
 Urban Pop Density=2295.7

RAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: KEWAUNEE NP WI Leaving : 09/08/09 11:50
TO : ORNL TN Arriving : 09/09/09 03:28

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			KEWAUNEE NP			WI	0.0	0:00	09/08/09	11:50
5.5	S42		TWO CREEKS	S	S42 LNR	WI	5.5	0:07	09/08/09	11:57
4.0	LOCAL		MISHICOT	N	S163LNR	WI	9.5	0:14	09/08/09	12:04
2.0	S163		MISHICOT		S147S163	WI	11.4	0:17	09/08/09	12:07
7.5	S147		MARIBEL	E	I43 X164	WI	18.9	0:27	09/08/09	12:17
92.2	I43		MILWAUKEE		I43 I94	WI	111.2	1:53	09/08/09	13:43
5.8	I94		MILWAUKEE	W	I894I94	WI	117.0	1:59	09/08/09	13:49
4.5	I894		MILWAUKEE	SW	I43 I894	WI	121.5	2:04	09/08/09	13:54
5.3	I43	I894	MILWAUKEE	S	I894I94	WI	126.8	2:10	09/08/09	14:00
27.7	I94		KENOSHA	W	I94 X344	WI	154.4	2:36	09/08/09	14:26
5.1	I94		crossing state border		IL/WI	BD	159.6	2:41	09/08/09	14:31
1.0	I94		ROSECRANS	N	I94 U41	IL	160.5	2:42	09/08/09	14:32
24.5	I94 \$		DEERFIELD		I294I94	IL	185.0	3:09	09/08/09	14:59
			Rest 30 minutes							
48.1	I294\$		HOMEWOOD	NW	I294I80	IL	233.1	4:31	09/08/09	16:21
4.9	I294\$	I80 \$	LANSING	W	I294I94	IL	238.0	4:37	09/08/09	16:27
3.0	I80	I94	crossing state border		IL/IN	BD	241.0	4:40	09/08/09	16:30
11.7	I80	I94	GARY	SE	I65 I80	IN	252.6	4:53	09/08/09	16:43
131.6	I65		ROYALTON	N	I65 I865	IN	384.2	7:04	09/08/09	18:54
4.1	I865		ZIONSVILLE	S	I465I865	IN	388.4	7:08	09/08/09	18:58
23.8	I465		INDIANAPOLIS	SE	I465I74	IN	412.2	7:32	09/08/09	19:22
			Rest 30 minutes							
75.3	I74		NEW TRENTON	SE	I74 X169	IN	487.5	8:47	09/08/09	20:37
2.3	I74		crossing state border		IN/OH	BD	489.8	9:20	09/08/09	21:10
5.9	I74		HARRISON	SE	I275I74	OH	495.6	9:26	09/08/09	22:16
7.3	I275		crossing state border		IN/OH	BD	502.9	9:34	09/08/09	22:24
1.9	I275		HARDINSBURG	E	I275X15	IN	504.8	9:36	09/08/09	21:26
1.3	I275		crossing state border		IN/KY	BD	506.1	9:37	09/08/09	21:27
13.7	I275		ERLANGER	N	I275I71	KY	519.9	9:51	09/08/09	22:41
12.3	I71	I75	WALTON	NW	I71 I75	KY	532.2	10:02	09/08/09	22:52
55.4	I75		LEXINGTON	N	I64 I75	KY	587.6	10:53	09/08/09	23:43
6.9	I64	I75	LEXINGTON	E	I64 I75	KY	594.5	11:01	09/08/09	23:51
101.3	I75		WILLIAMSBURG	S	I75 X11	KY	695.8	12:35	09/09/09	01:25
10.6	I75		crossing state border		KY/TN	BD	706.4	12:45	09/09/09	01:35
			Rest 30 minutes							
53.9	I75		KNOXVILLE	NW	I640I75	TN	760.3	14:03	09/09/09	02:53
3.6	I640	I75	KNOXVILLE	W	I40 I640	TN	764.0	14:07	09/09/09	02:57
17.3	I40	I75	FARRAGUT	W	I40 I75	TN	781.2	14:25	09/09/09	03:15
3.9	I40		LENOIR CITY	NW	I40 X364	TN	785.1	14:28	09/09/09	03:18
3.4	S95	X-10	W	S95 LOCL	TN	788.5	14:35	09/09/09	03:25	
2.3	LOCAL		ORNL		TN	790.8	14:38	09/09/09	03:28	

Total elapsed time: 14:38 Total trip mileage: 790.8 Impedance: 1488.5

Mileage by State :

IL: 81.4 IN: 252.0 KY: 200.3 OH: 13.1 TN: 84.4 WI: 159.6

Mileage by Sign Type:

1-INTERSTATE: 766.2 3-STATE: 18.3 6-LOCAL: 6.3

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 766.2 5-Principle Road: 5.5
6-Through Road: 9.4 7-Other: 9.7

Mileage by Tribal Lands:

Total Outside Tribal Lands : 790.8
Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: KEWAUNEE NP WI
TO : ORNL TN-----
>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996-----
IL 81.4 1.30 1.78 5.72 8.40 8.02 13.00 13.53 11.68 9.73 6.80 1.49
IN 252.0 16.50 45.73 52.45 40.11 33.52 27.17 16.24 9.74 6.96 2.82 0.74
KY 200.3 2.90 19.15 42.08 42.64 36.52 27.80 14.67 7.30 5.08 2.13 0.00
OH 13.1 1.52 0.95 2.09 2.15 2.27 1.20 1.72 0.59 0.59 0.07 0.00
TN 84.4 12.08 8.62 11.45 12.15 9.35 11.35 9.55 5.43 3.90 0.49 0.00
WI 159.6 0.94 21.34 39.10 33.04 17.80 12.69 10.03 8.17 8.72 5.59 2.18

TOTALS

790.8 35.24 97.57 152.89 138.49 107.48 93.21 65.74 42.91 34.98 17.90 4.41
PERCENTAGES

4.46 12.34 19.33 17.51 13.59 11.79 8.31 5.43 4.42 2.26 0.56

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 50.5 898.3 6107.4
People/sq. km. 19.5 346.8 2358.1

DISTANCE

	TOTALS			
Miles	424.2	309.3	57.3	790.8
Kilometers	682.6	497.8	92.2	1272.6
Percentages	53.6	39.1	7.2	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 137129 IN 118578 KY 78842 OH 7410 TN 46676 WI 133493

Total Population within 800 meter Buffer Zone: 522128

TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=KEWAUNEE NP

From STATE=WI

From SUBNET=

To CITY=ORNL

To STATE=TN

To SUBNET=

[IL]

Rural - KM= 27.7

Suburban - KM= 74.4
 Urban - KM= 29.0
 Total - KM= 131.0
 Rural Pop Density= 24.6
 Suburban Pop Density= 482.4
 Urban Pop Density=2455.8
 [IN]
 Rural - KM= 249.1
 Suburban - KM= 139.5
 Urban - KM= 16.9
 Total - KM= 405.6
 Rural Pop Density= 16.9
 Suburban Pop Density= 313.7
 Urban Pop Density=2284.5
 [KY]
 Rural - KM= 171.8
 Suburban - KM= 138.9
 Urban - KM= 11.6
 Total - KM= 322.3
 Rural Pop Density= 22.5
 Suburban Pop Density= 282.1
 Urban Pop Density=2145.1
 [OH]
 Rural - KM= 10.8
 Suburban - KM= 9.3
 Urban - KM= 1.1
 Total - KM= 21.1
 Rural Pop Density= 18.0
 Suburban Pop Density= 337.5
 Urban Pop Density=1901.2
 [TN]
 Rural - KM= 71.3
 Suburban - KM= 57.4
 Urban - KM= 7.1
 Total - KM= 135.8
 Rural Pop Density= 15.7
 Suburban Pop Density= 384.9
 Urban Pop Density=1908.4
 [WI]
 Rural - KM= 152.0
 Suburban - KM= 78.4
 Urban - KM= 26.5
 Total - KM= 256.8
 Rural Pop Density= 21.2
 Suburban Pop Density= 365.2
 Urban Pop Density=2529.4
 [Total]
 Rural - KM= 682.6
 Suburban - KM= 497.8
 Urban - KM= 92.2
 Total - KM=1272.6
 Rural Pop Density= 19.5
 Suburban Pop Density= 346.8
 Urban Pop Density=2358.1

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: KEWAUNEE NP WI Leaving : 09/08/09 11:51
 TO : DEAF SMITH CTY TX Arriving : 09/09/09 11:10

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
 Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			KEWAUNEE NP			WI	0.0	0:00	09/08/09	11:51
5.5	S42		TWO CREEKS	S	S42 LNR	WI	5.5	0:07	09/08/09	11:58
4.0	LOCAL		MISHICOT	N	S163LNR	WI	9.5	0:14	09/08/09	12:05
2.0	S163		MISHICOT		S147S163	WI	11.4	0:17	09/08/09	12:08
7.5	S147		MARIBEL	E	I43 X164	WI	18.9	0:27	09/08/09	12:18
92.2	I43		MILWAUKEE		I43 I94	WI	111.2	1:53	09/08/09	13:44
5.8	I94		MILWAUKEE	W	I894I94	WI	117.0	1:59	09/08/09	13:50
4.5	I894		MILWAUKEE	SW	I43 I894	WI	121.5	2:04	09/08/09	13:55
60.2	I43		BELOIT	NE	I43 I90	WI	181.7	3:00	09/08/09	14:51
2.5	I39	I90	crossing state border		IL/WI	BD	184.1	3:02	09/08/09	14:53
0.3	I39	I90	SOUTH BELOIT	E	I90 S75	IL	184.4	3:03	09/08/09	14:54
17.2	I39	\$	I90 \$ CHERRY VALLEY	NE	I39 I90	IL	201.6	3:22	09/08/09	15:13
25.8	I39		ROCHELLE	SE	I39 I88	IL	227.4	3:50	09/08/09	15:41
			Rest 30 minutes							
34.3	I88	\$	TEWT'S ROCK FALLS	SE	I88 X44	IL	261.7	4:57	09/08/09	16:48
43.9	I88		RAPIDS CITY	S	I80 I88	IL	305.6	5:45	09/08/09	17:36
3.2	I80		RAPIDS CITY	W	I80 X1	IL	308.8	5:48	09/08/09	17:39
0.3	I80		crossing state border		IA/IL	BD	309.1	5:49	09/08/09	17:40
			Rest 30 minutes							
168.0	I80		DES MOINES	N	I235I35	IA	477.0	8:54	09/08/09	20:45
14.2	I35	I80	DES MOINES	W	I235I35	IA	491.2	9:08	09/08/09	20:59
60.4	I35		DECATUR CITY	W	I35 X12	IA	551.6	10:05	09/08/09	21:56
12.9	I35		crossing state border		IA/MO	BD	564.5	10:17	09/08/09	22:08
102.0	I35		CLAYCOMO		I35 I435	MO	666.4	11:51	09/08/09	23:42
19.7	I435		GRANDVIEW	N	I435I470	MO	686.2	12:11	09/09/09	00:02
3.9	I435		crossing state border		KS/MO	BD	690.1	12:15	09/09/09	00:06
7.6	I435		LENEXA	S	I35 I435	KS	697.7	12:23	09/09/09	00:14
			Rest 30 minutes							
95.2	I35		EMPORIA	W	I335I35	KS	793.0	14:15	09/09/09	02:06
123.3	I35	\$	TKST'S SOUTH HAVEN	E	I35 X4	KS	916.2	16:01	09/09/09	03:52
4.1	I35		crossing state border		KS/OK	BD	920.3	16:04	09/09/09	03:55
			Rest 30 minutes							
99.0	I35		EDMOND	SE	I35 I44	OK	1019.3	18:00	09/09/09	05:51
4.4	I35	I44	OKLAHOMA CITY	NE	I35 I44	OK	1023.7	18:04	09/09/09	05:55
11.0	I44		OKLAHOMA CITY	W	I40 I44	OK	1034.7	18:16	09/09/09	06:07
125.3	I40		SAYRE	S	I40 X20	OK	1160.0	20:05	09/09/09	07:56
20.7	I40		crossing state border		OK/TX	BD	1180.7	20:23	09/09/09	08:14
			Rest 30 minutes							
139.6	I40		VEGA	S	I40 X36	TX	1320.3	23:00	09/09/09	10:51
9.8	U385		VEGA	S	U385F258	TX	1330.1	23:12	09/09/09	11:03
3.4	F2587		DEAF SMITH CTY			TX	1333.6	23:19	09/09/09	11:10

Total elapsed time: 23:19 Total trip mileage: 1333.6 Impedance: 2167.9

Mileage by State :

IA: 255.4 IL: 125.0 KS: 230.2 MO: 125.6 OK: 260.4 TX: 152.9
 WI: 184.1

Mileage by Sign Type:

1-INTERSTATE: 1301.4 2-US: 9.8 3-STATE: 14.9 6-LOCAL: 4.0
 7-OTHER: 3.4

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1301.4 5-Principle Road: 15.3
 6-Through Road: 9.4 7-Other: 7.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1331.6
 Total Inside Tribal Lands : 2.0

Cheyenne-Arapahoe Trust Land : 2.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: KEWAUNEE NP WI
 TO : DEAF SMITH CTY TX

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

IL 125.0 17.15 28.51 27.52 23.32 14.06 7.09 4.15 2.40 0.60 0.17 0.00
 IA 255.4 18.23 65.24 77.29 35.39 18.82 19.80 12.08 4.97 2.83 0.52 0.22
 KS 230.2 51.25 51.80 47.36 28.91 15.16 10.20 10.44 7.19 4.86 2.19 0.92
 MO 125.6 19.61 18.56 24.89 20.04 14.38 9.72 10.90 4.59 2.37 0.50 0.06
 OK 260.4 77.83 45.53 66.49 23.87 14.32 13.55 8.27 5.43 3.76 1.11 0.27
 TX 152.9 76.62 34.17 20.84 5.13 3.41 3.17 3.02 2.11 3.45 0.65 0.35
 WI 184.1 1.68 26.92 47.42 42.77 19.93 14.64 11.51 6.86 5.69 4.61 2.07

TOTALS

1333.6 262.37 270.73 311.81 179.43 100.08 78.17 60.37 33.55 23.56 9.75 3.89
 PERCENTAGES
 19.67 20.30 23.38 13.45 7.50 5.86 4.53 2.52 1.77 0.73 0.29

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION

People/sq. mi. 33.6 867.4 6116.9
 People/sq. km. 13.0 334.9 2361.7

DISTANCE

TOTALS
 Miles 1024.3 272.2 37.2 1333.6
 Kilometers 1648.5 438.0 59.9 2146.1
 Percentages 76.8 20.4 2.8

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 18871 IA 60440 KS 80813 MO 42090 OK 61316 TX 39546 WI 115348

Total Population within 800 meter Buffer Zone: 418424

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=KEWAUNEE NP

From STATE=WI

From SUBNET=

To CITY=DEAF SMITH CTY

To STATE=TX

To SUBNET=
 [IL]
 Rural - KM= 155.3
 Suburban - KM= 44.6
 Urban - KM= 1.2
 Total - KM= 201.1
 Rural Pop Density= 15.4
 Suburban Pop Density= 266.6
 Urban Pop Density=2049.0
 [IA]
 Rural - KM= 315.7
 Suburban - KM= 89.6
 Urban - KM= 5.7
 Total - KM= 411.0
 Rural Pop Density= 15.0
 Suburban Pop Density= 310.8
 Urban Pop Density=2105.2
 [KS]
 Rural - KM= 288.6
 Suburban - KM= 69.2
 Urban - KM= 12.8
 Total - KM= 370.5
 Rural Pop Density= 11.9
 Suburban Pop Density= 377.4
 Urban Pop Density=2405.0
 [MO]
 Rural - KM= 133.7
 Suburban - KM= 63.7
 Urban - KM= 4.7
 Total - KM= 202.2
 Rural Pop Density= 15.2
 Suburban Pop Density= 345.6
 Urban Pop Density=2035.2
 [OK]
 Rural - KM= 343.9
 Suburban - KM= 66.9
 Urban - KM= 8.3
 Total - KM= 419.0
 Rural Pop Density= 10.4
 Suburban Pop Density= 336.9
 Urban Pop Density=2173.1
 [TX]
 Rural - KM= 220.1
 Suburban - KM= 18.8
 Urban - KM= 7.2
 Total - KM= 246.0
 Rural Pop Density= 5.2
 Suburban Pop Density= 400.0
 Urban Pop Density=2148.0
 [WI]
 Rural - KM= 191.2
 Suburban - KM= 85.2
 Urban - KM= 19.9
 Total - KM= 296.3
 Rural Pop Density= 21.4
 Suburban Pop Density= 337.4
 Urban Pop Density=2660.0
 [Total]
 Rural - KM=1648.5
 Suburban - KM= 438.0
 Urban - KM= 59.9
 Total - KM=2146.1
 Rural Pop Density= 13.0
 Suburban Pop Density= 334.9
 Urban Pop Density=2361.7

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: KEWAUNEE NP WI Leaving : 09/08/09 11:52
 TO : SKULL VALLEY IR UT Arriving : 09/09/09 13:48

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
 Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		KEWAUNEE NP			WI	0.0	0:00	09/08/09	11:52
5.5	S42	TWO CREEKS	S	S42 LNR	WI	5.5	0:07	09/08/09	11:59
4.0	LOCAL	MISHICOT	N	S163LNR	WI	9.5	0:14	09/08/09	12:06
2.0	S163	MISHICOT		S147S163	WI	11.4	0:17	09/08/09	12:09
7.5	S147	MARIBEL	E	I43 X164	WI	18.9	0:27	09/08/09	12:19
92.2	I43	MILWAUKEE		I43 I94	WI	111.2	1:53	09/08/09	13:45
5.8	I94	MILWAUKEE	W	I894I94	WI	117.0	1:59	09/08/09	13:51
4.5	I894	MILWAUKEE	SW	I43 I894	WI	121.5	2:04	09/08/09	13:56
60.2	I43	BELOIT	NE	I43 I90	WI	181.7	3:00	09/08/09	14:52
2.5	I39	I90 crossing state border		IL/WI	BD	184.1	3:02	09/08/09	14:54
0.3	I39	I90 SOUTH BELOIT	E	I90 S75	IL	184.4	3:03	09/08/09	14:55
17.2	I39 \$	I90 \$ CHERRY VALLEY	NE	I39 I90	IL	201.6	3:22	09/08/09	15:14
25.8	I39	ROCHELLE	SE	I39 I88	IL	227.4	3:50	09/08/09	15:42
		Rest 30 minutes							
34.3	I88 \$	TEWT'S ROCK FALLS	SE	I88 X44	IL	261.7	4:57	09/08/09	16:49
43.9	I88	RAPIDS CITY	S	I80 I88	IL	305.6	5:45	09/08/09	17:37
3.2	I80	RAPIDS CITY	W	I80 X1	IL	308.8	5:48	09/08/09	17:40
0.3	I80	crossing state border		IA/IL	BD	309.1	5:49	09/08/09	17:41
		Rest 30 minutes							
168.0	I80	DES MOINES	N	I235I35	IA	477.0	8:54	09/08/09	20:46
14.2	I35	DES MOINES	W	I235I35	IA	491.2	9:08	09/08/09	21:00
95.7	I80	MINDEN	NW	I680I80	IA	586.9	10:37	09/08/09	22:29
16.5	I680	LOVELAND	SW	I29 I680	IA	603.4	10:52	09/08/09	22:44
9.7	I29	I680 CRESCENT	W	I29 I680	IA	613.1	11:01	09/08/09	22:53
3.0	I680	crossing state border		IA/NE	BD	616.1	11:04	09/08/09	22:56
13.4	I680	OMAHA	SW	I680I80	NE	629.5	11:18	09/08/09	23:10
		Rest 30 minutes							
		Rest 30 minutes							
422.7	I80	KIMBALL	S	I80 X20	NE	1052.2	17:28	09/09/09	04:20
20.6	I80	crossing state border		NE/WY	BD	1072.7	18:14	09/09/09	05:06
		Rest 30 minutes							
382.4	I80	EVANSTON	NE	I80 X18	WY	1455.1	23:50	09/09/09	10:42
18.2	I80	crossing state border		UT/WY	BD	1473.3	24:05	09/09/09	10:57
68.4	I80	HOLLADAY	N	I215I80	UT	1541.6	25:00	09/09/09	11:52
21.2	I215	SALT LAKE CITY	W	I215I80	UT	1562.9	25:19	09/09/09	12:11
		Rest 30 minutes							
40.8	I80	TIMPIE		I80 X77	UT	1603.6	25:54	09/09/09	12:46
24.5	LOCAL	SKULL VALLEY IR			UT	1628.1	26:56	09/09/09	13:48

Total elapsed time: 26:56 Total trip mileage: 1628.1 Impedance: 2678.3

Mileage by State :

IA: 307.1 IL: 125.0 NE: 456.6 UT: 154.8 WI: 184.1 WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 1584.7 3-STATE: 14.9 6-LOCAL: 28.5

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1584.7 5-Principle Road: 5.5
 6-Through Road: 9.4 7-Other: 28.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1627.3
 Total Inside Tribal Lands : 0.8

Skull Valley Reservation : 0.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: KEWAUNEE NP WI
 TO : SKULL VALLEY IR UT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

IL 125.0 17.15 28.51 27.52 23.32 14.06 7.09 4.15 2.40 0.60 0.17 0.00
 IA 307.1 26.27 73.66 93.61 51.14 25.99 18.72 10.70 3.86 2.30 0.64 0.20
 NE 456.6 167.07 80.87 107.72 49.64 24.69 10.77 7.27 4.24 2.75 1.02 0.59
 UT 154.8 69.51 20.41 19.54 12.87 7.71 5.40 5.49 4.78 5.00 3.62 0.50
 WI 184.1 1.68 26.92 47.42 42.77 19.93 14.64 11.51 6.86 5.69 4.61 2.07
 WY 400.5 207.08 105.56 52.54 12.14 6.48 6.02 4.33 4.26 1.86 0.22 0.06

TOTALS

1628.1 488.76 335.93 348.35 191.88 98.86 62.64 43.45 26.40 18.20 10.28 3.42

PERCENTAGES

30.02 20.63 21.40 11.79 6.07 3.85 2.67 1.62 1.12 0.63 0.21

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 27.9 802.4 6334.5
 People/sq. km. 10.8 309.8 2445.8

DISTANCE

	TOTALS			
Miles	1364.9	231.4	31.9	1628.1
Kilometers	2196.6	372.3	51.3	2620.1
Percentages	83.8	14.2	2.0	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 18871 IA 60053 NE 59486 UT 68580 WI 115348 WY 32573

Total Population within 800 meter Buffer Zone: 354911

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=KEWAUNEE NP

From STATE=WI

From SUBNET=

To CITY=SKULL VALLEY IR

To STATE=UT

To SUBNET=

[IL]

Rural - KM= 155.3

Suburban - KM= 44.6

Urban - KM= 1.2

Total - KM= 201.1

Rural Pop Density= 15.4
 Suburban Pop Density= 266.6
 Urban Pop Density=2049.0
 [IA]
 Rural - KM= 393.8
 Suburban - KM= 95.4
 Urban - KM= 5.1
 Total - KM= 494.1
 Rural Pop Density= 15.7
 Suburban Pop Density= 268.0
 Urban Pop Density=2185.2
 [NE]
 Rural - KM= 652.2
 Suburban - KM= 75.6
 Urban - KM= 7.0
 Total - KM= 734.8
 Rural Pop Density= 10.0
 Suburban Pop Density= 268.5
 Urban Pop Density=2401.8
 [UT]
 Rural - KM= 196.9
 Suburban - KM= 37.6
 Urban - KM= 14.7
 Total - KM= 249.2
 Rural Pop Density= 7.5
 Suburban Pop Density= 407.0
 Urban Pop Density=2411.9
 [WI]
 Rural - KM= 191.2
 Suburban - KM= 85.2
 Urban - KM= 19.9
 Total - KM= 296.3
 Rural Pop Density= 21.4
 Suburban Pop Density= 337.4
 Urban Pop Density=2660.0
 [WY]
 Rural - KM= 607.2
 Suburban - KM= 33.9
 Urban - KM= 3.4
 Total - KM= 644.6
 Rural Pop Density= 4.9
 Suburban Pop Density= 399.4
 Urban Pop Density=1966.6
 [Total]
 Rural - KM=2196.6
 Suburban - KM= 372.3
 Urban - KM= 51.3
 Total - KM=2620.1
 Rural Pop Density= 10.8
 Suburban Pop Density= 309.8
 Urban Pop Density=2445.8

RAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: KEWAUNEE NP WI Leaving : 09/08/09 11:52
TO : HANFORD WA Arriving : 09/09/09 22:15

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00
Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:
Prohibit use of links prohibiting truck use
Prohibit use of ferry crossing
Prohibit use of roads with Radioactive materials prohibition
Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		KEWAUNEE NP			WI	0.0	0:00	09/08/09	11:52
5.5	S42	TWO CREEKS	S	S42 LNR	WI	5.5	0:07	09/08/09	11:59
4.0	LOCAL	MISHICOT	N	S163LNR	WI	9.5	0:14	09/08/09	12:06
2.0	S163	MISHICOT		S147S163	WI	11.4	0:17	09/08/09	12:09
7.5	S147	MARIBEL	E	I43 X164	WI	18.9	0:27	09/08/09	12:19
92.2	I43	MILWAUKEE		I43 I94	WI	111.2	1:53	09/08/09	13:45
70.1	I94	MADISON	E	I90 I94	WI	181.3	2:59	09/08/09	14:51
29.6	I39	PORTAGE	S	I39 I90	WI	210.9	3:27	09/08/09	15:19
		Rest 30 minutes							
63.0	I90	I94 TOMAH	E	I90 I94	WI	273.9	4:55	09/08/09	16:47
43.1	I90	LSE AIRPORT		I90 X2	WI	317.1	5:34	09/08/09	17:26
2.2	I90	crossing state border MN/WI		BD	BD	319.3	5:36	09/08/09	17:28
		Rest 30 minutes							
273.8	I90	BEAVER CREEK	W	I90 X1	MN	593.1	10:01	09/08/09	21:53
1.0	I90	crossing state border MN/SD		BD	BD	594.2	10:02	09/08/09	21:54
		Rest 30 minutes							
401.4	I90	SPEARFISH	N	I90 X10	SD	995.6	15:54	09/09/09	02:46
10.1	I90	crossing state border SD/WY		BD	BD	1005.7	16:02	09/09/09	02:54
		Rest 30 minutes							
		Rest 30 minutes							
534.1	I90	BUTTE	E	I15 I90	MT	1539.9	24:51	09/09/09	11:43
8.5	I15	I90 BUTTE	W	I15 I90	MT	1548.3	25:00	09/09/09	11:52
		Rest 30 minutes							
121.9	I90	FRENCHTOWN	E	I90 X96	MT	1670.2	27:24	09/09/09	14:16
96.9	I90	crossing state border ID/MT		BD	BD	1767.1	29:01	09/09/09	15:53
		Rest 30 minutes							
60.9	I90	COEUR D'ALENE	N	I90 X12	ID	1828.0	30:27	09/09/09	16:19
11.5	I90	crossing state border ID/WA		BD	BD	1839.5	30:38	09/09/09	16:30
189.3	I90	ELLENSBURG	SE	I82 I90	WA	2028.8	33:47	09/09/09	19:39
		Rest 30 minutes							
102.0	I82	WEST RICHLAND	S	I182I82	WA	2130.8	35:59	09/09/09	21:51
5.3	I182	RICHLAND	SE	I182X5	WA	2136.2	36:05	09/09/09	21:57
5.2	S240	RICHLAND	N	S240LR4S	WA	2141.3	36:15	09/09/09	22:07
4.0	LR4S	HANFORD			WA	2145.4	36:23	09/09/09	22:15

Total elapsed time: 36:23 Total trip mileage: 2145.4 Impedance: 2741.9

Mileage by State :

ID: 72.4 MN: 274.9 MT: 552.1 SD: 411.6 WA: 305.8 WI: 319.3
WY: 209.2

Mileage by Sign Type:

1-INTERSTATE: 2117.2 3-STATE: 20.1 6-LOCAL: 8.0

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2117.2 5-Principle Road: 10.7
6-Through Road: 9.4 7-Other: 8.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2089.8
 Total Inside Tribal Lands : 55.6

Crow Reservation : 55.6

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: KEWAUNEE NP WI
 TO : HANFORD WA

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 72.4 21.42 11.27 8.15 5.64 7.23 6.20 6.34 3.23 2.30 0.54 0.12
 MN 274.9 48.86 54.79 98.57 41.37 15.77 10.45 3.50 0.89 0.42 0.27 0.00
 MT 552.1 219.62 110.24 107.63 45.30 27.09 18.12 12.62 6.17 3.55 1.68 0.11
 SD 411.6 162.73 102.51 79.06 30.19 17.88 10.02 5.14 2.55 0.95 0.50 0.12
 WA 305.8 116.89 33.86 53.61 27.22 22.04 19.51 12.83 8.67 8.30 2.33 0.60
 WI 319.3 13.57 53.01 80.16 69.21 39.14 26.32 16.30 8.96 6.52 4.10 1.93
 WY 209.2 94.31 64.55 33.62 6.66 2.58 1.92 2.19 2.04 1.27 0.05 0.05

TOTALS

2145.4 677.40 430.23 460.80 225.59 131.73 92.54 58.92 32.51 23.31 9.47 2.93

PERCENTAGES

31.57 20.05 21.48 10.51 6.14 4.31 2.75 1.52 1.09 0.44 0.14

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION

People/sq. mi. 26.4 782.5 5982.5
 People/sq. km. 10.2 302.1 2309.8

DISTANCE	TOTALS			
Miles	1794.0	315.7	35.7	2145.4
Kilometers	2887.1	508.1	57.5	3452.5
Percentages	83.6	14.7	1.7	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 32240 MN 24787 MT 70057 SD 34521 WA 104196 WI 138415 WY 15735

Total Population within 800 meter Buffer Zone: 419951

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=KEWAUNEE NP

From STATE=WI

From SUBNET=

To CITY=HANFORD

To STATE=WA

To SUBNET=

[ID]

Rural - KM= 74.8

Suburban - KM= 37.0

Urban - KM= 4.8

Total - KM= 116.6

Rural Pop Density= 8.7

Suburban Pop Density= 371.3

Urban Pop Density=2100.2
 [MN]
 Rural - KM= 392.0
 Suburban - KM= 49.3
 Urban - KM= 1.1
 Total - KM= 442.4
 Rural Pop Density= 14.2
 Suburban Pop Density= 210.2
 Urban Pop Density=2268.5
 [MT]
 Rural - KM= 777.0
 Suburban - KM= 103.0
 Urban - KM= 8.6
 Total - KM= 888.5
 Rural Pop Density= 8.4
 Suburban Pop Density= 299.3
 Urban Pop Density=2220.9
 [SD]
 Rural - KM= 602.7
 Suburban - KM= 57.3
 Urban - KM= 2.5
 Total - KM= 662.4
 Rural Pop Density= 7.9
 Suburban Pop Density= 254.0
 Urban Pop Density=2364.5
 [WA]
 Rural - KM= 372.7
 Suburban - KM= 101.5
 Urban - KM= 18.1
 Total - KM= 492.2
 Rural Pop Density= 9.0
 Suburban Pop Density= 343.0
 Urban Pop Density=2164.5
 [WI]
 Rural - KM= 347.5
 Suburban - KM= 146.0
 Urban - KM= 20.2
 Total - KM= 513.8
 Rural Pop Density= 19.5
 Suburban Pop Density= 294.9
 Urban Pop Density=2567.1
 [WY]
 Rural - KM= 320.5
 Suburban - KM= 14.0
 Urban - KM= 2.2
 Total - KM= 336.7
 Rural Pop Density= 5.7
 Suburban Pop Density= 439.1
 Urban Pop Density=1902.3
 [Total]
 Rural - KM=2887.1
 Suburban - KM= 508.1
 Urban - KM= 57.5
 Total - KM=3452.5
 Rural Pop Density= 10.2
 Suburban Pop Density= 302.1
 Urban Pop Density=2309.8

RAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:03
TO : TOOEELE ORDNANCE DEPO UT UP Arriving : 09/09/09 05:26

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:03
UP	162104311	POCATELLO	ID	76.2	7:40	09/08/09	19:43
UP	162104564	MCCAMMON	ID	98.1	8:51	09/08/09	20:54
UP	492107644	OGDEN	UT	208.9	13:59	09/09/09	02:02
UP	492108786	SALT LAKE CITY	UT	245.4	15:38	09/09/09	03:41
UP	492108987	SMELTER	UT	262.5	16:40	09/09/09	04:43
UP	492108991	SMELTER	UT	262.5	16:40	09/09/09	04:43
UP	492109686	TOOEELE ORDNANCE DEPO	UT	282.4	17:23	09/09/09	05:26

Length: 282.4 miles Transit Time: 17:23 Impedance: 439.7

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
UP	282.4	145.5	85.3	7.0	44.7
Total	282.4	145.5	85.3	7.0	44.7

Mileage by State :

ID: 147.4 UT: 135.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 266.4
Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
TO : TOOEELE ORDNANCE DEPO UT UP

>0.0	22.7	59.7	139	326	821	1861	3326	5815											
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996								
ID	147.4	54.19	36.59	26.42	12.10	4.09	4.36	3.17	2.83	2.41	0.91	0.34							
UT	135.0	16.53	20.66	26.36	18.13	12.51	11.96	8.83	7.78	7.28	4.44	0.54							

TOTALS

282.4 70.72 57.25 52.78 30.23 16.60 16.32 12.00 10.61 9.69 5.35 0.88
PERCENTAGES
25.04 20.27 18.69 10.70 5.88 5.78 4.25 3.76 3.43 1.89 0.31

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION
People/sq. mi. 28.3 1023.4 6046.6
People/sq. km. 10.9 395.1 2334.6

DISTANCE	TOTALS			
Miles	211.0	55.5	15.9	282.4
Kilometers	339.5	89.4	25.6	454.4
Percentages	74.7	19.7	5.6	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
ID 28646 UT 91976

Total Population within 800 meter Buffer Zone: 120622

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:05
TO : OAK RIDGE TN CSXT Arriving : 09/12/09 03:52

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:05
UP	162104311	POCATELLO	ID	76.2	7:40	09/08/09	19:45
UP	162104564	MCCAMMON	ID	98.1	8:51	09/08/09	20:56
UP	562106752	GRANGER	WY	288.9	14:49	09/09/09	02:54
UP	562106162	RAWLINS	WY	451.9	20:24	09/09/09	08:29
UP	562107501	LARAMIE	WY	566.6	24:29	09/09/09	12:34
UP	562107931	CHEYENNE	WY	623.0	26:15	09/09/09	14:20
UP	312107887	SIDNEY	NE	725.3	29:57	09/09/09	18:02
UP	82108276	JULESBURG	CO	766.7	31:15	09/09/09	19:20
UP	312107841	O FALLONS	NE	831.0	33:15	09/09/09	21:20
UP	312107904	NORTH PLATTE	NE	847.2	34:16	09/09/09	22:21
UP	312108885	GIBBON JCT	NE	955.9	37:39	09/10/09	01:44
UP	202111160	MARYSVILLE	KS	1095.5	42:01	09/10/09	06:06
UP	202112626	MENOKEN	KS	1170.4	44:52	09/10/09	08:57
UP	202112679	TOPEKA	KS	1175.3	45:01	09/10/09	09:06
UP	202112627	KANSAS CITY	KS	1240.3	47:03	09/10/09	11:08
UP	292112548	CONGO	MO	1249.6	47:20	09/10/09	11:25
UP	292112515	MARSHALL	MO	1331.1	49:53	09/10/09	13:58
UP	292113387	JEFFERSON CITY	MO	1407.4	52:16	09/10/09	16:21
UP	292113257	ST LOUIS	MO	1526.9	56:30	09/10/09	20:35
UP	172113341	VALLEY JCT	IL	1532.6	56:42	09/10/09	20:47
UP	172113338	VALLEY JCT	IL	1532.8	58:42	09/10/09	22:47
----- TRANSFER							
<TR>	172113338	VALLEY JCT	IL	1532.8	58:42	09/10/09	22:47
<TR>	172113354	EAST ST LOUIS	IL	1534.7	60:47	09/11/09	00:52
----- TRANSFER							
NS	172113354	EAST ST LOUIS	IL	1534.7	60:47	09/11/09	00:52
NS	172113463	CENTRALIA	IL	1593.6	63:14	09/11/09	03:19
NS	172113738	MOUNT VERNON	IL	1615.5	64:39	09/11/09	04:44
NS	172113584	MOUNT CARMEL	IL	1677.2	67:13	09/11/09	07:18
NS	182113695	PRINCETON	IN	1689.3	68:13	09/11/09	08:18
NS	182113714	OAKLAND CITY	IN	1702.7	68:47	09/11/09	08:52
NS	182113754	HUNTINGBURG	IN	1726.4	69:46	09/11/09	09:51
NS	212113819	LOUISVILLE	KY	1797.7	73:14	09/11/09	13:19
NS	212114834	DANVILLE	KY	1887.5	76:56	09/11/09	17:01
NS	472116983	HARRIMAN JCT	TN	2028.8	82:22	09/11/09	22:27
NS	472116993	HARRIMAN	TN	2029.8	86:24	09/12/09	02:29

----- TRANSFER
 CSXT 472116993-HARRIMAN TN 2029.8 86:24 09/12/09 02:29
 CSXT 472116821-DOSSETT TN 2053.0 87:44 09/12/09 03:49
 CSXT 472116839-OAK RIDGE TN 2054.3 87:47 09/12/09 03:52

Length: 2054.3 miles Transit Time: 87:47 Impedance: 2277.7

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<TR>	1.9	1.9	0.0	0.0	0.0
CSXT	24.4	15.4	0.0	9.0	0.0
NS	495.1	494.9	0.2	0.0	0.0
UP	1532.8	1457.4	23.7	7.0	44.7
Total	2054.3	1969.7	23.9	16.0	44.7

Mileage by State :

CO: 8.8 ID: 197.3 IL: 148.5 IN: 117.2 KS: 170.6 KY: 176.0
 MO: 288.3 NE: 395.3 TN: 82.5 WY: 469.6

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2038.3
 Total Inside Tribal Lands : 15.9

Fort Hall Reservation : 15.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
 TO : OAK RIDGE TN CSXT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

 CO 8.8 1.76 1.94 3.11 1.07 0.23 0.28 0.00 0.45 0.00 0.00 0.00
 ID 197.3 88.34 40.81 34.50 13.55 5.12 4.51 3.37 3.37 2.41 0.91 0.34
 IL 148.5 15.44 44.42 27.08 20.20 8.94 8.01 9.73 8.31 5.06 1.33 0.06
 IN 117.2 6.64 32.81 34.27 18.98 6.88 6.50 5.47 3.16 1.92 0.59 0.00
 KS 170.6 57.68 56.77 24.49 10.25 5.78 6.46 4.80 2.06 2.05 0.23 0.05
 KY 176.0 4.33 25.24 45.31 35.70 16.92 15.68 13.59 9.01 5.84 3.81 0.56
 MO 288.3 84.44 76.42 45.01 21.70 12.57 12.28 12.37 10.59 7.86 3.92 1.15
 NE 395.3 144.37 91.63 104.63 21.86 7.60 7.11 7.14 6.24 3.86 0.74 0.16
 TN 82.5 9.42 15.63 16.13 16.91 8.03 8.52 5.58 1.75 0.48 0.05 0.00
 WY 469.6 323.28 85.21 29.72 7.46 5.16 6.17 5.84 3.78 2.40 0.55 0.00

TOTALS

2054.3 735.70 470.88 364.25 167.68 77.23 75.52 67.89 48.72 31.88 12.13 2.32
 PERCENTAGES

35.81 22.92 17.73 8.16 3.76 3.68 3.30 2.37 1.55 0.59 0.11

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 22.0 1034.5 5765.6
 People/sq. km. 8.5 399.4 2226.1

DISTANCE

	TOTALS		
Miles	1738.5	269.4	46.3
Kilometers	2797.8	433.5	74.6
Percentages	84.6	13.1	2.3

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 1034 ID 30906 IL 68017 IN 29782 KS 27528 KY 102234 MO 127799 NE 57552

TN 18783 WY 33921

Total Population within 800 meter Buffer Zone: 497556

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: INEEL ID UP Leaving : 09/08/09 12:08
TO : HANFORD SITE WA UP Arriving : 09/09/09 17:58

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
UP	162103327	INEEL	ID	0.0	00:00	09/08/09	12:08
UP	162103400	NAMPA	ID	313.3	15:03	09/09/09	03:11
UP	412102124	LA GRANDE	OR	494.9	21:13	09/09/09	09:21
UP	412101807	HINKLE	OR	600.6	25:01	09/09/09	13:09
UP	532101637	WALLULA JCT	WA	631.5	26:34	09/09/09	14:42
UP	532101513	RICHLAND	WA	657.2	29:29	09/09/09	17:37
UP	532101501	HANFORD SITE	WA	660.1	29:50	09/09/09	17:58

Length: 660.1 miles Transit Time: 29:50 Impedance: 881.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
UP	660.1	526.2	53.6	14.3	65.9
Total	660.1	526.2	53.6	14.3	65.9

Mileage by State :

ID: 380.9 OR: 241.7 WA: 37.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 609.3
Total Inside Tribal Lands : 50.8

Fort Hall Reservation : 26.8 Umatilla Reservation : 24.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INEEL ID UP
TO : HANFORD SITE WA UP

	>0.0	22.7	59.7	139	326	821	1861	3326	5815			
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996	
ID	380.9	158.12	75.75	72.16	32.72	11.94	9.41	7.48	6.79	4.12	2.15	0.24
OR	241.7	136.96	38.25	32.72	10.61	5.61	6.02	4.88	3.97	2.06	0.63	0.00
WA	37.5	18.09	2.94	1.72	1.46	2.32	3.27	2.23	2.19	2.23	0.73	0.30

TOTALS

660.1 313.17 116.94 106.60 44.79 19.87 18.70 14.59 12.95 8.41 3.51 0.54
PERCENTAGES
47.44 17.72 16.15 6.79 3.01 2.83 2.21 1.96 1.27 0.53 0.08

BASIS: 2000 Census data

RADTRAN Input Data	RURAL	SUBURBAN	URBAN
WEIGHTED POPULATION			
People/sq. mi.	18.0	1036.1	5788.6
People/sq. km.	6.9	400.0	2235.0

DISTANCE	TOTALS			
Miles	581.5	66.1	12.5	660.1
Kilometers	935.8	106.4	20.1	1062.2
Percentages	88.1	10.0	1.9	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
ID 64305 OR 32124 WA 26077

Total Population within 800 meter Buffer Zone: 122506

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INEEL

From STATE=ID

From SUBNET=UP

To CITY=HANFORD SITE

To STATE=WA

To SUBNET=UP

[ID]

Rural - KM= 545.2

Suburban - KM= 57.3

Urban - KM= 10.5

Total - KM= 612.9

Rural Pop Density= 8.3

Suburban Pop Density= 388.2

Urban Pop Density=2281.4

[OR]

Rural - KM= 351.7

Suburban - KM= 33.0

Urban - KM= 4.3

Total - KM= 388.9

Rural Pop Density= 5.2

Suburban Pop Density= 407.2

Urban Pop Density=2066.2

[WA]

Rural - KM= 39.0

Suburban - KM= 16.1

Urban - KM= 5.2

Total - KM= 60.4

Rural Pop Density= 4.1

Suburban Pop Density= 427.6

Urban Pop Density=2281.5

[Total]

Rural - KM= 935.8

Suburban - KM= 106.4

Urban - KM= 20.1

Total - KM=1062.2

Rural Pop Density= 6.9

Suburban Pop Density= 400.0

Urban Pop Density=2235.0

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:32
TO : HANFORD WA Arriving : 09/10/09 10:35

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0			INDIAN POINT NP			NY	0.0	0:00	09/08/09	12:32
0.8	LOCAL		BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:33
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:51
17.5	I287\$	I87 \$	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:09
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:10
0.1	I287		crossing state border		NJ/NY	BD	35.0	0:38	09/08/09	13:10
25.7	I287		PARSPNY-TROY	N	I287I80	NJ	60.6	1:02	09/08/09	13:34
43.4	I80		PAHAQUARRY	S	I80 X1	NJ	104.1	1:42	09/08/09	14:14
0.1	I80 #		crossing state border		NJ/PA	BD	104.1	1:42	09/08/09	14:14
2.0	I80 #		E STROUDSBURG	E	I80 X309	PA	106.2	1:45	09/08/09	14:17
			Rest 30 minutes							
303.3	I80		WEST MIDDLESEX	NE	I80 X4	PA	409.5	6:56	09/08/09	19:28
4.0	I80		crossing state border		OH/PA	BD	413.5	7:00	09/08/09	19:32
17.9	I80		NORTH JACKSON	NE	I76 I80	OH	431.4	7:19	09/08/09	19:51
			Rest 30 minutes							
76.0	I80 \$		ELYRIA	NW	I80 I90	OH	507.4	9:12	09/08/09	21:44
128.7	I80 \$	I90 \$	WEST JEFFERSON	N	I80 X13	OH	636.1	11:33	09/09/09	00:05
13.1	I80 \$	I90 \$	crossing state border		IN/OH	BD	649.2	11:47	09/09/09	00:19
			Rest 30 minutes							
135.4	I80 \$	I90 \$	PORTAGE	W	I80 I90	IN	784.5	14:32	09/09/09	02:04
0.5	I80		LAKE STATION	NE	I80 I94	IN	785.0	14:33	09/09/09	02:05
14.5	I80	I94	HAMMOND	W	I80 X1	IN	799.5	14:49	09/09/09	02:21
0.9	I80	I94	crossing state border		IL/IN	BD	800.4	14:49	09/09/09	02:21
3.0	I80	I94	LANSING	W	I294I94	IL	803.4	14:53	09/09/09	02:25
4.9	I294\$	I80 \$	HOMEWOOD	NW	I294I80	IL	808.3	14:58	09/09/09	02:30
			Rest 30 minutes							
154.4	I80		RAPIDS CITY	W	I80 X1	IL	962.7	18:17	09/09/09	05:49
0.3	I80		crossing state border		IA/IL	BD	963.0	18:17	09/09/09	05:49
168.0	I80		DES MOINES	N	I235I35	IA	1131.0	20:52	09/09/09	08:24
14.2	I35	I80	DES MOINES	W	I235I35	IA	1145.2	21:07	09/09/09	08:39
			Rest 30 minutes							
95.7	I80		MINDEN	NW	I680I80	IA	1240.8	23:05	09/09/09	10:37
16.5	I680		LOVELAND	SW	I29 I680	IA	1257.3	23:20	09/09/09	10:52
9.7	I29	I680	CRESCENT	W	I29 I680	IA	1267.0	23:29	09/09/09	11:01
3.0	I680		crossing state border		IA/NE	BD	1270.1	23:32	09/09/09	11:04
13.4	I680		OMAHA	SW	I680I80	NE	1283.4	23:46	09/09/09	11:18
			Rest 30 minutes							

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=HANFORD

To STATE=WA

To SUBNET=

[ID]

Rural - KM= 357.0

Suburban - KM= 79.3
 Urban - KM= 7.3
 Total - KM= 443.5
 Rural Pop Density= 11.3
 Suburban Pop Density= 278.7
 Urban Pop Density=2219.6

[IL]

Rural - KM= 178.4
 Suburban - KM= 73.0
 Urban - KM= 10.2
 Total - KM= 261.7
 Rural Pop Density= 14.4
 Suburban Pop Density= 323.6
 Urban Pop Density=2379.1

[IN]

Rural - KM= 136.7
 Suburban - KM= 97.3
 Urban - KM= 9.4
 Total - KM= 243.4
 Rural Pop Density= 19.9
 Suburban Pop Density= 276.3
 Urban Pop Density=2354.7

[IA]

Rural - KM= 393.8
 Suburban - KM= 95.4
 Urban - KM= 5.1
 Total - KM= 494.1
 Rural Pop Density= 15.7
 Suburban Pop Density= 268.0
 Urban Pop Density=2185.2

[NE]

Rural - KM= 652.2
 Suburban - KM= 75.6
 Urban - KM= 7.0
 Total - KM= 734.8
 Rural Pop Density= 10.0
 Suburban Pop Density= 268.5
 Urban Pop Density=2401.8

[NJ]

Rural - KM= 42.7
 Suburban - KM= 56.5
 Urban - KM= 12.1
 Total - KM= 111.3
 Rural Pop Density= 20.2
 Suburban Pop Density= 445.8
 Urban Pop Density=2247.5

[NY]

Rural - KM= 11.7
 Suburban - KM= 28.1
 Urban - KM= 16.4
 Total - KM= 56.2
 Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9

[OH]

Rural - KM= 213.1
 Suburban - KM= 151.3
 Urban - KM= 14.8
 Total - KM= 379.3
 Rural Pop Density= 19.7
 Suburban Pop Density= 309.6
 Urban Pop Density=2211.7

[OR]

Rural - KM= 301.0
 Suburban - KM= 32.2
 Urban - KM= 2.3
 Total - KM= 335.5
 Rural Pop Density= 8.2
 Suburban Pop Density= 313.2
 Urban Pop Density=1976.3

[PA]

Rural - KM= 353.3
 Suburban - KM= 141.2
 Urban - KM= 3.4
 Total - KM= 497.9
 Rural Pop Density= 16.5
 Suburban Pop Density= 230.5
 Urban Pop Density=2009.9

[UT]

Rural - KM= 186.8
 Suburban - KM= 51.6
 Urban - KM= 1.5
 Total - KM= 240.0
 Rural Pop Density= 9.7
 Suburban Pop Density= 257.8
 Urban Pop Density=2112.2

[WA]

Rural - KM= 60.9
 Suburban - KM= 7.2
 Urban - KM= 4.2
 Total - KM= 72.2
 Rural Pop Density= 4.8
 Suburban Pop Density= 441.1
 Urban Pop Density=2281.6

[WY]

Rural - KM= 607.2
 Suburban - KM= 33.9
 Urban - KM= 3.4
 Total - KM= 644.6
 Rural Pop Density= 4.9
 Suburban Pop Density= 399.4
 Urban Pop Density=1966.6

[Total]

Rural - KM=3494.8
 Suburban - KM= 922.7
 Urban - KM= 97.3
 Total - KM=4514.6
 Rural Pop Density= 11.6
 Suburban Pop Density= 303.0
 Urban Pop Density=2300.8

[TRAGIS]

TRAGIS Version=1.5.4
 Mode=H
 Network Version=4.0

Census Data=2000
 Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP
 From STATE=NY
 From SUBNET=
 To CITY=SKULL VALLEY IR
 To STATE=UT
 To SUBNET=

[IL]

Rural - KM= 178.4
 Suburban - KM= 73.0
 Urban - KM= 10.2
 Total - KM= 261.7
 Rural Pop Density= 14.4
 Suburban Pop Density= 323.6
 Urban Pop Density=2379.1

[IN]

Rural - KM= 136.7
 Suburban - KM= 97.3
 Urban - KM= 9.4
 Total - KM= 243.4
 Rural Pop Density= 19.9
 Suburban Pop Density= 276.3
 Urban Pop Density=2354.7

[IA]

Rural - KM= 393.8
 Suburban - KM= 95.4
 Urban - KM= 5.1
 Total - KM= 494.1
 Rural Pop Density= 15.7
 Suburban Pop Density= 268.0
 Urban Pop Density=2185.2

[NE]

Rural - KM= 652.2
 Suburban - KM= 75.6
 Urban - KM= 7.0
 Total - KM= 734.8
 Rural Pop Density= 10.0
 Suburban Pop Density= 268.5
 Urban Pop Density=2401.8

[NJ]

Rural - KM= 42.7
 Suburban - KM= 56.5
 Urban - KM= 12.1
 Total - KM= 111.3
 Rural Pop Density= 20.2
 Suburban Pop Density= 445.8
 Urban Pop Density=2247.5

[NY]

Rural - KM= 11.7
 Suburban - KM= 28.1
 Urban - KM= 16.4
 Total - KM= 56.2
 Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9

[OH]

Rural - KM= 213.1
 Suburban - KM= 151.3
 Urban - KM= 14.8
 Total - KM= 379.3
 Rural Pop Density= 19.7
 Suburban Pop Density= 309.6
 Urban Pop Density=2211.7

[PA]

Rural - KM= 353.3
 Suburban - KM= 141.2
 Urban - KM= 3.4
 Total - KM= 497.9
 Rural Pop Density= 16.5
 Suburban Pop Density= 230.5
 Urban Pop Density=2009.9

[UT]

Rural - KM= 196.9
 Suburban - KM= 37.6
 Urban - KM= 14.7
 Total - KM= 249.2
 Rural Pop Density= 7.5
 Suburban Pop Density= 407.0
 Urban Pop Density=2411.9

[WY]

Rural - KM= 607.2
 Suburban - KM= 33.9
 Urban - KM= 3.4
 Total - KM= 644.6
 Rural Pop Density= 4.9
 Suburban Pop Density= 399.4
 Urban Pop Density=1966.6

[Total]

Rural - KM=2786.0
 Suburban - KM= 790.0
 Urban - KM= 96.6
 Total - KM=3672.5
 Rural Pop Density= 12.0

Suburban Pop Density= 311.7
 Urban Pop Density=2335.5

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:33
 TO : SKULL VALLEY IR UT Arriving : 09/10/09 01:57

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour	
0.0			INDIAN POINT	NP		NY	0.0	0:00	09/08/09	12:33	
0.8	LOCAL		BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:34	
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:52	
17.5	I287\$	I87 \$	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:10	
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:11	
0.1	I287				crossing state border	NJ/NY	BD	35.0	0:38	09/08/09	13:11
25.7	I287		PARSPNY-TROY	N	I287I80	NJ	60.6	1:02	09/08/09	13:35	
43.4	I80		PAHAQUARRY	S	I80 X1	NJ	104.1	1:42	09/08/09	14:15	
0.1	I80 #				crossing state border	NJ/PA	BD	104.1	1:42	09/08/09	14:15
2.0	I80 #		E STROUDSBURG	E	I80 X309	PA	106.2	1:45	09/08/09	14:18	
					Rest 30 minutes						
303.3	I80		WEST MIDDLESEX	NE	I80 X4	PA	409.5	6:56	09/08/09	19:29	
4.0	I80				crossing state border	OH/PA	BD	413.5	7:00	09/08/09	19:33
17.9	I80		NORTH JACKSON	NE	I76 I80	OH	431.4	7:19	09/08/09	19:52	
					Rest 30 minutes						
76.0	I80 \$		ELYRIA	NW	I80 I90	OH	507.4	9:12	09/08/09	21:45	
128.7	I80 \$	I90 \$	WEST JEFFERSON	N	I80 X13	OH	636.1	11:33	09/09/09	00:06	
13.1	I80 \$	I90 \$			crossing state border	IN/OH	BD	649.2	11:47	09/09/09	00:20
					Rest 30 minutes						
135.4	I80 \$	I90 \$	PORTAGE	W	I80 I90	IN	784.5	14:32	09/09/09	02:05	
0.5	I80		LAKE STATION	NE	I80 I94	IN	785.0	14:33	09/09/09	02:06	
14.5	I80	I94	HAMMOND	W	I80 X1	IN	799.5	14:49	09/09/09	02:22	
0.9	I80	I94			crossing state border	IL/IN	BD	800.4	14:49	09/09/09	02:22
3.0	I80	I94	LANSING	W	I294I94	IL	803.4	14:53	09/09/09	02:26	
4.9	I294\$	I80 \$	HOMWOOD	NW	I294I80	IL	808.3	14:58	09/09/09	02:31	
					Rest 30 minutes						
154.4	I80		RAPIDS CITY	W	I80 X1	IL	962.7	18:17	09/09/09	05:50	
0.3	I80				crossing state border	IA/IL	BD	963.0	18:17	09/09/09	05:50
168.0	I80		DES MOINES	N	I235I35	IA	1131.0	20:52	09/09/09	08:25	
14.2	I35	I80	DES MOINES	W	I235I35	IA	1145.2	21:07	09/09/09	08:40	
					Rest 30 minutes						
95.7	I80		MINDEN	NW	I680I80	IA	1240.8	23:05	09/09/09	10:38	
16.5	I680		LOVELAND	SW	I29 I680	IA	1257.3	23:20	09/09/09	10:53	
9.7	I29	I680	CRESCENT	W	I29 I680	IA	1267.0	23:29	09/09/09	11:02	
3.0	I680				crossing state border	IA/NE	BD	1270.1	23:32	09/09/09	11:05
13.4	I680		OMAHA	SW	I680I80	NE	1283.4	23:46	09/09/09	11:19	
					Rest 30 minutes						
422.7	I80		KIMBALL	S	I80 X20	NE	1706.1	29:56	09/09/09	16:29	
20.6	I80				crossing state border	NE/WY	BD	1726.7	30:13	09/09/09	16:46
					Rest 30 minutes						
					Rest 30 minutes						
382.4	I80		EVANSTON	NE	I80 X18	WY	2109.0	36:19	09/09/09	22:52	
18.2	I80				crossing state border	UT/WY	BD	2127.2	36:33	09/09/09	23:06
68.4	I80		HOLLADAY	N	I215I80	UT	2195.6	37:28	09/10/09	00:01	
21.2	I215		SALT LAKE CITY	W	I215I80	UT	2216.8	37:47	09/10/09	00:20	
					Rest 30 minutes						

40.8 I80 TIMPIE I80 X77 UT 2257.6 38:22 09/10/09 00:55
 24.5 LOCAL SKULL VALLEY IR UT 2282.0 39:24 09/10/09 01:57

Total elapsed time: 39:24 Total trip mileage: 2282.0 Impedance: 3281.6

Mileage by State :

IA: 307.1 IL: 162.6 IN: 151.2 NE: 456.6 NJ: 69.2 NY: 35.0
 OH: 235.7 PA: 309.4 UT: 154.8 WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 2240.7 2-US: 16.0 6-LOCAL: 25.3

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2248.7 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 7.1 7-Other: 25.3

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2281.3
 Total Inside Tribal Lands : 0.8

Skull Valley Reservation : 0.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INDIAN POINT NP NY
 TO : SKULL VALLEY IR UT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

IL 162.6 19.10 37.80 30.07 23.86 18.01 12.57 9.39 5.42 3.67 2.24 0.40
 IN 151.2 1.73 19.97 37.40 25.85 28.69 17.16 8.92 5.71 3.55 1.89 0.41
 IA 307.1 26.27 73.66 93.61 51.14 25.99 18.72 10.70 3.86 2.30 0.64 0.20
 NE 456.6 167.07 80.87 107.72 49.64 24.69 10.77 7.27 4.24 2.75 1.02 0.59
 NJ 69.2 1.93 6.56 8.51 9.52 7.30 10.12 10.25 7.44 4.92 2.38 0.23
 NY 35.0 3.14 1.02 1.31 1.83 2.10 3.01 6.27 6.07 5.85 2.20 2.17
 OH 235.7 5.72 33.46 51.22 42.02 37.15 29.12 17.51 10.25 6.65 1.89 0.68
 PA 309.4 30.21 67.45 62.50 59.36 42.71 29.03 12.48 3.49 1.78 0.29 0.06
 UT 154.8 69.51 20.41 19.54 12.87 7.71 5.40 5.49 4.78 5.00 3.62 0.50
 WY 400.5 207.08 105.56 52.54 12.14 6.48 6.02 4.33 4.26 1.86 0.22 0.06

TOTALS

2282.0 531.76 446.76 464.42 288.23 200.83 141.92 92.61 55.52 38.33 16.39 5.30
 PERCENTAGES

23.30 19.58 20.35 12.63 8.80 6.22 4.06 2.43 1.68 0.72 0.23

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 31.2 807.3 6049.0
 People/sq. km. 12.0 311.7 2335.5

DISTANCE

TOTALS
 Miles 1731.2 490.9 60.0 2282.0
 Kilometers 2786.0 790.0 96.6 3672.5
 Percentages 75.9 21.5 2.6

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 72678 IN 79041 IA 60053 NE 59486 NJ 69023 NY 81427 OH 123201 PA 59108
 UT 68580 WY 32573

Total Population within 800 meter Buffer Zone: 705170

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:35
 TO : DEAF SMITH CTY TX Arriving : 09/09/09 20:05

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		INDIAN POINT	NP		NY	0.0	0:00	09/08/09	12:35
0.8	LOCAL	BUCHANAN	N	U9	LOCL NY	0.8	0:01	09/08/09	12:36
16.0	U9	TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09	12:54
17.5	I287S	I87 \$ SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09	13:12
0.5	I287	SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09	13:13
0.1	I287	crossing state border			NJ/NY BD	35.0	0:38	09/08/09	13:13
46.6	I287	PLUCKEMIN	W	I287I78	NJ	81.6	1:21	09/08/09	13:56
26.7	I78	ALPHA	NE	I78 X3	NJ	108.3	1:46	09/08/09	14:21
2.6	I78 #	crossing state border			NJ/PA BD	110.8	1:48	09/08/09	14:23
0.2	I78 #	EASTON	SE	I78 X75	PA	111.1	1:48	09/08/09	14:23
76.4	I78	BORDNERSVILLE	SE	I78 I81	PA	187.5	2:59	09/08/09	15:34
		Rest 30 minutes							
83.8	I81	GREENCASTLE	E	I81 X5	PA	271.3	4:49	09/08/09	17:24
4.8	I81	crossing state border			MD/PA BD	276.1	4:53	09/08/09	17:28
8.5	I81	HALFWAY	W	I70 I81	MD	284.6	5:01	09/08/09	17:36
3.6	I81	crossing state border			MD/WV BD	288.1	5:04	09/08/09	17:39
21.1	I81	INWOOD	W	I81 X5	WV	309.2	5:22	09/08/09	17:57
5.1	I81	crossing state border			VA/WV BD	314.2	5:27	09/08/09	18:02
103.2	I81	STAUNTON	SE	I64 I81	VA	417.4	7:02	09/08/09	19:37
30.4	I64	I81 LEXINGTON	E	I64 I81	VA	447.8	7:30	09/08/09	20:05
		Rest 30 minutes							
109.4	I81	FT CHISWELL	E	I77 I81	VA	557.2	9:42	09/08/09	22:17
8.8	I77	I81 WYTHEVILLE	E	I77 I81	VA	566.0	9:50	09/08/09	22:25
71.7	I81	BRISTOL	W	I81 X1	VA	637.7	10:57	09/08/09	23:32
0.9	I81	crossing state border			TN/VA BD	638.6	10:58	09/08/09	23:33
74.9	I81	DANDRIDGE	NE	I40 I81	TN	713.5	12:02	09/09/09	00:37
28.5	I40	KNOXVILLE	NE	I40 I640	TN	741.9	12:27	09/09/09	01:02
6.9	I640	KNOXVILLE	NW	I640I75	TN	748.8	12:34	09/09/09	01:09
		Rest 30 minutes							
3.6	I640	I75 KNOXVILLE	W	I40 I640	TN	752.5	12:38	09/09/09	01:13
17.3	I40	I75 FARRAGUT	W	I40 I75	TN	769.8	13:26	09/09/09	02:01
154.2	I40	NASHVILLE	E	I24 I40	TN	924.0	15:40	09/09/09	03:15
1.1	I24	NASHVILLE	SE	I24 I440	TN	925.1	15:41	09/09/09	03:16
7.5	I440	NASHVILLE	W	I40 I440	TN	932.6	15:49	09/09/09	03:24
		Rest 30 minutes							
206.2	I40	MEMPHIS		I240I40	TN	1138.7	19:20	09/09/09	06:55
2.6	I40	crossing state border			AR/TN BD	1141.4	19:23	09/09/09	06:58
4.7	I40	WEST MEMPHIS	E	I40 I55	AR	1146.1	19:27	09/09/09	07:02
2.4	I40	I55 WEST MEMPHIS	N	I40 I55	AR	1148.5	19:29	09/09/09	07:04
		Rest 30 minutes							
270.8	I40	VAN BUREN	N	I40 X5	AR	1419.3	24:11	09/09/09	11:46
5.3	I40	crossing state border			AR/OK BD	1424.5	24:16	09/09/09	11:51
		Rest 30 minutes							
165.2	I40	OKLAHOMA CITY	SE	I240I40	OK	1589.7	27:07	09/09/09	14:42
16.2	I240	OKLAHOMA CITY	SW	I240I44	OK	1606.0	27:22	09/09/09	14:57
4.9	I44	OKLAHOMA CITY	W	I40 I44	OK	1610.9	27:27	09/09/09	15:02
125.3	I40	SAYRE	S	I40 X20	OK	1736.2	29:17	09/09/09	16:52
20.7	I40	crossing state border			OK/TX BD	1756.9	29:34	09/09/09	17:09
		Rest 30 minutes							

139.6 I40 VEGA S I40 X36 TX 1896.5 32:12 09/09/09 19:47
 9.8 U385 VEGA S U385F258 TX 1906.3 32:23 09/09/09 19:58
 3.4 F2587 DEAF SMITH CTY TX 1909.7 32:30 09/09/09 20:05

Total elapsed time: 32:30 Total trip mileage: 1909.7 Impedance: 2604.8

Mileage by State :

AR: 283.1 MD: 12.0 NJ: 75.9 NY: 35.0 OK: 332.4 PA: 165.2
 TN: 502.8 TX: 152.9 VA: 324.3 WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 1879.7 2-US: 25.8 6-LOCAL: 0.8 7-OTHER: 3.4

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1887.6 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 16.9 7-Other: 4.3

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1905.7
 Total Inside Tribal Lands : 4.1

Absentee-Shawnee Tribe Trust Land : 0.3 Cheyenne-Arapahoe Trust Land : 2.0
 Kickapoo Tribe Trust Land : 0.9 Sac and Fox Nation Trust Land : 0.5
 Thlopthlocco Tribal Town (Creek) : 0.5

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=DEAF SMITH CTY

To STATE=TX

To SUBNET=

[AR]

Rural - KM= 317.4

Suburban - KM= 130.0

Urban - KM= 8.4

Total - KM= 455.7

Rural Pop Density= 14.4

Suburban Pop Density= 273.4

Urban Pop Density=2060.2

[MD]

Rural - KM= 5.7

Suburban - KM= 12.3

Urban - KM= 1.4

Total - KM= 19.4

Rural Pop Density= 18.8

Suburban Pop Density= 380.0

Urban Pop Density=1764.7

[NJ]

Rural - KM= 40.2

Suburban - KM= 67.6

Urban - KM= 14.2

Total - KM= 122.1

Rural Pop Density= 19.7

Suburban Pop Density= 478.5

Urban Pop Density=2338.2

[NY]

Rural - KM= 11.7

Suburban - KM= 28.1

Urban - KM= 16.4

Total - KM= 56.2

Rural Pop Density= 13.2
 Suburban Pop Density= 583.4
 Urban Pop Density=2568.9

[OK]

Rural - KM= 428.4
 Suburban - KM= 98.2
 Urban - KM= 8.4
 Total - KM= 534.9
 Rural Pop Density= 11.9
 Suburban Pop Density= 311.5
 Urban Pop Density=2338.8

[PA]

Rural - KM= 134.5
 Suburban - KM= 120.4
 Urban - KM= 11.0
 Total - KM= 265.9
 Rural Pop Density= 22.6
 Suburban Pop Density= 335.4
 Urban Pop Density=2257.0

[TN]

Rural - KM= 496.4
 Suburban - KM= 281.4
 Urban - KM= 31.3
 Total - KM= 809.2
 Rural Pop Density= 18.1
 Suburban Pop Density= 314.3
 Urban Pop Density=2171.5

[TX]

Rural - KM= 220.1
 Suburban - KM= 18.8
 Urban - KM= 7.2
 Total - KM= 246.0
 Rural Pop Density= 5.2
 Suburban Pop Density= 400.0
 Urban Pop Density=2148.0

[VA]

Rural - KM= 282.1
 Suburban - KM= 230.1
 Urban - KM= 9.7
 Total - KM= 522.0
 Rural Pop Density= 18.0
 Suburban Pop Density= 280.0
 Urban Pop Density=2191.7

[WV]

Rural - KM= 12.6
 Suburban - KM= 28.8
 Urban - KM= 0.7
 Total - KM= 42.0
 Rural Pop Density= 29.5
 Suburban Pop Density= 342.3
 Urban Pop Density=1979.3

[Total]

Rural - KM=1949.1
 Suburban - KM=1015.7
 Urban - KM= 108.6
 Total - KM=3073.4
 Rural Pop Density= 15.1
 Suburban Pop Density= 325.1
 Urban Pop Density=2260.4

RAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: INDIAN POINT NP NY Leaving : 09/08/09 12:48
 TO : ORNL TN Arriving : 09/09/09 02:27

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)
 Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing
 Prohibit use of roads with Radioactive materials prohibition
 Las Vegas Beltway is considered a preferred route

Miles	Hwy	Sign	City	Dir	Junction	State	Dist	Time	Date	Hour	
0.0			INDIAN POINT	NP		NY	0.0	0:00	09/08/09	12:48	
0.8	LOCAL		BUCHANAN	N	U9	LOCL	NY	0.8	0:01	09/08/09 12:49	
16.0	U9		TARRYTOWN	S	I287X9	NY	16.8	0:19	09/08/09 13:07		
17.5	I287	S	I87 \$	SUFFERN	NW	I287I87	NY	34.3	0:37	09/08/09 13:25	
0.5	I287		SUFFERN	W	I287S17	NY	34.8	0:38	09/08/09 13:26		
0.1	I287		crossing state border NJ/NY			BD	35.0	0:38	09/08/09 13:26		
46.6	I287		PLUCKEMIN	W	I287I78	NJ	81.6	1:21	09/08/09 14:09		
26.7	I78		ALPHA	NE	I78 X3	NJ	108.3	1:46	09/08/09 14:34		
2.6	I78 #		crossing state border NJ/PA			BD	110.8	1:48	09/08/09 14:36		
0.2	I78 #		EASTON	SE	I78 X75	PA	111.1	1:48	09/08/09 14:36		
76.4	I78		BORDNERSVILLE	SE	I78 I81	PA	187.5	2:59	09/08/09 15:47		
			Rest 30 minutes								
83.8	I81		GREENCASTLE	E	I81 X5	PA	271.3	4:49	09/08/09 17:37		
4.8	I81		crossing state border MD/PA			BD	276.1	4:53	09/08/09 17:41		
8.5	I81		HALFWAY	W	I70 I81	MD	284.6	5:01	09/08/09 17:49		
3.6	I81		crossing state border MD/WV			BD	288.1	5:04	09/08/09 17:52		
21.1	I81		INWOOD	W	I81 X5	WV	309.2	5:22	09/08/09 18:10		
5.1	I81		crossing state border VA/WV			BD	314.2	5:27	09/08/09 18:15		
103.2	I81		STAUNTON	SE	I64 I81	VA	417.4	7:02	09/08/09 19:50		
30.4	I64	I81	LEXINGTON	E	I64 I81	VA	447.8	7:30	09/08/09 20:18		
			Rest 30 minutes								
109.4	I81		FT CHISWELL	E	I77 I81	VA	557.2	9:42	09/08/09 22:30		
8.8	I77	I81	WYTHEVILLE	E	I77 I81	VA	566.0	9:50	09/08/09 22:38		
71.7	I81		BRISTOL	W	I81 X1	VA	637.7	10:57	09/08/09 23:45		
0.9	I81		crossing state border TN/VA			BD	638.6	10:58	09/08/09 23:46		
74.9	I81		DANDRIDGE	NE	I40 I81	TN	713.5	12:02	09/09/09 00:50		
28.5	I40		KNOXVILLE	NE	I40 I640	TN	741.9	12:27	09/09/09 01:15		
6.9	I640		KNOXVILLE	NW	I640I75	TN	748.8	12:34	09/09/09 01:22		
			Rest 30 minutes								
3.6	I640	I75	KNOXVILLE	W	I40 I640	TN	752.5	12:38	09/09/09 01:26		
17.3	I40	I75	FARRAGUT	W	I40 I75	TN	769.8	13:26	09/09/09 02:14		
3.9	I40		LENOIR CITY	NW	I40 X364	TN	773.7	13:29	09/09/09 02:17		
3.4	S95	X-10		W	S95 LOCL	TN	777.1	13:36	09/09/09 02:24		
2.3	LOCAL	ORNL				TN	779.3	13:39	09/09/09 02:27		

Total elapsed time: 13:39 Total trip mileage: 779.3 Impedance: 1374.8

Mileage by State :

MD: 12.0 NJ: 75.9 NY: 35.0 PA: 165.2 TN: 140.8 VA: 324.3
 WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 756.8 2-US: 16.0 3-STATE: 3.4 6-LOCAL: 3.1

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 764.8 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 7.1 7-Other: 6.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 779.3
 Total Inside Tribal Lands : 0.0

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: INDIAN POINT NP NY

TO : ORNL TN

```
-----
>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996
-----
```

```
MD 12.0 0.36 0.74 1.38 1.06 1.57 2.99 2.06 1.04 0.85 0.00 0.00
NJ 75.9 1.54 6.36 8.76 8.32 6.02 11.50 15.54 8.96 5.27 3.19 0.39
NY 35.0 3.14 1.02 1.31 1.83 2.10 3.01 6.27 6.07 5.85 2.20 2.17
PA 165.2 1.96 11.33 38.68 31.63 25.98 24.32 14.80 9.69 4.67 1.69 0.48
TN 140.8 6.11 10.29 24.80 27.67 23.39 22.05 17.04 5.60 3.55 0.25 0.00
VA 324.3 16.54 54.94 49.81 54.01 55.18 50.24 28.26 9.32 4.36 1.28 0.37
WV 26.1 0.28 0.28 2.19 5.06 4.86 6.89 4.08 2.04 0.35 0.07 0.00
```

TOTALS

779.3 29.93 84.96 126.93 129.58 119.10 121.00 88.05 42.72 24.90 8.68 3.41

PERCENTAGES

3.84 10.90 16.29 16.63 15.28 15.53 11.30 5.48 3.20 1.11 0.44

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 51.9 878.9 5945.8

People/sq. km. 20.0 339.3 2295.7

[TRAGIS]

TRAGIS Version=1.5.4

Mode=H

Network Version=4.0

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=INDIAN POINT NP

From STATE=NY

From SUBNET=

To CITY=ORNL

To STATE=TN

To SUBNET=

[MD]

Rural - KM= 5.7

Suburban - KM= 12.3

Urban - KM= 1.4

Total - KM= 19.4

Rural Pop Density= 18.8

Suburban Pop Density= 380.0

Urban Pop Density=1764.7

[NJ]

Rural - KM= 40.2

Suburban - KM= 67.6

Urban - KM= 14.2

Total - KM= 122.1

Rural Pop Density= 19.7

Suburban Pop Density= 478.5

Urban Pop Density=2338.2

[NY]

Rural - KM= 11.7

Suburban - KM= 28.1

Urban - KM= 16.4

Total - KM= 56.2

Rural Pop Density= 13.2

Suburban Pop Density= 583.4

Urban Pop Density=2568.9

[PA]

Rural - KM= 134.5

Suburban - KM= 120.4

Urban - KM= 11.0

Total - KM= 265.9

Rural Pop Density= 22.6
 Suburban Pop Density= 335.4
 Urban Pop Density=2257.0
 [TN]
 Rural - KM= 110.8
 Suburban - KM= 109.6
 Urban - KM= 6.1
 Total - KM= 226.5
 Rural Pop Density= 21.9
 Suburban Pop Density= 314.5
 Urban Pop Density=1849.4
 [VA]
 Rural - KM= 282.1
 Suburban - KM= 230.1
 Urban - KM= 9.7
 Total - KM= 522.0
 Rural Pop Density= 18.0
 Suburban Pop Density= 280.0
 Urban Pop Density=2191.7
 [WV]
 Rural - KM= 12.6
 Suburban - KM= 28.8
 Urban - KM= 0.7
 Total - KM= 42.0
 Rural Pop Density= 29.5
 Suburban Pop Density= 342.3
 Urban Pop Density=1979.3
 [Total]
 Rural - KM= 597.7
 Suburban - KM= 596.8
 Urban - KM= 59.5
 Total - KM=1254.2
 Rural Pop Density= 20.0
 Suburban Pop Density= 339.3
 Urban Pop Density=2295.7

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: GREEN BAY JCT. WI CN Leaving : 09/08/09 14:40
 TO : HANFORD SITE WA UP Arriving : 09/11/09 21:14

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CN	552102687	GREEN BAY JCT.	WI	0.0	00:00	09/08/09	14:40
CN	552102712	GREEN BAY	WI	2.0	0:13	09/08/09	14:53
CN	552102885	APPLETON	WI	31.4	2:03	09/08/09	16:43
CN	552102695	STEVENS POINT	WI	97.3	4:32	09/08/09	19:12
CN	552102633	JUNCTION CITY	WI	108.6	5:30	09/08/09	20:10
CN	552102384	OWEN	WI	156.9	7:14	09/08/09	21:54
CN	552102408	CHIPPEWA FALLS	WI	198.4	9:49	09/09/09	00:29
CN	272102278	NORTHTOWN	MN	303.4	16:18	09/09/09	06:58
----- TRANSFER							
BNSF	272102278	NORTHTOWN	MN	303.4	20:18	09/09/09	10:58
BNSF	272102200	COON CREEK	MN	310.6	21:02	09/09/09	11:42
BNSF	272101971	ST CLOUD	MN	363.7	22:41	09/09/09	13:21
BNSF	272101484	STAPLES	MN	428.6	24:43	09/09/09	15:23
BNSF	272101089	DETROIT LAKES	MN	491.3	27:10	09/09/09	17:50

BNSF 272101065-MOORHEAD JCT	MN 538.1	29:08	09/09/09	19:48
BNSF 382101049-WEST FARGO	ND 545.2	29:22	09/09/09	20:02
BNSF 382101035-CASSELTON	ND 560.6	29:50	09/09/09	20:30
BNSF 382100904-NOLAN	ND 584.4	30:35	09/09/09	21:15
BNSF 382100547-NEW ROCKFORD	ND 668.2	33:12	09/09/09	23:52
BNSF 382100312-SURREY	ND 770.5	36:24	09/10/09	03:04
BNSF 382100318-MINOT	ND 777.9	37:08	09/10/09	03:48
BNSF 382100279-BERTHOLD	ND 800.5	37:50	09/10/09	04:30
BNSF 302100394-SNOWDEN	MT 923.9	41:41	09/10/09	08:21
BNSF 302100340-GLASGOW	MT 1054.8	45:47	09/10/09	12:27
BNSF 302100152-HAVRE EAST	MT 1206.2	51:01	09/10/09	17:41
BNSF 302100178-SHELBY	MT 1314.6	54:24	09/10/09	21:04
BNSF 302100217-WHITEFISH	MT 1465.9	59:08	09/11/09	01:48
BNSF 162100300-SANDPOINT	ID 1651.3	65:25	09/11/09	08:05
BNSF 162100514-HAUSER	ID 1698.0	66:53	09/11/09	09:33
BNSF 532100564-SPOKANE	WA 1716.4	67:28	09/11/09	10:08
BNSF 532101556-PASCO	WA 1863.5	72:33	09/11/09	15:13
BNSF 532101573-KENNEWICK	WA 1865.8	76:39	09/11/09	19:19
----- TRANSFER				
UP 532101573-KENNEWICK	WA 1865.8	76:39	09/11/09	19:19
UP 532101513-RICHLAND	WA 1878.3	78:12	09/11/09	20:52
UP 532101501-HANFORD SITE	WA 1881.1	78:34	09/11/09	21:14

Length: 1881.1 miles Transit Time: 78:34 Impedance: 2038.0

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
-----	-----	-----	-----	-----	-----
BNSF	1562.4	1561.8	0.7	0.0	0.0
CN	303.4	123.3	178.3	0.0	1.7
UP	15.3	0.0	0.0	0.0	15.3
-----	-----	-----	-----	-----	-----
Total	1881.1	1685.1	179.0	0.0	17.0

Mileage by State :

ID: 100.1 MN: 266.4 MT: 677.9 ND: 382.5 WA: 181.5 WI: 272.7

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1747.4
Total Inside Tribal Lands : 133.8

Blackfoot Reservation	: 49.6	Fort Peck Reservation	: 83.6
Fort Peck Trust Land	: 0.0	Turtle Mountain Trust Land	: 0.4

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: GREEN BAY JCT. WI CN
TO : HANFORD SITE WA UP

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 100.1	32.49	16.11	15.57	10.67	11.41	8.27	3.02	1.39	0.93	0.23	0.00
MN 266.4	19.63	43.75	51.07	46.39	36.70	28.15	18.51	10.57	8.06	2.93	0.61
MT 677.9	422.92	175.29	38.85	7.86	7.35	8.37	10.29	5.07	1.66	0.33	0.00
ND 382.5	268.43	65.43	18.05	5.92	6.44	6.76	4.95	3.40	1.94	0.90	0.26
WA 181.5	77.61	25.13	27.69	10.05	10.52	8.75	7.07	6.68	5.13	2.24	0.57
WI 272.7	19.75	70.31	84.57	34.02	14.81	15.35	12.10	10.29	8.43	2.69	0.46

TOTALS

1881.1 840.83 396.02 235.80 114.91 87.23 75.65 55.94 37.40 26.15 9.32 1.90

PERCENTAGES

44.70 21.05 12.53 6.11 4.64 4.02 2.97 1.99 1.39 0.50 0.10

BASIS: 2000 Census data

RADTRAN Input Data	RURAL	SUBURBAN	URBAN
WEIGHTED POPULATION			
People/sq. mi.	16.8	919.8	5729.1
People/sq. km.	6.5	355.1	2212.0

DISTANCE	TOTALS			
Miles	1587.6	256.2	37.4	1881.1
Kilometers	2554.9	412.3	60.1	3027.3
Percentages	84.4	13.6	2.0	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
 ID 14926 MN 127807 MT 37744 ND 35077 WA 71801 WI 111790

Total Population within 800 meter Buffer Zone: 399145

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=GREEN BAY JCT.

From STATE=WI

From SUBNET=CN

To CITY=HANFORD SITE

To STATE=WA

To SUBNET=UP

[ID]

Rural - KM= 120.4

Suburban - KM= 38.8

Urban - KM= 1.9

Total - KM= 161.1

Rural Pop Density= 9.9

Suburban Pop Density= 241.2

Urban Pop Density=2020.0

[MN]

Rural - KM= 258.8

Suburban - KM= 151.2

Urban - KM= 18.7

Total - KM= 428.7

Rural Pop Density= 17.6

Suburban Pop Density= 316.1

Urban Pop Density=2220.5

[MT]

Rural - KM=1037.9

Suburban - KM= 50.0

Urban - KM= 3.2

Total - KM=1091.0

Rural Pop Density= 2.9

Suburban Pop Density= 415.6

Urban Pop Density=1978.2

[ND]

Rural - KM= 575.9

Suburban - KM= 34.7

Urban - KM= 5.0

Total - KM= 615.6

Rural Pop Density= 2.4

Suburban Pop Density= 373.2

Urban Pop Density=2346.7

[WA]

Rural - KM= 226.1

Suburban - KM= 53.1

Urban - KM= 12.8

Total - KM= 292.1

Rural Pop Density= 6.8

Suburban Pop Density= 400.7

Urban Pop Density=2306.1
 [WI]
 Rural - KM= 335.8
 Suburban - KM= 84.6
 Urban - KM= 18.6
 Total - KM= 438.9
 Rural Pop Density= 14.5
 Suburban Pop Density= 405.3
 Urban Pop Density=2162.4
 [Total]
 Rural - KM=2554.9
 Suburban - KM= 412.3
 Urban - KM= 60.1
 Total - KM=3027.3
 Rural Pop Density= 6.5
 Suburban Pop Density= 355.1
 Urban Pop Density=2212.0

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: GREEN BAY JCT. WI CN Leaving : 09/08/09 14:42
 TO : TOOEELE ORDNANCE DEPO UT UP Arriving : 09/11/09 08:00

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HR

CN	552102687	-GREEN BAY JCT.	WI	0.0	00:00	09/08/09	14:42
CN	552102712	-GREEN BAY	WI	2.0	0:13	09/08/09	14:55
CN	552102885	-APPLETON	WI	31.4	2:03	09/08/09	16:45
CN	552102944	-NEENAH	WI	37.6	2:23	09/08/09	17:05
CN	552103625	-SLINGER	WI	100.4	4:51	09/08/09	19:33
CN	552103934	-DUPLAINVILLE	WI	120.3	5:29	09/08/09	20:11
CN	552104048	-WAUKESHA	WI	125.7	5:39	09/08/09	20:21
CN	172105799	-FRANKLIN PARK	IL	208.0	8:43	09/08/09	23:25
----- TRANSFER							
IHB	172105799	-FRANKLIN PARK	IL	208.0	12:43	09/09/09	03:25
IHB	172105918	-MELROSE PARK	IL	211.2	14:49	09/09/09	05:31
----- TRANSFER							
UP	172105918	-MELROSE PARK	IL	211.2	14:49	09/09/09	05:31
UP	172105889	-PROVISO	IL	214.2	14:55	09/09/09	05:37
UP	172105944	-WEST CHICAGO	IL	229.3	15:23	09/09/09	06:05
UP	172105836	-ROCHELLE	IL	274.4	16:48	09/09/09	07:30
UP	172106145	-NELSON	IL	303.3	17:42	09/09/09	08:24
UP	192106078	-CLINTON	IA	336.2	18:43	09/09/09	09:25
UP	192105787	-CEDAR RAPIDS	IA	416.8	21:45	09/09/09	12:27
UP	192105607	-EAST MARSHALLTOWN	IA	479.5	23:42	09/09/09	14:24
UP	192105617	-AMES	IA	519.8	24:58	09/09/09	15:40
UP	192106824	-MISSOURI VALLEY	IA	656.1	29:43	09/09/09	20:25
UP	192106818	-CALIFORNIA JCT WEST	IA	662.1	29:54	09/09/09	20:36
UP	312107162	-FREMONT	NE	693.5	30:53	09/09/09	21:35
UP	312108371	-GRAND ISLAND	NE	799.7	34:12	09/10/09	00:54
UP	312108885	-GIBBON JCT	NE	828.3	35:06	09/10/09	01:48
UP	312107904	-NORTH PLATTE	NE	936.9	38:30	09/10/09	05:12
UP	312107841	-O FALLONS	NE	953.1	39:30	09/10/09	06:12
UP	82108276	-JULESBURG	CO	1017.4	41:31	09/10/09	08:13
UP	312107887	-SIDNEY	NE	1058.9	42:48	09/10/09	09:30
UP	562107931	-CHEYENNE	WY	1161.2	46:00	09/10/09	12:42
UP	562107501	-LARAMIE	WY	1217.6	48:16	09/10/09	14:58
UP	562106162	-RAWLINS	WY	1332.3	51:51	09/10/09	18:33

UP 562106752-GRANGER WY 1495.5 57:57 09/11/09 00:39
 UP 492107787-RIVERDALE UT 1637.8 62:24 09/11/09 05:06
 UP 492108786-SALT LAKE CITY UT 1674.6 63:33 09/11/09 06:15
 UP 492108987-SMELTER UT 1691.7 64:35 09/11/09 07:17
 UP 492108991-SMELTER UT 1691.7 64:35 09/11/09 07:17
 UP 492109686-TOOELE ORDNANCE DEPO UT 1711.6 65:18 09/11/09 08:00

Length: 1711.6 miles Transit Time: 65:18 Impedance: 1753.7

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
CN	208.0	172.2	34.2	0.0	1.7
IHB	3.2	3.2	0.0	0.0	0.0
UP	1500.4	1500.4	0.0	0.0	0.0
Total	1711.6	1675.7	34.2	0.0	1.7

Mileage by State :

CO: 8.8 IA: 331.7 IL: 168.7 NE: 441.4 UT: 140.9 WI: 166.5
 WY: 453.4

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1708.9
 Total Inside Tribal Lands : 2.6

Sac and Fox (Iowa) Reservation : 2.6

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: GREEN BAY JCT. WICN
 TO : TOOELE ORDNANCE DEPO UT UP

	>0.0	22.7	59.7	139	326	821	1861	3326	5815
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815
CO	8.8	1.76	1.94	3.11	1.07	0.23	0.28	0.00	0.45
IL	168.7	13.58	29.32	26.06	15.57	10.62	12.41	13.90	14.62
IA	331.7	32.62	87.35	87.30	41.23	38.26	29.41	7.62	3.79
NE	441.4	135.52	106.24	112.36	32.22	13.32	11.62	12.53	9.41
UT	140.9	39.59	16.76	19.07	14.58	12.52	9.58	8.90	7.65
WI	166.5	3.99	22.25	44.89	21.27	12.88	16.81	15.26	11.83
WY	453.4	316.90	74.81	27.29	8.56	6.12	6.46	5.72	4.32

TOTALS

1711.6 543.96 338.67 320.08 134.50 93.95 86.57 63.93 52.07 46.79 24.84 6.31

PERCENTAGES

31.78 19.79 18.70 7.86 5.49 5.06 3.73 3.04 2.73 1.45 0.37

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi.	23.4	985.7	6153.9
People/sq. km.	9.0	380.6	2376.0

DISTANCE

	TOTALS		
Miles	1337.2	296.5	77.9
Kilometers	2152.0	477.2	125.4
Percentages	78.1	17.3	4.6

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 1034 IL 244926 IA 67006 NE 93863 UT 92829 WI 136864 WY 36343

Total Population within 800 meter Buffer Zone: 672865

[TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=GREEN BAY JCT.
 From STATE=WI
 From SUBNET=CN
 To CITY=TOOELE ORDNANCE DEPO
 To STATE=UT
 To SUBNET=UP
 [CO]
 Rural - KM= 12.7
 Suburban - KM= 1.5
 Urban - KM= 0.0
 Total - KM= 14.2
 Rural Pop Density= 12.8
 Suburban Pop Density= 555.5
 Urban Pop Density= 0.0
 [IL]
 Rural - KM= 136.0
 Suburban - KM= 83.0
 Urban - KM= 52.5
 Total - KM= 271.5
 Rural Pop Density= 13.8
 Suburban Pop Density= 495.4
 Urban Pop Density=2484.6
 [IA]
 Rural - KM= 399.9
 Suburban - KM= 127.3
 Urban - KM= 6.6
 Total - KM= 533.9
 Rural Pop Density= 13.8
 Suburban Pop Density= 223.7
 Urban Pop Density=2352.8
 [NE]
 Rural - KM= 621.7
 Suburban - KM= 75.4
 Urban - KM= 13.3
 Total - KM= 710.4
 Rural Pop Density= 9.3
 Suburban Pop Density= 419.8
 Urban Pop Density=2103.5
 [UT]
 Rural - KM= 144.8
 Suburban - KM= 62.2
 Urban - KM= 19.9
 Total - KM= 226.8
 Rural Pop Density= 10.6
 Suburban Pop Density= 401.4
 Urban Pop Density=2332.6
 [WI]
 Rural - KM= 148.7
 Suburban - KM= 91.4
 Urban - KM= 28.0
 Total - KM= 268.0
 Rural Pop Density= 17.8
 Suburban Pop Density= 433.7
 Urban Pop Density=2404.9
 [WY]
 Rural - KM= 688.1
 Suburban - KM= 36.4
 Urban - KM= 5.2
 Total - KM= 729.7
 Rural Pop Density= 2.7
 Suburban Pop Density= 409.7
 Urban Pop Density=2012.6
 [Total]

Rural - KM=2152.0
 Suburban - KM= 477.2
 Urban - KM= 125.4
 Total - KM=2754.5
 Rural Pop Density= 9.0
 Suburban Pop Density= 380.6
 Urban Pop Density=2376.0

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: GREEN BAY JCT. WI CN Leaving : 09/08/09 14:43
 TO : AMARILLO TX UP Arriving : 09/10/09 17:30

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR

CN	552102687	GREEN BAY JCT.	WI	0.0	00:00	09/08/09	14:43
CN	552102712	GREEN BAY	WI	2.0	0:13	09/08/09	14:56
CN	552102885	APPLETON	WI	31.4	2:03	09/08/09	16:46
CN	552102944	NEENAH	WI	37.6	2:23	09/08/09	17:06
CN	552103625	SLINGER	WI	100.4	4:51	09/08/09	19:34
CN	552103934	DUPLAINVILLE	WI	120.3	5:29	09/08/09	20:12
CN	552104048	WAUKESHA	WI	125.7	5:39	09/08/09	20:22
CN	172105799	FRANKLIN PARK	IL	208.0	8:43	09/08/09	23:26
----- TRANSFER							
IHB	172105799	FRANKLIN PARK	IL	208.0	12:43	09/09/09	03:26
IHB	172106105	LA GRANGE	IL	216.1	14:58	09/09/09	05:41
----- TRANSFER							
BNSF	172106105	LA GRANGE	IL	216.1	14:58	09/09/09	05:41
BNSF	172106247	SOUTH AURORA	IL	241.4	16:16	09/09/09	06:59
BNSF	172108338	GALESBURG	IL	364.3	20:06	09/09/09	10:49
BNSF	172109131	LOMAX	IL	406.1	21:25	09/09/09	12:08
BNSF	192109349	FORT MADISON	IA	422.4	21:56	09/09/09	12:39
BNSF	292112390	C A JCT	MO	605.4	28:09	09/09/09	18:52
BNSF	292112548	CONGO	MO	630.5	28:56	09/09/09	19:39
BNSF	202112931	OLATHE	KS	657.7	29:47	09/09/09	20:30
BNSF	202113599	EMPORIA	KS	744.0	32:29	09/09/09	23:12
BNSF	202114801	AUGUSTA	KS	819.1	34:50	09/10/09	01:33
BNSF	202115395	WELLINGTON	KS	858.2	36:03	09/10/09	02:46
BNSF	402116131	AVARD	OK	954.7	39:34	09/10/09	06:17
BNSF	402116278	WEST WAYNOKA	OK	965.5	39:54	09/10/09	06:37
BNSF	482118135	AMARILLO	TX	1168.0	46:14	09/10/09	12:57
----- TRANSFER							
UP	482118135	AMARILLO	TX	1168.0	50:14	09/10/09	16:57
UP	482118129	AMARILLO	TX	1169.4	50:47	09/10/09	17:30

Length: 1169.4 miles Transit Time: 50:47 Impedance: 1251.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br

BNSF	951.9	951.9	0.0	0.0	0.0
CN	208.0	172.2	34.2	0.0	1.7
IHB	8.1	8.1	0.0	0.0	0.0
UP	1.4	1.4	0.0	0.0	0.0

Total	1169.4	1133.5	34.2	0.0	1.7

Mileage by State :

IA: 19.8 IL: 253.5 KS: 288.1 MO: 199.0 OK: 116.5 TX: 126.0
WI: 166.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1169.4
Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: GREEN BAY JCT. WI CN
TO : AMARILLO TX UP

```
-----
      >0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES  0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996
-----
IL 253.5 46.96 62.41 29.42 13.67 11.26 14.97 19.64 18.80 21.81 10.28 4.36
IA 19.8 1.20 7.05 4.06 3.93 1.67 1.18 0.14 0.13 0.30 0.00 0.09
KS 288.1 102.87 78.44 41.43 17.03 7.49 9.58 12.69 8.67 6.62 2.81 0.44
MO 199.0 96.29 45.64 30.98 6.45 5.05 5.26 4.38 2.72 0.81 0.91 0.51
OK 116.5 69.78 27.31 9.36 1.68 1.31 2.41 2.09 1.93 0.46 0.14 0.00
TX 126.0 67.55 25.82 15.67 4.32 3.29 3.14 2.89 1.95 1.06 0.18 0.13
WI 166.5 3.99 22.25 44.89 21.27 12.88 16.81 15.26 11.83 10.29 5.48 1.65
```

TOTALS

1169.4 388.64 268.92 175.81 68.35 42.95 53.35 57.09 46.03 41.35 19.80 7.18

PERCENTAGES

33.23 23.00 15.03 5.84 3.67 4.56 4.88 3.94 3.54 1.69 0.61

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 19.7 1186.0 6212.5
People/sq. km. 7.6 457.9 2398.6

DISTANCE

	TOTALS		
Miles	901.7	199.4	68.3
Kilometers	1451.1	320.9	110.0
Percentages	77.1	17.1	5.8

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 274309 IA 4740 KS 84299 MO 31397 OK 10774 TX 19919 WI 136864

Total Population within 800 meter Buffer Zone: 562302

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=GREEN BAY JCT.

From STATE=WI

From SUBNET=CN

To CITY=AMARILLO

To STATE=TX

To SUBNET=UP

[IL]

Rural - KM= 245.4

Suburban - KM= 104.1

Urban - KM= 58.7

Total - KM= 408.0

Rural Pop Density= 8.7
 Suburban Pop Density= 515.2
 Urban Pop Density=2424.8

[IA]

Rural - KM= 26.1
 Suburban - KM= 5.0
 Urban - KM= 0.6
 Total - KM= 31.8

Rural Pop Density= 15.6
 Suburban Pop Density= 196.8
 Urban Pop Density=2337.5

[KS]

Rural - KM= 385.9
 Suburban - KM= 61.8
 Urban - KM= 15.9
 Total - KM= 463.6

Rural Pop Density= 7.2
 Suburban Pop Density= 469.6
 Urban Pop Density=2241.9

[MO]

Rural - KM= 288.6
 Suburban - KM= 28.0
 Urban - KM= 3.6
 Total - KM= 320.2

Rural Pop Density= 5.5
 Suburban Pop Density= 379.6
 Urban Pop Density=2857.9

[OK]

Rural - KM= 174.0
 Suburban - KM= 12.5
 Urban - KM= 1.0
 Total - KM= 187.5

Rural Pop Density= 3.3
 Suburban Pop Density= 473.6
 Urban Pop Density=2065.1

[TX]

Rural - KM= 182.4
 Suburban - KM= 18.1
 Urban - KM= 2.2
 Total - KM= 202.8

Rural Pop Density= 4.9
 Suburban Pop Density= 393.9
 Urban Pop Density=2169.4

[WI]

Rural - KM= 148.7
 Suburban - KM= 91.4
 Urban - KM= 28.0
 Total - KM= 268.0

Rural Pop Density= 17.8
 Suburban Pop Density= 433.7
 Urban Pop Density=2404.9

[Total]

Rural - KM=1451.1
 Suburban - KM= 320.9
 Urban - KM= 110.0
 Total - KM=1881.9

Rural Pop Density= 7.6
 Suburban Pop Density= 457.9
 Urban Pop Density=2398.6

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: GREEN BAY JCT. WI CN Leaving : 09/08/09 14:44
 TO : OAK RIDGE TN CSXT Arriving : 09/10/09 03:19

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0

Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CN	552102687	GREEN BAY JCT.	WI	0.0	00:00	09/08/09	14:44
CN	552102712	GREEN BAY	WI	2.0	0:13	09/08/09	14:57
CN	552102885	APPLETON	WI	31.4	2:03	09/08/09	16:47
CN	552102944	NEENAH	WI	37.6	2:23	09/08/09	17:07
CN	552103625	SLINGER	WI	100.4	4:51	09/08/09	19:35
CN	552103934	DUPLAINVILLE	WI	120.3	5:29	09/08/09	20:13
CN	552104048	WAIKESHA	WI	125.7	5:39	09/08/09	20:23
CN	172105799	FRANKLIN PARK	IL	208.0	8:43	09/08/09	23:27
----- TRANSFER							
CSXT	172105799	FRANKLIN PARK	IL	208.0	12:43	09/09/09	03:27
CSXT	172106183	ARGO	IL	220.3	13:06	09/09/09	03:50
CSXT	182106597	EAST CHICAGO	IN	243.9	14:20	09/09/09	05:04
CSXT	182106599	CLARKE JCT.	IN	246.7	14:26	09/09/09	05:10
CSXT	182107166	MILFORD JCT	IN	329.6	17:01	09/09/09	07:45
CSXT	392107553	DEFIANCE	OH	407.0	19:26	09/09/09	10:10
CSXT	392107716	DESHLER	OH	432.1	20:13	09/09/09	10:57
CSXT	392108990	LIMA	OH	467.8	21:50	09/09/09	12:34
CSXT	392110216	SIDNEY JCT	OH	500.7	22:52	09/09/09	13:36
CSXT	392111394	DAYTON	OH	537.7	24:01	09/09/09	14:45
CSXT	392112516	CINCINNATI	OH	597.0	26:22	09/09/09	17:06
CSXT	212112705	LATONIA	KY	603.0	26:34	09/09/09	17:18
CSXT	212114279	PATIO	KY	696.6	30:22	09/09/09	21:06
CSXT	212115808	CORBIN	KY	787.0	33:35	09/10/09	00:19
CSXT	472116821	DOSSETT	TN	865.3	36:32	09/10/09	03:16
CSXT	472116839	OAK RIDGE	TN	866.6	36:35	09/10/09	03:19

Length: 866.6 miles Transit Time: 36:35 Impedance: 908.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
CN	208.0	172.2	34.2	0.0	1.7
CSXT	658.6	658.6	0.0	0.0	0.0
Total	866.6	830.8	34.2	0.0	1.7

Mileage by State :

IL: 74.5 IN: 143.8 KY: 217.2 OH: 215.3 TN: 49.4 WI: 166.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 866.6
 Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: GREEN BAY JCT. WI CN
 TO : OAK RIDGE TN CSXT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

 IL 74.5 1.12 0.19 1.95 4.26 7.19 9.49 11.21 11.03 14.17 9.49 4.39
 IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
 KY 217.2 9.52 48.83 59.76 39.37 18.87 17.73 9.83 5.40 3.66 2.97 1.17
 OH 215.3 10.83 44.00 47.56 22.28 19.65 21.59 18.60 13.09 12.66 3.69 1.49
 TN 49.4 2.75 11.57 11.53 9.09 4.69 4.27 3.62 1.35 0.37 0.12 0.00

WI 166.5 3.99 22.25 44.89 21.27 12.88 16.81 15.26 11.83 10.29 5.48 1.65

TOTALS

866.6 32.56 158.79 212.50 118.71 73.73 78.97 66.72 46.59 45.58 23.22 9.37

PERCENTAGES

3.76 18.32 24.52 13.70 8.51 9.11 7.70 5.38 5.26 2.68 1.08

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 43.5 1025.3 6331.8

People/sq. km. 16.8 395.9 2444.7

DISTANCE

TOTALS

Miles 522.6 266.0 78.2 866.6

Kilometers 841.0 428.1 125.8 1394.7

Percentages 60.3 30.7 9.0

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 199515 IN 71427 KY 80220 OH 145525 TN 12761 WI 136864

Total Population within 800 meter Buffer Zone: 646312

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=GREEN BAY JCT.

From STATE=WI

From SUBNET=CN

To CITY=OAK RIDGE

To STATE=TN

To SUBNET=CSXT

[IL]

Rural - KM= 12.1

Suburban - KM= 62.6

Urban - KM= 45.1

Total - KM= 119.8

Rural Pop Density= 26.0

Suburban Pop Density= 503.5

Urban Pop Density=2588.8

[IN]

Rural - KM= 169.9

Suburban - KM= 50.9

Urban - KM= 10.6

Total - KM= 231.4

Rural Pop Density= 16.8

Suburban Pop Density= 350.7

Urban Pop Density=2305.9

[KY]

Rural - KM= 253.4

Suburban - KM= 83.4

Urban - KM= 12.6

Total - KM= 349.5

Rural Pop Density= 17.3

Suburban Pop Density= 311.0

Urban Pop Density=2627.3

[OH]

Rural - KM= 200.6

Suburban - KM= 117.4

Urban - KM= 28.7

Total - KM= 346.5

Rural Pop Density= 14.8

Suburban Pop Density= 401.5
 Urban Pop Density=2238.3
 [TN]
 Rural - KM= 56.2
 Suburban - KM= 22.4
 Urban - KM= 0.8
 Total - KM= 79.5
 Rural Pop Density= 17.0
 Suburban Pop Density= 329.7
 Urban Pop Density=2080.0
 [WI]
 Rural - KM= 148.7
 Suburban - KM= 91.4
 Urban - KM= 28.0
 Total - KM= 268.0
 Rural Pop Density= 17.8
 Suburban Pop Density= 433.7
 Urban Pop Density=2404.9
 [Total]
 Rural - KM= 841.0
 Suburban - KM= 428.1
 Urban - KM= 125.8
 Total - KM=1394.7
 Rural Pop Density= 16.8
 Suburban Pop Density= 395.9
 Urban Pop Density=2444.7

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: NEW ROCHELLE NY CSXT Leaving : 09/08/09 15:05
 TO : OAK RIDGE TN CSXT Arriving : 09/11/09 02:07

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CSXT	362108431	NEW ROCHELLE	NY	0.0	00:00	09/08/09	15:05
CSXT	362109092	FRESH POND JCT	NY	18.0	1:54	09/08/09	16:59
----- TRANSFER							
NYA	362109092	FRESH POND JCT	NY	18.0	5:54	09/08/09	20:59
NYA	362109301	BAY RIDGE	NY	29.1	11:17	09/09/09	02:22
----- TRANSFER							
<TR>	362109301	BAY RIDGE	NY	29.1	11:17	09/09/09	02:22
<TR>	342109149	GREENVILLE	NJ	34.5	13:58	09/09/09	05:03
----- TRANSFER							
CR	342109149	GREENVILLE	NJ	34.5	13:58	09/09/09	05:03
CR	342109047	OAK ISLAND	NJ	39.5	14:10	09/09/09	05:15
----- TRANSFER							
CSXT	342109047	OAK ISLAND	NJ	39.5	18:10	09/09/09	09:15
CSXT	342109557	BOUND BROOK	NJ	62.3	18:53	09/09/09	09:58
CSXT	342110252	WEST TRENTON	NJ	89.4	20:11	09/09/09	11:16
CSXT	102111450	ELSMERE JCT	DE	149.0	22:48	09/09/09	13:53
CSXT	242112166	BAY VIEW	MD	210.8	25:30	09/09/09	16:35
CSXT	242112279	WEST BALTIMORE	MD	221.1	25:52	09/09/09	16:57
CSXT	242112335	HALETHORPE	MD	223.8	25:58	09/09/09	17:03
CSXT	112112909	VIRGINIA AVENUE	DC	258.2	27:02	09/09/09	18:07
CSXT	512112975	POTOMAC YARD	VA	262.4	27:10	09/09/09	18:15
CSXT	512113020	ALEXANDRIA	VA	266.0	31:17	09/09/09	22:22
----- TRANSFER							
NS	512113020	ALEXANDRIA	VA	266.0	31:17	09/09/09	22:22

NS 512114200-CHARLOTTESVILLE VA 368.7 36:16 09/10/09 03:21
 NS 512115161-LYNCHBURG VA 430.1 38:49 09/10/09 05:54
 NS 512115350-ROANOKE VA 480.2 40:25 09/10/09 07:30
 NS 512116226-BRISTOL VA 630.4 47:40 09/10/09 14:45
 NS 472116612-JUSTICE TN 706.5 51:59 09/10/09 19:04
 NS 472116660-NEW LINE TN 722.0 52:32 09/10/09 19:37
 NS 472116879-SEVIER YARD TN 755.2 53:34 09/10/09 20:39
 NS 472116936-KNOXVILLE TN 761.1 54:15 09/10/09 21:20
 NS 472116955-KNOXVILLE WILLOUGHBY TN 762.8 58:18 09/11/09 01:23
 ----- TRANSFER -----
 CSXT 472116955-KNOXVILLE WILLOUGHBY TN 762.8 58:18 09/11/09 01:23
 CSXT 472116951-KNOXVILLE WILLOUGHBY TN 762.9 58:19 09/11/09 01:24
 CSXT 472116839-OAK RIDGE TN 785.5 59:02 09/11/09 02:07

Length: 785.5 miles Transit Time: 59:02 Impedance: 1085.8

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<TR>	5.5	0.0	0.0	0.0	5.5
CR	5.0	5.0	0.0	0.0	0.0
CSXT	267.4	192.3	56.9	8.3	9.9
NS	496.7	285.8	210.9	0.0	0.0
NYA	11.0	0.0	0.0	0.0	11.0
Total	785.5	483.1	267.8	8.3	26.3

Mileage by State :

DC: 7.4 DE: 21.2 MD: 91.8 NJ: 59.3 NY: 31.6 PA: 48.9
 TN: 154.8 VA: 370.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 785.5
 Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: NEW ROCHELLE NY CSXT
 TO : OAK RIDGE TN CSXT

>0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

DE	21.2	0.00	0.00	0.06	0.26	1.33	1.86	4.31	4.42	4.32	2.72	1.92
DC	7.4	1.12	0.10	0.14	0.00	0.45	0.61	0.35	0.51	1.27	1.27	1.58
MD	91.8	3.77	2.51	11.58	9.62	9.34	11.92	13.80	10.46	8.30	5.17	5.33
NJ	59.3	3.99	4.19	8.42	4.87	4.06	5.50	7.21	6.42	7.10	4.74	2.89
NY	31.6	4.33	0.07	0.41	0.50	0.44	0.77	0.93	0.93	1.10	1.48	20.65
PA	48.9	3.81	0.45	0.46	0.84	2.05	3.74	5.69	4.32	8.24	7.76	11.52
TN	154.8	3.77	8.23	29.01	33.62	20.75	20.72	18.81	11.95	6.19	1.57	0.16
VA	370.5	24.32	78.02	64.44	46.59	33.62	40.03	38.27	21.87	13.27	7.62	2.56

TOTALS

785.5 45.11 93.57 114.52 96.30 72.04 85.15 89.37 60.88 49.79 32.33 46.61

PERCENTAGES

5.74 11.91 14.58 12.26 9.17 10.84 11.38 7.75 6.34 4.11 5.93

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi.	44.6	1116.7	7736.0
People/sq. km.	17.2	431.2	2986.9

DISTANCE

TOTALS

Miles	349.5	307.4	128.7	785.5
Kilometers	562.5	494.8	207.2	1264.2
Percentages	44.5	39.1	16.4	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

DE 82522 DC 41408 MD 195651 NJ 136540 NY 787802 PA 319330 TN 106917 VA 274698

Total Population within 800 meter Buffer Zone: 1944868

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=NEW ROCHELLE

From STATE=NY

From SUBNET=CSXT

To CITY=OAK RIDGE

To STATE=TN

To SUBNET=CSXT

[DE]

Rural - KM= 0.5

Suburban - KM= 19.2

Urban - KM= 14.4

Total - KM= 34.1

Rural Pop Density= 34.1

Suburban Pop Density= 603.1

Urban Pop Density=2687.5

[DC]

Rural - KM= 2.2

Suburban - KM= 3.1

Urban - KM= 6.6

Total - KM= 11.9

Rural Pop Density= 2.0

Suburban Pop Density= 451.8

Urban Pop Density=3113.6

[MD]

Rural - KM= 44.2

Suburban - KM= 73.3

Urban - KM= 30.3

Total - KM= 147.8

Rural Pop Density= 20.6

Suburban Pop Density= 463.5

Urban Pop Density=2822.6

[NJ]

Rural - KM= 34.6

Suburban - KM= 37.3

Urban - KM= 23.7

Total - KM= 95.5

Rural Pop Density= 16.0

Suburban Pop Density= 506.4

Urban Pop Density=2666.1

[NY]

Rural - KM= 8.5

Suburban - KM= 4.9

Urban - KM= 37.4

Total - KM= 50.9

Rural Pop Density= 4.9

Suburban Pop Density= 528.6

Urban Pop Density=4053.4

[PA]

Rural - KM= 8.9

Suburban - KM= 25.4

Urban - KM= 44.3

Total - KM= 78.6

Rural Pop Density= 7.5
 Suburban Pop Density= 524.3
 Urban Pop Density=3166.9
 [TN]
 Rural - KM= 120.1
 Suburban - KM= 116.2
 Urban - KM= 12.7
 Total - KM= 249.1
 Rural Pop Density= 24.1
 Suburban Pop Density= 389.8
 Urban Pop Density=2070.1
 [VA]
 Rural - KM= 343.4
 Suburban - KM= 215.3
 Urban - KM= 37.7
 Total - KM= 596.3
 Rural Pop Density= 15.1
 Suburban Pop Density= 400.6
 Urban Pop Density=2454.1
 [Total]
 Rural - KM= 562.5
 Suburban - KM= 494.8
 Urban - KM= 207.2
 Total - KM=1264.2
 Rural Pop Density= 17.2
 Suburban Pop Density= 431.2
 Urban Pop Density=2986.9

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: NEW ROCHELLE NY CSXT Leaving : 09/08/09 15:05
 TO : OAK RIDGE TN CSXT Arriving : 09/11/09 02:07

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CSXT	362108431	NEW ROCHELLE	NY	0.0	00:00	09/08/09	15:05
CSXT	362109092	FRESH POND JCT	NY	18.0	1:54	09/08/09	16:59
----- TRANSFER							
NYA	362109092	FRESH POND JCT	NY	18.0	5:54	09/08/09	20:59
NYA	362109301	BAY RIDGE	NY	29.1	11:17	09/09/09	02:22
----- TRANSFER							
<TR>	362109301	BAY RIDGE	NY	29.1	11:17	09/09/09	02:22
<TR>	342109149	GREENVILLE	NJ	34.5	13:58	09/09/09	05:03
----- TRANSFER							
CR	342109149	GREENVILLE	NJ	34.5	13:58	09/09/09	05:03
CR	342109047	OAK ISLAND	NJ	39.5	14:10	09/09/09	05:15
----- TRANSFER							
CSXT	342109047	OAK ISLAND	NJ	39.5	18:10	09/09/09	09:15
CSXT	342109557	BOUND BROOK	NJ	62.3	18:53	09/09/09	09:58
CSXT	342110252	WEST TRENTON	NJ	89.4	20:11	09/09/09	11:16
CSXT	102111450	ELSMERE JCT	DE	149.0	22:48	09/09/09	13:53
CSXT	242112166	BAY VIEW	MD	210.8	25:30	09/09/09	16:35
CSXT	242112279	WEST BALTIMORE	MD	221.1	25:52	09/09/09	16:57
CSXT	242112335	HALETHORPE	MD	223.8	25:58	09/09/09	17:03
CSXT	112112909	VIRGINIA AVENUE	DC	258.2	27:02	09/09/09	18:07
CSXT	512112975	POTOMAC YARD	VA	262.4	27:10	09/09/09	18:15
CSXT	512113020	ALEXANDRIA	VA	266.0	31:17	09/09/09	22:22
----- TRANSFER							

NS 512113020-ALEXANDRIA VA 266.0 31:17 09/09/09 22:22
 NS 512114200-CHARLOTTESVILLE VA 368.7 36:16 09/10/09 03:21
 NS 512115161-LYNCHBURG VA 430.1 38:49 09/10/09 05:54
 NS 512115350-ROANOKE VA 480.2 40:25 09/10/09 07:30
 NS 512116226-BRISTOL VA 630.4 47:40 09/10/09 14:45
 NS 472116612-JUSTICE TN 706.5 51:59 09/10/09 19:04
 NS 472116660-NEW LINE TN 722.0 52:32 09/10/09 19:37
 NS 472116879-SEVIER YARD TN 755.2 53:34 09/10/09 20:39
 NS 472116936-KNOXVILLE TN 761.1 54:15 09/10/09 21:20
 NS 472116955-KNOXVILLE WILLOUGHBY TN 762.8 58:18 09/11/09 01:23

----- TRANSFER

CSXT 472116955-KNOXVILLE WILLOUGHBY TN 762.8 58:18 09/11/09 01:23
 CSXT 472116951-KNOXVILLE WILLOUGHBY TN 762.9 58:19 09/11/09 01:24
 CSXT 472116839-OAK RIDGE TN 785.5 59:02 09/11/09 02:07

Length: 785.5 miles Transit Time: 59:02 Impedance: 1085.8

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<TR>	5.5	0.0	0.0	0.0	5.5
CR	5.0	5.0	0.0	0.0	0.0
CSXT	267.4	192.3	56.9	8.3	9.9
NS	496.7	285.8	210.9	0.0	0.0
NYA	11.0	0.0	0.0	0.0	11.0
Total	785.5	483.1	267.8	8.3	26.3

Mileage by State :

DC: 7.4 DE: 21.2 MD: 91.8 NJ: 59.3 NY: 31.6 PA: 48.9
 TN: 154.8 VA: 370.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 785.5
 Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: NEW ROCHELLE NY CSXT
 TO : OAK RIDGE TN CSXT

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

 DE 21.2 0.00 0.00 0.06 0.26 1.33 1.86 4.31 4.42 4.32 2.72 1.92
 DC 7.4 1.12 0.10 0.14 0.00 0.45 0.61 0.35 0.51 1.27 1.27 1.58
 MD 91.8 3.77 2.51 11.58 9.62 9.34 11.92 13.80 10.46 8.30 5.17 5.33
 NJ 59.3 3.99 4.19 8.42 4.87 4.06 5.50 7.21 6.42 7.10 4.74 2.89
 NY 31.6 4.33 0.07 0.41 0.50 0.44 0.77 0.93 0.93 1.10 1.48 20.65
 PA 48.9 3.81 0.45 0.46 0.84 2.05 3.74 5.69 4.32 8.24 7.76 11.52
 TN 154.8 3.77 8.23 29.01 33.62 20.75 20.72 18.81 11.95 6.19 1.57 0.16
 VA 370.5 24.32 78.02 64.44 46.59 33.62 40.03 38.27 21.87 13.27 7.62 2.56

TOTALS

785.5 45.11 93.57 114.52 96.30 72.04 85.15 89.37 60.88 49.79 32.33 46.61
 PERCENTAGES

5.74 11.91 14.58 12.26 9.17 10.84 11.38 7.75 6.34 4.11 5.93

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 44.6 1116.7 7736.0
 People/sq. km. 17.2 431.2 2986.9

DISTANCE	TOTALS			
Miles	349.5	307.4	128.7	785.5
Kilometers	562.5	494.8	207.2	1264.2
Percentages	44.5	39.1	16.4	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

DE 82522 DC 41408 MD 195651 NJ 136540 NY 787802 PA 319330 TN 106917 VA 274698

Total Population within 800 meter Buffer Zone: 1944868

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=NEW ROCHELLE

From STATE=NY

From SUBNET=CSXT

To CITY=OAK RIDGE

To STATE=TN

To SUBNET=CSXT

[DE]

Rural - KM= 0.5

Suburban - KM= 19.2

Urban - KM= 14.4

Total - KM= 34.1

Rural Pop Density= 34.1

Suburban Pop Density= 603.1

Urban Pop Density=2687.5

[DC]

Rural - KM= 2.2

Suburban - KM= 3.1

Urban - KM= 6.6

Total - KM= 11.9

Rural Pop Density= 2.0

Suburban Pop Density= 451.8

Urban Pop Density=3113.6

[MD]

Rural - KM= 44.2

Suburban - KM= 73.3

Urban - KM= 30.3

Total - KM= 147.8

Rural Pop Density= 20.6

Suburban Pop Density= 463.5

Urban Pop Density=2822.6

[NJ]

Rural - KM= 34.6

Suburban - KM= 37.3

Urban - KM= 23.7

Total - KM= 95.5

Rural Pop Density= 16.0

Suburban Pop Density= 506.4

Urban Pop Density=2666.1

[NY]

Rural - KM= 8.5

Suburban - KM= 4.9

Urban - KM= 37.4

Total - KM= 50.9

Rural Pop Density= 4.9

Suburban Pop Density= 528.6

Urban Pop Density=4053.4

[PA]

Rural - KM= 8.9

Suburban - KM= 25.4

Urban - KM= 44.3

Total - KM= 78.6
 Rural Pop Density= 7.5
 Suburban Pop Density= 524.3
 Urban Pop Density=3166.9
 [TN]
 Rural - KM= 120.1
 Suburban - KM= 116.2
 Urban - KM= 12.7
 Total - KM= 249.1
 Rural Pop Density= 24.1
 Suburban Pop Density= 389.8
 Urban Pop Density=2070.1
 [VA]
 Rural - KM= 343.4
 Suburban - KM= 215.3
 Urban - KM= 37.7
 Total - KM= 596.3
 Rural Pop Density= 15.1
 Suburban Pop Density= 400.6
 Urban Pop Density=2454.1
 [Total]
 Rural - KM= 562.5
 Suburban - KM= 494.8
 Urban - KM= 207.2
 Total - KM=1264.2
 Rural Pop Density= 17.2
 Suburban Pop Density= 431.2
 Urban Pop Density=2986.9

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: NEW ROCHELLE NY CSXT Leaving : 09/08/09 15:07
 TO : AMARILLO TX UP Arriving : 09/12/09 02:26

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CSXT	362108431	NEW ROCHELLE	NY	0.0	00:00	09/08/09	15:07
CSXT	362108622	MELROSE JCT.	NY	10.1	1:15	09/08/09	16:22
CSXT	362108652	NEW YORK	NY	10.7	1:18	09/08/09	16:25
CSXT	362106343	POUGHKEEPSIE	NY	78.7	6:58	09/08/09	22:05
CSXT	362104720	SELKIRK	NY	141.5	12:02	09/09/09	03:09
CSXT	362104281	ROTTERDAM JCT	NY	169.6	13:25	09/09/09	04:32
CSXT	362103889	UTICA	NY	240.3	15:38	09/09/09	06:45
CSXT	362103748	ROME	NY	251.9	15:59	09/09/09	07:06
CSXT	362103960	SYRACUSE	NY	296.1	17:52	09/09/09	08:59
CSXT	362103897	GENESEE JCT	NY	376.2	20:30	09/09/09	11:37
CSXT	362104303	BUFFALO	NY	440.0	23:34	09/09/09	14:41
CSXT	362104798	DUNKIRK(NYC,AMTK)	NY	478.2	24:46	09/09/09	15:53
CSXT	362105036	WESTFIELD	NY	495.7	25:18	09/09/09	16:25
CSXT	422105473	ERIE	PA	523.6	26:11	09/09/09	17:18
CSXT	392107192	CLEVELAND	OH	630.0	30:00	09/09/09	21:07
CSXT	392108155	GREENWICH	OH	676.5	31:27	09/09/09	22:34
CSXT	392107870	FOSTORIA	OH	723.3	33:25	09/10/09	00:32
CSXT	392107716	DESHLER	OH	749.5	34:14	09/10/09	01:21
CSXT	392107553	DEFIANCE	OH	774.6	35:01	09/10/09	02:08
CSXT	182107166	MILFORD JCT	IN	852.0	37:27	09/10/09	04:34
CSXT	182106599	CLARKE JCT.	IN	935.0	40:02	09/10/09	07:09
CSXT	182106597	EAST CHICAGO	IN	937.7	40:07	09/10/09	07:14


```

CSXT 172106505-BLUE ISLAND      IL 949.9 41:00 09/10/09 08:07
----- TRANSFER
IHB 172106505-BLUE ISLAND      IL 949.9 45:00 09/10/09 12:07
IHB 172106183-ARGO              IL 961.7 45:23 09/10/09 12:30
IHB 172106105-LA GRANGE        IL 965.8 47:30 09/10/09 14:37
----- TRANSFER
BNSF 172106105-LA GRANGE        IL 965.8 47:30 09/10/09 14:37
BNSF 172106247-SOUTH AURORA    IL 991.1 48:48 09/10/09 15:55
BNSF 172108338-GALESBURG      IL 1114.1 52:38 09/10/09 19:45
BNSF 172109131-LOMAX          IL 1155.9 53:58 09/10/09 21:05
BNSF 192109349-FORT MADISON    IA 1172.1 54:28 09/10/09 21:35
BNSF 292112390-C A JCT        MO 1355.1 60:41 09/11/09 03:48
BNSF 292112548-CONGO          MO 1380.3 61:28 09/11/09 04:35
BNSF 202112931-OLATHE         KS 1407.5 62:19 09/11/09 05:26
BNSF 202113599-EMPORIA        KS 1493.8 65:01 09/11/09 08:08
BNSF 202114801-AUGUSTA        KS 1568.8 67:22 09/11/09 10:29
BNSF 202115395-WELLINGTON     KS 1607.9 68:35 09/11/09 11:42
BNSF 402116131-AVARD          OK 1704.5 72:06 09/11/09 15:13
BNSF 402116278-WEST WAYNOKA   OK 1715.3 72:26 09/11/09 15:33
BNSF 482118135-AMARILLO      TX 1917.7 78:46 09/11/09 21:53
----- TRANSFER
UP 482118135-AMARILLO        TX 1917.7 82:46 09/12/09 01:53
UP 482118129-AMARILLO        TX 1919.1 83:19 09/12/09 02:26

```

Length: 1919.1 miles Transit Time: 83:19 Impedance: 2134.8

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
BNSF	951.9	951.9	0.0	0.0	0.0
CSXT	949.9	811.6	0.2	128.1	10.1
IHB	15.9	15.7	0.2	0.0	0.0
UP	1.4	1.4	0.0	0.0	0.0
Total	1919.1	1780.6	0.4	128.1	10.1

Mileage by State :

IA: 19.8 IL: 229.2 IN: 143.8 KS: 288.1 MO: 199.0 NY: 506.4
 OH: 246.7 OK: 116.5 PA: 43.8 TX: 126.0

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1917.3
 Total Inside Tribal Lands : 1.8

Cattaraugus Reservation : 1.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

```

FROM: NEW ROCHELLE      NY CSXT
TO : AMARILLO          TX UP
-----
      >0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996
-----
IL 229.2 46.26 62.30 28.41 11.57 10.75 11.60 15.23 13.93 17.52 8.11 3.53
IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
IA 19.8 1.20 7.05 4.06 3.93 1.67 1.18 0.14 0.13 0.30 0.00 0.09
KS 288.1 102.87 78.44 41.43 17.03 7.49 9.58 12.69 8.67 6.62 2.81 0.44
MO 199.0 96.29 45.64 30.98 6.45 5.05 5.26 4.38 2.72 0.81 0.91 0.51
NY 506.4 59.69 69.51 104.96 67.59 45.30 49.82 39.74 24.03 17.54 10.30 17.97
OH 246.7 22.58 56.05 50.30 25.79 15.60 14.98 19.68 16.06 14.29 6.97 4.28
OK 116.5 69.78 27.31 9.36 1.68 1.31 2.41 2.09 1.93 0.46 0.14 0.00
PA 43.8 1.96 3.57 3.88 6.91 6.37 6.83 4.68 4.49 2.51 1.87 0.75
TX 126.0 67.55 25.82 15.67 4.32 3.29 3.14 2.89 1.95 1.06 0.18 0.13

```

TOTALS

1919.1 472.53 407.64 335.86 167.71 107.28 113.88 109.72 77.80 65.54 32.76 28.37
 PERCENTAGES

24.62 21.24 17.50 8.74 5.59 5.93 5.72 4.05 3.42 1.71 1.48

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION
People/sq. mi. 26.1 1074.6 6873.0
People/sq. km. 10.1 414.9 2653.7

DISTANCE TOTALS
Miles 1383.7 408.7 126.7 1919.1
Kilometers 2226.9 657.7 203.9 3088.4
Percentages 72.1 21.3 6.6

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 237190 IN 71427 IA 4740 KS 84299 MO 31397 NY 898086 OH 233271 OK 10774
PA 56449 TX 19919

Total Population within 800 meter Buffer Zone: 1647552

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: NEW ROCHELLE NY CSXT Leaving : 09/08/09 15:08
TO : TOOEELE ORDNANCE DEPO UT UP Arriving : 09/12/09 17:16

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
R322115986USG - , NV
R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CSXT	362108431	NEW ROCHELLE	NY	0.0	00:00	09/08/09	15:08
CSXT	362108622	MELROSE JCT.	NY	10.1	1:15	09/08/09	16:23
CSXT	362108652	NEW YORK	NY	10.7	1:18	09/08/09	16:26
CSXT	362106343	POUGHKEEPSIE	NY	78.7	6:58	09/08/09	22:06
CSXT	362104720	SELKIRK	NY	141.5	12:02	09/09/09	03:10
CSXT	362104281	ROTTERDAM JCT	NY	169.6	13:25	09/09/09	04:33
CSXT	362103889	UTICA	NY	240.3	15:38	09/09/09	06:46
CSXT	362103748	ROME	NY	251.9	15:59	09/09/09	07:07
CSXT	362103960	SYRACUSE	NY	296.1	17:52	09/09/09	09:00
CSXT	362103897	GENESEE JCT	NY	376.2	20:30	09/09/09	11:38
CSXT	362104303	BUFFALO	NY	440.0	23:34	09/09/09	14:42
CSXT	362104798	DUNKIRK(NYC,AMTK)	NY	478.2	24:46	09/09/09	15:54
CSXT	362105036	WESTFIELD	NY	495.7	25:18	09/09/09	16:26
CSXT	422105473	ERIE	PA	523.6	26:11	09/09/09	17:19
CSXT	392107192	CLEVELAND	OH	630.0	30:00	09/09/09	21:08
CSXT	392108155	GREENWICH	OH	676.5	31:27	09/09/09	22:35
CSXT	392107870	FOSTORIA	OH	723.3	33:25	09/10/09	00:33
CSXT	392107716	DESHLER	OH	749.5	34:14	09/10/09	01:22
CSXT	392107553	DEFIANCE	OH	774.6	35:01	09/10/09	02:09
CSXT	182107166	MILFORD JCT	IN	852.0	37:27	09/10/09	04:35
CSXT	182106599	CLARKE JCT.	IN	935.0	40:02	09/10/09	07:10
CSXT	182106597	EAST CHICAGO	IN	937.7	40:07	09/10/09	07:15
CSXT	172106505	BLUE ISLAND	IL	949.9	41:00	09/10/09	08:08
----- TRANSFER							
IHB	172106505	BLUE ISLAND	IL	949.9	45:00	09/10/09	12:08
IHB	172106183	ARGO	IL	961.7	45:23	09/10/09	12:31
IHB	172105918	MELROSE PARK	IL	970.8	47:40	09/10/09	14:48
----- TRANSFER							

UP 172105918-MELROSE PARK IL 970.8 47:40 09/10/09 14:48
 UP 172105889-PROVISO IL 973.8 47:45 09/10/09 14:53
 UP 172105944-WEST CHICAGO IL 988.9 48:14 09/10/09 15:22
 UP 172105836-ROCHELLE IL 1034.0 49:38 09/10/09 16:46
 UP 172106145-NELSON IL 1062.9 50:32 09/10/09 17:40
 UP 192106078-CLINTON IA 1095.8 51:34 09/10/09 18:42
 UP 192105787-CEDAR RAPIDS IA 1176.4 54:35 09/10/09 21:43
 UP 192105607-EAST MARSHALLTOWN IA 1239.0 56:33 09/10/09 23:41
 UP 192105617-AMES IA 1279.4 57:48 09/11/09 00:56
 UP 192106824-MISSOURI VALLEY IA 1415.6 62:34 09/11/09 05:42
 UP 192106818-CALIFORNIA JCT WEST IA 1421.7 62:45 09/11/09 05:53
 UP 312107162-FREMONT NE 1453.1 63:44 09/11/09 06:52
 UP 312108371-GRAND ISLAND NE 1559.3 67:03 09/11/09 10:11
 UP 312108885-GIBBON JCT NE 1587.8 67:57 09/11/09 11:05
 UP 312107904-NORTH PLATTE NE 1696.5 71:20 09/11/09 14:28
 UP 312107841-O FALLONS NE 1712.7 72:21 09/11/09 15:29
 UP 82108276-JULESBURG CO 1777.0 74:21 09/11/09 17:29
 UP 312107887-SIDNEY NE 1818.5 75:39 09/11/09 18:47
 UP 562107931-CHEYENNE WY 1920.8 78:51 09/11/09 21:59
 UP 562107501-LARAMIE WY 1977.2 81:07 09/12/09 00:15
 UP 562106162-RAWLINS WY 2091.8 84:42 09/12/09 03:50
 UP 562106752-GRANGER WY 2255.1 90:48 09/12/09 09:56
 UP 492107787-RIVERDALE UT 2397.4 95:15 09/12/09 14:23
 UP 492108786-SALT LAKE CITY UT 2434.2 96:23 09/12/09 15:31
 UP 492108987-SMELTER UT 2451.3 97:26 09/12/09 16:34
 UP 492108991-SMELTER UT 2451.3 97:26 09/12/09 16:34
 UP 492109686-TOOELE ORDNANCE DEPO UT 2471.2 98:08 09/12/09 17:16

Length: 2471.2 miles Transit Time: 98:08 Impedance: 2646.9

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
CSXT	949.9	811.6	0.2	128.1	10.1
IHB	20.8	20.7	0.2	0.0	0.0
UP	1500.4	1500.4	0.0	0.0	0.0
Total	2471.2	2332.7	0.4	128.1	10.1

Mileage by State :

CO: 8.8 IA: 331.7 IL: 154.2 IN: 143.8 NE: 441.4 NY: 506.4
 OH: 246.7 PA: 43.8 UT: 140.9 WY: 453.4

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2466.7
 Total Inside Tribal Lands : 4.4

Cattaraugus Reservation : 1.8 Sac and Fox (Iowa) Reservation : 2.6

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: NEW ROCHELLE NY CSXT
 TO : TOOELE ORDNANCE DEPO UT UP

	>0.0	22.7	59.7	139	326	821	1861	3326	5815		
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996
CO	8.8	1.76	1.94	3.11	1.07	0.23	0.28	0.00	0.45	0.00	0.00
IL	154.2	12.88	29.21	25.05	13.47	10.11	10.44	10.75	10.95	16.45	10.62
IN	143.8	4.35	31.95	46.81	22.44	10.45	9.08	8.20	3.89	4.43	1.47
IA	331.7	32.62	87.35	87.30	41.23	38.26	29.41	7.62	3.79	2.43	1.42
NE	441.4	135.52	106.24	112.36	32.22	13.32	11.62	12.53	9.41	6.35	1.59
NY	506.4	59.69	69.51	104.96	67.59	45.30	49.82	39.74	24.03	17.54	10.30
OH	246.7	22.58	56.05	50.30	25.79	15.60	14.98	19.68	16.06	14.29	6.97
PA	43.8	1.96	3.57	3.88	6.91	6.37	6.83	4.68	4.49	2.51	1.87
UT	140.9	39.59	16.76	19.07	14.58	12.52	9.58	8.90	7.65	7.38	4.44
WY	453.4	316.90	74.81	27.29	8.56	6.12	6.46	5.72	4.32	2.60	0.62

TOTALS

2471.2 627.85 477.39 480.13 233.86 158.28 148.50 117.82 85.04 73.98 39.30 28.98

PERCENTAGES

25.41 19.32 19.43 9.46 6.41 6.01 4.77 3.44 2.99 1.59 1.17

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 27.3 982.1 6801.6

People/sq. km. 10.5 379.2 2626.1

DISTANCE

Miles 1819.2 509.6 142.3 2471.2

Kilometers 2927.7 820.2 228.9 3976.8

Percentages 73.6 20.6 5.8

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 1034 IL 242703 IN 71427 IA 67006 NE 93863 NY 898086 OH 233271 PA 56449

UT 92829 WY 36343

Total Population within 800 meter Buffer Zone: 1793011

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: NEW ROCHELLE NY CSXT Leaving : 09/08/09 15:09

TO : HANFORD SITE WA UP Arriving : 09/13/09 16:44

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0

Transfer Time for P points = 240.0 Transfer Time for M points = 240.0

Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV

R322115986USG - , NV

R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CSXT	362108431	NEW ROCHELLE	NY	0.0	00:00	09/08/09	15:09
CSXT	362108622	MELROSE JCT.	NY	10.1	1:15	09/08/09	16:24
CSXT	362108652	NEW YORK	NY	10.7	1:18	09/08/09	16:27
CSXT	362106343	POUGHKEEPSIE	NY	78.7	6:58	09/08/09	22:07
CSXT	362104720	SELKIRK	NY	141.5	12:02	09/09/09	03:11
CSXT	362104281	ROTTERDAM JCT	NY	169.6	13:25	09/09/09	04:34
CSXT	362103889	UTICA	NY	240.3	15:38	09/09/09	06:47
CSXT	362103748	ROME	NY	251.9	15:59	09/09/09	07:08
CSXT	362103960	SYRACUSE	NY	296.1	17:52	09/09/09	09:01
CSXT	362103897	GENESEE JCT	NY	376.2	20:30	09/09/09	11:39
CSXT	362104303	BUFFALO	NY	440.0	23:34	09/09/09	14:43
CSXT	362104798	DUNKIRK(NYC,AMTK)	NY	478.2	24:46	09/09/09	15:55
CSXT	362105036	WESTFIELD	NY	495.7	25:18	09/09/09	16:27
CSXT	422105473	ERIE	PA	523.6	26:11	09/09/09	17:20
CSXT	392107192	CLEVELAND	OH	630.0	30:00	09/09/09	21:09
CSXT	392108155	GREENWICH	OH	676.5	31:27	09/09/09	22:36
CSXT	392107870	FOSTORIA	OH	723.3	33:25	09/10/09	00:34
CSXT	392107716	DESHLER	OH	749.5	34:14	09/10/09	01:23
CSXT	392107553	DEFIANCE	OH	774.6	35:01	09/10/09	02:10
CSXT	182107166	MILFORD JCT	IN	852.0	37:27	09/10/09	04:36
CSXT	182106599	CLARKE JCT.	IN	935.0	40:02	09/10/09	07:11
CSXT	182106597	EAST CHICAGO	IN	937.7	40:07	09/10/09	07:16
CSXT	172106505	BLUE ISLAND	IL	949.9	41:00	09/10/09	08:09

----- TRANSFER

IHB 172106505-BLUE ISLAND	IL 949.9 45:00 09/10/09 12:09
IHB 172106183-ARGO	IL 961.7 45:23 09/10/09 12:32
IHB 172106105-LA GRANGE	IL 965.8 47:30 09/10/09 14:39
----- TRANSFER	
BNSF 172106105-LA GRANGE	IL 965.8 47:30 09/10/09 14:39
BNSF 172106247-SOUTH AURORA	IL 991.1 48:48 09/10/09 15:57
BNSF 172105882-ROCHELLE	IL 1033.5 50:19 09/10/09 17:28
BNSF 172105539-SAVANNA	IL 1096.2 52:32 09/10/09 19:41
BNSF 172104782-EAST DUBUQUE	IL 1136.3 53:47 09/10/09 20:56
BNSF 552104033-CRAWFORD	WI 1188.3 55:25 09/10/09 22:34
BNSF 552103194-LA CROSSE	WI 1251.4 57:23 09/11/09 00:32
BNSF 552103037-EAST WINONA	WI 1276.0 58:39 09/11/09 01:48
BNSF 272102392-ST PAUL	MN 1379.0 62:22 09/11/09 05:31
BNSF 272102386-SAINT PAUL	MN 1380.2 62:55 09/11/09 06:04
BNSF 272102374-WESTMINSTER STREET	MN 1381.0 62:56 09/11/09 06:05
BNSF 272102339-MINNEAPOLIS JCT	MN 1389.3 63:12 09/11/09 06:21
BNSF 272102278-NORTHTOWN	MN 1393.4 63:19 09/11/09 06:28
BNSF 272102200-COON CREEK	MN 1400.6 64:03 09/11/09 07:12
BNSF 272101971-ST CLOUD	MN 1453.7 65:43 09/11/09 08:52
BNSF 272101484-STAPLES	MN 1518.6 67:44 09/11/09 10:53
BNSF 272101089-DETROIT LAKES	MN 1581.3 70:12 09/11/09 13:21
BNSF 272101065-MOORHEAD JCT	MN 1628.1 72:10 09/11/09 15:19
BNSF 382101049-WEST FARGO	ND 1635.3 72:23 09/11/09 15:32
BNSF 382101035-CASSELTON	ND 1650.6 72:52 09/11/09 16:01
BNSF 382100904-NOLAN	ND 1674.5 73:36 09/11/09 16:45
BNSF 382100547-NEW ROCKFORD	ND 1758.2 76:14 09/11/09 19:23
BNSF 382100312-SURREY	ND 1860.5 79:25 09/11/09 22:34
BNSF 382100318-MINOT	ND 1868.0 80:09 09/11/09 23:18
BNSF 382100279-BERTHOLD	ND 1890.5 80:52 09/12/09 00:01
BNSF 302100394-SNOWDEN	MT 2013.9 84:43 09/12/09 03:52
BNSF 302100340-GLASGOW	MT 2144.8 88:48 09/12/09 07:57
BNSF 302100152-HAVRE EAST	MT 2296.3 94:02 09/12/09 13:11
BNSF 302100178-SHELBY	MT 2404.6 97:26 09/12/09 16:35
BNSF 302100217-WHITEFISH	MT 2555.9 102:09 09/12/09 21:18
BNSF 162100300-SANDPOINT	ID 2741.3 108:27 09/13/09 03:36
BNSF 162100514-HAUSER	ID 2788.1 109:55 09/13/09 05:04
BNSF 532100564-SPOKANE	WA 2806.5 110:29 09/13/09 05:38
BNSF 532101556-PASCO	WA 2953.5 115:35 09/13/09 10:44
BNSF 532101573-KENNEWICK	WA 2955.8 119:40 09/13/09 14:49
----- TRANSFER	
UP 532101573-KENNEWICK	WA 2955.8 119:40 09/13/09 14:49
UP 532101513-RICHLAND	WA 2968.3 121:14 09/13/09 16:23
UP 532101501-HANFORD SITE	WA 2971.2 121:35 09/13/09 16:44

Length: 2971.2 miles Transit Time: 121:35 Impedance: 3233.0

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
BNSF	1990.0	1989.3	0.7	0.0	0.0
CSXT	949.9	811.6	0.2	128.1	10.1
IHB	15.9	15.7	0.2	0.0	0.0
UP	15.3	0.0	0.0	0.0	15.3
Total	2971.2	2816.7	1.0	128.1	25.4

Mileage by State :

ID: 100.1 IL: 196.8 IN: 143.8 MN: 271.2 MT: 677.9 ND: 382.5
 NY: 506.4 OH: 246.7 PA: 43.8 WA: 181.5 WI: 220.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2835.6
 Total Inside Tribal Lands : 135.6

Blackfeet Reservation	: 49.6	Cattaraugus Reservation	: 1.8
Fort Peck Reservation	: 83.6	Fort Peck Trust Land	: 0.0
Turtle Mountain Trust Land	: 0.4		

POPULATION DENSITY within 800 meter Buffer Zone:
 FROM: NEW ROCHELLE NY CSXT
 TO : HANFORD SITE WA UP

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 100.1 32.49 16.11 15.57 10.67 11.41 8.27 3.02 1.39 0.93 0.23 0.00
 IL 196.8 40.24 53.05 23.95 12.03 10.21 8.87 11.69 10.85 14.55 7.89 3.47
 IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
 MN 271.2 22.82 45.70 54.72 42.39 35.07 27.91 18.89 9.79 8.71 3.85 1.37
 MT 677.9 422.92 175.29 38.85 7.86 7.35 8.37 10.29 5.07 1.66 0.33 0.00
 NY 506.4 59.69 69.51 104.96 67.59 45.30 49.82 39.74 24.03 17.54 10.30 17.97
 ND 382.5 268.43 65.43 18.05 5.92 6.44 6.76 4.95 3.40 1.94 0.90 0.26
 OH 246.7 22.58 56.05 50.30 25.79 15.60 14.98 19.68 16.06 14.29 6.97 4.28
 PA 43.8 1.96 3.57 3.88 6.91 6.37 6.83 4.68 4.49 2.51 1.87 0.75
 WA 181.5 77.61 25.13 27.69 10.05 10.52 8.75 7.07 6.68 5.13 2.24 0.57
 WI 220.5 97.55 48.92 28.30 18.99 7.87 5.24 5.17 3.49 3.80 0.80 0.34

TOTALS

2971.2 1050.64 590.71 413.08 230.64 166.59 154.88 133.38 89.14 75.49 36.85 29.68

PERCENTAGES

35.36 19.88 13.90 7.76 5.61 5.21 4.49 3.00 2.54 1.24 1.00

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION

People/sq. mi. 21.1 988.3 6779.5
 People/sq. km. 8.1 381.6 2617.6

DISTANCE

	TOTALS			
Miles	2285.1	544.0	142.0	2971.2
Kilometers	3677.4	875.4	228.6	4781.5
Percentages	76.9	18.3	4.8	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 14926 IL 213554 IN 71427 MN 145002 MT 37744 NY 898086 ND 35077 OH 233271
 PA 56449 WA 71801 WI 38169

Total Population within 800 meter Buffer Zone: 1815506

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: MAINE YANKEE NP ME Leaving : 09/10/09 14:01
 TO : HANFORD WA Arriving : 09/12/09 17:41

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles Hwy Sign City Dir Junction State Dist Time Date Hour

 0.0 MAINE YANKEE NP ME 0.0 0:00 09/10/09 14:01
 1.1 LOCAL MONTSWEAG E S144LOCL ME 1.1 0:02 09/10/09 14:03
 0.9 S144 MONTSWEAG NE U1 S144 ME 2.0 0:03 09/10/09 14:04

17.9 U1 BRUNSWICK W I95 U1 ME 19.9 0:23 09/10/09 14:24
 17.5 I95 FALMOUTH FRSD W I295I95 ME 37.4 0:39 09/10/09 14:40
 3.8 I95 \$ WESTBROOK TMETX9 ME 41.2 0:43 09/10/09 14:44
 44.9 I95 \$ TMET\$ YORK VILLAGE NW I95 TMET ME 86.1 1:28 09/10/09 15:29
 4.9 I95 KITTERY NW I95 S236 ME 91.0 1:32 09/10/09 15:33
 1.3 I95 crossing state border ME/NH BD 92.3 1:33 09/10/09 15:34
 3.1 I95 PORTSMOUTH SW I95 X3 NH 95.5 1:37 09/10/09 15:38
 12.1 I95 \$ TNHT\$ SEABROOK W I95 X1 NH 107.6 1:48 09/10/09 15:49
 0.9 I95 crossing state border MA/NH BD 108.5 1:49 09/10/09 15:50
 1.6 I95 AMESBURY E I495I95 MA 110.1 1:50 09/10/09 15:51
 55.5 I495 MARLBOROUGH NW I290I495 MA 165.6 2:42 09/10/09 16:43
 20.3 I290 AUBURN I290I395 MA 185.9 3:02 09/10/09 17:03
 0.8 I90 XRAMP AUBURN N I90 X10 MA 186.7 3:03 09/10/09 17:04
 11.7 I90 \$ TMTAT\$ STURBRIDGE NE I84 I90 MA 198.4 3:14 09/10/09 17:15
 1.4 I84 STURBRIDGE N I84 X3 MA 199.9 3:15 09/10/09 17:16
 6.6 I84 crossing state border CT/MA BD 206.4 3:21 09/10/09 17:22
 Rest 30 minutes
 94.1 I84 DANBURY W I84 X3 CT 300.5 5:30 09/10/09 19:31
 3.7 I84 crossing state border CT/NY BD 304.2 5:34 09/10/09 19:35
 29.9 I84 BEACON N I84 X11 NY 334.1 6:02 09/10/09 20:03
 2.4 I84 # NEWBURGH N I84 X10 NY 336.5 6:05 09/10/09 20:06
 38.2 I84 PORT JERVIS S I84 X1 NY 374.7 6:40 09/10/09 20:41
 0.6 I84 crossing state border NY/PA BD 375.4 6:41 09/10/09 20:42
 49.8 I84 ELMHURST W I380I84 PA 425.1 7:27 09/10/09 21:28
 4.0 I380 I84 DUNMORE E I380I81 PA 429.1 7:31 09/10/09 21:32
 36.4 I81 DRUMS N I80 I81 PA 465.5 8:07 09/10/09 22:08
 Rest 30 minutes
 254.1 I80 WEST MIDDLESEX NE I80 X4 PA 719.6 12:33 09/11/09 02:34
 4.0 I80 crossing state border OH/PA BD 723.6 12:37 09/11/09 02:38
 Rest 30 minutes
 17.9 I80 NORTH JACKSON NE I76 I80 OH 741.5 13:26 09/11/09 03:27
 76.0 I80 \$ ELYRIA NW I80 I90 OH 817.5 14:49 09/11/09 04:50
 128.7 I80 \$ I90 \$ WEST JEFFERSON N I80 X13 OH 946.2 17:10 09/11/09 07:11
 13.1 I80 \$ I90 \$ crossing state border IN/OH BD 959.3 17:24 09/11/09 07:25
 Rest 30 minutes
 135.4 I80 \$ I90 \$ PORTAGE W I80 I90 IN 1094.7 20:09 09/11/09 09:10
 0.5 I80 LAKE STATION NE I80 I94 IN 1095.1 20:10 09/11/09 09:11
 14.5 I80 I94 HAMMOND W I80 X1 IN 1109.7 20:25 09/11/09 09:26
 0.9 I80 I94 crossing state border IL/IN BD 1110.5 20:26 09/11/09 09:27
 3.0 I80 I94 LANSING W I294I94 IL 1113.5 20:29 09/11/09 09:30
 4.9 I294\$ I80 \$ HOMEWOOD NW I294I80 IL 1118.4 20:35 09/11/09 09:36
 Rest 30 minutes
 154.4 I80 RAPIDS CITY W I80 X1 IL 1272.8 23:53 09/11/09 12:54
 0.3 I80 crossing state border IA/IL BD 1273.1 23:54 09/11/09 12:55
 Rest 30 minutes
 168.0 I80 DES MOINES N I235I35 IA 1441.1 26:59 09/11/09 16:00
 14.2 I35 I80 DES MOINES W I235I35 IA 1455.3 27:13 09/11/09 16:14
 95.7 I80 MINDEN NW I680I80 IA 1550.9 28:42 09/11/09 17:43
 16.5 I680 LOVELAND SW I29 I680 IA 1567.4 28:57 09/11/09 17:58
 9.7 I29 I680 CRESCENT W I29 I680 IA 1577.2 29:06 09/11/09 18:07
 3.0 I680 crossing state border IA/NE BD 1580.2 29:09 09/11/09 18:10
 13.4 I680 OMAHA SW I680I80 NE 1593.5 29:23 09/11/09 18:24
 Rest 30 minutes
 Rest 30 minutes
 422.7 I80 KIMBALL S I80 X20 NE 2016.2 36:03 09/12/09 00:04
 20.6 I80 crossing state border NE/WY BD 2036.8 36:19 09/12/09 00:20
 Rest 30 minutes
 382.4 I80 EVANSTON NE I80 X18 WY 2419.2 41:55 09/12/09 05:56
 18.2 I80 crossing state border UT/WY BD 2437.3 42:10 09/12/09 06:11
 29.4 I80 ECHO I80 I84 UT 2466.7 42:33 09/12/09 06:34
 38.5 I84 OGDEN S I15 I84 UT 2505.3 43:04 09/12/09 07:05
 Rest 30 minutes
 39.4 I15 I84 TREMONTON W I15 I84 UT 2544.7 44:08 09/12/09 08:09
 37.4 I84 SNOWVILLE W I84 X5 UT 2582.1 44:40 09/12/09 08:41
 4.4 I84 crossing state border ID/UT BD 2586.4 44:43 09/12/09 08:44
 Rest 30 minutes
 272.8 I84 FRUITLAND S I84 X3 ID 2859.2 49:26 09/12/09 13:27
 2.9 I84 crossing state border ID/OR BD 2862.1 49:28 09/12/09 13:29
 Rest 30 minutes
 197.9 I84 HERMISTON SW I82 I84 OR 3059.9 53:34 09/12/09 16:35

9.6 I82 UMATILLA I82 X1 OR 3069.6 53:45 09/12/09 16:46
 1.0 I82 crossing state border OR/WA BD 3070.5 53:46 09/12/09 16:47
 30.3 I82 WEST RICHLAND S I182I82 WA 3100.9 54:16 09/12/09 17:17
 5.3 I182 RICHLAND SE I182X5 WA 3106.2 54:22 09/12/09 17:23
 5.2 S240 RICHLAND N S240LR4S WA 3111.4 54:32 09/12/09 17:33
 4.0 LR4S HANFORD WA 3115.4 54:40 09/12/09 17:41

Total elapsed time: 54:40 Total trip mileage: 3115.4 Impedance: 3752.1

Mileage by State :

CT: 97.8 IA: 307.1 ID: 275.6 IL: 162.6 IN: 151.2 MA: 97.9
 ME: 92.3 NE: 456.6 NH: 16.2 NY: 71.2 OH: 235.7 OR: 208.5
 PA: 348.2 UT: 149.1 WA: 44.9 WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 3086.3 2-US: 17.9 3-STATE: 6.1 6-LOCAL: 5.1

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 3096.7 5-Principle Road: 12.6
 7-Other: 6.1

Mileage by Tribal Lands:

Total Outside Tribal Lands : 3088.6
 Total Inside Tribal Lands : 26.9

Umatilla Reservation : 26.9

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME
 TO : HANFORD WA

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CT 97.8 0.84 3.17 6.51 11.17 14.89 17.85 18.78 11.05 6.77 4.00 2.67
 ID 275.6 66.98 64.43 58.19 32.26 21.75 15.09 8.29 4.14 3.23 1.01 0.31
 IL 162.6 19.10 37.80 30.07 23.86 18.01 12.57 9.39 5.42 3.67 2.24 0.40
 IN 151.2 1.73 19.97 37.40 25.85 28.69 17.16 8.92 5.71 3.55 1.89 0.41
 IA 307.1 26.27 73.66 93.61 51.14 25.99 18.72 10.70 3.86 2.30 0.64 0.20
 ME 92.3 1.67 7.21 14.07 14.46 17.55 20.03 11.26 4.18 1.12 0.78 0.00
 MA 97.9 0.88 2.76 6.25 11.38 16.28 20.95 18.21 12.10 4.70 2.30 2.04
 NE 456.6 167.07 80.87 107.72 49.64 24.69 10.77 7.27 4.24 2.75 1.02 0.59
 NH 16.2 0.99 0.62 1.31 1.89 3.63 3.83 2.20 1.27 0.49 0.00 0.00
 NY 71.2 4.42 8.91 9.27 9.66 10.39 10.26 10.94 4.52 2.20 0.46 0.16
 OH 235.7 5.72 33.46 51.22 42.02 37.15 29.12 17.51 10.25 6.65 1.89 0.68
 OR 208.5 87.03 39.49 44.10 16.40 8.10 5.98 3.59 2.36 1.22 0.24 0.00
 PA 348.2 32.00 71.03 69.82 65.61 48.89 35.86 16.13 4.98 2.52 1.09 0.29
 UT 149.1 51.32 23.29 26.14 15.30 15.41 9.73 4.60 2.35 0.74 0.16 0.05
 WA 44.9 27.34 3.72 4.34 2.46 1.39 1.07 0.81 1.18 1.72 0.72 0.17
 WY 400.5 207.08 105.56 52.54 12.14 6.48 6.02 4.33 4.26 1.86 0.22 0.06

TOTALS

3115.4 700.44 575.95 612.56 385.24 299.29 235.01 152.93 81.87 45.49 18.66 8.03

PERCENTAGES

22.48 18.49 19.66 12.37 9.61 7.54 4.91 2.63 1.46 0.60 0.26

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 31.4 808.4 6147.9
 People/sq. km. 12.1 312.1 2373.7

DISTANCE

TOTALS

Miles	2274.2	769.1	72.2	3115.4
Kilometers	3659.9	1237.7	116.2	5013.7
Percentages	73.0	24.7	2.3	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CT 150349 ID 55406 IL 72678 IN 79041 IA 60053 ME 42057 MA 112883 NE 59486
NH 8133 NY 44216 OH 123201 OR 20611 PA 81086 UT 22778 WA 15804 WY 32573

Total Population within 800 meter Buffer Zone: 980355

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: MAINE YANKEE NP ME Leaving : 09/10/09 14:03
TO : DEAF SMITH CTY TX Arriving : 09/12/09 03:21

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		MAINE YANKEE	NP		ME	0.0	0:00	09/10/09	14:03
1.1	LOCAL	MONTSWEAG	E	S144	LOCL ME	1.1	0:02	09/10/09	14:05
0.9	S144	MONTSWEAG	NE	U1 S144	ME	2.0	0:03	09/10/09	14:06
17.9	U1	BRUNSWICK	W	I95 U1	ME	19.9	0:23	09/10/09	14:26
17.5	I95	FALMOUTH	FRSD	W I295	I95 ME	37.4	0:39	09/10/09	14:42
3.8	I95 \$	WESTBROOK		TMETX9	ME	41.2	0:43	09/10/09	14:46
44.9	I95 \$	TMET\$ YORK VILLAGE	NW	I95 TMET	ME	86.1	1:28	09/10/09	15:31
4.9	I95	KITTERY	NW	I95 S236	ME	91.0	1:32	09/10/09	15:35
1.3	I95			crossing state border	ME/NH	BD	92.3	1:33	09/10/09 15:36
3.1	I95	PORTSMOUTH	SW	I95 X3	NH	95.5	1:37	09/10/09	15:40
12.1	I95 \$	TNHT\$ SEABROOK	W	I95 X1	NH	107.6	1:48	09/10/09	15:51
0.9	I95			crossing state border	MA/NH	BD	108.5	1:49	09/10/09 15:52
1.6	I95	AMESBURY	E	I495	I95 MA	110.1	1:50	09/10/09	15:53
55.5	I495	MARLBOROUGH	NW	I290	I495 MA	165.6	2:42	09/10/09	16:45
20.3	I290	AUBURN		I290	I395 MA	185.9	3:02	09/10/09	17:05
0.8	I90	XRAMP AUBURN	N	I90 X10	MA	186.7	3:03	09/10/09	17:06
11.7	I90 \$	TMAT\$ STURBRIDGE	NE	I84 I90	MA	198.4	3:14	09/10/09	17:17
1.4	I84	STURBRIDGE	N	I84 X3	MA	199.9	3:15	09/10/09	17:18
6.6	I84			crossing state border	CT/MA	BD	206.4	3:21	09/10/09 17:24
35.1	I84	HARTFORD		I84 I91	CT	241.5	3:54	09/10/09	17:57
				Rest 30 minutes					
38.5	I91	NEW HAVEN		I91 I95	CT	280.0	5:01	09/10/09	19:04
45.0	I95	GREENWICH		I95 X3	CT	325.0	5:50	09/10/09	19:53
2.6	I95			crossing state border	CT/NY	BD	327.6	5:53	09/10/09 19:56
0.9	I95	PORT CHESTER	S	I287	I95 NY	328.6	5:54	09/10/09	19:57
11.0	I287	TARRYTOWN	SE	I287	I87 NY	339.6	6:05	09/10/09	20:08
1.5	I287	I87 TARRYTOWN	S	I287	X9 NY	341.1	6:07	09/10/09	20:10
17.5	I287 \$	I87 \$ SUFFERN	NW	I287	I87 NY	358.6	6:25	09/10/09	20:28
0.5	I287	SUFFERN	W	I287	S17 NY	359.1	6:26	09/10/09	20:29
0.1	I287			crossing state border	NJ/NY	BD	359.2	6:26	09/10/09 20:29
46.6	I287	PLUCKEMIN	W	I287	I78 NJ	405.8	7:09	09/10/09	21:12
26.7	I78	ALPHA	NE	I78 X3	NJ	432.5	7:34	09/10/09	21:37
2.6	I78 #			crossing state border	NJ/PA	BD	435.1	7:36	09/10/09 21:39
0.2	I78 #	EASTON	SE	I78 X75	PA	435.3	7:36	09/10/09	21:39
				Rest 30 minutes					
76.4	I78	BORDNERSVILLE	SE	I78 I81	PA	511.7	9:17	09/10/09	23:20
83.8	I81	GREENCASTLE	E	I81 X5	PA	595.5	10:37	09/11/09	00:40

4.8 I81 crossing state border MD/PA BD 600.4 10:41 09/11/09 00:44
 8.5 I81 HALFWAY W I70 I81 MD 608.8 10:49 09/11/09 00:52
 3.6 I81 crossing state border MD/WV BD 612.4 10:52 09/11/09 00:55
 21.1 I81 INWOOD W I81 X5 WV 633.4 11:10 09/11/09 01:13
 5.1 I81 crossing state border VA/WV BD 638.5 11:15 09/11/09 01:18
 103.2 I81 STAUNTON SE I64 I81 VA 741.7 12:50 09/11/09 02:53
 Rest 30 minutes
 30.4 I64 I81 LEXINGTON E I64 I81 VA 772.1 13:48 09/11/09 03:51
 109.4 I81 FT CHISWELL E I77 I81 VA 881.5 15:29 09/11/09 05:32
 8.8 I77 I81 WYTHEVILLE E I77 I81 VA 890.3 15:38 09/11/09 05:41
 71.7 I81 BRISTOL W I81 X1 VA 962.0 16:45 09/11/09 06:48
 0.9 I81 crossing state border TN/VA BD 962.8 16:46 09/11/09 06:49
 Rest 30 minutes
 74.9 I81 DANDRIDGE NE I40 I81 TN 1037.8 18:20 09/11/09 08:23
 28.5 I40 KNOXVILLE NE I40 I640 TN 1066.2 18:45 09/11/09 08:48
 6.9 I640 KNOXVILLE NW I640I75 TN 1073.1 18:52 09/11/09 08:55
 3.6 I640 I75 KNOXVILLE W I40 I640 TN 1076.7 18:56 09/11/09 08:59
 17.3 I40 I75 FARRAGUT W I40 I75 TN 1094.0 19:14 09/11/09 09:17
 154.2 I40 NASHVILLE E I24 I40 TN 1248.3 21:28 09/11/09 10:31
 1.1 I24 NASHVILLE SE I24 I440 TN 1249.3 21:29 09/11/09 10:32
 7.5 I440 NASHVILLE W I40 I440 TN 1256.8 21:37 09/11/09 10:40
 Rest 30 minutes
 206.2 I40 MEMPHIS I240I40 TN 1463.0 25:08 09/11/09 14:11
 2.6 I40 crossing state border AR/TN BD 1465.7 25:10 09/11/09 14:13
 4.7 I40 WEST MEMPHIS E I40 I55 AR 1470.3 25:15 09/11/09 14:18
 2.4 I40 I55 WEST MEMPHIS N I40 I55 AR 1472.8 25:17 09/11/09 14:20
 Rest 30 minutes
 270.8 I40 VAN BUREN N I40 X5 AR 1743.5 29:59 09/11/09 19:02
 5.3 I40 crossing state border AR/OK BD 1748.8 30:04 09/11/09 19:07
 Rest 30 minutes
 165.2 I40 OKLAHOMA CITY SE I240I40 OK 1914.0 32:55 09/11/09 21:58
 16.2 I240 OKLAHOMA CITY SW I240I44 OK 1930.2 33:10 09/11/09 22:13
 4.9 I44 OKLAHOMA CITY W I40 I44 OK 1935.2 33:15 09/11/09 22:18
 Rest 30 minutes
 125.3 I40 SAYRE S I40 X20 OK 2060.5 35:34 09/12/09 00:37
 20.7 I40 crossing state border OK/TX BD 2081.2 35:52 09/12/09 00:55
 139.6 I40 VEGA S I40 X36 TX 2220.8 37:59 09/12/09 03:02
 9.8 U385 VEGA S U385F258 TX 2230.6 38:11 09/12/09 03:14
 3.4 F2587 DEAF SMITH CTY TX 2234.0 38:18 09/12/09 03:21

Total elapsed time: 38:18 Total trip mileage: 2234.0 Impedance: 3010.8

Mileage by State :

AR: 283.1 CT: 121.2 MA: 97.9 MD: 12.0 ME: 92.3 NH: 16.2
 NJ: 75.9 NY: 31.6 OK: 332.4 PA: 165.2 TN: 502.8 TX: 152.9
 VA: 324.3 WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 2200.9 2-US: 27.7 3-STATE: 0.9 6-LOCAL: 1.1
 7-OTHER: 3.4

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2210.4 3-Multi-Lane Divided Highway: 0.9
 5-Principle Road: 17.2 7-Other: 5.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2229.9
 Total Inside Tribal Lands : 4.1

Absentee-Shawnee Tribe Trust Land : 0.3 Cheyenne-Arapahoe Trust Land : 2.0
 Kickapoo Tribe Trust Land : 0.9 Sac and Fox Nation Trust Land : 0.5
 Thlopthlocco Tribal Town (Creek) : 0.5

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:
 FROM: MAINE YANKEE NP ME

TO : DEAF SMITH CTY TX

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

AR 283.1 38.20 52.50 67.66 38.85 37.89 23.58 12.13 7.17 4.11 0.96 0.12
 CT 121.2 3.23 3.87 6.12 12.05 14.03 17.14 21.86 18.71 10.49 7.70 6.00
 ME 92.3 1.67 7.21 14.07 14.46 17.55 20.03 11.26 4.18 1.12 0.78 0.00
 MD 12.0 0.36 0.74 1.38 1.06 1.57 2.99 2.06 1.04 0.85 0.00 0.00
 MA 97.9 0.88 2.76 6.25 11.38 16.28 20.95 18.21 12.10 4.70 2.30 2.04
 NH 16.2 0.99 0.62 1.31 1.89 3.63 3.83 2.20 1.27 0.49 0.00 0.00
 NJ 75.9 1.54 6.36 8.76 8.32 6.02 11.50 15.54 8.96 5.27 3.19 0.39
 NY 31.6 2.46 0.26 0.38 1.06 1.85 4.10 7.06 5.24 5.13 2.22 1.88
 OK 332.4 61.94 84.34 83.75 36.17 24.34 18.56 11.28 6.87 3.21 1.62 0.36
 PA 165.2 1.96 11.33 38.68 31.63 25.98 24.32 14.80 9.69 4.67 1.69 0.48
 TN 502.8 27.36 83.34 109.32 88.44 69.21 51.41 35.05 19.18 13.91 4.94 0.63
 TX 152.9 76.62 34.17 20.84 5.13 3.41 3.17 3.02 2.11 3.45 0.65 0.35
 VA 324.3 16.54 54.94 49.81 54.01 55.18 50.24 28.26 9.32 4.36 1.28 0.37
 WV 26.1 0.28 0.28 2.19 5.06 4.86 6.89 4.08 2.04 0.35 0.07 0.00

TOTALS

2234.0 234.03 342.72 410.52 309.51 281.80 258.71 186.81 107.88 62.11 27.40 12.62

PERCENTAGES

10.48 15.34 18.38 13.85 12.61 11.58 8.36 4.83 2.78 1.23 0.56

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION

People/sq. mi. 40.4 891.0 6259.7
 People/sq. km. 15.6 344.0 2416.9

DISTANCE

	TOTALS			
Miles	1296.8	835.2	102.1	2234.0
Kilometers	2086.9	1344.1	164.4	3595.2
Percentages	58.0	37.4	4.6	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

AR 77168 CT 251651 ME 42057 MD 8804 MA 112883 NH 8133 NJ 84424 NY 85376
 OK 80577 PA 91341 TN 233120 TX 39546 VA 119000 WV 13999

Total Population within 800 meter Buffer Zone: 1248079

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: MAINE YANKEE NP ME Leaving : 09/10/09 14:05
 TO : SKULL VALLEY UT Arriving : 09/12/09 09:09

Routing parameters used to calculate the route-

Routing type: HRCQ Preferred Route with 2 driver(s)

Preferred roads Time bias: 1.00 Mile bias: 0.00, Toll bias: 1.00

Nonpreferred roads Time bias: 0.00 Mile bias: 1.00, Toll bias: 1.00, Penalty factor: 30.0

Constraints used on route:

Prohibit use of links prohibiting truck use

Prohibit use of ferry crossing

Prohibit use of roads with Radioactive materials prohibition

Las Vegas Beltway is considered a preferred route

Miles Hwy Sign City Dir Junction State Dist Time Date Hour

 0.0 MAINE YANKEE NP ME 0.0 0:00 09/10/09 14:05
 1.1 LOCAL MONTSWEAG E S144LOCL ME 1.1 0:02 09/10/09 14:07
 0.9 S144 MONTSWEAG NE U1 S144 ME 2.0 0:03 09/10/09 14:08

17.9 U1 BRUNSWICK W I95 U1 ME 19.9 0:23 09/10/09 14:28
 17.5 I95 FALMOUTH FRSD W I295I95 ME 37.4 0:39 09/10/09 14:44
 3.8 I95 \$ WESTBROOK TMETX9 ME 41.2 0:43 09/10/09 14:48
 44.9 I95 \$ TMET\$ YORK VILLAGE NW I95 TMET ME 86.1 1:28 09/10/09 15:33
 4.9 I95 KITTERY NW I95 S236 ME 91.0 1:32 09/10/09 15:37
 1.3 I95 crossing state border ME/NH BD 92.3 1:33 09/10/09 15:38
 3.1 I95 PORTSMOUTH SW I95 X3 NH 95.5 1:37 09/10/09 15:42
 12.1 I95 \$ TNHT\$ SEABROOK W I95 X1 NH 107.6 1:48 09/10/09 15:53
 0.9 I95 crossing state border MA/NH BD 108.5 1:49 09/10/09 15:54
 1.6 I95 AMESBURY E I495I95 MA 110.1 1:50 09/10/09 15:55
 55.5 I495 MARLBOROUGH NW I290I495 MA 165.6 2:42 09/10/09 16:47
 20.3 I290 AUBURN I290I395 MA 185.9 3:02 09/10/09 17:07
 0.8 I90 XRAMP AUBURN N I90 X10 MA 186.7 3:03 09/10/09 17:08
 11.7 I90 \$ TMTAT\$ STURBRIDGE NE I84 I90 MA 198.4 3:14 09/10/09 17:19
 1.4 I84 STURBRIDGE N I84 X3 MA 199.9 3:15 09/10/09 17:20
 6.6 I84 crossing state border CT/MA BD 206.4 3:21 09/10/09 17:26
 Rest 30 minutes
 94.1 I84 DANBURY W I84 X3 CT 300.5 5:30 09/10/09 19:35
 3.7 I84 crossing state border CT/NY BD 304.2 5:34 09/10/09 19:39
 29.9 I84 BEACON N I84 X11 NY 334.1 6:02 09/10/09 20:07
 2.4 I84 # NEWBURGH N I84 X10 NY 336.5 6:05 09/10/09 20:10
 38.2 I84 PORT JERVIS S I84 X1 NY 374.7 6:40 09/10/09 20:45
 0.6 I84 crossing state border NY/PA BD 375.4 6:41 09/10/09 20:46
 49.8 I84 ELMHURST W I380I84 PA 425.1 7:27 09/10/09 21:32
 4.0 I380 I84 DUNMORE E I380I81 PA 429.1 7:31 09/10/09 21:36
 36.4 I81 DRUMS N I80 I81 PA 465.5 8:07 09/10/09 22:12
 Rest 30 minutes
 254.1 I80 WEST MIDDLESEX NE I80 X4 PA 719.6 12:33 09/11/09 02:38
 4.0 I80 crossing state border OH/PA BD 723.6 12:37 09/11/09 02:42
 Rest 30 minutes
 17.9 I80 NORTH JACKSON NE I76 I80 OH 741.5 13:26 09/11/09 03:31
 76.0 I80 \$ ELYRIA NW I80 I90 OH 817.5 14:49 09/11/09 04:54
 128.7 I80 \$ I90 \$ WEST JEFFERSON N I80 X13 OH 946.2 17:10 09/11/09 07:15
 13.1 I80 \$ I90 \$ crossing state border IN/OH BD 959.3 17:24 09/11/09 07:29
 Rest 30 minutes
 135.4 I80 \$ I90 \$ PORTAGE W I80 I90 IN 1094.7 20:09 09/11/09 09:14
 0.5 I80 LAKE STATION NE I80 I94 IN 1095.1 20:10 09/11/09 09:15
 14.5 I80 I94 HAMMOND W I80 X1 IN 1109.7 20:25 09/11/09 09:30
 0.9 I80 I94 crossing state border IL/IN BD 1110.5 20:26 09/11/09 09:31
 3.0 I80 I94 LANSING W I294I94 IL 1113.5 20:29 09/11/09 09:34
 4.9 I294 \$ I80 \$ HOMEWOOD NW I294I80 IL 1118.4 20:35 09/11/09 09:40
 Rest 30 minutes
 154.4 I80 RAPIDS CITY W I80 X1 IL 1272.8 23:53 09/11/09 12:58
 0.3 I80 crossing state border IA/IL BD 1273.1 23:54 09/11/09 12:59
 Rest 30 minutes
 168.0 I80 DES MOINES N I235I35 IA 1441.1 26:59 09/11/09 16:04
 14.2 I35 I80 DES MOINES W I235I35 IA 1455.3 27:13 09/11/09 16:18
 95.7 I80 MINDEN NW I680I80 IA 1550.9 28:42 09/11/09 17:47
 16.5 I680 LOVELAND SW I29 I680 IA 1567.4 28:57 09/11/09 18:02
 9.7 I29 I680 CRESCENT W I29 I680 IA 1577.2 29:06 09/11/09 18:11
 3.0 I680 crossing state border IA/NE BD 1580.2 29:09 09/11/09 18:14
 13.4 I680 OMAHA SW I680I80 NE 1593.5 29:23 09/11/09 18:28
 Rest 30 minutes
 Rest 30 minutes
 422.7 I80 KIMBALL S I80 X20 NE 2016.2 36:03 09/12/09 00:08
 20.6 I80 crossing state border NE/WY BD 2036.8 36:19 09/12/09 00:24
 Rest 30 minutes
 382.4 I80 EVANSTON NE I80 X18 WY 2419.2 41:55 09/12/09 06:00
 18.2 I80 crossing state border UT/WY BD 2437.3 42:10 09/12/09 06:15
 68.4 I80 HOLLADAY N I215I80 UT 2505.7 43:05 09/12/09 07:10
 Rest 30 minutes
 21.2 I215 SALT LAKE CITY W I215I80 UT 2526.9 43:54 09/12/09 07:59
 40.8 I80 TIMPIE I80 X77 UT 2567.7 44:29 09/12/09 08:34
 26.4 LOCAL SKULL VALLEY UT 2594.1 45:04 09/12/09 09:09

Total elapsed time: 45:04 Total trip mileage: 2594.1 Impedance: 3735.3

Mileage by State :

CT: 97.8 IA: 307.1 IL: 162.6 IN: 151.2 MA: 97.9 ME: 92.3

NE: 456.6 NH: 16.2 NY: 71.2 OH: 235.7 PA: 348.2 UT: 156.8
WY: 400.5

Mileage by Sign Type:

1-INTERSTATE: 2547.8 2-US: 17.9 3-STATE: 0.9 6-LOCAL: 27.5

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 2558.2 5-Principle Road: 7.4
7-Other: 28.4

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2591.4
Total Inside Tribal Lands : 2.7

Skull Valley Reservation : 2.7

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME
TO : SKULL VALLEY UT

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CT 97.8 0.84 3.17 6.51 11.17 14.89 17.85 18.78 11.05 6.77 4.00 2.67
IL 162.6 19.10 37.80 30.07 23.86 18.01 12.57 9.39 5.42 3.67 2.24 0.40
IN 151.2 1.73 19.97 37.40 25.85 28.69 17.16 8.92 5.71 3.55 1.89 0.41
IA 307.1 26.27 73.66 93.61 51.14 25.99 18.72 10.70 3.86 2.30 0.64 0.20
ME 92.3 1.67 7.21 14.07 14.46 17.55 20.03 11.26 4.18 1.12 0.78 0.00
MA 97.9 0.88 2.76 6.25 11.38 16.28 20.95 18.21 12.10 4.70 2.30 2.04
NE 456.6 167.07 80.87 107.72 49.64 24.69 10.77 7.27 4.24 2.75 1.02 0.59
NH 16.2 0.99 0.62 1.31 1.89 3.63 3.83 2.20 1.27 0.49 0.00 0.00
NY 71.2 4.42 8.91 9.27 9.66 10.39 10.26 10.94 4.52 2.20 0.46 0.16
OH 235.7 5.72 33.46 51.22 42.02 37.15 29.12 17.51 10.25 6.65 1.89 0.68
PA 348.2 32.00 71.03 69.82 65.61 48.89 35.86 16.13 4.98 2.52 1.09 0.29
UT 156.8 71.47 20.41 19.54 12.87 7.71 5.40 5.49 4.78 5.00 3.62 0.50
WY 400.5 207.08 105.56 52.54 12.14 6.48 6.02 4.33 4.26 1.86 0.22 0.06

TOTALS

2594.1 539.24 465.43 499.33 331.69 260.35 208.54 141.13 76.62 43.58 20.15 8.00

PERCENTAGES

20.79 17.94 19.25 12.79 10.04 8.04 5.44 2.95 1.68 0.78 0.31

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 32.7 827.4 6224.4
People/sq. km. 12.6 319.4 2403.3

DISTANCE

TOTALS
Miles 1835.7 686.6 71.7 2594.1
Kilometers 2954.2 1105.0 115.4 4174.7
Percentages 70.8 26.5 2.8

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CT 150349 IL 72678 IN 79041 IA 60053 ME 42057 MA 112883 NE 59486 NH 8133
NY 44216 OH 123201 PA 81086 UT 68580 WY 32573

Total Population within 800 meter Buffer Zone: 934336

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: MAINE YANKEE NP ME <C3> Leaving : 09/10/09 14:32

TO : HANFORD SITE WA UP Arriving : 09/16/09 10:03

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
<C3>	232103110-MAINE	YANKEE NP	ME	0.0	00:00	09/10/09	14:32
<C3>	232103138-BRUNSWICK		ME	19.2	2:23	09/10/09	16:55
----- TRANSFER							
ST	232103138-BRUNSWICK		ME	19.2	6:23	09/10/09	20:55
ST	232103320-PORTLAND		ME	47.2	9:07	09/10/09	23:39
ST	332103744-DOVER		NH	94.3	12:04	09/11/09	02:36
ST	332103983-ROCKINGHAM		NH	106.1	12:48	09/11/09	03:20
ST	252104509-LAWRENCE		MA	135.6	14:39	09/11/09	05:11
ST	252104615-LOWELL JCT.		MA	141.6	15:01	09/11/09	05:33
ST	252104593-LOWELL		MA	149.5	15:31	09/11/09	06:03
ST	252104685-AYER		MA	166.2	16:24	09/11/09	06:56
ST	252104663-FITCHBURG		MA	179.3	17:13	09/11/09	07:45
ST	362104281-ROTTERDAM JCT		NY	339.4	27:21	09/11/09	17:53
----- TRANSFER							
CSXT	362104281-ROTTERDAM JCT		NY	339.4	31:21	09/11/09	21:53
CSXT	362103889-UTICA		NY	410.0	33:34	09/12/09	00:06
CSXT	362103748-ROME		NY	421.6	33:56	09/12/09	00:28
CSXT	362103960-SYRACUSE		NY	465.8	35:48	09/12/09	02:20
CSXT	362103897-GENESEE JCT		NY	545.9	38:26	09/12/09	04:58
CSXT	362104303-BUFFALO		NY	609.7	41:30	09/12/09	08:02
CSXT	362104798-DUNKIRK(NYC,AMTK)		NY	648.0	42:42	09/12/09	09:14
CSXT	362105036-WESTFIELD		NY	665.4	43:15	09/12/09	09:47
CSXT	422105473-ERIE		PA	693.3	44:07	09/12/09	10:39
CSXT	392107192-CLEVELAND		OH	799.8	47:56	09/12/09	14:28
CSXT	392108155-GREENWICH		OH	846.2	49:24	09/12/09	15:56
CSXT	392107870-FOSTORIA		OH	893.1	51:21	09/12/09	17:53
CSXT	392107716-DESHLER		OH	919.3	52:11	09/12/09	18:43
CSXT	392107553-DEFIANCE		OH	944.4	52:58	09/12/09	19:30
CSXT	182107166-MILFORD JCT		IN	1021.7	55:23	09/12/09	21:55
CSXT	182106599-CLARKE JCT.		IN	1104.7	57:58	09/13/09	00:30
CSXT	182106597-EAST CHICAGO		IN	1107.5	58:03	09/13/09	00:35
CSXT	172106505-BLUE ISLAND		IL	1119.7	58:56	09/13/09	01:28
----- TRANSFER							
IHB	172106505-BLUE ISLAND		IL	1119.7	62:56	09/13/09	05:28
IHB	172106183-ARGO		IL	1131.4	63:19	09/13/09	05:51
IHB	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	07:59
----- TRANSFER							
BNSF	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	07:59
BNSF	172106247-SOUTH AURORA		IL	1160.8	66:44	09/13/09	09:16
BNSF	172105882-ROCHELLE		IL	1203.2	68:15	09/13/09	10:47
BNSF	172105539-SAVANNA		IL	1266.0	70:28	09/13/09	13:00
BNSF	172104782-EAST DUBUQUE		IL	1306.1	71:44	09/13/09	14:16
BNSF	552104033-CRAWFORD		WI	1358.1	73:21	09/13/09	15:53
BNSF	552103194-LA CROSSE		WI	1421.2	75:19	09/13/09	17:51
BNSF	552103037-EAST WINONA		WI	1445.7	76:35	09/13/09	19:07
BNSF	272102392-ST PAUL		MN	1548.7	80:19	09/13/09	22:51
BNSF	272102386-SAINT PAUL		MN	1550.0	80:51	09/13/09	23:23
BNSF	272102374-WESTMINSTER STREET		MN	1550.7	80:52	09/13/09	23:24
BNSF	272102339-MINNEAPOLIS JCT		MN	1559.0	81:08	09/13/09	23:40
BNSF	272102278-NORTHTOWN		MN	1563.1	81:16	09/13/09	23:48
BNSF	272102200-COON CREEK		MN	1570.4	81:59	09/14/09	00:31
BNSF	272101971-ST CLOUD		MN	1623.5	83:39	09/14/09	02:11
BNSF	272101484-STAPLES		MN	1688.3	85:40	09/14/09	04:12
BNSF	272101089-DETROIT LAKES		MN	1751.0	88:08	09/14/09	06:40

BNSF 272101065-MOORHEAD JCT MN 1797.9 90:06 09/14/09 08:38
 BNSF 382101049-WEST FARGO ND 1805.0 90:19 09/14/09 08:51
 BNSF 382101035-CASSELTON ND 1820.3 90:48 09/14/09 09:20
 BNSF 382100904-NOLAN ND 1844.2 91:33 09/14/09 10:05
 BNSF 382100547-NEW ROCKFORD ND 1928.0 94:10 09/14/09 12:42
 BNSF 382100312-SURREY ND 2030.3 97:22 09/14/09 15:54
 BNSF 382100318-MINOT ND 2037.7 98:05 09/14/09 16:37
 BNSF 382100279-BERTHOLD ND 2060.3 98:48 09/14/09 17:20
 BNSF 302100394-SNOWDEN MT 2183.6 102:39 09/14/09 21:11
 BNSF 302100340-GLASGOW MT 2314.5 106:45 09/15/09 01:17
 BNSF 302100152-HAVRE EAST MT 2466.0 111:58 09/15/09 06:30
 BNSF 302100178-SHELBY MT 2574.4 115:22 09/15/09 09:54
 BNSF 302100217-WHITEFISH MT 2725.6 120:05 09/15/09 14:37
 BNSF 162100300-SANDPOINT ID 2911.0 126:23 09/15/09 20:55
 BNSF 162100514-HAUSER ID 2957.8 127:51 09/15/09 22:23
 BNSF 532100564-SPOKANE WA 2976.2 128:25 09/15/09 22:57
 BNSF 532101556-PASCO WA 3123.2 133:31 09/16/09 04:03
 BNSF 532101573-KENNEWICK WA 3125.6 137:36 09/16/09 08:08
 ----- TRANSFER
 UP 532101573-KENNEWICK WA 3125.6 137:36 09/16/09 08:08
 UP 532101513-RICHLAND WA 3138.0 139:10 09/16/09 09:42
 UP 532101501-HANFORD SITE WA 3140.9 139:31 09/16/09 10:03

Length: 3140.9 miles Transit Time: 139:31 Impedance: 3491.4

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<C3>	19.2	0.0	0.0	0.0	19.2
BNSF	1990.0	1989.3	0.7	0.0	0.0
CSXT	780.3	780.1	0.2	0.0	0.0
IHB	15.9	15.7	0.2	0.0	0.0
ST	320.2	0.0	292.0	12.5	15.6
UP	15.3	0.0	0.0	0.0	15.3
Total	3140.9	2785.2	293.1	12.5	50.2

Mileage by State :

ID: 100.1 IL: 196.8 IN: 143.8 MA: 154.6 ME: 90.1 MN: 271.2
 MT: 677.9 ND: 382.5 NH: 34.9 NY: 390.3 OH: 246.7 PA: 43.8
 VT: 6.2 WA: 181.5 WI: 220.5

Mileage by Tribal Lands:

Total Outside Tribal Lands : 3005.3
 Total Inside Tribal Lands : 135.6

Blackfeet Reservation : 49.6 Cattaraugus Reservation : 1.8
 Fort Peck Reservation : 83.6 Fort Peck Trust Land : 0.0
 Turtle Mountain Trust Land : 0.4

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME <C3>
 TO : HANFORD SITE WA UP

>0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

ID 100.1 32.49 16.11 15.57 10.67 11.41 8.27 3.02 1.39 0.93 0.23 0.00
 IL 196.8 40.24 53.05 23.95 12.03 10.21 8.87 11.69 10.85 14.55 7.89 3.47
 IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
 ME 90.1 2.77 10.70 16.27 12.49 10.48 13.68 11.13 5.51 3.93 2.77 0.47
 MA 154.6 14.59 19.80 16.58 19.51 14.99 19.25 19.53 12.30 8.53 4.51 4.96
 MN 271.2 22.82 45.70 54.72 42.39 35.07 27.91 18.89 9.79 8.71 3.85 1.37
 MT 677.9 422.92 175.29 38.85 7.86 7.35 8.37 10.29 5.07 1.66 0.33 0.00
 NH 34.9 0.07 1.15 6.25 5.72 4.72 5.19 5.76 2.82 2.28 0.80 0.14
 NY 390.3 17.35 64.06 93.11 59.69 36.66 43.78 33.63 20.58 12.91 6.54 2.03
 ND 382.5 268.43 65.43 18.05 5.92 6.44 6.76 4.95 3.40 1.94 0.90 0.26

OH 246.7 22.58 56.05 50.30 25.79 15.60 14.98 19.68 16.06 14.29 6.97 4.28
 PA 43.8 1.96 3.57 3.88 6.91 6.37 6.83 4.68 4.49 2.51 1.87 0.75
 VT 6.2 0.51 1.15 1.15 0.83 1.67 0.45 0.26 0.13 0.00 0.00 0.00
 WA 181.5 77.61 25.13 27.69 10.05 10.52 8.75 7.07 6.68 5.13 2.24 0.57
 WI 220.5 97.55 48.92 28.30 18.99 7.87 5.24 5.17 3.49 3.80 0.80 0.34

TOTALS

3140.9 1026.24 618.06 441.48 261.29 189.81 187.41 163.95 106.45 85.60 41.17 19.31

PERCENTAGES

32.67 19.68 14.06 8.32 6.04 5.97 5.22 3.39 2.73 1.31 0.61

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 22.5 999.9 6360.3

People/sq. km. 8.7 386.1 2455.7

DISTANCE

TOTALS

Miles 2347.1 647.6 146.1 3140.9

Kilometers 3777.1 1042.2 235.1 5054.6

Percentages 74.7 20.6 4.7

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

ID 14926 IL 213554 IN 71427 ME 69495 MA 176593 MN 145002 MT 37744 NH 28079

NY 240398 ND 35077 OH 233271 PA 56449 VT 1194 WA 71801 WI 38169

Total Population within 800 meter Buffer Zone: 1433179

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=MAINE YANKEE NP

From STATE=ME

From SUBNET=<C3>

To CITY=HANFORD SITE

To STATE=WA

To SUBNET=UP

[ID]

Rural - KM= 120.4

Suburban - KM= 38.8

Urban - KM= 1.9

Total - KM= 161.1

Rural Pop Density= 9.9

Suburban Pop Density= 241.2

Urban Pop Density=2020.0

[IL]

Rural - KM= 208.0

Suburban - KM= 67.0

Urban - KM= 41.7

Total - KM= 316.8

Rural Pop Density= 8.7

Suburban Pop Density= 475.7

Urban Pop Density=2489.2

[IN]

Rural - KM= 169.9

Suburban - KM= 50.9

Urban - KM= 10.6

Total - KM= 231.4

Rural Pop Density= 16.8

Suburban Pop Density= 350.7

Urban Pop Density=2305.9

[ME]

Rural - KM= 68.0
 Suburban - KM= 65.7
 Urban - KM= 11.5
 Total - KM= 145.1
 Rural Pop Density= 18.8
 Suburban Pop Density= 373.8
 Urban Pop Density=2424.9
 [MA]
 Rural - KM= 113.4
 Suburban - KM= 106.3
 Urban - KM= 29.0
 Total - KM= 248.9
 Rural Pop Density= 15.9
 Suburban Pop Density= 424.3
 Urban Pop Density=2771.3
 [MN]
 Rural - KM= 266.5
 Suburban - KM= 147.5
 Urban - KM= 22.4
 Total - KM= 436.4
 Rural Pop Density= 16.5
 Suburban Pop Density= 315.4
 Urban Pop Density=2364.7
 [MT]
 Rural - KM=1037.9
 Suburban - KM= 50.0
 Urban - KM= 3.2
 Total - KM=1091.0
 Rural Pop Density= 2.9
 Suburban Pop Density= 415.6
 Urban Pop Density=1978.2
 [NH]
 Rural - KM= 21.2
 Suburban - KM= 29.8
 Urban - KM= 5.2
 Total - KM= 56.2
 Rural Pop Density= 24.6
 Suburban Pop Density= 399.1
 Urban Pop Density=2192.5
 [NY]
 Rural - KM= 376.9
 Suburban - KM= 216.7
 Urban - KM= 34.6
 Total - KM= 628.1
 Rural Pop Density= 17.6
 Suburban Pop Density= 378.8
 Urban Pop Density=2391.3
 [ND]
 Rural - KM= 575.9
 Suburban - KM= 34.7
 Urban - KM= 5.0
 Total - KM= 615.6
 Rural Pop Density= 2.4
 Suburban Pop Density= 373.2
 Urban Pop Density=2346.7
 [OH]
 Rural - KM= 249.0
 Suburban - KM= 106.7
 Urban - KM= 41.1
 Total - KM= 397.0
 Rural Pop Density= 13.5
 Suburban Pop Density= 467.3
 Urban Pop Density=2532.1
 [PA]
 Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5

Urban Pop Density=2597.0
 [VT]
 Rural - KM= 5.9
 Suburban - KM= 4.0
 Urban - KM= 0.0
 Total - KM= 9.9
 Rural Pop Density= 15.5
 Suburban Pop Density= 204.9
 Urban Pop Density= 0.0
 [WA]
 Rural - KM= 226.1
 Suburban - KM= 53.1
 Urban - KM= 12.8
 Total - KM= 292.1
 Rural Pop Density= 6.8
 Suburban Pop Density= 400.7
 Urban Pop Density=2306.1
 [WI]
 Rural - KM= 311.8
 Suburban - KM= 35.0
 Urban - KM= 7.9
 Total - KM= 354.8
 Rural Pop Density= 7.4
 Suburban Pop Density= 369.2
 Urban Pop Density=2144.1
 [Total]
 Rural - KM=3777.1
 Suburban - KM=1042.2
 Urban - KM= 235.1
 Total - KM=5054.6
 Rural Pop Density= 8.7
 Suburban Pop Density= 386.1
 Urban Pop Density=2455.7

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: MAINE YANKEE NP ME <C3> Leaving : 09/10/09 14:33
 TO : TOOELE ORDNANCE DEPO UT UP Arriving : 09/15/09 10:37

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
<C3>	232103110-MAINE	YANKEE NP	ME	0.0	00:00	09/10/09	14:33
<C3>	232103138-BRUNSWICK		ME	19.2	2:23	09/10/09	16:56
----- TRANSFER -----							
ST	232103138-BRUNSWICK		ME	19.2	6:23	09/10/09	20:56
ST	232103320-PORTLAND		ME	47.2	9:07	09/10/09	23:40
ST	332103744-DOVER		NH	94.3	12:04	09/11/09	02:37
ST	332103983-ROCKINGHAM		NH	106.1	12:48	09/11/09	03:21
ST	252104509-LAWRENCE		MA	135.6	14:39	09/11/09	05:12
ST	252104615-LOWELL JCT.		MA	141.6	15:01	09/11/09	05:34
ST	252104593-LOWELL		MA	149.5	15:31	09/11/09	06:04
ST	252104685-AYER		MA	166.2	16:24	09/11/09	06:57
ST	252104663-FITCHBURG		MA	179.3	17:13	09/11/09	07:46
ST	362104281-ROTTERDAM JCT		NY	339.4	27:21	09/11/09	17:54
----- TRANSFER -----							
CSXT	362104281-ROTTERDAM JCT		NY	339.4	31:21	09/11/09	21:54
CSXT	362103889-UTICA		NY	410.0	33:34	09/12/09	00:07
CSXT	362103748-ROME		NY	421.6	33:56	09/12/09	00:29

CSXT 362103960-SYRACUSE NY 465.8 35:48 09/12/09 02:21
 CSXT 362103897-GENESEE JCT NY 545.9 38:26 09/12/09 04:59
 CSXT 362104303-BUFFALO NY 609.7 41:30 09/12/09 08:03
 CSXT 362104798-DUNKIRK(NYC,AMTK) NY 648.0 42:42 09/12/09 09:15
 CSXT 362105036-WESTFIELD NY 665.4 43:15 09/12/09 09:48
 CSXT 422105473-ERIE PA 693.3 44:07 09/12/09 10:40
 CSXT 392107192-CLEVELAND OH 799.8 47:56 09/12/09 14:29
 CSXT 392108155-GREENWICH OH 846.2 49:24 09/12/09 15:57
 CSXT 392107870-FOSTORIA OH 893.1 51:21 09/12/09 17:54
 CSXT 392107716-DESHLER OH 919.3 52:11 09/12/09 18:44
 CSXT 392107553-DEFIANCE OH 944.4 52:58 09/12/09 19:31
 CSXT 182107166-MILFORD JCT IN 1021.7 55:23 09/12/09 21:56
 CSXT 182106599-CLARKE JCT. IN 1104.7 57:58 09/13/09 00:31
 CSXT 182106597-EAST CHICAGO IN 1107.5 58:03 09/13/09 00:36
 CSXT 172106505-BLUE ISLAND IL 1119.7 58:56 09/13/09 01:29
 ----- TRANSFER
 IHB 172106505-BLUE ISLAND IL 1119.7 62:56 09/13/09 05:29
 IHB 172106183-ARGO IL 1131.4 63:19 09/13/09 05:52
 IHB 172105918-MELROSE PARK IL 1140.5 65:36 09/13/09 08:09
 ----- TRANSFER
 UP 172105918-MELROSE PARK IL 1140.5 65:36 09/13/09 08:09
 UP 172105889-PROVISO IL 1143.5 65:41 09/13/09 08:14
 UP 172105944-WEST CHICAGO IL 1158.6 66:10 09/13/09 08:43
 UP 172105836-ROCHELLE IL 1203.8 67:34 09/13/09 10:07
 UP 172106145-NELSON IL 1232.6 68:28 09/13/09 11:01
 UP 192106078-CLINTON IA 1265.5 69:30 09/13/09 12:03
 UP 192105787-CEDAR RAPIDS IA 1346.1 72:31 09/13/09 15:04
 UP 192105607-EAST MARSHALLTOWN IA 1408.8 74:29 09/13/09 17:02
 UP 192105617-AMES IA 1449.1 75:44 09/13/09 18:17
 UP 192106824-MISSOURI VALLEY IA 1585.4 80:30 09/13/09 23:03
 UP 192106818-CALIFORNIA JCT WEST IA 1591.4 80:41 09/13/09 23:14
 UP 312107162-FREMONT NE 1622.8 81:40 09/14/09 00:13
 UP 312108371-GRAND ISLAND NE 1729.0 84:59 09/14/09 03:32
 UP 312108885-GIBBON JCT NE 1757.6 85:53 09/14/09 04:26
 UP 312107904-NORTH PLATTE NE 1866.2 89:16 09/14/09 07:49
 UP 312107841-O FALLONS NE 1882.4 90:17 09/14/09 08:50
 UP 82108276-JULESBURG CO 1946.8 92:17 09/14/09 10:50
 UP 312107887-SIDNEY NE 1988.2 93:35 09/14/09 12:08
 UP 562107931-CHEYENNE WY 2090.5 96:47 09/14/09 15:20
 UP 562107501-LARAMIE WY 2146.9 99:03 09/14/09 17:36
 UP 562106162-RAWLINS WY 2261.6 102:38 09/14/09 21:11
 UP 562106752-GRANGER WY 2424.8 108:44 09/15/09 03:17
 UP 492107787-RIVERDALE UT 2567.1 113:11 09/15/09 07:44
 UP 492108786-SALT LAKE CITY UT 2603.9 114:20 09/15/09 08:53
 UP 492108987-SMELTER UT 2621.0 115:22 09/15/09 09:55
 UP 492108991-SMELTER UT 2621.0 115:22 09/15/09 09:55
 UP 492109686-TOOELE ORDNANCE DEPO UT 2640.9 116:04 09/15/09 10:37

Length: 2640.9 miles Transit Time: 116:04 Impedance: 2905.3

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<C3>	19.2	0.0	0.0	0.0	19.2
CSXT	780.3	780.1	0.2	0.0	0.0
IHB	20.8	20.7	0.2	0.0	0.0
ST	320.2	0.0	292.0	12.5	15.6
UP	1500.4	1500.4	0.0	0.0	0.0
Total	2640.9	2301.2	292.4	12.5	34.8

Mileage by State :

CO: 8.8 IA: 331.7 IL: 154.2 IN: 143.8 MA: 154.6 ME: 90.1
 NE: 441.4 NH: 34.9 NY: 390.3 OH: 246.7 PA: 43.8 UT: 140.9
 VT: 6.2 WY: 453.4

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2636.5
 Total Inside Tribal Lands : 4.4

Cattaraugus Reservation : 1.8 Sac and Fox (Iowa) Reservation : 2.6

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME <C3>

TO : TOOEELE ORDNANCE DEPO UT UP

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CO 8.8 1.76 1.94 3.11 1.07 0.23 0.28 0.00 0.45 0.00 0.00 0.00
 IL 154.2 12.88 29.21 25.05 13.47 10.11 10.44 10.75 10.95 16.45 10.62 4.26
 IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
 IA 331.7 32.62 87.35 87.30 41.23 38.26 29.41 7.62 3.79 2.43 1.42 0.23
 ME 90.1 2.77 10.70 16.27 12.49 10.48 13.68 11.13 5.51 3.93 2.77 0.47
 MA 154.6 14.59 19.80 16.58 19.51 14.99 19.25 19.53 12.30 8.53 4.51 4.96
 NE 441.4 135.52 106.24 112.36 32.22 13.32 11.62 12.53 9.41 6.35 1.59 0.30
 NH 34.9 0.07 1.15 6.25 5.72 4.72 5.19 5.76 2.82 2.28 0.80 0.14
 NY 390.3 17.35 64.06 93.11 59.69 36.66 43.78 33.63 20.58 12.91 6.54 2.03
 OH 246.7 22.58 56.05 50.30 25.79 15.60 14.98 19.68 16.06 14.29 6.97 4.28
 PA 43.8 1.96 3.57 3.88 6.91 6.37 6.83 4.68 4.49 2.51 1.87 0.75
 UT 140.9 39.59 16.76 19.07 14.58 12.52 9.58 8.90 7.65 7.38 4.44 0.52
 VT 6.2 0.51 1.15 1.15 0.83 1.67 0.45 0.26 0.13 0.00 0.00 0.00
 WY 453.4 316.90 74.81 27.29 8.56 6.12 6.46 5.72 4.32 2.60 0.62 0.00

TOTALS

2640.9 603.45 504.74 508.53 264.51 181.50 181.03 148.39 102.35 84.09 43.62 18.61

PERCENTAGES

22.85 19.11 19.26 10.02 6.87 6.86 5.62 3.88 3.18 1.65 0.70

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 28.8 995.4 6382.5

People/sq. km. 11.1 384.3 2464.3

DISTANCE

TOTALS

Miles 1881.2 613.3 146.3 2640.9

Kilometers 3027.5 986.9 235.5 4250.0

Percentages 71.2 23.2 5.5

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CO 1034 IL 242703 IN 71427 IA 67006 ME 69495 MA 176593 NE 93863 NH 28079

NY 240398 OH 233271 PA 56449 UT 92829 VT 1194 WY 36343

Total Population within 800 meter Buffer Zone: 1410684

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: MAINE YANKEE NP ME <C3> Leaving : 09/10/09 14:34

TO : AMARILLO TX UP Arriving : 09/14/09 19:49

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0

Transfer Time for P points = 240.0 Transfer Time for M points = 240.0

Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV

R322115986USG - , NV

R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
<C3>	232103110-MAINE	YANKEE NP	ME	0.0	00:00	09/10/09	14:34
<C3>	232103138-BRUNSWICK		ME	19.2	2:23	09/10/09	16:57
----- TRANSFER							
ST	232103138-BRUNSWICK		ME	19.2	6:23	09/10/09	20:57
ST	232103320-PORTLAND		ME	47.2	9:07	09/10/09	23:41
ST	332103744-DOVER		NH	94.3	12:04	09/11/09	02:38
ST	332103983-ROCKINGHAM		NH	106.1	12:48	09/11/09	03:22
ST	252104509-LAWRENCE		MA	135.6	14:39	09/11/09	05:13
ST	252104615-LOWELL JCT.		MA	141.6	15:01	09/11/09	05:35
ST	252104593-LOWELL		MA	149.5	15:31	09/11/09	06:05
ST	252104685-AYER		MA	166.2	16:24	09/11/09	06:58
ST	252104663-FITCHBURG		MA	179.3	17:13	09/11/09	07:47
ST	362104281-ROTTERDAM JCT		NY	339.4	27:21	09/11/09	17:55
----- TRANSFER							
CSXT	362104281-ROTTERDAM JCT		NY	339.4	31:21	09/11/09	21:55
CSXT	362103889-UTICA		NY	410.0	33:34	09/12/09	00:08
CSXT	362103748-ROME		NY	421.6	33:56	09/12/09	00:30
CSXT	362103960-SYRACUSE		NY	465.8	35:48	09/12/09	02:22
CSXT	362103897-GENESEE JCT		NY	545.9	38:26	09/12/09	05:00
CSXT	362104303-BUFFALO		NY	609.7	41:30	09/12/09	08:04
CSXT	362104798-DUNKIRK(NYC,AMTK)		NY	648.0	42:42	09/12/09	09:16
CSXT	362105036-WESTFIELD		NY	665.4	43:15	09/12/09	09:49
CSXT	422105473-ERIE		PA	693.3	44:07	09/12/09	10:41
CSXT	392107192-CLEVELAND		OH	799.8	47:56	09/12/09	14:30
CSXT	392108155-GREENWICH		OH	846.2	49:24	09/12/09	15:58
CSXT	392107870-FOSTORIA		OH	893.1	51:21	09/12/09	17:55
CSXT	392107716-DESHLER		OH	919.3	52:11	09/12/09	18:45
CSXT	392107553-DEFIANCE		OH	944.4	52:58	09/12/09	19:32
CSXT	182107166-MILFORD JCT		IN	1021.7	55:23	09/12/09	21:57
CSXT	182106599-CLARKE JCT.		IN	1104.7	57:58	09/13/09	00:32
CSXT	182106597-EAST CHICAGO		IN	1107.5	58:03	09/13/09	00:37
CSXT	172106505-BLUE ISLAND		IL	1119.7	58:56	09/13/09	01:30
----- TRANSFER							
IHB	172106505-BLUE ISLAND		IL	1119.7	62:56	09/13/09	05:30
IHB	172106183-ARGO		IL	1131.4	63:19	09/13/09	05:53
IHB	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	08:01
----- TRANSFER							
BNSF	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	08:01
BNSF	172106247-SOUTH AURORA		IL	1160.8	66:44	09/13/09	09:18
BNSF	172108338-GALESBURG		IL	1283.8	70:34	09/13/09	13:08
BNSF	172109131-LOMAX		IL	1325.6	71:54	09/13/09	14:28
BNSF	192109349-FORT MADISON		IA	1341.9	72:24	09/13/09	14:58
BNSF	292112390-C A JCT		MO	1524.8	78:37	09/13/09	21:11
BNSF	292112548-CONGO		MO	1550.0	79:24	09/13/09	21:58
BNSF	202112931-OLATHE		KS	1577.2	80:15	09/13/09	22:49
BNSF	202113599-EMPORIA		KS	1663.5	82:57	09/14/09	01:31
BNSF	202114801-AUGUSTA		KS	1738.6	85:18	09/14/09	03:52
BNSF	202115395-WELLINGTON		KS	1777.6	86:31	09/14/09	05:05
BNSF	402116131-AVARD		OK	1874.2	90:02	09/14/09	08:36
BNSF	402116278-WEST WAYNOKA		OK	1885.0	90:23	09/14/09	08:57
BNSF	482118135-AMARILLO		TX	2087.5	96:42	09/14/09	15:16
----- TRANSFER							
UP	482118135-AMARILLO		TX	2087.5	100:42	09/14/09	19:16
UP	482118129-AMARILLO		TX	2088.9	101:15	09/14/09	19:49

Length: 2088.9 miles Transit Time: 101:15 Impedance: 2393.3

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<C3>	19.2	0.0	0.0	0.0	19.2
BNSF	951.9	951.9	0.0	0.0	0.0
CSXT	780.3	780.1	0.2	0.0	0.0
IHB	15.9	15.7	0.2	0.0	0.0
ST	320.2	0.0	292.0	12.5	15.6
UP	1.4	1.4	0.0	0.0	0.0

Total 2088.9 1749.1 292.4 12.5 34.8

Mileage by State :

IA: 19.8 IL: 229.2 IN: 143.8 KS: 288.1 MA: 154.6 ME: 90.1
 MO: 199.0 NH: 34.9 NY: 390.3 OH: 246.7 OK: 116.5 PA: 43.8
 TX: 126.0 VT: 6.2

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2087.1
 Total Inside Tribal Lands : 1.8

Cattaraugus Reservation : 1.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME <C3>

TO : AMARILLO TX UP

 >0.0 22.7 59.7 139 326 821 1861 3326 5815
 ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

 IL 229.2 46.26 62.30 28.41 11.57 10.75 11.60 15.23 13.93 17.52 8.11 3.53
 IN 143.8 4.35 31.95 46.81 22.44 10.45 9.08 8.20 3.89 4.43 1.47 0.67
 IA 19.8 1.20 7.05 4.06 3.93 1.67 1.18 0.14 0.13 0.30 0.00 0.09
 KS 288.1 102.87 78.44 41.43 17.03 7.49 9.58 12.69 8.67 6.62 2.81 0.44
 ME 90.1 2.77 10.70 16.27 12.49 10.48 13.68 11.13 5.51 3.93 2.77 0.47
 MA 154.6 14.59 19.80 16.58 19.51 14.99 19.25 19.53 12.30 8.53 4.51 4.96
 MO 199.0 96.29 45.64 30.98 6.45 5.05 5.26 4.38 2.72 0.81 0.91 0.51
 NH 34.9 0.07 1.15 6.25 5.72 4.72 5.19 5.76 2.82 2.28 0.80 0.14
 NY 390.3 17.35 64.06 93.11 59.69 36.66 43.78 33.63 20.58 12.91 6.54 2.03
 OH 246.7 22.58 56.05 50.30 25.79 15.60 14.98 19.68 16.06 14.29 6.97 4.28
 OK 116.5 69.78 27.31 9.36 1.68 1.31 2.41 2.09 1.93 0.46 0.14 0.00
 PA 43.8 1.96 3.57 3.88 6.91 6.37 6.83 4.68 4.49 2.51 1.87 0.75
 TX 126.0 67.55 25.82 15.67 4.32 3.29 3.14 2.89 1.95 1.06 0.18 0.13
 VT 6.2 0.51 1.15 1.15 0.83 1.67 0.45 0.26 0.13 0.00 0.00 0.00

TOTALS

2088.9 448.13 434.99 364.26 198.36 130.50 146.41 140.29 95.11 75.65 37.08 18.00

PERCENTAGES

21.45 20.83 17.44 9.50 6.25 7.01 6.72 4.55 3.62 1.78 0.86

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 28.2 1071.8 6401.7

People/sq. km. 10.9 413.8 2471.7

DISTANCE

TOTALS

Miles 1445.7 512.3 130.7 2088.9

Kilometers 2326.6 824.5 210.4 3361.6

Percentages 69.2 24.5 6.3

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 237190 IN 71427 IA 4740 KS 84299 ME 69495 MA 176593 MO 31397 NH 28079

NY 240398 OH 233271 OK 10774 PA 56449 TX 19919 VT 1194

Total Population within 800 meter Buffer Zone: 1265225

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=MAINE YANKEE NP
 From STATE=ME
 From SUBNET=<C3>
 To CITY=AMARILLO
 To STATE=TX
 To SUBNET=UP
 [IL]
 Rural - KM= 239.0
 Suburban - KM= 82.9
 Urban - KM= 46.9
 Total - KM= 368.8
 Rural Pop Density= 8.3
 Suburban Pop Density= 492.5
 Urban Pop Density=2423.3
 [IN]
 Rural - KM= 169.9
 Suburban - KM= 50.9
 Urban - KM= 10.6
 Total - KM= 231.4
 Rural Pop Density= 16.8
 Suburban Pop Density= 350.7
 Urban Pop Density=2305.9
 [IA]
 Rural - KM= 26.1
 Suburban - KM= 5.0
 Urban - KM= 0.6
 Total - KM= 31.8
 Rural Pop Density= 15.6
 Suburban Pop Density= 196.8
 Urban Pop Density=2337.5
 [KS]
 Rural - KM= 385.9
 Suburban - KM= 61.8
 Urban - KM= 15.9
 Total - KM= 463.6
 Rural Pop Density= 7.2
 Suburban Pop Density= 469.6
 Urban Pop Density=2241.9
 [ME]
 Rural - KM= 68.0
 Suburban - KM= 65.7
 Urban - KM= 11.5
 Total - KM= 145.1
 Rural Pop Density= 18.8
 Suburban Pop Density= 373.8
 Urban Pop Density=2424.9
 [MA]
 Rural - KM= 113.4
 Suburban - KM= 106.3
 Urban - KM= 29.0
 Total - KM= 248.9
 Rural Pop Density= 15.9
 Suburban Pop Density= 424.3
 Urban Pop Density=2771.3
 [MO]
 Rural - KM= 288.6
 Suburban - KM= 28.0
 Urban - KM= 3.6
 Total - KM= 320.2
 Rural Pop Density= 5.5
 Suburban Pop Density= 379.6
 Urban Pop Density=2857.9
 [NH]
 Rural - KM= 21.2
 Suburban - KM= 29.8
 Urban - KM= 5.2
 Total - KM= 56.2
 Rural Pop Density= 24.6
 Suburban Pop Density= 399.1
 Urban Pop Density=2192.5

[NY]
 Rural - KM= 376.9
 Suburban - KM= 216.7
 Urban - KM= 34.6
 Total - KM= 628.1
 Rural Pop Density= 17.6
 Suburban Pop Density= 378.8
 Urban Pop Density=2391.3
 [OH]
 Rural - KM= 249.0
 Suburban - KM= 106.7
 Urban - KM= 41.1
 Total - KM= 397.0
 Rural Pop Density= 13.5
 Suburban Pop Density= 467.3
 Urban Pop Density=2532.1
 [OK]
 Rural - KM= 174.0
 Suburban - KM= 12.5
 Urban - KM= 1.0
 Total - KM= 187.5
 Rural Pop Density= 3.3
 Suburban Pop Density= 473.6
 Urban Pop Density=2065.1
 [PA]
 Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density=2597.0
 [TX]
 Rural - KM= 182.4
 Suburban - KM= 18.1
 Urban - KM= 2.2
 Total - KM= 202.8
 Rural Pop Density= 4.9
 Suburban Pop Density= 393.9
 Urban Pop Density=2169.4
 [VT]
 Rural - KM= 5.9
 Suburban - KM= 4.0
 Urban - KM= 0.0
 Total - KM= 9.9
 Rural Pop Density= 15.5
 Suburban Pop Density= 204.9
 Urban Pop Density= 0.0
 [Total]
 Rural - KM=2326.6
 Suburban - KM= 824.5
 Urban - KM= 210.4
 Total - KM=3361.6
 Rural Pop Density= 10.9
 Suburban Pop Density= 413.8
 Urban Pop Density=2471.7

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: MAINE YANKEE NP ME <C3> Leaving : 09/10/09 14:34
 TO : AMARILLO TX UP Arriving : 09/14/09 19:49

Dedicated Train Routing Constraints Used

Altered Delay Times

Crew Change Time = 30.0 Yard Change Time = 0.0
 Transfer Time for P points = 240.0 Transfer Time for M points = 240.0
 Transfer Time for T points = 120.0 Transfer Time for D points = 120.0

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
<C3>	232103110-MAINE	YANKEE NP	ME	0.0	00:00	09/10/09	14:34
<C3>	232103138-BRUNSWICK		ME	19.2	2:23	09/10/09	16:57
----- TRANSFER							
ST	232103138-BRUNSWICK		ME	19.2	6:23	09/10/09	20:57
ST	232103320-PORTLAND		ME	47.2	9:07	09/10/09	23:41
ST	332103744-DOVER		NH	94.3	12:04	09/11/09	02:38
ST	332103983-ROCKINGHAM		NH	106.1	12:48	09/11/09	03:22
ST	252104509-LAWRENCE		MA	135.6	14:39	09/11/09	05:13
ST	252104615-LOWELL JCT.		MA	141.6	15:01	09/11/09	05:35
ST	252104593-LOWELL		MA	149.5	15:31	09/11/09	06:05
ST	252104685-AYER		MA	166.2	16:24	09/11/09	06:58
ST	252104663-FITCHBURG		MA	179.3	17:13	09/11/09	07:47
ST	362104281-ROTTERDAM JCT		NY	339.4	27:21	09/11/09	17:55
----- TRANSFER							
CSXT	362104281-ROTTERDAM JCT		NY	339.4	31:21	09/11/09	21:55
CSXT	362103889-UTICA		NY	410.0	33:34	09/12/09	00:08
CSXT	362103748-ROME		NY	421.6	33:56	09/12/09	00:30
CSXT	362103960-SYRACUSE		NY	465.8	35:48	09/12/09	02:22
CSXT	362103897-GENESEE JCT		NY	545.9	38:26	09/12/09	05:00
CSXT	362104303-BUFFALO		NY	609.7	41:30	09/12/09	08:04
CSXT	362104798-DUNKIRK(NYC,AMTK)		NY	648.0	42:42	09/12/09	09:16
CSXT	362105036-WESTFIELD		NY	665.4	43:15	09/12/09	09:49
CSXT	422105473-ERIE		PA	693.3	44:07	09/12/09	10:41
CSXT	392107192-CLEVELAND		OH	799.8	47:56	09/12/09	14:30
CSXT	392108155-GREENWICH		OH	846.2	49:24	09/12/09	15:58
CSXT	392107870-FOSTORIA		OH	893.1	51:21	09/12/09	17:55
CSXT	392107716-DESHLER		OH	919.3	52:11	09/12/09	18:45
CSXT	392107553-DEFIANCE		OH	944.4	52:58	09/12/09	19:32
CSXT	182107166-MILFORD JCT		IN	1021.7	55:23	09/12/09	21:57
CSXT	182106599-CLARKE JCT.		IN	1104.7	57:58	09/13/09	00:32
CSXT	182106597-EAST CHICAGO		IN	1107.5	58:03	09/13/09	00:37
CSXT	172106505-BLUE ISLAND		IL	1119.7	58:56	09/13/09	01:30
----- TRANSFER							
IHB	172106505-BLUE ISLAND		IL	1119.7	62:56	09/13/09	05:30
IHB	172106183-ARGO		IL	1131.4	63:19	09/13/09	05:53
IHB	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	08:01
----- TRANSFER							
BNSF	172106105-LA GRANGE		IL	1135.6	65:27	09/13/09	08:01
BNSF	172106247-SOUTH AURORA		IL	1160.8	66:44	09/13/09	09:18
BNSF	172108338-GALESBURG		IL	1283.8	70:34	09/13/09	13:08
BNSF	172109131-LOMAX		IL	1325.6	71:54	09/13/09	14:28
BNSF	192109349-FORT MADISON		IA	1341.9	72:24	09/13/09	14:58
BNSF	292112390-C A JCT		MO	1524.8	78:37	09/13/09	21:11
BNSF	292112548-CONGO		MO	1550.0	79:24	09/13/09	21:58
BNSF	202112931-OLATHE		KS	1577.2	80:15	09/13/09	22:49
BNSF	202113599-EMPORIA		KS	1663.5	82:57	09/14/09	01:31
BNSF	202114801-AUGUSTA		KS	1738.6	85:18	09/14/09	03:52
BNSF	202115395-WELLINGTON		KS	1777.6	86:31	09/14/09	05:05
BNSF	402116131-AVARD		OK	1874.2	90:02	09/14/09	08:36
BNSF	402116278-WEST WAYNOKA		OK	1885.0	90:23	09/14/09	08:57
BNSF	482118135-AMARILLO		TX	2087.5	96:42	09/14/09	15:16
----- TRANSFER							
UP	482118135-AMARILLO		TX	2087.5	100:42	09/14/09	19:16
UP	482118129-AMARILLO		TX	2088.9	101:15	09/14/09	19:49

Length: 2088.9 miles Transit Time: 101:15 Impedance: 2393.3

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<C3>	19.2	0.0	0.0	0.0	19.2
BNSF	951.9	951.9	0.0	0.0	0.0
CSXT	780.3	780.1	0.2	0.0	0.0
IHB	15.9	15.7	0.2	0.0	0.0

ST	320.2	0.0	292.0	12.5	15.6
UP	1.4	1.4	0.0	0.0	0.0

Total	2088.9	1749.1	292.4	12.5	34.8

Mileage by State :

IA: 19.8 IL: 229.2 IN: 143.8 KS: 288.1 MA: 154.6 ME: 90.1
MO: 199.0 NH: 34.9 NY: 390.3 OH: 246.7 OK: 116.5 PA: 43.8
TX: 126.0 VT: 6.2

Mileage by Tribal Lands:

Total Outside Tribal Lands : 2087.1
Total Inside Tribal Lands : 1.8

Cattaraugus Reservation : 1.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME <C3>
TO : AMARILLO TX UP

	>0.0	22.7	59.7	139	326	821	1861	3326	5815		
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996

IL	229.2	46.26	62.30	28.41	11.57	10.75	11.60	15.23	13.93	17.52	8.11	3.53
IN	143.8	4.35	31.95	46.81	22.44	10.45	9.08	8.20	3.89	4.43	1.47	0.67
IA	19.8	1.20	7.05	4.06	3.93	1.67	1.18	0.14	0.13	0.30	0.00	0.09
KS	288.1	102.87	78.44	41.43	17.03	7.49	9.58	12.69	8.67	6.62	2.81	0.44
ME	90.1	2.77	10.70	16.27	12.49	10.48	13.68	11.13	5.51	3.93	2.77	0.47
MA	154.6	14.59	19.80	16.58	19.51	14.99	19.25	19.53	12.30	8.53	4.51	4.96
MO	199.0	96.29	45.64	30.98	6.45	5.05	5.26	4.38	2.72	0.81	0.91	0.51
NH	34.9	0.07	1.15	6.25	5.72	4.72	5.19	5.76	2.82	2.28	0.80	0.14
NY	390.3	17.35	64.06	93.11	59.69	36.66	43.78	33.63	20.58	12.91	6.54	2.03
OH	246.7	22.58	56.05	50.30	25.79	15.60	14.98	19.68	16.06	14.29	6.97	4.28
OK	116.5	69.78	27.31	9.36	1.68	1.31	2.41	2.09	1.93	0.46	0.14	0.00
PA	43.8	1.96	3.57	3.88	6.91	6.37	6.83	4.68	4.49	2.51	1.87	0.75
TX	126.0	67.55	25.82	15.67	4.32	3.29	3.14	2.89	1.95	1.06	0.18	0.13
VT	6.2	0.51	1.15	1.15	0.83	1.67	0.45	0.26	0.13	0.00	0.00	0.00

TOTALS

2088.9 448.13 434.99 364.26 198.36 130.50 146.41 140.29 95.11 75.65 37.08 18.00
PERCENTAGES
21.45 20.83 17.44 9.50 6.25 7.01 6.72 4.55 3.62 1.78 0.86

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION

People/sq. mi.	28.2	1071.8	6401.7
People/sq. km.	10.9	413.8	2471.7

DISTANCE				TOTALS
Miles	1445.7	512.3	130.7	2088.9
Kilometers	2326.6	824.5	210.4	3361.6
Percentages	69.2	24.5	6.3	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

IL 237190 IN 71427 IA 4740 KS 84299 ME 69495 MA 176593 MO 31397 NH 28079
NY 240398 OH 233271 OK 10774 PA 56449 TX 19919 VT 1194

Total Population within 800 meter Buffer Zone: 1265225

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: TWO RIVERS WI CN Leaving : 02/26/10 12:15

TO : OAK RIDGE TN CSXT Arriving : 03/05/10 16:39

General Freight Routing Constraints Used
 Originating Railroad Factor = 0.80

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
CN	552102974	TWO RIVERS	WI	0.0	00:00	02/26/10	12:15
CN	552102944	NEENAH	WI	50.1	6:12	02/26/10	18:27
CN	552103625	SLINGER	WI	113.0	8:40	02/26/10	20:55
CN	552103934	DUPLAINVILLE	WI	132.9	9:17	02/26/10	21:32
CN	552104048	WAUKESHA	WI	138.3	9:27	02/26/10	21:42
CN	172105799	FRANKLIN PARK	IL	220.6	34:32	02/27/10	22:47
----- TRANSFER							
CSXT	172105799	FRANKLIN PARK	IL	220.6	38:32	02/28/10	02:47
CSXT	172106183	ARGO	IL	232.9	38:55	02/28/10	03:10
CSXT	182106597	EAST CHICAGO	IN	256.5	62:09	03/01/10	02:24
CSXT	182106599	CLARKE JCT.	IN	259.2	62:14	03/01/10	02:29
CSXT	182107166	MILFORD JCT	IN	342.2	64:50	03/01/10	05:05
CSXT	392107553	DEFIANCE	OH	419.5	67:15	03/01/10	07:30
CSXT	392107716	DESHLER	OH	444.6	68:02	03/01/10	08:17
CSXT	392108990	LIMA	OH	480.3	91:39	03/02/10	07:54
CSXT	392110216	SIDNEY JCT	OH	513.2	92:40	03/02/10	08:55
CSXT	392111394	DAYTON	OH	550.3	93:50	03/02/10	10:05
CSXT	392112516	CINCINNATI	OH	609.6	140:11	03/04/10	08:26
CSXT	212112705	LATONIA	KY	615.5	162:22	03/05/10	06:37
CSXT	212114279	PATIO	KY	709.2	166:11	03/05/10	10:26
CSXT	212115808	CORBIN	KY	799.5	169:24	03/05/10	13:39
CSXT	472116821	DOSSETT	TN	877.9	172:21	03/05/10	16:36
CSXT	472116839	OAK RIDGE	TN	879.2	172:24	03/05/10	16:39

Length: 879.2 miles Transit Time: 172:24 Impedance: 1254.0

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
CN	220.6	171.0	0.0	0.0	49.5
CSXT	658.6	658.6	0.0	0.0	0.0

Total	879.2	829.6	0.0	0.0	49.5

Mileage by State :

IL: 74.5 IN: 143.8 KY: 217.2 OH: 215.3 TN: 49.4 WI: 179.1

Mileage by Tribal Lands:

Total Outside Tribal Lands : 879.2
 Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: TWO RIVERS WI CN
 TO : OAK RIDGE TN CSXT

	>0.0	22.7	59.7	139	326	821	1861	3326	5815			
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996	

IL	74.5	1.12	0.19	1.95	4.26	7.19	9.49	11.21	11.03	14.17	9.49	4.39
IN	143.8	4.35	31.95	46.81	22.44	10.45	9.08	8.20	3.89	4.43	1.47	0.67
KY	217.2	9.52	48.83	59.76	39.37	18.87	17.73	9.83	5.40	3.66	2.97	1.17

OH 215.3 10.83 44.00 47.56 22.28 19.65 21.59 18.60 13.09 12.66 3.69 1.49
 TN 49.4 2.75 11.57 11.53 9.09 4.69 4.27 3.62 1.35 0.37 0.12 0.00
 WI 179.1 8.12 31.32 51.04 23.03 13.28 15.17 13.76 10.28 8.04 3.77 1.25

TOTALS

879.2 36.69 167.86 218.65 120.47 74.13 77.33 65.22 45.04 43.33 21.51 8.97
 PERCENTAGES
 4.17 19.09 24.87 13.70 8.43 8.80 7.42 5.12 4.93 2.45 1.02

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
 WEIGHTED POPULATION
 People/sq. mi. 42.9 1015.8 6323.8
 People/sq. km. 16.5 392.2 2441.6

DISTANCE TOTALS
 Miles 543.7 261.7 73.8 879.2
 Kilometers 874.9 421.2 118.8 1414.9
 Percentages 61.8 29.8 8.4

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:
 IL 199515 IN 71427 KY 80220 OH 145525 TN 12761 WI 104668

Total Population within 800 meter Buffer Zone: 614116

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=TWO RIVERS

From STATE=WI

From SUBNET=CN

To CITY=OAK RIDGE

To STATE=TN

To SUBNET=CSXT

[IL]

Rural - KM= 12.1

Suburban - KM= 62.6

Urban - KM= 45.1

Total - KM= 119.8

Rural Pop Density= 26.0

Suburban Pop Density= 503.5

Urban Pop Density=2588.8

[IN]

Rural - KM= 169.9

Suburban - KM= 50.9

Urban - KM= 10.6

Total - KM= 231.4

Rural Pop Density= 16.8

Suburban Pop Density= 350.7

Urban Pop Density=2305.9

[KY]

Rural - KM= 253.4

Suburban - KM= 83.4

Urban - KM= 12.6

Total - KM= 349.5

Rural Pop Density= 17.3

Suburban Pop Density= 311.0

Urban Pop Density=2627.3

[OH]

Rural - KM= 200.6

Suburban - KM= 117.4

Urban - KM= 28.7

Total - KM= 346.5
 Rural Pop Density= 14.8
 Suburban Pop Density= 401.5
 Urban Pop Density=2238.3
 [TN]
 Rural - KM= 56.2
 Suburban - KM= 22.4
 Urban - KM= 0.8
 Total - KM= 79.5
 Rural Pop Density= 17.0
 Suburban Pop Density= 329.7
 Urban Pop Density=2080.0
 [WI]
 Rural - KM= 182.7
 Suburban - KM= 84.5
 Urban - KM= 21.0
 Total - KM= 288.2
 Rural Pop Density= 16.4
 Suburban Pop Density= 418.5
 Urban Pop Density=2374.0
 [Total]
 Rural - KM= 874.9
 Suburban - KM= 421.2
 Urban - KM= 118.8
 Total - KM=1414.9
 Rural Pop Density= 16.5
 Suburban Pop Density= 392.2
 Urban Pop Density=2441.6

TRAGIS Routing Engine Version 1.5.4 -- Railroad Data Network 3.2

FROM: MAINE YANKEE NP ME <C3> Leaving : 02/26/10 12:40
 TO : OAK RIDGE TN CSXT Arriving : 03/06/10 19:10

General Freight Routing Constraints Used
 Originating Railroad Factor = 0.80

Nodes Blocked:

R322111765USG - , NV
 R322115986USG - , NV
 R322115321USG - IRB , NV

RR	NODE	NAME	STATE	DIST	TIME	DATE	HOUR
<C3>	232103110-MAINE	YANKEE NP	ME	0.0	00:00	02/26/10	12:40
<C3>	232103138-BRUNSWICK		ME	19.2	2:23	02/26/10	15:03
----- TRANSFER							
ST	232103138-BRUNSWICK		ME	19.2	6:23	02/26/10	19:03
ST	232103320-PORTLAND		ME	47.2	9:07	02/26/10	21:47
ST	332103744-DOVER		NH	94.3	12:04	02/27/10	00:44
ST	332103983-ROCKINGHAM		NH	106.1	12:48	02/27/10	01:28
ST	252104509-LAWRENCE		MA	135.6	14:39	02/27/10	03:19
ST	252104615-LOWELL JCT.		MA	141.6	15:01	02/27/10	03:41
ST	252104593-LOWELL		MA	149.5	15:31	02/27/10	04:11
ST	252104685-AYER		MA	166.2	16:24	02/27/10	05:04
ST	252104663-FITCHBURG		MA	179.3	17:13	02/27/10	05:53
ST	362104281-ROTTERDAM JCT		NY	339.4	27:21	02/27/10	16:01
----- TRANSFER							
CSXT	362104281-ROTTERDAM JCT		NY	339.4	31:21	02/27/10	20:01
CSXT	362103889-UTICA		NY	410.0	33:34	02/27/10	22:14
CSXT	362103748-ROME		NY	421.6	33:56	02/27/10	22:36
CSXT	362103960-SYRACUSE		NY	465.8	57:48	02/28/10	22:28
CSXT	362103897-GENESEE JCT		NY	545.9	60:26	03/01/10	01:06
CSXT	362104303-BUFFALO		NY	609.7	85:30	03/02/10	02:10
CSXT	362104798-DUNKIRK(NYC,AMTK)		NY	648.0	86:42	03/02/10	03:22
CSXT	362105036-WESTFIELD		NY	665.4	87:15	03/02/10	03:55
CSXT	422105473-ERIE		PA	693.3	88:07	03/02/10	04:47
CSXT	392107192-CLEVELAND		OH	799.8	113:56	03/03/10	06:36
CSXT	392108163-GREENWICH		OH	846.0	115:23	03/03/10	08:03

CSXT 392110216-SIDNEY JCT	OH 954.7	118:47	03/03/10	11:27
CSXT 392111394-DAYTON	OH 991.7	119:57	03/03/10	12:37
CSXT 392112516-CINCINNATI	OH 1051.0	166:18	03/05/10	10:58
CSXT 212112705-LATONIA	KY 1057.0	188:29	03/06/10	09:09
CSXT 212114279-PATIO	KY 1150.6	192:17	03/06/10	12:57
CSXT 212115808-CORBIN	KY 1241.0	195:31	03/06/10	16:11
CSXT 472116821-DOSSETT	TN 1319.3	198:28	03/06/10	19:08
CSXT 472116839-OAK RIDGE	TN 1320.6	198:30	03/06/10	19:10

Length: 1320.6 miles Transit Time: 198:30 Impedance: 2079.5

Mileage Summary by Railroad:

RR	Total	A-M	B-M	A-Br	B-Br
<C3>	19.2	0.0	0.0	0.0	19.2
CSXT	981.3	980.9	0.4	0.0	0.0
ST	320.2	0.0	292.0	12.5	15.6
Total	1320.6	980.9	292.5	12.5	34.8

Mileage by State :

KY: 217.2 MA: 154.6 ME: 90.1 NH: 34.9 NY: 390.3 OH: 334.2
PA: 43.8 TN: 49.4 VT: 6.2

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1318.8
Total Inside Tribal Lands : 1.8

Cattaraugus Reservation : 1.8

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME <C3>
TO : OAK RIDGE TN CSXT

>0.0	22.7	59.7	139	326	821	1861	3326	5815			
ST MILES	0	-22.7	-59.7	-139	-326	-821	-1861	-3326	-5815	-9996	>9996

KY	217.2	9.52	48.83	59.76	39.37	18.87	17.73	9.83	5.40	3.66	2.97	1.17
ME	90.1	2.77	10.70	16.27	12.49	10.48	13.68	11.13	5.51	3.93	2.77	0.47
MA	154.6	14.59	19.80	16.58	19.51	14.99	19.25	19.53	12.30	8.53	4.51	4.96
NH	34.9	0.07	1.15	6.25	5.72	4.72	5.19	5.76	2.82	2.28	0.80	0.14
NY	390.3	17.35	64.06	93.11	59.69	36.66	43.78	33.63	20.58	12.91	6.54	2.03
OH	334.2	10.80	59.02	71.05	41.45	30.17	30.54	32.51	21.76	21.51	10.09	5.29
PA	43.8	1.96	3.57	3.88	6.91	6.37	6.83	4.68	4.49	2.51	1.87	0.75
TN	49.4	2.75	11.57	11.53	9.09	4.69	4.27	3.62	1.35	0.37	0.12	0.00
VT	6.2	0.51	1.15	1.15	0.83	1.67	0.45	0.26	0.13	0.00	0.00	0.00

TOTALS

1320.6 60.32 219.85 279.58 195.06 128.62 141.72 120.95 74.34 55.70 29.67 14.81

PERCENTAGES

4.57 16.65 21.17 14.77 9.74 10.73 9.16 5.63 4.22 2.25 1.12

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN
WEIGHTED POPULATION

People/sq. mi.	45.0	1001.2	6508.7
People/sq. km.	17.4	386.6	2513.0

DISTANCE

	TOTALS			
Miles	754.8	465.6	100.2	1320.6
Kilometers	1214.7	749.3	161.2	2125.3
Percentages	57.2	35.3	7.6	

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

KY 80220 ME 69495 MA 176593 NH 28079 NY 240398 OH 325781 PA 56449 TN 12761
VT 1194

Total Population within 800 meter Buffer Zone: 990970

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=MAINE YANKEE NP

From STATE=ME

From SUBNET=<C3>

To CITY=OAK RIDGE

To STATE=TN

To SUBNET=CSXT

[KY]

Rural - KM= 253.4

Suburban - KM= 83.4

Urban - KM= 12.6

Total - KM= 349.5

Rural Pop Density= 17.3

Suburban Pop Density= 311.0

Urban Pop Density=2627.3

[ME]

Rural - KM= 68.0

Suburban - KM= 65.7

Urban - KM= 11.5

Total - KM= 145.1

Rural Pop Density= 18.8

Suburban Pop Density= 373.8

Urban Pop Density=2424.9

[MA]

Rural - KM= 113.4

Suburban - KM= 106.3

Urban - KM= 29.0

Total - KM= 248.9

Rural Pop Density= 15.9

Suburban Pop Density= 424.3

Urban Pop Density=2771.3

[NH]

Rural - KM= 21.2

Suburban - KM= 29.8

Urban - KM= 5.2

Total - KM= 56.2

Rural Pop Density= 24.6

Suburban Pop Density= 399.1

Urban Pop Density=2192.5

[NY]

Rural - KM= 376.9

Suburban - KM= 216.7

Urban - KM= 34.6

Total - KM= 628.1

Rural Pop Density= 17.6

Suburban Pop Density= 378.8

Urban Pop Density=2391.3

[OH]

Rural - KM= 293.4

Suburban - KM= 185.0

Urban - KM= 59.4

Total - KM= 537.8

Rural Pop Density= 16.7

Suburban Pop Density= 418.3

Urban Pop Density=2472.8

[PA]

Rural - KM= 26.3

Suburban - KM= 36.0

Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density=2597.0
 [TN]
 Rural - KM= 56.2
 Suburban - KM= 22.4
 Urban - KM= 0.8
 Total - KM= 79.5
 Rural Pop Density= 17.0
 Suburban Pop Density= 329.7
 Urban Pop Density=2080.0
 [VT]
 Rural - KM= 5.9
 Suburban - KM= 4.0
 Urban - KM= 0.0
 Total - KM= 9.9
 Rural Pop Density= 15.5
 Suburban Pop Density= 204.9
 Urban Pop Density= 0.0
 [Total]
 Rural - KM=1214.7
 Suburban - KM= 749.3
 Urban - KM= 161.2
 Total - KM=2125.3
 Rural Pop Density= 17.4
 Suburban Pop Density= 386.6
 Urban Pop Density=2513.0

[TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=NEW ROCHELLE
 From STATE=NY
 From SUBNET=CSXT
 To CITY=AMARILLO
 To STATE=TX
 To SUBNET=UP
 [IL]
 Rural - KM= 239.0
 Suburban - KM= 82.9
 Urban - KM= 46.9
 Total - KM= 368.8
 Rural Pop Density= 8.3
 Suburban Pop Density= 492.5
 Urban Pop Density= 2423.3
 [IN]
 Rural - KM= 169.9
 Suburban - KM= 50.9
 Urban - KM= 10.6
 Total - KM= 231.4
 Rural Pop Density= 16.8
 Suburban Pop Density= 350.7
 Urban Pop Density= 2305.9
 [IA]
 Rural - KM= 26.1
 Suburban - KM= 5.0
 Urban - KM= 0.6
 Total - KM= 31.8
 Rural Pop Density= 15.6
 Suburban Pop Density= 196.8
 Urban Pop Density= 2337.5
 [KS]
 Rural - KM= 385.9
 Suburban - KM= 61.8

Urban - KM= 15.9
 Total - KM= 463.6
 Rural Pop Density= 7.2
 Suburban Pop Density= 469.6
 Urban Pop Density= 2241.9
 [MO]
 Rural - KM= 288.6
 Suburban - KM= 28.0
 Urban - KM= 3.6
 Total - KM= 320.2
 Rural Pop Density= 5.5
 Suburban Pop Density= 379.6
 Urban Pop Density= 2857.9
 [NY]
 Rural - KM= 485.6
 Suburban - KM= 255.7
 Urban - KM= 73.7
 Total - KM= 814.9
 Rural Pop Density= 15.4
 Suburban Pop Density= 376.0
 Urban Pop Density= 3028.0
 [OH]
 Rural - KM= 249.0
 Suburban - KM= 106.7
 Urban - KM= 41.1
 Total - KM= 397.0
 Rural Pop Density= 13.5
 Suburban Pop Density= 467.3
 Urban Pop Density= 2532.1
 [OK]
 Rural - KM= 174.0
 Suburban - KM= 12.5
 Urban - KM= 1.0
 Total - KM= 187.5
 Rural Pop Density= 3.3
 Suburban Pop Density= 473.6
 Urban Pop Density= 2065.1
 [PA]
 Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density= 2597.0
 [TX]
 Rural - KM= 182.4
 Suburban - KM= 18.1
 Urban - KM= 2.2
 Total - KM= 202.8
 Rural Pop Density= 4.9
 Suburban Pop Density= 393.9
 Urban Pop Density= 2169.4
 [Total]
 Rural - KM=2226.9
 Suburban - KM= 657.7
 Urban - KM= 203.9
 Total - KM=3088.4
 Rural Pop Density= 10.1
 Suburban Pop Density= 414.9
 Urban Pop Density= 2653.7

 [TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=NEW ROCHELLE

From STATE=NY
From SUBNET=CSXT
To CITY=HANFORD SITE
To STATE=WA
To SUBNET=UP
[ID]
Rural - KM= 120.4
Suburban - KM= 38.8
Urban - KM= 1.9
Total - KM= 161.1
Rural Pop Density= 9.9
Suburban Pop Density= 241.2
Urban Pop Density= 2020.0
[IL]
Rural - KM= 208.0
Suburban - KM= 67.0
Urban - KM= 41.7
Total - KM= 316.8
Rural Pop Density= 8.7
Suburban Pop Density= 475.7
Urban Pop Density= 2489.2
[IN]
Rural - KM= 169.9
Suburban - KM= 50.9
Urban - KM= 10.6
Total - KM= 231.4
Rural Pop Density= 16.8
Suburban Pop Density= 350.7
Urban Pop Density= 2305.9
[MN]
Rural - KM= 266.5
Suburban - KM= 147.5
Urban - KM= 22.4
Total - KM= 436.4
Rural Pop Density= 16.5
Suburban Pop Density= 315.4
Urban Pop Density= 2364.7
[MT]
Rural - KM=1037.9
Suburban - KM= 50.0
Urban - KM= 3.2
Total - KM=1091.0
Rural Pop Density= 2.9
Suburban Pop Density= 415.6
Urban Pop Density= 1978.2
[NY]
Rural - KM= 485.6
Suburban - KM= 255.7
Urban - KM= 73.7
Total - KM= 814.9
Rural Pop Density= 15.4
Suburban Pop Density= 376.0
Urban Pop Density= 3028.0
[ND]
Rural - KM= 575.9
Suburban - KM= 34.7
Urban - KM= 5.0
Total - KM= 615.6
Rural Pop Density= 2.4
Suburban Pop Density= 373.2
Urban Pop Density= 2346.7
[OH]
Rural - KM= 249.0
Suburban - KM= 106.7
Urban - KM= 41.1
Total - KM= 397.0
Rural Pop Density= 13.5
Suburban Pop Density= 467.3
Urban Pop Density= 2532.1
[PA]

Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density= 2597.0

[WA]

Rural - KM= 226.1
 Suburban - KM= 53.1
 Urban - KM= 12.8
 Total - KM= 292.1
 Rural Pop Density= 6.8
 Suburban Pop Density= 400.7
 Urban Pop Density= 2306.1

[WI]

Rural - KM= 311.8
 Suburban - KM= 35.0
 Urban - KM= 7.9
 Total - KM= 354.8
 Rural Pop Density= 7.4
 Suburban Pop Density= 369.2
 Urban Pop Density= 2144.1

[Total]

Rural - KM=3677.4
 Suburban - KM= 875.4
 Urban - KM= 228.6
 Total - KM=4781.5
 Rural Pop Density= 8.1
 Suburban Pop Density= 381.6
 Urban Pop Density= 2617.6

[TRAGIS]

TRAGIS Version=1.5.4

Mode=R

Network Version=3.2

Census Data=2000

Buffer Zone=800

[ROUTEINFO]

From CITY=NEW ROCHELLE

From STATE=NY

From SUBNET=CSXT

To CITY=TOOELE ORDNANCE DEPO

To STATE=UT

To SUBNET=UP

[CO]

Rural - KM= 12.7
 Suburban - KM= 1.5
 Urban - KM= 0.0
 Total - KM= 14.2
 Rural Pop Density= 12.8
 Suburban Pop Density= 555.5
 Urban Pop Density= 0.0

[IL]

Rural - KM= 129.7
 Suburban - KM= 68.0
 Urban - KM= 50.4
 Total - KM= 248.1
 Rural Pop Density= 13.3
 Suburban Pop Density= 467.5
 Urban Pop Density= 2538.7

[IN]

Rural - KM= 169.9
 Suburban - KM= 50.9
 Urban - KM= 10.6
 Total - KM= 231.4
 Rural Pop Density= 16.8
 Suburban Pop Density= 350.7
 Urban Pop Density= 2305.9

[IA]

Rural - KM= 399.9
 Suburban - KM= 127.3
 Urban - KM= 6.6
 Total - KM= 533.9
 Rural Pop Density= 13.8
 Suburban Pop Density= 223.7
 Urban Pop Density= 2352.8
 [NE]
 Rural - KM= 621.7
 Suburban - KM= 75.4
 Urban - KM= 13.3
 Total - KM= 710.4
 Rural Pop Density= 9.3
 Suburban Pop Density= 419.8
 Urban Pop Density= 2103.5
 [NY]
 Rural - KM= 485.6
 Suburban - KM= 255.7
 Urban - KM= 73.7
 Total - KM= 814.9
 Rural Pop Density= 15.4
 Suburban Pop Density= 376.0
 Urban Pop Density= 3028.0
 [OH]
 Rural - KM= 249.0
 Suburban - KM= 106.7
 Urban - KM= 41.1
 Total - KM= 397.0
 Rural Pop Density= 13.5
 Suburban Pop Density= 467.3
 Urban Pop Density= 2532.1
 [PA]
 Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density= 2597.0
 [UT]
 Rural - KM= 144.8
 Suburban - KM= 62.2
 Urban - KM= 19.9
 Total - KM= 226.8
 Rural Pop Density= 10.6
 Suburban Pop Density= 401.4
 Urban Pop Density= 2332.6
 [WY]
 Rural - KM= 688.1
 Suburban - KM= 36.4
 Urban - KM= 5.2
 Total - KM= 729.7
 Rural Pop Density= 2.7
 Suburban Pop Density= 409.7
 Urban Pop Density= 2012.6
 [Total]
 Rural - KM=2927.7
 Suburban - KM= 820.2
 Urban - KM= 228.9
 Total - KM=3976.8
 Rural Pop Density= 10.5
 Suburban Pop Density= 379.2
 Urban Pop Density= 2626.1

 [TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800

[ROUTEINFO]
 From CITY=INEEL
 From STATE=ID
 From SUBNET=UP
 To CITY=OAK RIDGE
 To STATE=TN
 To SUBNET=CSXT
 [CO]
 Rural - KM= 12.7
 Suburban - KM= 1.5
 Urban - KM= 0.0
 Total - KM= 14.2
 Rural Pop Density= 12.8
 Suburban Pop Density= 555.5
 Urban Pop Density= 0.0
 [ID]
 Rural - KM= 285.2
 Suburban - KM= 26.3
 Urban - KM= 5.9
 Total - KM= 317.5
 Rural Pop Density= 7.3
 Suburban Pop Density= 401.8
 Urban Pop Density= 2315.4
 [IL]
 Rural - KM= 172.4
 Suburban - KM= 56.3
 Urban - KM= 10.4
 Total - KM= 239.1
 Rural Pop Density= 13.5
 Suburban Pop Density= 455.4
 Urban Pop Density= 2053.3
 [IN]
 Rural - KM= 149.2
 Suburban - KM= 35.4
 Urban - KM= 4.0
 Total - KM= 188.6
 Rural Pop Density= 15.6
 Suburban Pop Density= 365.9
 Urban Pop Density= 2067.3
 [KS]
 Rural - KM= 240.1
 Suburban - KM= 30.7
 Urban - KM= 3.7
 Total - KM= 274.6
 Rural Pop Density= 7.3
 Suburban Pop Density= 340.2
 Urban Pop Density= 1945.0
 [KY]
 Rural - KM= 178.0
 Suburban - KM= 88.8
 Urban - KM= 16.4
 Total - KM= 283.2
 Rural Pop Density= 20.1
 Suburban Pop Density= 381.3
 Urban Pop Density= 2381.3
 [MO]
 Rural - KM= 366.2
 Suburban - KM= 76.9
 Urban - KM= 20.8
 Total - KM= 464.0
 Rural Pop Density= 8.6
 Suburban Pop Density= 436.2
 Urban Pop Density= 2375.8
 [NE]
 Rural - KM= 583.4
 Suburban - KM= 45.2
 Urban - KM= 7.7
 Total - KM= 636.2
 Rural Pop Density= 8.3
 Suburban Pop Density= 434.4

Urban Pop Density= 2048.3
 [TN]
 Rural - KM= 93.5
 Suburban - KM= 38.4
 Urban - KM= 0.9
 Total - KM= 132.8
 Rural Pop Density= 17.0
 Suburban Pop Density= 303.6
 Urban Pop Density= 1886.1
 [WY]
 Rural - KM= 717.2
 Suburban - KM= 33.7
 Urban - KM= 4.7
 Total - KM= 755.8
 Rural Pop Density= 2.7
 Suburban Pop Density= 412.3
 Urban Pop Density= 2004.7
 [Total]
 Rural - KM=2797.8
 Suburban - KM= 433.5
 Urban - KM= 74.6
 Total - KM=3305.9
 Rural Pop Density= 8.5
 Suburban Pop Density= 399.4
 Urban Pop Density= 2226.1

[TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=INEEL
 From STATE=ID
 From SUBNET=UP
 To CITY=AMARILLO
 To STATE=TX
 To SUBNET=UP
 [CO]
 Rural - KM= 457.5
 Suburban - KM= 138.7
 Urban - KM= 30.0
 Total - KM= 626.2
 Rural Pop Density= 8.9
 Suburban Pop Density= 426.5
 Urban Pop Density= 2336.2
 [ID]
 Rural - KM= 285.2
 Suburban - KM= 26.3
 Urban - KM= 5.9
 Total - KM= 317.5
 Rural Pop Density= 7.3
 Suburban Pop Density= 401.8
 Urban Pop Density= 2315.4
 [OK]
 Rural - KM= 68.4
 Suburban - KM= 0.9
 Urban - KM= 0.0
 Total - KM= 69.3
 Rural Pop Density= 2.1
 Suburban Pop Density= 309.2
 Urban Pop Density= 0.0
 [TX]
 Rural - KM= 192.5
 Suburban - KM= 10.9
 Urban - KM= 1.3
 Total - KM= 204.8
 Rural Pop Density= 2.9
 Suburban Pop Density= 488.1

Urban Pop Density= 2036.1
 [WY]
 Rural - KM= 669.5
 Suburban - KM= 22.4
 Urban - KM= 3.2
 Total - KM= 695.1
 Rural Pop Density= 2.2
 Suburban Pop Density= 406.6
 Urban Pop Density= 2058.8
 [Total]
 Rural - KM=1673.0
 Suburban - KM= 199.3
 Urban - KM= 40.4
 Total - KM=1913.0
 Rural Pop Density= 5.0
 Suburban Pop Density= 423.8
 Urban Pop Density= 2301.5

[TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=INEEL
 From STATE=ID
 From SUBNET=UP
 To CITY=TOOELE ORDNANCE DEPO
 To STATE=UT
 To SUBNET=UP

[ID]
 Rural - KM= 208.1
 Suburban - KM= 23.3
 Urban - KM= 5.9
 Total - KM= 237.2
 Rural Pop Density= 8.4
 Suburban Pop Density= 401.9
 Urban Pop Density= 2315.4
 [UT]
 Rural - KM= 131.4
 Suburban - KM= 66.1
 Urban - KM= 19.7
 Total - KM= 217.2
 Rural Pop Density= 15.0
 Suburban Pop Density= 392.7
 Urban Pop Density= 2340.3
 [Total]
 Rural - KM= 339.5
 Suburban - KM= 89.4
 Urban - KM= 25.6
 Total - KM= 454.4
 Rural Pop Density= 10.9
 Suburban Pop Density= 395.1
 Urban Pop Density= 2334.6

[TRAGIS]
 TRAGIS Version=1.5.4
 Mode=R
 Network Version=3.2
 Census Data=2000
 Buffer Zone=800
 [ROUTEINFO]
 From CITY=MAINE YANKEE NP
 From STATE=ME
 From SUBNET=<C3>
 To CITY=TOOELE ORDNANCE DEPO
 To STATE=UT
 To SUBNET=UP
 [CO]

Rural - KM= 12.7
 Suburban - KM= 1.5
 Urban - KM= 0.0
 Total - KM= 14.2
 Rural Pop Density= 12.8
 Suburban Pop Density= 555.5
 Urban Pop Density= 0.0
 [IL]
 Rural - KM= 129.7
 Suburban - KM= 68.0
 Urban - KM= 50.4
 Total - KM= 248.1
 Rural Pop Density= 13.3
 Suburban Pop Density= 467.5
 Urban Pop Density= 2538.7
 [IN]
 Rural - KM= 169.9
 Suburban - KM= 50.9
 Urban - KM= 10.6
 Total - KM= 231.4
 Rural Pop Density= 16.8
 Suburban Pop Density= 350.7
 Urban Pop Density= 2305.9
 [IA]
 Rural - KM= 399.9
 Suburban - KM= 127.3
 Urban - KM= 6.6
 Total - KM= 533.9
 Rural Pop Density= 13.8
 Suburban Pop Density= 223.7
 Urban Pop Density= 2352.8
 [ME]
 Rural - KM= 68.0
 Suburban - KM= 65.7
 Urban - KM= 11.5
 Total - KM= 145.1
 Rural Pop Density= 18.8
 Suburban Pop Density= 373.8
 Urban Pop Density= 2424.9
 [MA]
 Rural - KM= 113.4
 Suburban - KM= 106.3
 Urban - KM= 29.0
 Total - KM= 248.9
 Rural Pop Density= 15.9
 Suburban Pop Density= 424.3
 Urban Pop Density= 2771.3
 [NE]
 Rural - KM= 621.7
 Suburban - KM= 75.4
 Urban - KM= 13.3
 Total - KM= 710.4
 Rural Pop Density= 9.3
 Suburban Pop Density= 419.8
 Urban Pop Density= 2103.5
 [NH]
 Rural - KM= 21.2
 Suburban - KM= 29.8
 Urban - KM= 5.2
 Total - KM= 56.2
 Rural Pop Density= 24.6
 Suburban Pop Density= 399.1
 Urban Pop Density= 2192.5
 [NY]
 Rural - KM= 376.9
 Suburban - KM= 216.7
 Urban - KM= 34.6
 Total - KM= 628.1
 Rural Pop Density= 17.6
 Suburban Pop Density= 378.8

Urban Pop Density= 2391.3
 [OH]
 Rural - KM= 249.0
 Suburban - KM= 106.7
 Urban - KM= 41.1
 Total - KM= 397.0
 Rural Pop Density= 13.5
 Suburban Pop Density= 467.3
 Urban Pop Density= 2532.1
 [PA]
 Rural - KM= 26.3
 Suburban - KM= 36.0
 Urban - KM= 8.3
 Total - KM= 70.5
 Rural Pop Density= 21.2
 Suburban Pop Density= 402.5
 Urban Pop Density= 2597.0
 [UT]
 Rural - KM= 144.8
 Suburban - KM= 62.2
 Urban - KM= 19.9
 Total - KM= 226.8
 Rural Pop Density= 10.6
 Suburban Pop Density= 401.4
 Urban Pop Density= 2332.6
 [VT]
 Rural - KM= 5.9
 Suburban - KM= 4.0
 Urban - KM= 0.0
 Total - KM= 9.9
 Rural Pop Density= 15.5
 Suburban Pop Density= 204.9
 Urban Pop Density= 0.0
 [WY]
 Rural - KM= 688.1
 Suburban - KM= 36.4
 Urban - KM= 5.2
 Total - KM= 729.7
 Rural Pop Density= 2.7
 Suburban Pop Density= 409.7
 Urban Pop Density= 2012.6
 [Total]
 Rural - KM=3027.5
 Suburban - KM= 986.9
 Urban - KM= 235.5
 Total - KM=4250.0
 Rural Pop Density= 11.1
 Suburban Pop Density= 384.3
 Urban Pop Density= 2464.3

TRAGIS Routing Engine Version 1.5.4 -- Highway Data Network 4.0

FROM: MAINE YANKEE NP ME Leaving : 03/02/10 18:35
 TO : ORNL TN Arriving : 03/03/10 13:55

Routing parameters used to calculate the route-

Routing type: Commercial with 2 driver(s) *Not HRCQ
 Time bias: 0.70 Mile bias: 0.30, Toll bias: 1.00

Constraints used on route:
 Prohibit use of links prohibiting truck use
 Prohibit use of ferry crossing

Miles	Hwy Sign	City	Dir	Junction	State	Dist	Time	Date	Hour
0.0		MAINE YANKEE	NP		ME	0.0	0:00	03/02/10	18:35
1.1	LOCAL	MONTSWEAG	E	S144	LOCL ME	1.1	0:02	03/02/10	18:37

0.9 S144 MONTSWEAG NE U1 S144 ME 2.0 0:03 03/02/10 18:38
 17.9 U1 BRUNSWICK W I95 U1 ME 19.9 0:23 03/02/10 18:58
 17.5 I95 FALMOUTH FRSD W I295I95 ME 37.4 0:39 03/02/10 19:14
 10.8 I295 SOUTH PORTLAND W TMETX6A ME 48.2 0:49 03/02/10 19:24
 37.8 I95 \$ TMET\$ YORK VILLAGE NW I95 TMET ME 86.0 1:27 03/02/10 20:02
 4.9 I95 KITTERY NW I95 S236 ME 90.9 1:32 03/02/10 20:07
 1.3 I95 crossing state border ME/NH BD 92.2 1:33 03/02/10 20:08
 3.1 I95 PORTSMOUTH SW I95 X3 NH 95.3 1:36 03/02/10 20:11
 12.1 I95 \$ TNHT\$ SEABROOK W I95 X1 NH 107.4 1:48 03/02/10 20:23
 0.9 I95 crossing state border MA/NH BD 108.4 1:49 03/02/10 20:24
 1.6 I95 AMESBURY E I495I95 MA 110.0 1:50 03/02/10 20:25
 55.5 I495 MARLBOROUGH NW I290I495 MA 165.5 2:41 03/02/10 21:16
 20.3 I290 AUBURN I290I395 MA 185.8 3:01 03/02/10 21:36
 0.8 I90 XRAMP AUBURN N I90 X10 MA 186.6 3:03 03/02/10 21:38
 11.7 I90 \$ TMT\$ STURBRIDGE NE I84 I90 MA 198.3 3:13 03/02/10 21:48
 1.4 I84 STURBRIDGE N I84 X3 MA 199.7 3:15 03/02/10 21:50
 6.6 I84 crossing state border CT/MA BD 206.3 3:21 03/02/10 21:56
 33.2 I84 EAST HARTFORD I84 X57 CT 239.5 3:51 03/02/10 22:26
 0.7 TWCHW EAST HARTFORD U5 WCHW CT 240.2 3:52 03/02/10 22:27
 0.9 U5 TWCHW HARTFORD S I91 X29 CT 241.1 3:53 03/02/10 22:28
 Rest 30 minutes
 37.1 I91 NEW HAVEN I91 I95 CT 278.2 4:59 03/02/10 23:34
 45.0 I95 GREENWICH I95 X3 CT 323.2 5:48 03/03/10 00:23
 2.6 I95 crossing state border CT/NY BD 325.8 5:51 03/03/10 00:26
 0.9 I95 PORT CHESTER S I287I95 NY 326.7 5:52 03/03/10 00:27
 9.5 I95 \$ TNET\$ NEW ROCHELLE I95 X15 NY 336.2 6:03 03/03/10 00:38
 6.7 I95 BRONX SE I678I95 NY 343.0 6:11 03/03/10 00:46
 0.5 I95 I278 BRONX E I278I95 NY 343.4 6:12 03/03/10 00:47
 5.5 I95 G W BRIDGE E I95 X1A NY 348.9 6:21 03/03/10 00:56
 0.5 I95 # crossing state border NJ/NY BD 349.4 6:24 03/03/10 00:59
 0.4 I95 # FT LEE NE TPAL I95 NJ 349.8 6:26 03/03/10 01:01
 0.8 I95 FT LEE NW I95 X73 NJ 350.6 6:27 03/03/10 01:02
 2.1 U1 U46 RIDGEFIELD N U1 U46 NJ 352.7 6:29 03/03/10 01:04
 0.8 U46 RIDGEFIELD PK S I95 X18 NJ 353.5 6:31 03/03/10 01:06
 1.4 I95 \$ TNJT\$ RIDGEFIELD W I95EI95W NJ 354.9 6:33 03/03/10 01:08
 7.7 I95W\$ TNJT\$ KEARNY S I95EI95W NJ 362.6 6:40 03/03/10 01:15
 3.4 I95 \$ TNJT\$ NEWARK SE I78 I95 NJ 366.0 6:43 03/03/10 01:18
 0.5 I78 \$ NEWARK S I78 X58 NJ 366.5 6:43 03/03/10 01:18
 54.1 I78 ALPHA NE I78 X3 NJ 420.6 7:33 03/03/10 02:08
 2.6 I78 # crossing state border NJ/PA BD 423.2 7:36 03/03/10 02:11
 0.2 I78 # EASTON SE I78 X75 PA 423.4 7:36 03/03/10 02:11
 Rest 30 minutes
 76.4 I78 BORDNERSVILLE SE I78 I81 PA 499.8 9:17 03/03/10 03:52
 83.8 I81 GREENCASTLE E I81 X5 PA 583.6 10:36 03/03/10 05:11
 4.8 I81 crossing state border MD/PA BD 588.4 10:41 03/03/10 05:16
 8.5 I81 HALFWAY W I70 I81 MD 596.9 10:49 03/03/10 05:24
 3.6 I81 crossing state border MD/WV BD 600.5 10:52 03/03/10 05:27
 21.1 I81 INWOOD W I81 X5 WV 621.5 11:10 03/03/10 05:45
 5.1 I81 crossing state border VA/WV BD 626.6 11:14 03/03/10 05:49
 103.2 I81 STAUNTON SE I64 I81 VA 729.7 12:50 03/03/10 07:25
 Rest 30 minutes
 30.4 I64 I81 LEXINGTON E I64 I81 VA 760.2 13:48 03/03/10 08:23
 109.4 I81 FT CHISWELL E I77 I81 VA 869.5 15:29 03/03/10 10:04
 8.8 I77 I81 WYTHEVILLE E I77 I81 VA 878.4 15:37 03/03/10 10:12
 71.7 I81 BRISTOL W I81 X1 VA 950.0 16:45 03/03/10 11:20
 0.9 I81 crossing state border TN/VA BD 950.9 16:45 03/03/10 11:20
 Rest 30 minutes
 74.9 I81 DANDRIDGE NE I40 I81 TN 1025.8 18:20 03/03/10 12:55
 36.4 I40 KNOXVILLE W I40 I640 TN 1062.3 18:54 03/03/10 13:29
 9.1 I40 I75 KNOXVILLE W I40 X376 TN 1071.4 19:04 03/03/10 13:39
 5.8 S162 SOLWAY S162S62 TN 1077.2 19:10 03/03/10 13:45
 2.5 S62 SCARBORO S62 LOCL TN 1079.7 19:13 03/03/10 13:48
 6.1 LOCAL ORNL TN 1085.8 19:20 03/03/10 13:55

Total elapsed time: 19:20 Total trip mileage: 1085.8 Impedance: 1054.2

Mileage by State :

CT: 119.5 MA: 97.9 MD: 12.0 ME: 92.2 NH: 16.2 NJ: 73.8
 NY: 23.6 PA: 165.2 TN: 134.9 VA: 324.3 WV: 26.1

Mileage by Sign Type:

1-INTERSTATE: 1047.0 2-US: 21.7 3-STATE: 9.2 4-TURNPIKE: 0.7
6-LOCAL: 7.2

Mileage by Lane Type:

1-Multi-Lane Controlled Access: 1061.0 3-Multi-Lane Divided Highway: 9.1
5-Principle Road: 7.4 7-Other: 8.2

Mileage by Tribal Lands:

Total Outside Tribal Lands : 1085.8
Total Inside Tribal Lands : 0.0

TRAGIS Routing Engine Version 1.5.4 -- 2000 Census Data

POPULATION DENSITY within 800 meter Buffer Zone:

FROM: MAINE YANKEE NP ME
TO : ORNL TN

>0.0 22.7 59.7 139 326 821 1861 3326 5815
ST MILES 0 -22.7 -59.7 -139 -326 -821 -1861 -3326 -5815 -9996 >9996

CT 119.5 3.07 3.85 6.13 11.93 13.48 16.57 21.84 18.66 10.43 7.59 5.97
ME 92.2 2.38 6.78 13.46 14.51 16.27 18.75 11.80 5.30 1.19 1.32 0.43
MD 12.0 0.36 0.74 1.38 1.06 1.57 2.99 2.06 1.04 0.85 0.00 0.00
MA 97.9 0.88 2.76 6.25 11.38 16.28 20.95 18.21 12.10 4.70 2.30 2.04
NH 16.2 0.99 0.62 1.31 1.89 3.63 3.83 2.20 1.27 0.49 0.00 0.00
NJ 73.8 9.46 5.81 7.09 5.92 6.15 9.77 10.65 6.67 4.45 3.88 4.01
NY 23.6 0.76 0.12 0.07 0.07 0.20 0.80 2.02 2.63 2.69 3.77 10.46
PA 165.2 1.96 11.33 38.68 31.63 25.98 24.32 14.80 9.69 4.67 1.69 0.48
TN 134.9 7.18 10.09 22.35 27.07 22.19 20.93 14.98 6.01 3.53 0.57 0.04
VA 324.3 16.54 54.94 49.81 54.01 55.18 50.24 28.26 9.32 4.36 1.28 0.37
WV 26.1 0.28 0.28 2.19 5.06 4.86 6.89 4.08 2.04 0.35 0.07 0.00

TOTALS

1085.8 43.86 97.32 148.72 164.53 165.79 176.04 130.90 74.73 37.71 22.47 23.80
PERCENTAGES
4.04 8.96 13.70 15.15 15.27 16.21 12.05 6.88 3.47 2.07 2.19

BASIS: 2000 Census data

RADTRAN Input Data RURAL SUBURBAN URBAN

WEIGHTED POPULATION

People/sq. mi. 52.4 929.5 7285.0
People/sq. km. 20.2 358.9 2812.7

DISTANCE

TOTALS
Miles 454.4 547.5 84.0 1085.8
Kilometers 731.3 881.0 135.1 1747.4
Percentages 41.9 50.4 7.7

BASIS (people/sq mi.) <139 139-3326 >3326

Population within 800 meter Buffer Zone by State:

CT 248687 ME 52712 MD 8804 MA 112883 NH 8133 NJ 150685 NY 463327 PA 91341
TN 66637 VA 119000 WV 13999

Total Population within 800 meter Buffer Zone: 1336208