

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Petition of Ace Telephone)
Company, Allendale Telephone Company,)
Barry County Telephone Company, Blanchard)
Telephone Company, Bloomingdale Telephone)
Company, Chippewa County Telephone Company)
Deerfield Farmers' Telephone Company,)
Hiawatha Telephone Company, Kaleva Telephone)
Company, Midway Telephone Company, Ogden)
Telephone Company, Ontonagon Telephone)
Company, Pigeon Telephone Company, the)
Upper Peninsula Telephone Company, Waldron)
Telephone Company, and Winn Telephone)
Company, For the Arbitration of Interconnection)
Rates, Terms and Conditions and Related)
Arrangements with Alltel Communications, Inc.)
Pursuant to Section 252(b) of the Federal)
Telecommunications Act of 1996)
_____)

Case No. U-14889

**AFFIDAVIT OF
WILL BRANDT**

I, Will Brandt, being of lawful age and duly sworn on oath, states that if called as a witness in this matter that I would be competent to testify to the following:

I have caused to be prepared the attached written testimony in the above referenced docket. This testimony is true and correct to the best of my knowledge, information, and belief.

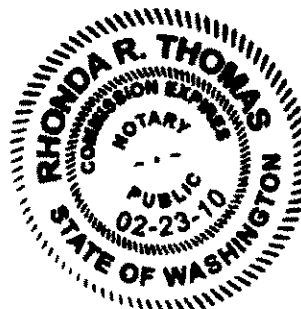
Further Affiant sayeth not.

Will Brandt

Subscribed and Sworn to before me
this 8th day of June, 2006.

Rhonda R. Thomas

Notary Public



BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the petition of Ace, Allendale, Barry)
County, Blanchard, Bloomingdale, Chippewa County,)
Deerfield Farmers', Hiawatha, Kaleva, Midway, Ogden,)
Ontonagon, Pigeon, Upper Peninsula, Waldron, and Winn)
Telephone Company for the arbitration of interconnection)
rates, terms and conditions, and related arrangements with)
Alltel Communications, Inc., pursuant to Section 252(b) of)
the Federal Telecommunications Act of 1996.)

Case U-14889

DIRECT TESTIMONY OF

WILL BRANDT

ON BEHALF OF ALLTEL COMMUNICATIONS

1 **I. QUALIFICATIONS AND PURPOSE OF TESTIMONY**

2 **Q: PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.**

3 A: My name is Will Brandt. I am employed by Alltel Communications. My business
4 address is 3650 131st Avenue Southeast, Bellevue, Washington 98006.

5 **Q: FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?**

6 A: I am testifying on behalf of Alltel Communications ("Alltel Wireless"), which provides
7 commercial mobile radio services ("CMRS") in the state of Michigan.

8 **Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

9 A: I have a Bachelors degree in International Studies from the University of Washington in
10 Seattle, Washington.

11 **Q: WHAT IS YOUR PROFESSIONAL EXPERIENCE IN THE FIELD OF TELECOMMUNICATIONS?**

12 A: I was hired by Western Wireless in September of 2000, which merged with Alltel in
13 August of 2005. I have held many positions in the company, ranging from Customer
14 Care Representative to Senior Quality Analyst to my current position as Senior
15 Regulatory Analyst. My relevant experience includes working with and creating
16 databases and reports, data mining, and performing analysis of various data sets, studies,
17 and trends.

18 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 The purpose of my testimony is to provide clear facts, calculations, and exhibits that
20 determine interim reciprocal compensation rates in accordance with FCC rules that
21 should be implemented if interim transport rates, rather than the current zero rate or bill
22 and keep, must be implemented related to the Petitioner local exchange carriers (LECs).
23 The LECs that will be the focus of my testimony are as follows: Ace Telephone
24 Company, Inc; Allendale Telephone Company; Barry County Telephone Company;

1 Blanchard Telephone Association, Inc; Bloomingdale Telephone Company; Chippewa
2 County Telephone Company; Deerfield Farmers Telephone Company; Hiawatha
3 Telephone Company; Kaleva Telephone Company; Midway Telephone Company; Ogden
4 Telephone Company; Ontonagon County Telephone Company; Pigeon Telephone
5 Company; Upper Peninsula Telephone Company; Waldron Telephone Company; Winn
6 Telephone Company.

7 **II. FCC STANDARDS FOR INTERIM RECIPROCAL COMPENSATION FOR**
8 **TRANSPORT OF TELECOMMUNICATIONS TRAFFIC**

9 **Q: WHAT ARE THE FCC RULES REGARDING INTERIM RECIPROCAL COMPENSATION FOR**
10 **TRANSPORT OF TELECOMMUNICATIONS TRAFFIC?**

11 A. The FCC rules provide clear direction for the calculation of interim reciprocal
12 compensation rates for the transport of telecommunications traffic. C.F.R. §51.715 (b)
13 (3) prescribes that interim transport pricing is to be established as described in
14 §51.707(b)(2) which states:

15 (2) *Transport.* The incumbent LEC's rates for the transport of
16 telecommunications traffic, under this section, shall comply with the
17 proxies described in §51.513(c)(3) (4), and (5) of this part that apply to
18 the analogous unbundled network elements used in transporting a call
19 to the end office that services the called party.

20 The relevant subpart of §51.513(c) is sub paragraph (4) which states:

21 *Shared transmission facilities between tandem switches and end*
22 *offices.* The proxy-based rates for shared transmission facilities
23 between tandem switches and end offices shall be no greater than the
24 weighted per-minute equivalent of DS1 and DS3 interoffice dedicated
25 transmission link rates that reflects the relative number of DS1 and
26 DS3 circuits used in the tandem to end office links..., calculated using
27 a loading factor of 9,000 minutes per month per voice-grade circuit.

28 **Q: DO THESE RULES APPLY IN THIS INSTANCE?**

29 A: The FCC rules stated above apply in part for the following reasons:

30 1) The matter at-hand relates to transport traffic;

- 1 2) The Commission has not established transport rates for reciprocal
2 compensation that meet FCC forward looking economic cost guidelines, per §
3 51.715 (b) (c); and
4 3) If the current zero rate or bill and keep is not required then the Commission
5 should set interim transport rate ceilings for the Petitioner LECs per §§
6 51.715, 51.707, and 51.513 of the FCC rules.

7 **Q: IS A LOCAL SWITCHING RATE ELEMENT ALSO PERMITTED UNDER THE FCC'S INTERIM**
8 **DEFAULT RECIPROCAL COMPENSATION RATE STANDARDS?**

9 A: An interim default ceiling of \$.004 per minute of use for local switching is referenced in
10 § 51.715(b)(3).

11 **Q: IS A LOCAL SWITCHING ELEMENT APPROPRIATE IN THESE CASES?**

12 A: No. Local switching is non-usage sensitive. Testimonies filed by Ron Williams and
13 Craig Conwell on behalf of Alltel address this issue in more detail.

14 15 **III. DEVELOPMENT OF TRANSPORT RATES**

16 **Q: WHAT TRANSPORT RATES DID YOU CALCULATE FOR THE PETITIONERS?**

17 A: The table provided below indicates the transport rate that was calculated for each of the
18 Petitioners using the prescribed FCC rules for determining interim transport
19 compensation rates:

Ace Telephone Company, Inc	\$0.003224
Allendale Telephone Company	\$0.001927
Barry County Telephone Company	\$0.002278
Blanchard Telephone Association, Inc	\$0.001927
Bloomington Telephone Company	\$0.001927
Chippewa County Telephone Company	\$0.001947
Deerfield Farmers Telephone Company	\$0.001988
Hiawatha Telephone Company	\$0.002329
Kaleva Telephone Company	\$0.002308

Midway Telephone Company	\$0.004899
Ogden Telephone Company	\$0.001927
Ontonagon County Telephone Company	\$0.002695
Pigeon Telephone Company	\$0.002042
Upper Peninsula Telephone Company	\$0.001925
Waldron Telephone Company	\$0.001927
Winn Telephone Company	\$0.001927

1

2

Exhibit A of my testimony provides an explanation on how transport rates are calculated.

3

Exhibits B through Q are specific to each Petitioner and detail the calculations of these

4

rates for each Petitioner

5

Q: WHAT RESOURCES WERE USED IN THE PROCESS OF CALCULATING THE TRANSPORT

6

RATES?

7

A: The Local Exchange Routing Guide (LERG), the National Exchange Carrier Association

8

(NECA) Tariff 5, SBC/Ameritech and Verizon transit invoices with respect to Alltel

9

traffic that terminates to the Petitioners, and various mathematical formulas generally

10

described in my testimony were used in making these calculations.

11

Q: What types of data were used to calculate the overall transport rates?

12

A: The Operating Company Name (OCN) of each of the Petitioner LECs; the switches and

13

corresponding rate centers within their network; the host switch corresponding to such

14

switch; and the V&H coordinates¹ of each switch were all obtained from the LERG. DS1

15

circuit pricing, circuit cost per mile, and channel termination cost were obtained from

16

Section 17.2.2 of NECA Tariff 5, pertaining to rates and charges of switched access

¹ V&H coordinates are assigned to locate rate centers/switches on a grid of North America. V&H coordinates were designed by AT&T in 1957 by Jay K. Donald for the easy computation (by slide rule) of distances between telephone switching centers. *Source: Kentucky Public Service Commission website.*

1 service for local transport traffic. Each Petitioner LEC is listed in Section 17.5.1 (Rate
2 Tables) of NECA Tariff 5, and therefore the rates listed under Section 17.2.2 were used
3 for each cost element (DS1 circuit pricing, circuit cost per mile, and channel termination
4 cost). Other types of data used to calculate the overall transport rates were mileage
5 between a host switch and its remote switch, as well as mileage between the tandem and
6 host switch; the circuit cost per mile; the number of channel terminations; channel
7 termination cost; default traffic volume; Alltel-to-LEC transit minutes of usage (per
8 month) both at a switch and LEC level; the weight each switch holds against the overall
9 minutes of usage (per month) of the LEC; the default transport rate(s); weighted transport
10 rate(s).

11 **Q: WHERE DID YOU OBTAIN THE MINUTES USED IN THE WEIGHTING?**

12 A: Minutes used in the weighting were obtained from SBC/Ameritech and Verizon transit
13 invoices for Alltel. These transit bills list the switch and corresponding minutes of usage
14 for traffic that is transited from Alltel via tandem switches of the biller (SBC/Ameritech
15 and Verizon) to such switch. The time period is equal to one month of usage.
16 Bloomingdale Telephone Company and Ogden Telephone Company minutes were
17 obtained from Verizon transit invoices. Upper Peninsula Telephone Company minutes
18 were obtained from both SBC/Ameritech and Verizon transit invoices. All remaining
19 LEC minutes were obtained from SBC/Ameritech transit invoices. All of the traffic for
20 these LECs is transited via SBC/Ameritech and/or Verizon tandem switches. No transit
21 minutes could be found for Blanchard Telephone Association, Inc in either
22 SBC/Ameritech or Verizon transit invoices. However, because this LEC has only one
23 switch, this lack of data does not affect the calculation for its interim transport rate, as the

weight of its one switch is equal to 100 per cent. How interim transport rates are calculated is discussed later in my testimony.

Q: HOW WAS THE NUMBER OF CHANNEL TERMINATIONS DETERMINED?

A: The number of channel terminations (terms) was determined by whether a switch was a host or had a host. Traffic that is sent from a transit tandem to a host switch utilizes a total of one (1) channel term, essentially a “door” for the traffic to enter into that switch. Traffic that is sent from a host switch to an end office switch utilizes a total of three (3) channel terms: one for traffic entering into the host switch, one for traffic exiting the host switch, and one for traffic entering into the end office switch.

Q: HOW IS TRANSPORT MILEAGE CALCULATED?

A: Mileage between two points is calculated using V&H coordinates of the two points. Transport mileage for each end office switch was calculated using the V&H coordinates of the end office switch and its host switch. The formula used to calculate the distance in miles between a host switch and an end office switch is **the square root of**

$$(((V_E - V_O)^2 + (H_E - H_O)^2)/10)$$

Where E is the end office coordinates and O is the host coordinates

As no V&H coordinates were available for the meet point between the transit tandems and host switches, 10.0 miles was used as the default for the distance between these points. The 10.0 mileage distance I used in my calculations is greater than the mileage used in the mapping of the cost studies of the Petitioners.

Q: HOW IS THE DEFAULT TRAFFIC VOLUME CALCULATED?

A: The default traffic volume is calculated using the FCC’s very conservative presumption that a DS0 circuit has the capacity to carry 9,000 minutes of traffic over it per month. A DS1 circuit has a total of 24 DS0 trunks. Therefore, the default traffic volume of a DS1

circuit is equal to the capacity multiplied by the number of trunks, or 9,000 (minutes) multiplied by 24 (trunks), or 216,000 minutes per month. Based on the limited information made available by the Petitioners in their cost studies, it appears that all are using DS1 circuits.

Q: HOW IS THE DEFAULT TRANSPORT RATE CALCULATED?

A: The default transport rate is calculated by taking the sum of the circuit price, the product of mileage and circuit cost per miles, and the product of the number of channel terms and channel termination cost, and dividing that sum by the default traffic volume. For example, if circuit price equaled \$159.05, mileage equaled 10.0, circuit cost per miles equaled \$17.22, number of channel terms equaled 1, channel termination cost equaled \$84.89, and the default traffic volume equaled 216,000, the default transport rate would be calculated as follows:

$$((\$159.05) + (10.0 \times \$17.22) + (1 \times \$84.89)) / (216,000) \text{ or } \$0.001864$$

Q: HOW IS THE WEIGHT CALCULATED?

A: The weight is equal to the minutes for a specific switch divided by sum for all switches of a LEC. For example, if a switch had 10 minutes, and the total number of minutes for all switches of the LEC was equal to 100 minutes, the weight for that specific switch would be 10/100, or 10.0% of the total.

Q: HOW IS THE WEIGHTED TRANSPORT RATE CALCULATED?

A: The switch-specific weighted transport rate is equal to the weight of that switch divided by the default transport rate of such switch. For each Petitioner LEC, the weighted transport rate for each of their switches was calculated. Each weighted transport rate was then added together to obtain the overall weighted transport rate for that specific Petitioner LEC.

1
2 **IV. CONCLUSION**

3 **Q: DO YOU BELIEVE THE INTERIM TRANSPORT COMPENSATION RATES THAT YOU HAVE**
4 **CALCULATED FOR EACH OF THE PETITIONERS IS A CORRECT, JUST AND REASONABLE**
5 **REPRESENTATION OF COSTS UNDER AND COMPLIANT WITH THE FCC RULES?**

6 A: Yes, I do. Based on the resources I used to calculate the interim transport compensation
7 rates for each of the Petitioner LECs, I believe that such rates are a correct, just, and
8 reasonable presentation of costs under the FCC rules regarding interim reciprocal
9 compensation for transport of telecommunications traffic.

10 **Q: WHAT IS YOUR RECOMMENDATION CONCERNING THE APPLICATION OF THESE RATES?**

11 A: If zero rate or bill and keep is not required to continue and interim compensation rates are
12 to be implemented, the Commission should order that the rates I have developed and
13 presented in my testimony be adopted as interim reciprocal compensation rates. These
14 rates should be in effect until permanent FCC rule compliant rates are established; at
15 which time these interim rates would be subject to a retroactive true-up and replaced by
16 final reciprocal compensation rates.

17 **Q: DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

A: Yes, it does.

EXHIBIT A**EXPLANATION OF INTERIM TRANSPORT RATE CALCULATION:**

[A]	[B]	[C]	[D]	[E]	[F]
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BRMLMIXIRSO	BRIMLEY	-	4899	3489	1
BYMLMIXIRSO	BAY MILLES	BRIMLEY	4894	3513	3

[A]	[B]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
BYMLMIXIRSO	BRIMLEY	\$159.05	10.0	\$17.22	\$84.89	216,000	25,436	96.73%	\$0.001927	\$0.001864
BYMLMIXIRSO	BAY MILLS	\$159.05	7.8	\$17.22	\$84.89	216,000	861	3.27%	\$0.002537	\$0.000083
OVERALL RATE										\$0.001947

A- Switch: The local exchange carrier's switch**B- Rate Center:** The rate center that corresponds to the switch listed at its left**C- LEC Host:** When applicable, the switch that hosts the remote switch**D- V:** V Coordinate**E- H:** H Coordinate**F- # of Channel Terms:** The number of channels through which a call is transported, after the meet point with the local exchange carrier**G- DS1 Circuit Price:** Obtained from NECA Tariff 5, Section 17.2.2**H- Mileage:** The distance between a host switch and its remote switch, or between the SBC/Ameritech tandem switch and host switch. An assumed mileage of 10.0 miles was used for the distance between the tandem and host rate centers (switches). To calculate the distance between a host switch and its remote, the formula used is: $\text{square root } (((V1-V2)^2 + (H1-H2)^2)/10)$.**I- Circuit Cost Per Mile:** Obtained from NECA Tariff 5, Section 17.2.2**J- Channel Termination Cost:** Obtained from NECA Tariff 5, Section 17.2.2**K- Default Traffic Volume:** The maximum capacity that a DS1 circuit can carry per month, as presumed by the FCC. One DS1 circuit contains 24 DS0 circuits. Each DS0 has the capacity of 9,000 minutes per month; thus $24 \times 9000 = 216,000$.**L- Alltel Minutes:** Number of minutes transited in an average month via an SBC/Ameritech tandem from Alltel to the local exchange carrier, unless otherwise indicated.**M- Weight:** Column L divided by the sum of all rows in Column L**N- Default Transport Rate:** $((G)+(H \times I)+(F \times J))/K$ **O- Weighted Transport Rate:** $M \times N$ **Overall Weighted Transport Rate:** Sum of all rows in Column O

ACE TELEPHONE COMPANY, INC.

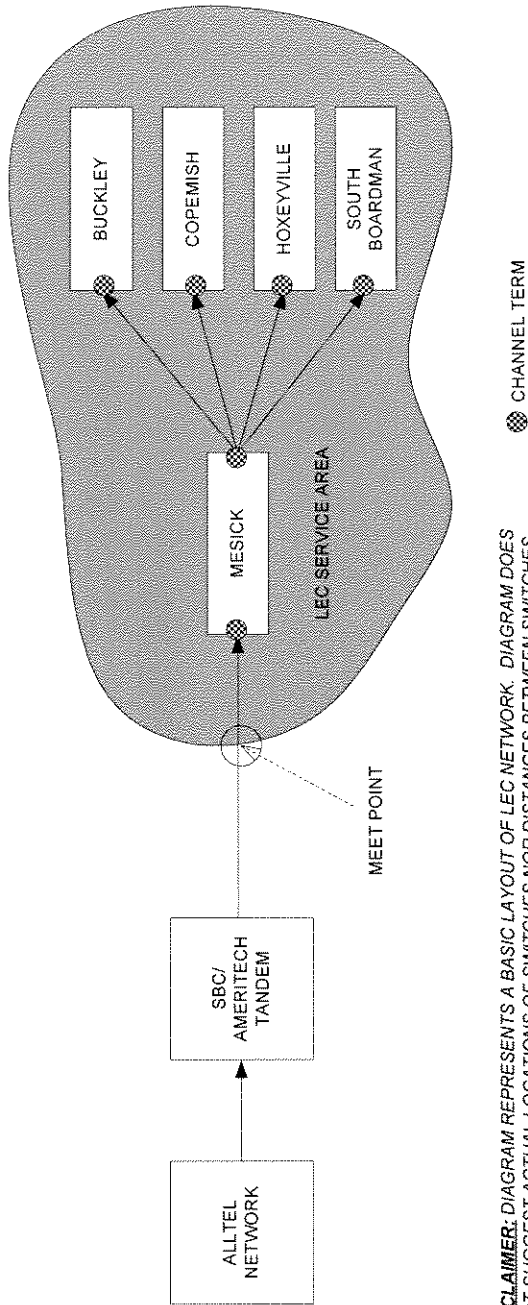
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BCKLMIXIRS1	BUCKLEY	MESICK	05341	03431	3
CPMHMIXIRS0	COPEMISH	MESICK	05361	03466	3
HXLVMIXIRS0	HOXEYVILLE	MESICK	05400	03397	3
MSCKMIXIDS1	MESICK	-	05361	03422	1
SBRDMIXIRS0	SOUTH BOARDMAN	MESICK	05281	03385	3

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
BCKLMIXIRS1	BUCKLEY	\$159.05	7.0	\$17.22	\$84.89	216,000	57,836	29.16%	\$0.002473	\$0.000721
CPMHMIXIRS0	COPEMISH	\$159.05	14.0	\$17.22	\$84.89	216,000	52,815	26.63%	\$0.003031	\$0.000807
HXVLMIXIRS0	HONEYVILLE	\$159.05	14.7	\$17.22	\$84.89	216,000	14,635	7.38%	\$0.003087	\$0.000228
MSCKMIXIDS1	MESICK	\$159.05	10.0	\$17.22	\$84.89	216,000	5,099	2.57%	\$0.001927	\$0.000050
SBRDMIXIRS0	SOUTH BOARDMAN	\$159.05	27.9	\$17.22	\$84.89	216,000	67,966	34.27%	\$0.004140	\$0.001418
OVERALL RATE										\$0.003224

EXHIBIT B-2

ACE TELEPHONE COMPANY, INC

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

ALLENDALE TELEPHONE COMPANY

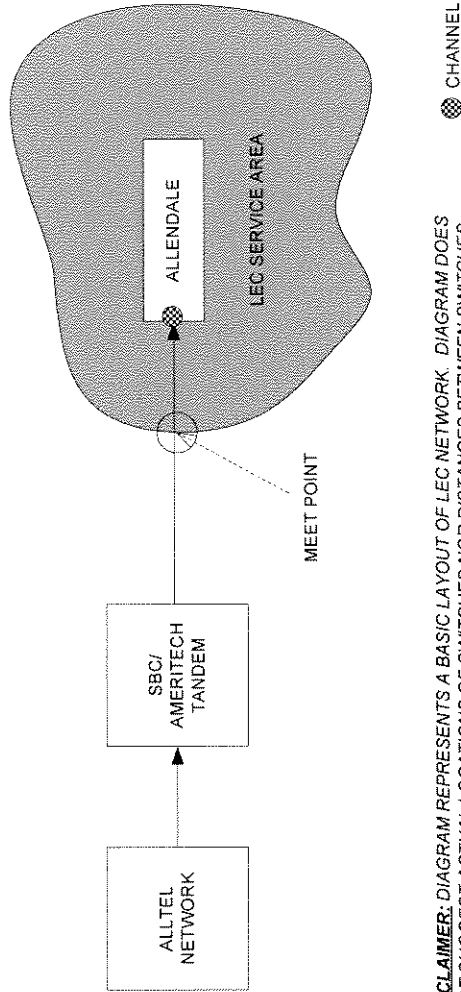
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
ALDLMIXJDS2	ALLENDALE	-	05649	03301	1

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
ALDL MIX DS2	ALLENDALE	\$159.05	10.0	\$17.22	\$84.89	216,000	93,340	100.0%	\$0.001927	\$0.001927
OVERALL RATE										\$0.001927

EXHIBIT C-2

ALLENDALE TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

BARRY COUNTY TELEPHONE COMPANY

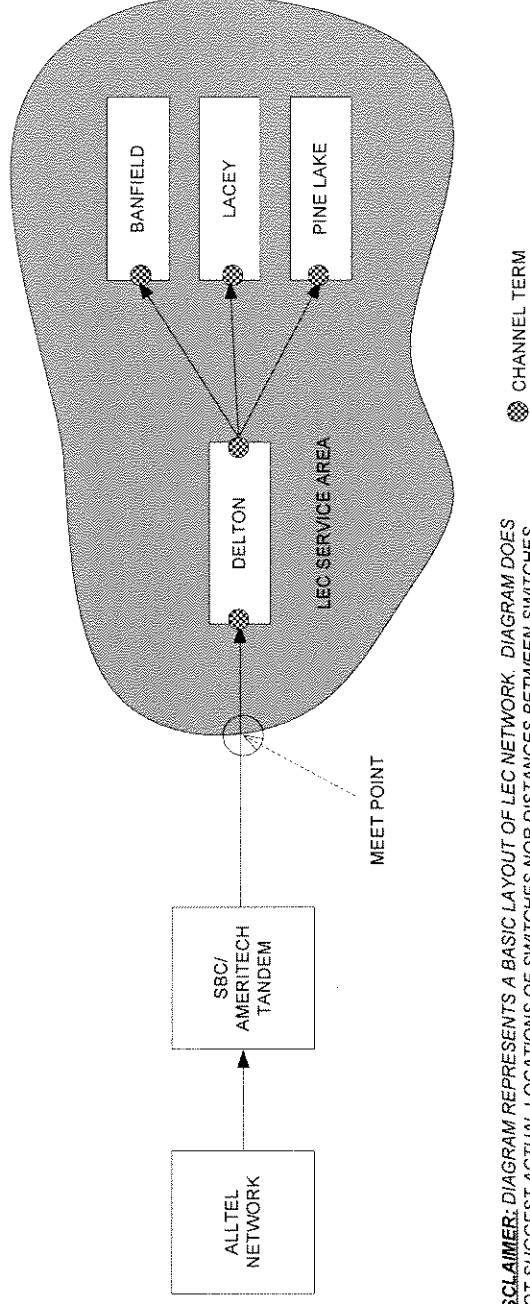
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BNFDMIXIRS0	BANFIELD	DELTON	05693	03154	3
DELTMIIXIDS0	DELTON	-	05696	03175	1
LACYMIXIRS0	LACEY	DELTON	05680	03143	3
PNLKMIXIRS0	PTINE LAKE	DELTON	05706	03193	3

[illegible]

EXHIBIT D-2

BARRY COUNTY TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

EXHIBIT E-1

BLANCHARD TELEPHONE ASSOCIATION, INC

DATA TABLE

Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BLNCMIXIDS0	BLANCHARD	-	05479	03241	1

INTERIM TRANSPORT RATE CALCULATION

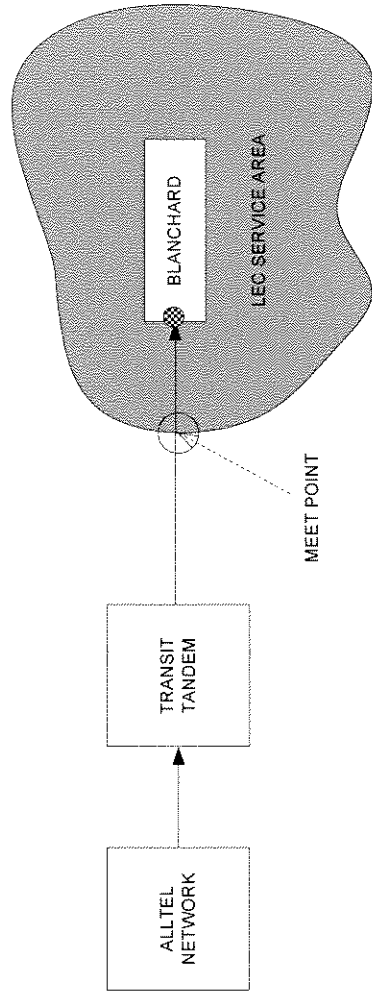
Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes*	Weight	Default Transport Rate	Weighted Transport Rate
BLNCMIXIDS0	BLANCHARD	\$159.05	10.0	\$17.22	\$84.89	216,000	-	100.0%	\$0.001927	\$0.001927
OVERALL RATE										\$0.001927

* No transit minutes for Blanchard Telephone Association, Inc could be found in either SBC/Ameritech or Verizon transit bills. Because this LEC has only one switch, this lack of data does not affect the calculation for its interim transport rate, as the weight is equal to 100%.

EXHIBIT E-2

BLANCHARD TELEPHONE ASSOCIATION, INC

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

BLOOMINGDALE TELEPHONE COMPANY

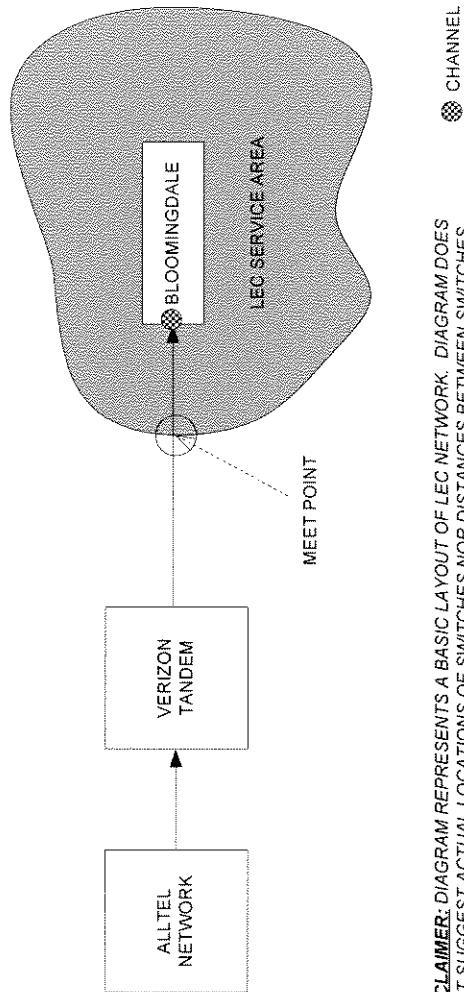
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BLDL MIXIDS0	BLOOMINGDALE	-	05762	03240	1

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
BLDL MIXIDS0	BLOOMINGDALE	\$159.05	10.0	\$17.22	\$84.89	216,000	46,098	100.0%	\$0.001927	\$0.001927
									OVERALL RATE	\$0.001927

EXHIBIT F-2

BLOOMINGDALE TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

CHIPPEWA COUNTY TELEPHONE COMPANY

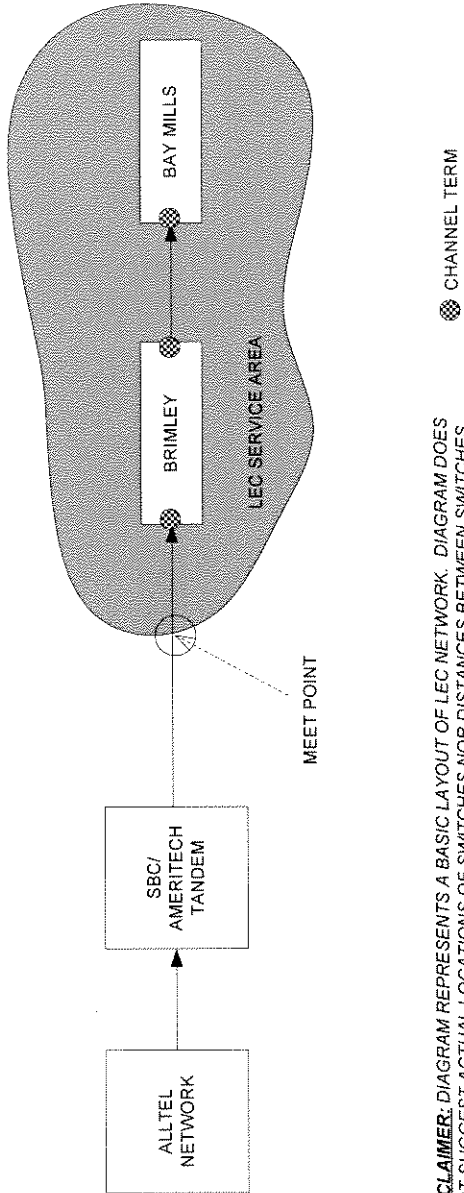
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BRMLMIXIDS0	BRIMLEY	-	04899	03489	1
BYMLMIXIRS0	BAY MILLS	BRIMLEY	04894	03513	3

[illegible]

EXHIBIT G-2

CHIPPEWA COUNTY TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

DEERFIELD FARMERS TELEPHONE COMPANY

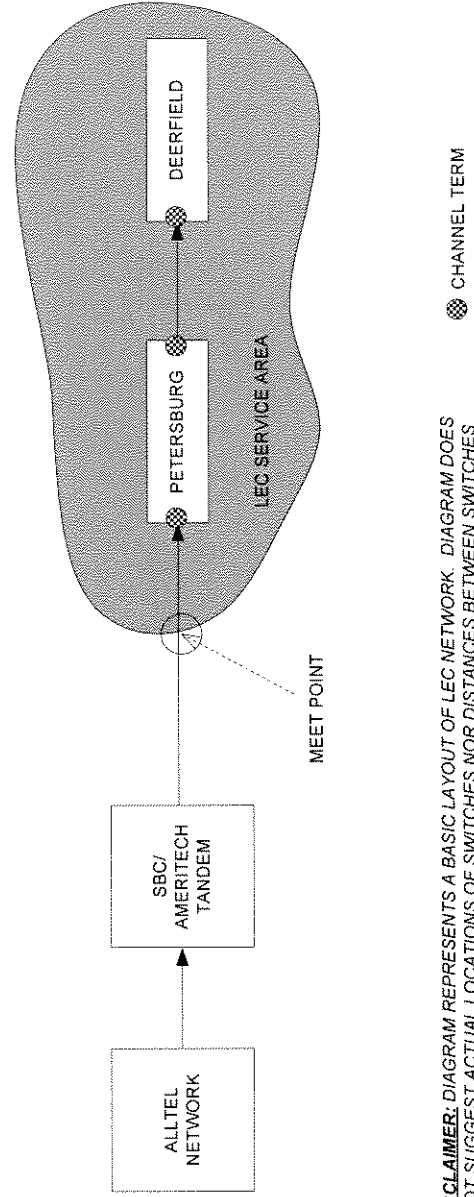
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
DRFDMIXIRS0	DEERFIELD	PETERSBURG	05679	02880	3
PTBGMIXIDS1	PETERSBURG	-	05672	02872	1

[illegible]

EXHIBIT H-2

DEERFIELD FARMERS TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

HIAWATHA TELEPHONE COMPANY

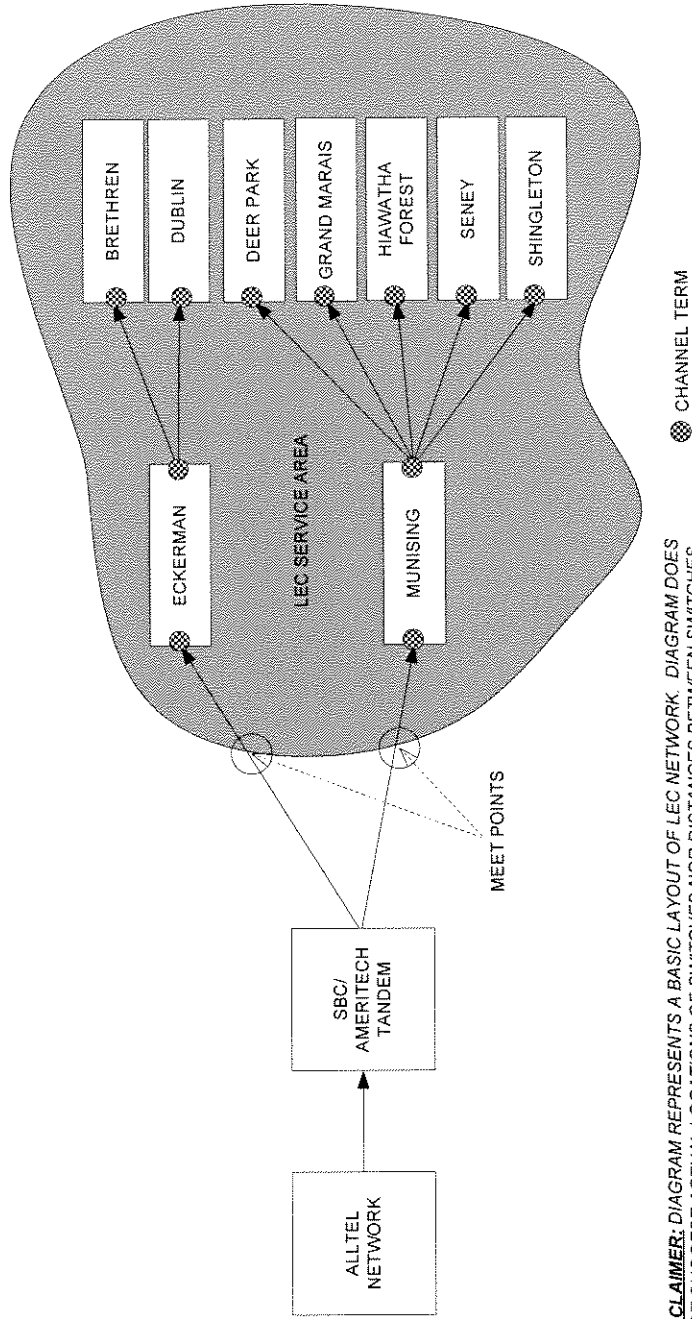
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
DRPKMIXIRS0	DEER PARK	MUNISING	04929	03652	3
ECKRMIXIDS0	ECKERMAN	-	04944	03542	1
GDMRMIXIRS0	GRAND MARAIS	MUNISING	04953	03703	3
HLBRMIXIRS0	HULBERT	ECKERMAN	04951	03559	3
HWFRMIXIRS0	HIAWATHA FOREST	MUNISING	05107	03729	3
MNSGMIXJDS0	MUNISING	-	05052	03763	2
PRDSMIXIRS0	PARADISE	ECKERMAN	04891	03575	3
SENYMIXIRS0	SENEY	MUNISING	05012	03663	3
SHNGMIXIRS0	SHINGLETON	MUNISING	05050	03732	3

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
DRPKMIXIRS0	DEER PARK	\$159.05	52.4	\$17.22	\$84.89	216,000	1,635	0.91%	\$0.006093	\$0.000055
ECKRMIXIDS0	ECKERMAN	\$159.05	10.0	\$17.22	\$84.89	216,000	5,539	3.07%	\$0.001927	\$0.000059
GDMRMIXIRS0	GRAND MARAIS	\$159.05	36.7	\$17.22	\$84.89	216,000	7,123	3.95%	\$0.004841	\$0.000191
HLBRMIXIRS0	HULBERT	\$159.05	5.9	\$17.22	\$84.89	216,000	2,662	1.48%	\$0.002386	\$0.000035
HWFRMIXIRS0	HIAWATHA FOREST	\$159.05	20.5	\$17.22	\$84.89	216,000	8,495	4.71%	\$0.003550	\$0.000167
MNSGMIXJDS0	MUNISING	\$159.05	10.0	\$17.22	\$84.89	216,000	129,925	72.11%	\$0.001927	\$0.001389
PRDSMIXIRS0	PARADISE	\$159.05	19.8	\$17.22	\$84.89	216,000	4,973	2.76%	\$0.003494	\$0.000096
SENYMIXIRS0	SENEY	\$159.05	34.1	\$17.22	\$84.89	216,000	3,673	2.04%	\$0.004634	\$0.000094
SHNGMIXIRS0	SHINGLETON	\$159.05	9.9	\$17.22	\$84.89	216,000	16,160	8.97%	\$0.002705	\$0.000243
OVERALL RATE										\$0.002329

EXHIBIT I-2

HIAWATHA TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



KALEVA TELEPHONE COMPANY

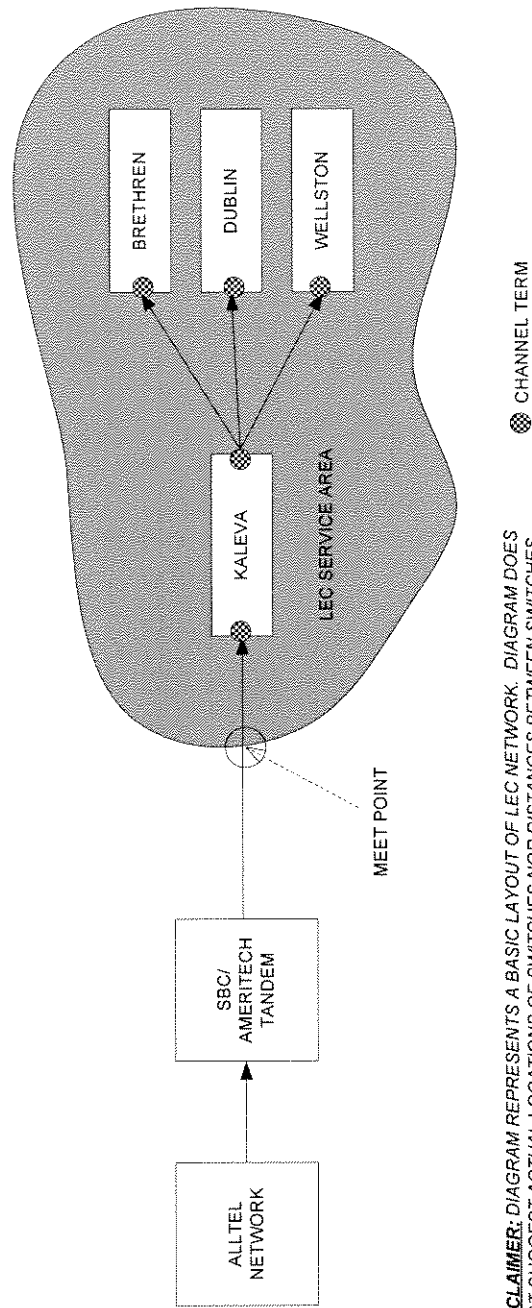
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BRTHMIXIRS	BRETHREN	KALEVA	05404	03453	3
DBLNMIXIRS	DUBLIN	KALEVA	05419	03428	3
KLVMIXIDS0	KALEVA	-	05390	03459	1
WLTNMIXIRS	WELLSTON	KALEVA	05414	03437	3

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
BRTMIXIRSA	BRETHREN	\$159.05	4.9	\$17.22	\$84.89	216,000	27,595	28.68%	\$0.002306	\$0.000662
DBLNMIXIRS0	DUBLIN	\$159.05	13.5	\$17.22	\$84.89	216,000	8,788	9.13%	\$0.002992	\$0.000273
KLVAMIXIDS0	KALEVA	\$159.05	10.0	\$17.22	\$84.89	216,000	39,031	40.57%	\$0.001927	\$0.000782
WLTNMXIRSA	WELLSTON	\$159.05	10.3	\$17.22	\$84.89	216,000	20,790	21.61%	\$0.002737	\$0.000591
OVERALL RATE									\$0.002308	

EXHIBIT J-2

KALEVA TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

EXHIBIT K-1**MIDWAY TELEPHONE COMPANY****DATA TABLE**

Switch	Rate Center	LEC Host*	V	H	# of Channel Terms
GDLKMIXIRS0	GOLDEN LAKE	ONTONAGON	05253	04038	3
TRCKMIXJRS0	TROUT CREEK	ONTONAGON	05205	04084	3
WTTNMIXJRS0	WATTON	ONTONAGON	05166	04036	3
ONTNMIXIDS0	ONTONAGON	-	05151	04164	-

INTERIM TRANSPORT RATE CALCULATION

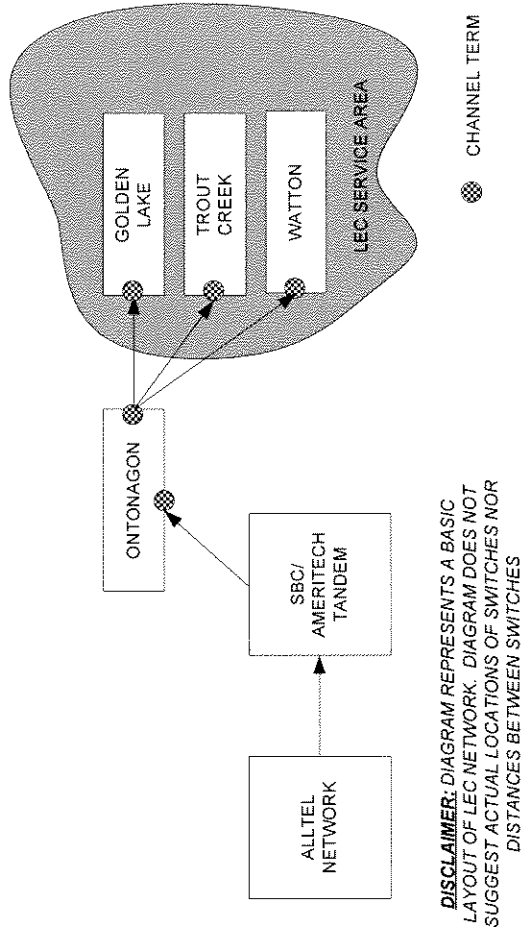
Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
GDLKMIXIRS0	GOLDEN LAKE	\$159.05	51.3	\$17.22	\$84.89	216,000	1,512	8.63%	\$0.006005	\$0.000518
TRCKMIXJRS0	TROUT CREEK	\$159.05	30.6	\$17.22	\$84.89	216,000	7,354	41.97%	\$0.004355	\$0.001828
WTTNMIXJRS0	WATTON	\$159.05	40.8	\$17.22	\$84.89	216,000	8,657	49.40%	\$0.005168	\$0.002553
OVERALL RATE										\$0.004899

* All switches for Midway Telephone Company have a host switch belonging to Ontonagon County Telephone Company. Data for this switch (ONTNMIXIDS0) is included in the first table above for calculation of mileage for the second table.

EXHIBIT K-2

MIDWAY TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



OGDEN TELEPHONE COMPANY

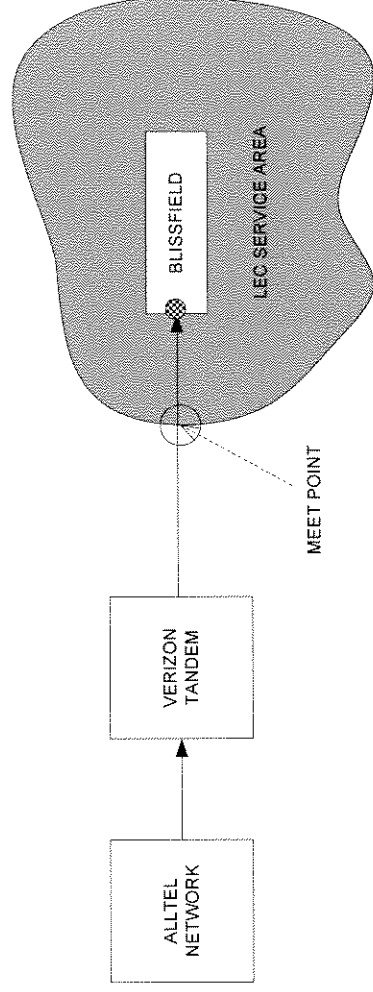
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
OGDCMIXIDS0	BLISSFIELD	-	05716	02893	1

[illegible]

EXHIBIT L-2

OGDEN TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

 CHANNEL TERM

ONTONAGON COUNTY TELEPHONE COMPANY

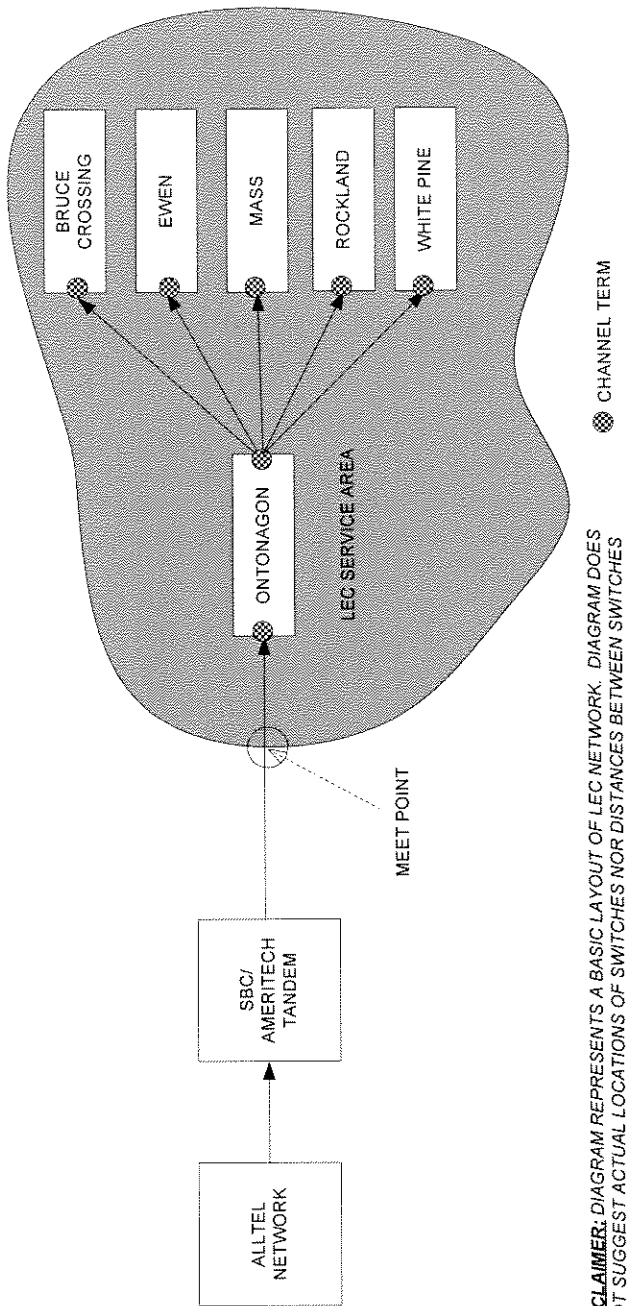
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
BRCRMIXIRS0	BRUCE CROSSING	ONTONAGON	05207	04112	3
EWENMIXIRS0	EWEN	ONTONAGON	05214	04125	3
MASSMIXIRS0	MASS	ONTONAGON	05156	04122	3
ONTNMIXIDS0	ONTONAGON	-	05151	04164	1
RKLDMIXIRS0	ROCKLAND	ONTONAGON	05166	04133	3
WHPMIXIRS0	WHITE PINE	ONTONAGON	05192	04187	3

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
BRCRMIXRS0	BRUCE CROSSING	\$159.05	24.2	\$17.22	\$84.89	216,000	11,394	12.36%	\$0.003845	\$0.000475
EWENMIXRS0	EWEN	\$159.05	23.5	\$17.22	\$84.89	216,000	12,088	13.12%	\$0.003789	\$0.000497
MASSMIXRS0	MASS	\$159.05	13.4	\$17.22	\$84.89	216,000	13,951	15.14%	\$0.002984	\$0.000452
ONTNMIXDS0	ONTONAGON	\$159.05	10.0	\$17.22	\$84.89	216,000	44,050	47.80%	\$0.001927	\$0.000921
RKLDMIXRS0	ROCKLAND	\$159.05	10.9	\$17.22	\$84.89	216,000	2,898	3.14%	\$0.002784	\$0.000088
WHPTMIXRS0	WHITE PINE	\$159.05	14.9	\$17.22	\$84.89	216,000	7,768	8.43%	\$0.003103	\$0.000262
OVERALL RATE									\$0.002695	

EXHIBIT M-2

ONTONAGON COUNTY TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



PIGEON TELEPHONE COMPANY

Switch	Rate Center	LEC Host	V	H	# of Channel Terms
ALBAMIXJRS0	ALBA	LKNRMIXJDS0	05196	03383	3
LKNRMIXJDS0	LAKE OF THE NORTH	-	05198	03365	1
LKNRMIXJDS1	LAKE OF THE NORTH	-	05200	03363	1
PGENMIXJDS1	PIGEON	-	05276	03027	1
TWNGMI01DS0	TWINING	-	05266	03132	1

[illegible]

EXHIBIT N-2

PIGEON TELEPHONE COMPANY

CHANNEL TERM DIAGRAM

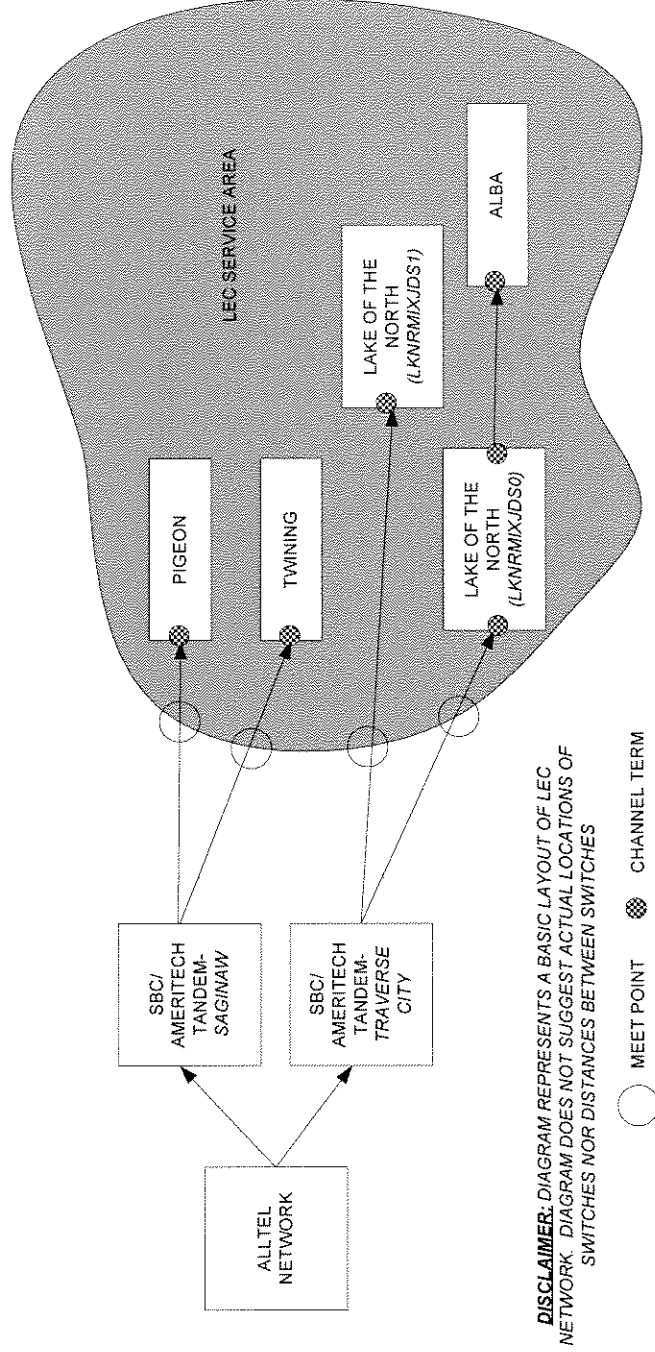


EXHIBIT O-1

UPPER PENINSULA TELEPHONE COMPANY

DATA TABLE

Switch	Rate Center	LEC Host	V	H	# of Channel Terms
CRNYMIABDS1	CARNEY	-	05273	03797	1
DNKNMIXIDS0	DONKEN	-	05114	04102	1
DRISMIXIDS0	DRUMMOND ISLAND	-	04907	03337	1
FLCHMIXIDS0	FELCH	-	05216	03875	1
FNRVMIXIDS0	FENCE RIVER	-	05141	03978	1
FTHRMIAADS1	FAITHORN	-	05271	03833	1
LKGOMIXIDS0	LAKE GOGEBIC	-	05256	04149	1
MHGFMIXIDS0	MICHIGAMME FOREST	-	05149	03904	1
MRNSMIXIDS1	MARENISCO	-	05272	04166	1
NLNDMIXIDS1	NORTH LAND-O-LAKES	-	05283	04079	1
RXTNMIAADS1	REXTON	-	04996	03551	1
SCPTMIXIDS0	SCOTT POINT	NORTH LAND-O-LAKES	05052	03594	1
SMLKMIXIRS0	SMOKEY LAKE	-	05293	04051	3
WLLCMIXADS1	WALLACE	-	05327	03778	1
WTMQMIXIDS0	WATSON	-	05184	03845	1
AMBLMIAADS1	AMBLE	-	05519	03272	1
GRHRMIXIDS1	GRACE HARBOR	-	05019	03346	1
CTPOMIXJDS0	CHESTER TOWNSHIP	-	05171	03315	1
MRVRMIXIDS1	MANISTEE RIVER	-	05259	03337	1

UPPER PENINSULA TELEPHONE COMPANY

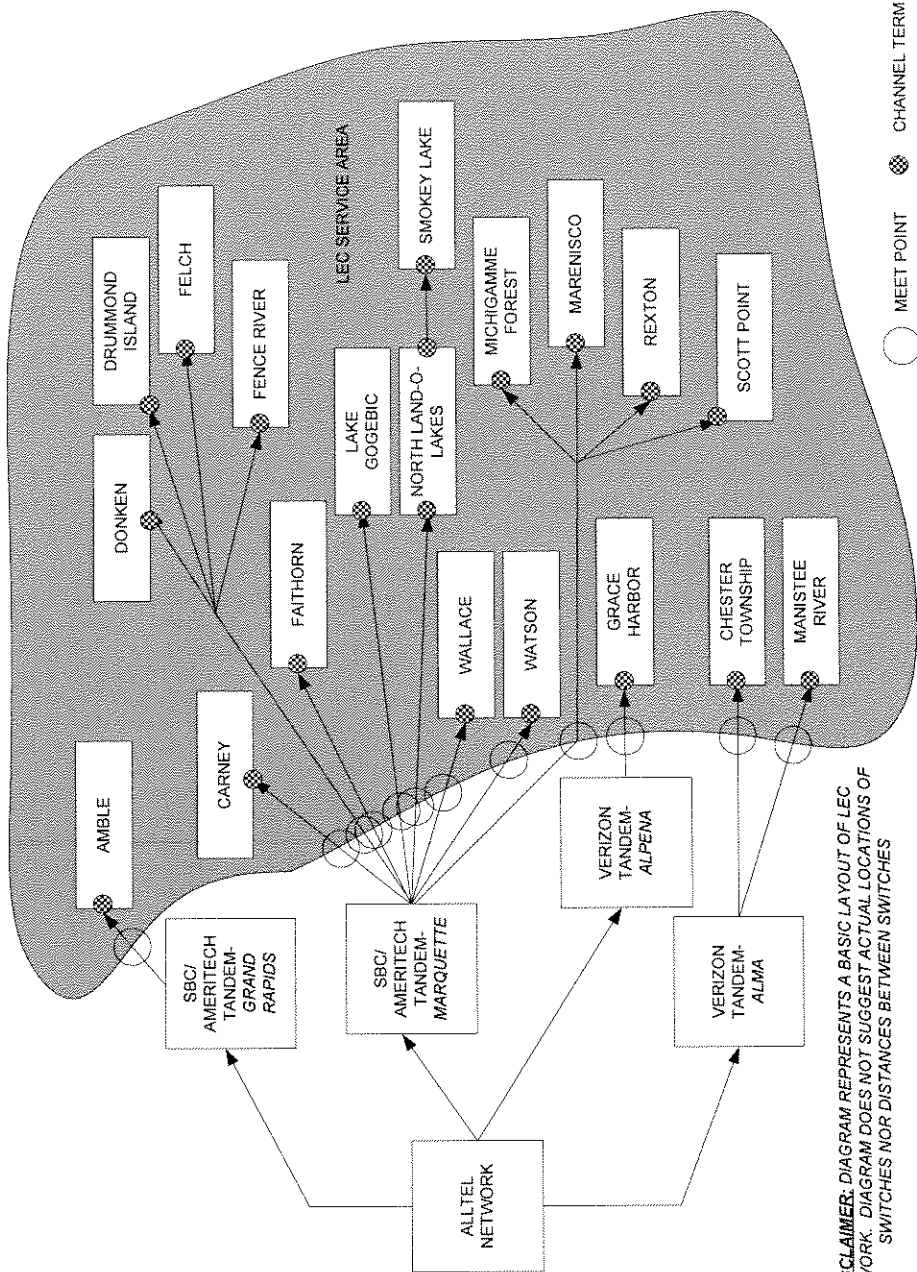
OVERALL
RATE

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
AMBLMIAADS1	AMBLE	\$159.05	10.0	\$17.22	\$84.89	216,000	437	0.28%	\$0.001927	\$0.000005
CRNYMIAADS1	CARNEY	\$159.05	10.0	\$17.22	\$84.89	216,000	35,800	22.69%	\$0.001927	\$0.000437
CTPOMIXIDS0	CHESTER TOWNSHIP	\$159.05	10.0	\$17.22	\$84.89	216,000	31,483	19.95%	\$0.001927	\$0.000384
DNKNMIXIDS0	DONKEN	\$159.05	10.0	\$17.22	\$84.89	216,000	5,515	3.49%	\$0.001927	\$0.000067
DRISMIXIDS0	DRUMMOND ISLAND	\$159.05	10.0	\$17.22	\$84.89	216,000	9,539	6.04%	\$0.001927	\$0.000116
FLCHMIXIDS0	FELCH	\$159.05	10.0	\$17.22	\$84.89	216,000	31,560	20.00%	\$0.001927	\$0.000385
FNRVMIXIDS0	FENCE RIVER	\$159.05	10.0	\$17.22	\$84.89	216,000	1,321	0.84%	\$0.001927	\$0.000016
FTHRMIAADS1	FAITHORN	\$159.05	10.0	\$17.22	\$84.89	216,000	6,482	4.11%	\$0.001927	\$0.000079
GRHRMIXIDS1	GRACE HARBOR	\$159.05	10.0	\$17.22	\$84.89	216,000	240	0.15%	\$0.001927	\$0.000003
LKGOMIXIDS0	LAKE GOGEBIC	\$159.05	10.0	\$17.22	\$84.89	216,000	2,790	1.77%	\$0.001927	\$0.000034
MHGFMIXIDS0	MICHIGAMME FOREST	\$159.05	10.0	\$17.22	\$84.89	216,000	1,084	0.69%	\$0.001927	\$0.000013
MRNSMIXIDS1	MARENISCO	\$159.05	10.0	\$17.22	\$84.89	216,000	3,722	2.36%	\$0.001927	\$0.000045
MRVRMIXIDS1	MANISTEE RIVER	\$159.05	10.0	\$17.22	\$84.89	216,000	899	0.57%	\$0.001927	\$0.000012
NLNDMIXIDS1	NORTH LAND-O-LAKES	\$159.05	10.0	\$17.22	\$84.89	216,000	2,816	1.78%	\$0.001927	\$0.000034
RXTNMIAADS1	REXTON	\$159.05	10.0	\$17.22	\$84.89	216,000	5,289	3.35%	\$0.001927	\$0.000065
SCPTMIXIDS0	SCOTT POINT	\$159.05	10.0	\$17.22	\$84.89	216,000	1,742	1.10%	\$0.001927	\$0.000021
SMLKMIXIRS0	SMOKEY LAKE	\$159.05	9.5	\$17.22	\$84.89	216,000	215	0.14%	\$0.002673	\$0.000003
WLLCMIXADS1	WALLACE	\$159.05	10.0	\$17.22	\$84.89	216,000	6,567	4.16%	\$0.001927	\$0.000080
WTMQMIXIDS0	WATSON	\$159.05	10.0	\$17.22	\$84.89	216,000	10,302	6.53%	\$0.001927	\$0.000126
OVERALL RATE									\$0.001925	

EXHIBIT O-3

UPPER PENINSULA TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

WALDRON TELEPHONE COMPANY

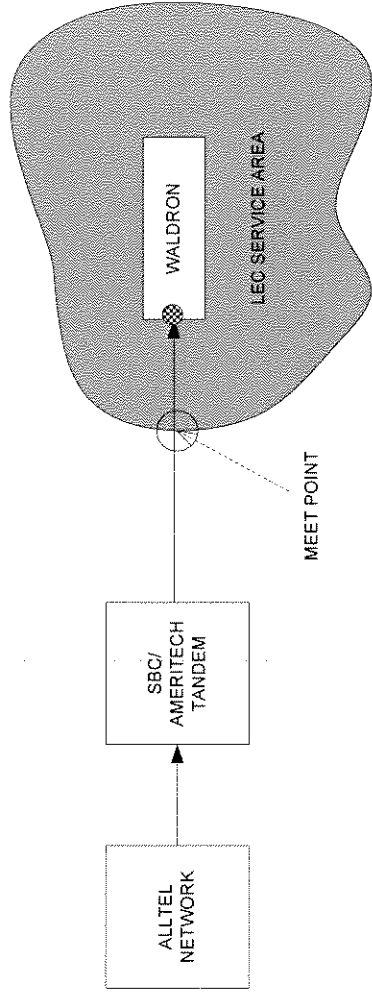
Switch	Rate Center	LEC Host	V	H	# of Channel Terms
WDRNMIXJDS1	WALDRON	-	05762	02951	1

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
WDRNMIXJDS1	WALDRON	\$159.05	10.0	\$17.22	\$84.89	216,000	10,120	100.00%	\$0.001927	\$0.001927
OVERALL RATE										\$0.001927

EXHIBIT P-2

WALDRON TELEPHONE COMPANY

CHANNEL TERM DIAGRAM



DISCLAIMER: DIAGRAM REPRESENTS A BASIC LAYOUT OF LEC NETWORK. DIAGRAM DOES NOT SUGGEST ACTUAL LOCATIONS OF SWITCHES NOR DISTANCES BETWEEN SWITCHES

 CHANNEL TERM

WINN TELEPHONE COMPANY

Switch	Rate Center	LEC Host	V	H	# of Channel Terms
WTNNMIXIDS0	WTNN	-	05463	03216	1

Switch	Rate Center	DS1 Circuit Price	Mileage	Circuit Cost Per Mile	Channel Termination Cost	Default Traffic Volume	Alltel Minutes	Weight	Default Transport Rate	Weighted Transport Rate
WINNMIXIDS0	WINN	\$159.05	10.0	\$17.22	\$84.89	216,000	30,635	100.00%	\$0.001927	\$0.001927
OVERALL RATE										\$0.001927

EXHIBIT Q-2

WINN TELEPHONE COMPANY

CHANNEL TERM DIAGRAM

