

TRAFFIC REGISTER ASSIGNMENTS — REGISTER ORDERS
NON-TUR ROUTE RELAYS FOR PEG COUNT
AND OVERFLOW REGISTER ASSIGNMENTS
NO. 5 CROSSBAR

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1. GENERAL

1.01 This appendix supplements Section 218-040-022. It provides:

- A description of No. 5 Crossbar route relay and associated equipment component functions.
- A guide for the assignment of peg count and overflow registers and the associated pin (pulse) jacks, for non-Engineering and Data Acquisition System (EADAS) offices.
- A guide for the assignment of peg count and overflow Data Collection Devices (DCDs) for EADAS.

1.02 It is reissued to provide updated information.

Note: Marginal arrows used to denote changes are omitted.

1.03 The route relays are associated with trunk groups requiring these measurements. The description of route relays and associated equipment is intended to provide an understanding of their function and the need for accurate and current

assignment to peg count and overflow registers to provide valid trunking data.

2. RESPONSIBILITIES

2.01 Network Administration Center (NAC)/ Network Data Collection Center (NDCC):
The NAC is responsible for the assignment of peg count, overflow registers and pin jacks for non-EADAS offices. In an EADAS environment, the NDCC has responsibility for the assignment of peg count, overflow DCDs and providing cross-connect information. Both work groups issue cross-connect assignments to Switching Maintenance.

2.02 The Area Trunk Assignment Bureau/Common Control Order Group (ATAB/CCOG) is responsible for route relay assignments, route relay cross-connects, preroute relays, trunk and sender allotter assignments, Individual Peg Count (IPC) relays, IPC cross-connects and other cross-connects, as required.

2.03 The NAC or the NDCC should reproduce two copies of Form F 829, TUR and Traffic Register Order (non-EADAS) or Form P 4344, EADAS-Peg Count, Overflow and TUR Assignments for cross-connects. These forms should reach Switching Maintenance no later than 10 business days prior to the due date. Western Electric (WE) job orders shall be forwarded to reach Switching Maintenance by the date established by the job committee or the equipment supervisor. Discrepancies noted by Switching Maintenance shall be discussed with the NAC or the NDCC before changes are made. Upon completion, Switching Maintenance will indicate any corrections in red, date and sign the order, and return one copy to ATAB and one copy to the NDCC or NAC. ATAB will reissue the order reflecting any changes.

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3. ROUTE RELAY FUNCTIONS

3.01 The operation of a route relay makes it possible to condition the completing or combined marker for the items of information listed below:

- Trunk selection — trunk block (TB) and trunk group (TG)

Note: The abbreviation TG will mean trunk group throughout this section. It should not be confused with the TG punching on the trunk link frame (see 3.09).

- Sender group selection
- Route advance
- Digit deletion
- Prefixing of digits
- Code conversion
- Called number structure
- Code pattern
- High 5, low 5 indications

3.02 In general, all calls which require identical treatment for all of these items are directed to the same route relay. Where there is a difference in any one of the items, additional route relays are required.

3.03 *Route-Advance Traffic:* When a TG has both first-route traffic offered to it and traffic which is route-advanced to it from another group, it is necessary to provide a separate route relay for handling the traffic which is route-advanced to the group.

3.04 *Ground Supplies:* Each route relay is assigned in one of six ground supplies. Route advancing may be from a relay in any ground supply (except six) to a relay in any other ground supply. Within a given route-advance chain, it is not permissible to return to a previously used ground supply. Ground supplies five and six are reserved for final-route or last-end route relays. Outgoing trunk groups are assigned to ground supplies one through four. See Sections 218-060-190 and 218-060-200 for more details on route relays and ground supplies.

3.05 *Route-Advance Functions:* The No. 5 Crossbar completing marker is provided with a route-advance feature which enables it, when unable to complete a connection to the first route desired, to test up to three alternate routes in attempting to establish a connection to a trunk. The marker will route-advance whenever it finds any of the following conditions; there may be other conditions, however, these are the most common:

- All trunks busy in selected trunk group.
- All senders busy in selected sender group.
- A second failure to match condition.
- A double area code dialed by a customer.
- Called station is busy on an intra-office call.
- Call being processed is a reverting type call.

3.06 *Route-Advance Conditions:* Normal route-advance cross-connections usually provide for the following conditions:

- Intra-office overflow and reverting call trunk groups to the route relay for the combination tone trunks.
- Permanent signal holding trunks to the route relay for the common overflow trunks.
- Noncoin combination tone trunks to the route relay for the common overflow trunks.
- Coin combination tone trunks and common overflow trunks, with none of these trunks available (the marker signals the originating register to return an overflow signal; 120 IPM tone).

3.07 *Charge Condition:* When route-advancing occurs, the charge condition is established by the route series relay to which the first route relay is connected. Therefore, the route relay to which the call is advanced need not discriminate for charge condition.

3.08 *Additional Route Relay Requirement:* When a TG has both first-route traffic offered to it and also traffic which is route-advanced to it from another group, it is necessary to provide a separate route relay for handling the route-advanced traffic.

3.09 Trunk Selection: Cross-connections of the TB and TG punchings furnish leads through the trunk link connector circuit. This causes the selection of a trunk in the desired TG on the trunk link frame. A minimum of one route relay is required for each outgoing TG.

3.10 Sender Group Selection: The outsender group (OSG) cross-connection causes selection of a sender in the sender group associated with the TG selected. The sender and trunk are connected via the outsender link (OSL) frame.

3.11 Allotted Trunk Groups: If any TG is allotted to two different TB relays on the trunk link frame, a statement should be included in the Traffic Equipment Order (TEO). If more than one group of outsenders is to be assigned to a particular route, a statement to that effect should also be included in the TEO.

(a) Wire Spring (WS) and Flat Spring (UY) relay markers are equipped with four allotter circuits so that four TGs may be assigned using the allotter.

(b) The groups must be assigned one group to a pair of route relays in each of ground supplies one through four.

Note: UY relay markers normally use route relays 10 through 19 in ground supply four.

(c) Four allotter circuits are provided, and their association with ground supplies should be as follows:

<i>Allotter Circuit</i>	<i>Ground Supply</i>
0	1
1	2
2	3
3	4

Notes:

1. In some offices there may be an option to cross-connect any allotter circuit to any ground supply (one through four).
2. See Sections 218-060-190 and 218-060-200 for further reference on allotted trunk groups.

3.12 Trunk Group Ground Supply Assignments: These assignments are handled as follows:

(a) The intra-office TGs may be assigned to any of the first four ground supplies. They must be in a different ground supply than the TG over which reverting calls are handled.

(b) Stuck coin trunks, permanent signal, non-coin combination tone trunks should be assigned to ground supply five.

(c) Coin combination tone trunks and common overflow trunks should be assigned to ground supply six.

(d) Outgoing routes which include interoffice, intermarker group, groups to tandem, toll switching, intertoll, service routes, etc, are assigned in ground supplies one through four.

3.13 Peg Count Register — Provision and Operation: Peg count (PC) registers are handled as follows:

(a) PC registers should always be provided on operator, final and high usage groups, intermarker groups, intra-office, reverting, and miscellaneous groups.

(1) All TGs listed on the trunk forecast need PC, overflow, and usage register assignments. If the three measurements cannot be provided, the following guidelines are furnished to assist the NAC and NDCC in the assignment of peg count, overflow and usage registers (DCDs) for trunking:

- Preferred: Usage, Peg Count, Overflow
- 2nd choice: Usage
- 3rd choice: Peg Count, Overflow

(2) All miscellaneous groups (ie, announcement trunks, tone trunks, centrex data, intercept trunks, etc) to be assigned PC, overflow, and usage registers are listed in Section 218-040-022 with Equipment Measurement Codes (EMCs).

(3) TEO will specify the amount of registers provided for each office. Table A indicates the registers required for various sized TGs.

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TABLE A

TOTAL TRUNK GROUP SIZE	REGISTERS REQUIRED
1-60	ONE PER TG
61-100 (IPC REQUIRED)	TWO PER TG, ONE EACH FOR ODD AND EVEN NUMBERED MARKERS
MORE THAN 100 (IPC REQUIRED)	ONE REGISTER PER MARKER FOR EACH TG

(b) PC registers are scored by the combined or completing marker circuit over the route relay PC or IPC lead when the marker offers a call to the TG. Hence, in addition to the completed calls, the scorings include attempts where all trunks or junctors are busy, all senders associated with the TG are busy, the called line is busy on an intra-office call, or a reverting call is involved. The latter two conditions score the register associated with the intra-office TG. The marker does not score on marker pulse conversion calls or on connections to originating registers.

3.14 Overflow Registers — Provision and Operation: Overflow registers are handled as follows:

(a) One overflow register is provided per TG. These registers are provided on operator, final and high usage groups, intermarker, interoffice, and reverting groups.

(b) The overflow register is scored by the combined or completing marker circuit over the route relay OF lead. This occurs when it finds all trunks in the group busy while trying to set up a connection from a line equipment (customer or trunk) to a trunk.

3.15 Preroute Peg Count Feature: Preroute PCs are used for dynamic overload control, traffic to a specific code (or codes), and special studies (as requested).

(a) Where routes have the same trunk information but different charge patterns, a reduction in route relay requirements can be effected by utilizing the preroute PC circuit modification in the WS marker. A maximum of 40 circuits may

be equipped and requirements must be specified in TEO.

(1) These preroute PC circuits in the WS marker are used to control operation of 40 preroute PC traffic registers which can provide a count by code destination as the outgoing calls are routed over specified trunk groups.

(2) UY marker relays may also be equipped for a maximum of 20 of these circuits with the traffic register function only.

(b) The ATAB/CCOG would assign a preroute relay on a cross-connect order, Form P 3169-ATAB.

(c) The NAC assigns the pin jack and registers (DCDs) associated with preroute relays in a non-EADAS office, as shown in Exhibit 9.

(d) In an EADAS environment, the NDCC assigns the DCDs, associated punchings, and EMCs.

4. ASSIGNMENT PROCEDURES FOR ROUTE RELAYS TO PEG COUNT AND OVERFLOW REGISTERS

4.01 In order to provide accurate and valid trunk study data, it is important that the relationship of the route relay association with the traffic carried on each TG be understood and PC and overflow registers assigned accordingly. The preceding paragraphs described the use, operation, and assignment of route relays and associated equipment. The remainder of this appendix describes the following:

- Trunk Order (TO) flow
- Source of route relay assignment information
- Wiring lists
- Examples of how to assign the proper route relays
- TB and allotting circuits to PC and overflow registers

4.02 Trunk Orders: The NAC or the NDCC should receive a copy of the TO from the ATAB on all TG activity. Some offices have converted to a mechanized trunk order which replaces the

present manual form. (See Form P 3334-ATAB, Exhibit 12A). Exhibit 19 shows a sample of a mechanized trunk order that the NAC or NDCC may receive. The following actions will require a change in a PC and overflow assignment:

- Change, disconnect, or add a route relay.
- Disconnect a TG.
- Establish a TG.

4.03 Source of Route Relay Assignment: The route relay can be obtained from the Trunk Record (Form P 3337-ATAB, Exhibits 1A, 1B or 1C) or from the cross-connect order (Form P 3141-A-ATAB, Exhibit 2, which includes a description of form entries). A minimum of one route relay is required for each outgoing trunk group, although there may be several route relays associated with one TG. The ATAB will identify on the Trunk Record those route relays that have initial and last access to the TG.

- (a) The initial route relays are those operated from original route traffic (first route relay after the code) or alternate route traffic (route-advancing from some other TG). These route relays will be associated with PC registers (DCDs).
- (b) The last route relays are those having the last access to the TG prior to route-advancing to another trunk group. These route relays will be associated with overflow registers (DCDs).
- (c) The majority of TGs will associate all route relays with PC and overflow registers (DCDs).
- (d) Initial access will also include any test codes that are used to access TGs.

4.04 Register Assignments for Trunk Groups Having Less than 61 Trunks: The route relays will be obtained from the Trunk Record. Normally one register (DCD) each will be required for PC, overflow, and usage data. Examples of orders in a non-EADAS office are shown in Exhibit 3, 5 and 7 (Form F 829). Examples of orders for an EADAS office are shown in Exhibits 6 and 8. Exhibit 4 includes instructions for using Form LF 4771.

4.05 Register Assignments for Trunk Groups With 61 or More Trunks: A maximum of 10 IPC relays per completing marker can be provided for TGs with 61 or more total trunks. The number of IPC relays provided will be specified on the TEO.

- (a) The central office wiring list (ie, T27XX-5260) will list the IPC relays and other assignment information. See Exhibits 17A through 17C for examples of wiring lists (drawings).
- (b) The ATAB/CCOG will assign the IPC relays and issue a cross-connect order (see Exhibit 18). See Exhibits 10, 11, 13 and 14 for examples of cross-connect orders for trunk groups associated with IPC relays.
- (c) Whenever trunk groups are established with 61 to 100 trunks or 100 or more trunks, ATAB/CCOG will assign the IPC relays. Peg count and overflow assignments should be assigned by the NAC or NDCC as indicated in 4.06, Notes.
- (d) Where more than 10 IPC relays are required, the NAC and Trunk Engineering will determine which TGs will be associated with IPC relays. In an EADAS environment, the NAC should notify the NDCC, via an Intra-Company Memorandum, regarding any IPC assignment changes. The NDCC will issue the cross-connect assignments to Switching Maintenance.
- (e) Once the trunk group is established, there will be no notification from the ATAB on TGs adding or disconnecting trunks for groups over 100 trunks. If fewer or additional registers (DCDs) are required the NAC or the NDCC will be responsible for this assignment based on the guidelines in 4.06, Notes.
- (f) Whenever a completing marker is installed at a Central Office in accordance with a WE job, Switching Maintenance should verify that the proper amount of IPC relays are provided and that they are wired properly.

4.06 Register Assignment for a TG with Two (Split) TBs: When there are more than two subgroups (or split TBs), an IPC relay would be required when the total TG is more than 60 trunks. Registers (DCDs) will be required as follows:

- One PC register (see Notes)

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- One overflow register
- One usage register

Notes:

1. For 61 to 100 trunks, one register each for odd and even numbered markers.
2. When more than 100 trunks are in a TG, an IPC relay must be assigned with one register per marker.

Example: TB2 — 33 Trunks
TB3 — 29 Trunks

Route Relays for TB2: 166, 167, 168, 121, and 122

Route Relays for TB3: 191, 178, 187, 190, and 186

Initial and Last Access Traffic Route Relays —
TB3: 132, 133, 134, and 135

- (1) When all 33 trunks in TB2 are busy, the route relays will route-advance to a trunk in TB3 (29 trunks).
- (2) Peg count registers will be associated with route relays 166, 167, 168, 121, 122, 132, 133, 134, and 135.
- (3) An overflow register will be associated with route relays 191, 178, 187, 190, 186, 132, 133, 134, and 135. The overflow must be associated with the trunks in TB3 since that is the final route. If the associated route relays in TB2 were assigned to an overflow register, overflow peg count would be received on every call that route-advanced to TB3.
- (4) The Trunk Order (Form P 3334-ATAB) and Trunk Record (Form P 3337-ATAB) may specify the amount of trunks in each TB, as shown in Exhibits 12A and 12B. If information is not available, contact the ATAB/ Trunk Assignment Group (TAG) to get the amount of trunks assigned to each TB.
- (5) On the Traffic Usage Recorder (TUR) and Traffic Register Order (Form F 829), show the amount of trunks in each TB as shown in Exhibit 11.

- (6) In an EADAS environment, the NDCC assigns the DCDs for peg count and overflow data on Form LF 4771. This form is sent to Switching Maintenance for cross-connecting (see Exhibit 15).

4.07 Register Assignment for a Trunk Group with TB Allotting: When large TGs have split TBs, TB allotting should be used. Trunk groups such as intra-office, inter-marker group, or toll switching groups may require allotting. This information will be obtained from the ATAB/CCOG cross-connect order. Form P 3169-ATAB will provide this information (see Exhibit 18).

- (a) When TB allotting is assigned, the allotter circuit number and IPC relay number should be the same as shown in Table B. It is recommended to use IPCs 04 through 09 for TGs not using allotter circuits.
- (b) Registers for allotted TGs will be assigned using normal procedures as explained in 3.13 and 3.14 (see Exhibits 16A and 16B for an example of allotted TG assignment).

TABLE B

GROUND SUPPLY	ALLOTTER CIRCUIT	IPC NO.
1	0	00
2	1	01
3	2	02
4	3	03

4.08 Trunk Order Completion: When a completion notice is received from Switching Maintenance on a Trunk Order or cross-connect order, the NAC or NDCC should enter the completion date on the Order Activity Log (Form F 830) or the Trunk Order Activity Log (Form LF 4708) and on the trunk order itself. At this time, the NAC or NDCC should update the appropriate Total Network Data System (TNDS) data bases to reflect any changes.

4.09 Trunking data should be obtained for a few days to analyze results on that group for the following:

- (a) Detector test should agree with number of trunks connected.

- (b) Disconnected groups should have zero peg count, overflow, and usage.
- (c) New groups should have some peg count and usage as soon as the Trunk Order is completed.
- (d) Trunk usage may increase when additional trunks are added, especially an overloaded trunk group.
- (e) If TUR data is zero and peg count is greater than zero, the TUR data may be invalid.
- (f) If overflow exceeds the PC, one or both sources of data may be invalid.
- (g) PC and overflow scorings can be reasonably validated by using assumed holding times when overflow has been reached.
- (h) Using PC and assumed holding times, determination can be made whether overflow should occur.
- (i) Total calls per hundred seconds (CCS) should be no higher than the number of trunks in the group times 36 CCS.

Note: Any of the above items would indicate a data problem. There may be other conditions that would indicate invalid data, however, the ones listed above are the most common.

4.10 The cross-connect order pages should be interfiled so an up-to-date record is available to the NAC or NDCC. The common control orders will be sent to the NAC in offices without EADAS. In an EADAS office, the NDCC will receive common control orders.

4.11 Trunk Order Check List: The Trunk Order Check List (Table C) may be used by the NAC or NDCC to ensure that all necessary forms are updated when TOs are completed. Forms F 826, F 827, F 829, F 830 and F 831 are to be utilized by the NAC for non-EADAS offices. Forms LF 3486, LF 4708, P 3799, P 4253 and LF 4771 are to be utilized by the NDCC for EADAS offices.

TABLE C
TRUNK ORDER CHECK LIST

FORM NUMBER	DESCRIPTION	DATE COMPLETED	DIAL OFFICE CLERK
F 826	REGISTER LAYOUT		
F 827	TUR SCAN SWITCH		
F 829	TUR & TRAFFIC REGISTER ORDER		
F 830	ORDER ACTIVITY LOG		
F 831	PIN JACK FIELD		
LF 3486	RELAY RACK TO TUR ASSIGNMENT CHART		
LF 4708	TRUNK ORDER ACTIVITY LOG		
P 3799	EADAS/ICUR CIRCUIT GROUPING UPDATE		
P 4253	ETDC INPUT ASSIGNMENT CARD		
LF 4771	EADAS-PEG COUNT, OVERFLOW AND TUR ASSIGNMENTS		
*OS RECORD	RECORD OF TRUNKS PER SENDER GROUP		
*IR RECORD	RECORD OF TRUNKS PER INC. REG. GROUP.		
TUR DET. TEST	TUR DETECTOR TEST		
TDAS	SOURCE DOCUMENTS		

*INFORMATION MAY BE OBTAINED FROM ATAB IN SOME AREAS.

4.12 Bell System Practice (BSP) References:

Section 218-020-040	Section 218-060-150
Section 218-040-020	Section 218-060-190
Section 218-040-022	Section 218-060-200
Section 218-060-140	Section 252-122-105
	Section 780-400-355



TRUNK RECORD

P 3337-ATAB (1-75)
(F 1295)

TGID No./CGSN N7710-033		Control Office SNJS CA 14 X 0		Page 1 of 2																			
Location "A" SNJS CA 14 26G (25xMO) M-				Pulse				Location "Z" MLPS CA 11 26C(25xMO)				Trc.-Cls. PH		Ofc.-Cls. 55		Use IE		Modifier ILEXT		Order Number A4D5-134861			
Office																				Dsn. Num.			
H M L	Trunk No.	On Off Act.	TL		OSL			AMA		TRK EQUIP				TRK EQUIP				IRL		TL			
			FR	SL	FR	TS	SV	RC	DR	CI	AISLE	FR	CKT	LOC	AISLE	FR	CKT	LOC	FR	SV	FR		SL
M	1		25	A64	9			4-2	1	20	107	16	16	L44-45		106	08	06	M-29	1	1-06	06	B65
	2		14	A64	5			6-5	6	68	117	12	34	L57-58		106	12	06	L-30	1	2-26	07	B62
	3		09	A54	3			6-11	4	47	107	13	09	M21-22		103	09	08	M-61	3	0-38	12	B84
	4		10	A44	4			0-9	5	23	107	04	08	L39-40		107	00	16	L-17	0	1-25	03	B63
	5		07	B04	2			8-15	3	48	106	12	10	L30		103	09	12	M-61	3	1-32	13	B23
	6		08	A44	3			2-17	4	12	107	05	06	M29-30		108	01	26	L-1	0	2-02	00	B69
	7		13	A74	5			2-17	4	79	117	04	30	L59-60		108	23	46	L17	0	0-22	01	B64
	8		07	A64	0			8-0	3	08	106	12	06	L30-32		106	12	07	L30	1	2-27	07	B72
	9		02	A44	0			8-9	2	83	105	06	32	L-6		107	01	16	L34	0	2-33	09	B68
▼	10		01	A44	0			4-0	1	22	105	43	31	L27-28		106	20	11	L29	1	3-31	08	B15
Trunk Group Common Assign		On Off Act.	INITIAL & LAST ACCESS																				
			B88 TB TG ETC																				
			0	2	06	95																4	25A

ROUTE RELAY FOR PEG COUNT AND OVERFLOW

Ph Trunk Group
Exhibit 1A



TRUNK RECORD

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(F 1295)

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TGID No./CGSN N8100-132		Control Office SNJS CA 13 X0		Page 1 of 2														
Location "A" SNJS CA 13 22C				Pulse M-	Location "Z" SNJC CA 01 20T				Tfc.-Cls. AF	Ofc.-Cls. 5-0	Use TO	Modifier	Order Number A4D4-145751					
Office																		
H M L	Trunk No.	On Off Act.																Dsn. Num.
H	1	ON	18	ALL	13	189	9-11	17	0-5	120	127	13	18	N157				
	1	OFF	01	ALL	13	-	0-11	15	9-0	120	127	01	09	J151				
	2	ON	18	A21	13	190	9-12	17	1-5	121	127	13	19	N158				
	2	OFF	01	A21	13	-	0-12	15	0-1	121	127	01	10	J152				
	3		01	A31	13		0-13	15	1-1	122	127	01	11	J151				
	4		01	A41	13		0-14	15	2-1	123	127	01	12	J151				
	5		01	A51	13		0-15	15	3-1	124	127	01	13	J152				
	6		01	A61	13		0-16	15	4-1	125	127	01	14	J152				
	7		01	A71	13		0-17	15	5-1	126	127	01	15	J153				
	8		01	A81	13		0-18	15	6-1	127	127	01	16	J153				
	9		01	A91	13		0-19	15	7-1	128	127	01	17	J153				
Y	10		03	A11	13		1-11	15	7-2	129	127	01	18	J153				
Trunk Group Common Assign														On Off Act.				
SDR TB TG ETC														INITIAL & LAST ACCESS				
5 9 02 131 132 125 126 127 128 129 140 150 151																		

ROUTE RELAYS FOR PEG COUNT AND OVERFLOW

Final Trunk Group
Exhibit 1C



LF 4771 (1-82)

EADAS - Peg Count, Overflow And TUR Assignments

Office: SHOK CA01 98H				Trunk Group: HLWD CA01 67J				Due Date: 9-7-82				Page 1 of 1						
Issued By: D.O. CLERK				TGID: H9468-615				Completed By:				Return To: 14709 VANOWEN						
Tel. No.: 786-0143				CGSN: AB055000				Tel. No.:				RM 203						
Date Issued: 7-7-82				Order No.: SH3M.670000A				Comp. Date:				VAN NUYS						
Item	Act	Meas. Type/Pchg.	Card No.	Pos. No.	DCD	FTC (RR)	Dist. Frame				TUR Assignments						Remarks	
							Vert	Bik	Row	Pchg.	Aisle, Frame, Ckt.			TUR				
1	ON	PC	7	16	048	065	8	D	29	6								
2	ON	PC	1	16	048	066	8	D	30	1								
3	ON	OVF	3	12	098	065	8	D	36	4								
4	ON	OVF	3	12	098	066	8	D	36	5								

EADAS Office - IH Trunk Group Exhibit 6



EADAS - Peg Count, Overflow And TUR Assignments

Office: SH6K CA01 98H			Trunk Group: ELMN CA01 10T			Due Date: 9-7-82			Page 1 of 1														
Issued By: D.O. CLERK			TGID: H9468-004			Completed By:			Return To: 14709 VANOWEN														
Tel. No.: 786-0143			CGSN: AB055601			Tel. No.:			RM 203														
Date Issued: 7-7-82			Order No.: SH36.9913.543			Comp. Date:			VAN NUYS														
Item	Act	Meas. Type/ Pchg.	Card No.	Pos. No.	DCD	FTC (RR)	Dist. Frame				TUR Assignments					Remarks							
							Vert	Blk	Row	Pchg.	Aisle, Frame, Ckt.			TUR									
1	ON	PC	1	16	049	069	6	D	30	4													
2	ON	↓	↓	↓	↓	083	6	D	30	5													
3	ON	OVF	1	16	030	069	6	D	36	1													
4	ON	OVF	↓	↓	↓	083	6	D	36	2													

EADAS Office - Final Trunk Group Exhibit 8

EADAS - Peg Count, Overflow And TUR Assignments

Office: LSAN CA07 22K		Trunk Group: LSAN CA07 22G		Due Date: 9-9-82		Page 1 Of 1												
Issued By: DO. CLERK		TGID: T6700-001		Completed By:		Return To: 14709 VANOWEN												
Tel. No.: 786-0143		CGSN: AB067001		Tel. No.:		RM 203												
Date Issued: 7-7-82		Order No.: SM45-9991-344		Comp. Date:		VAN NUYS												
Item	Act	Meas. Type/Pchg.	Card No.	Pos. No.	DCD	FTC (RR)	Dist. Frame				TUR Assignments						Remarks	
							Vert	Blk	Row	Pchg.	Aisle, Frame, Ckt.			TUR				
1	ON	PC	3	16	835	47	12	B	5	6							IPC 01 MKR 100	
2					836		12	B	36	1							101	
3					837		13	A	42	4							104	
4					838		13	A	19	5							105	
5					839		13	A	17	1							106	
6					840		13	A	17	2							109	
7					841		13	A	17	3							110	
8		↓	↓	↓	842		13	A	17	4						↓	↓	111
9	↓	OVF	1	12	843	↓	14	B	12	1								

EADAS Office — IPC Assignments (More Than 100 Trunks)
Exhibit 10

TUR & TRAFFIC REGISTER ORDER

TRK GROUP OR EQUIP. SNJS CA14 26K M → SNJS CA14 26G IMS-FR NOTES: ADD 8 TRUNKS AS PROVIDED BY W.E. JOB	ID NUMBER N 7750-058	ORDER NO. NN33-206802	PAGE <u>1</u> OF PAGES <u>12</u>
ISSUED BY R. BUSH	DATE ISSUED 8-27-82	DUE DATE—ON OR BEFORE 10-22-82	
COORDINATE WITH 262 E JOB		RESCHED DATE	REASON

DATE ORDER & CONTINUITY TEST COMPLETED	COMPLETED BY	RETURN TO NET ADMIN.
--	--------------	--------------------------------

ITEM	ACTION	TUR - FR					REG. TS BK	PCHG	PJ		REGISTER		TYPE	ITEM TO BE MEASURED	QTY	ASSIGNMENT	TUR - DF				
		F	S	C	H	V			RG NO.	D G U	CAB NO.	CAB NO.					CL	TS	R	P	
									103	01	103	2400	PC	TRKS 1-164	MKR 100/164	RR 51.65	IPC 01				
									103	02	103	2401	PC		MKR 101						
									103	03	103	2402	PC		MKR 104						
									103	04	103	2403	PC		MKR 105						
									103	05	103	2404	PC		MKR 106						
									103	06	103	2405	PC		MKR 109						
									101	68	103	2487	PC		MKR 110						
									104	21	103	2488	PC		MKR 111						
									103	128	103	2406	OFL	TRKS 1-164		164	RR 65				

94 TRKS ASSOC/W TB2
70 TRKS ASSOC/W TB4

(TB2 R.A. TO TB4)



Pacific Telephone
Nevada Bell

P 3334-ATAB (1-75)
(F 1293)

TRUNK ORDER

Order Control TAB		A <input type="checkbox"/> Z <input type="checkbox"/>		Assoc. Order		LL <input type="checkbox"/> IC <input type="checkbox"/> ESSO <input type="checkbox"/> SSO <input type="checkbox"/> PNB <input type="checkbox"/> IR <input type="checkbox"/> SSN <input type="checkbox"/> CTX <input type="checkbox"/>		T.O. Page 1 of Pages 7	
Location "A"		Pulse		Location "Z"		TFC-CLS OFC-CLS Use Modifier		Ckt. Prov. Bur.	
SNJS CA14 26K		M-		SNJS CA13 22C		AF 52 00 LAMA		SF <input checked="" type="checkbox"/> LA <input type="checkbox"/>	
TGID No. N7750.031		Control Office		PAC Reporting Office		Project Coordination Office		Order Number	
CGSN No.		SNJS CA14 X0						CPB Iss. Num.	
								A4D4-424620	
Trunk Quantity		No. of Trks. Affected		Description of Work and Coordinate with Information					
Before 62 After 62		Add (A) Disc (D) Rerr (R)		REARRANGE 6 TRUNKS FROM 10 36M EQUIP. TO 1/2 C6M					
		6		EQUIP. REARRANGE TRUNKS ON "Z" END FROM B164 TO					
				B61M EQUIP.					
A D R		Manual Asgnmts.		Mech. Asgnmts.					
		Otc-A Otc-Z (CLR/CLO)						Due/Date (Comp. on or before)	
R		X -		SPLIT TBs - TB2 - 33 TRUNKS				10-22-82	
		-		-TB3 - 29 TRUNKS				Reschedule Date Reason	
2		X		C/W SNJS 14 262E JOB.				Plant Test Date	
3		-						TA Code Prepared By	
4								Tel. No.	
5								Approved By Date to TAB	
6								"A" TAB "Z" TAB	
				Design No.		Trunk Numbers		Location "A" Equip. or Assembly Code	
				8001 1-6				Location "Z" Equip. or Assembly Code	
								TR Pages Affected TR Pages Affected	
								1 OF 7 1 OF 7	
								TAB Code TAB Code	
								405	
								Prepared By Prepared By	
								V. POND E. LAKE	
								Tel. No. Tel. No.	
								291-7001 291-7002	
								Date Written Date Written	
								5-10-82 5-12-82	
								Approved By Date	
								A. SUPERVISOR 5-14-82	
								Date Sent To CPB or Plant	
								Assumes Completion of Last Order Written for this Group	
								Order Number Due Date	
								332 47275 5-31-82	
								Control Number	
								247275	
								Tel. Nos. For Control or Reporting Office Use Only	
								Completion ATAB-291-7003	
								Contact	
								Reschedule ATAB-291-7004	
								Completion Report	
								Actual Completion Date	
								CPB Module Return Code Date to Repr	
								Date to Plant	
Orig. DOT		5-28-82		Orig. DOB		6-4-82		XMT: B/P <input type="checkbox"/> ML <input type="checkbox"/> Non-Mech <input type="checkbox"/>	
Resch. DOT				Resch. DOB				Order <input checked="" type="checkbox"/> Reschedule Notice	
T A <input type="checkbox"/>		Z <input type="checkbox"/>		A C C P B <input type="checkbox"/>		Z P L T <input type="checkbox"/>		Completion Notice	
Clean/Unclean Reason Code								Digits Out 5	
Missed > <input type="checkbox"/>								Canc. Held Decline Date	

Assigning Split TBs
Exhibit 12A



TRUNK RECORD

P 3337-ATAB (1-75)
(F 1295)

TGID No./CGSN N7750-059		Control Office SNJS CA 14 X1		Page 1 of 7																		
Location "A" SNJS CA 14 26K				Pulse M- SNJS CA 13 22C				Tfc.-Cis. AF 52		Ofc.-Cis. 00		Use LAMA		Order Number A4D4-424620								
Office																						
H M L	Trunk No.	On Off Act.	TL		RELAY RACK		MDF		AMA		OSL								Dsn. Num.			
			FR	SL	AISLE	FR	CKT	LOC	RCDRCII	FR	TS	S-V										
H	1140		14	A11	13	189	12	M177	8	2-4	127	13	1-8									
	1141		18	A21	13	189	13			3-4		14	1-9									
	1142		01	A31	13	189	14			4-4		15	2-0									
	1143		01	A41	13	189	15			5-4		16	2-1									
	1144		01	A51	13	189	16			6-4		17	2-2									
	1145		01	A61	13	189	17			4-5		18	2-3									
	1146		01	A71	13	189	18			5-5		19	2-4									
	1147		03	A81	13	189	19			6-5		20	2-5									
	1148		03	A91	13	189	20			7-5		21	2-6									
▼	1149		04	A21	13	189	21	▼	▼	8-5	▼	22	3-0									
Trunk Group Common Assign																						
		On Off Act.	SDR INITIAL ACCESS				SDR LAST ACCESS				INITIAL ACCESS											
			GRP	TB	TG	FTC	GRP	TB	TG	FTC												
			MFS	2	08	166	167	168	121	122	MFS	3	12	191	178	187	190	186	132	133	134	135
				TB2-33 TRUNKS				TB3-29 TRUNKS				TB2 R.A. TO TB3										

Exhibit 12B

EADAS - Peg Count, Overflow And TUR Assignments

Office: RVSD CA01 68H						Trunk Group: CLTN CA01 78C				Due Date: 9-7-82			Page 1 Of 1				
Issued By: D. O. CLERK						TGID: T9400-006				Completed By:			Return To: 14709 VANOWEN				
Tel. No.: 786-0143						CGSN: AB 504066				Tel. No.:			RM 203				
Date Issued: 7-7-82						Order No.: SH50-713594				Comp. Date:			VAN NUYS				
Item	Act	Meas. Type/Pchg.	Card No.	Pos. No.	DCD	FTC (RR)	Dist. Frame				TUR Assignments					Remarks	
							Vert	Blk	Row	Pchg.	Aisle, Frame, Ckt.			FR	S		C
1	ON	PC	2	10	1236	166	8	D	36	1							IPC 06 EVEN MKR
2		↓	↓	↓	1237	167	8	D	37	2							↓ ODD MKR
3		OVF	3	12	1238	166	7	D	14	4							
4		↓	↓	↓	↓	167	7	D	14	5							

EADAS Office — IPC Assignment (61 to 100 Trunks)
Exhibit 13



Pacific Telephone
Nevada Bell

P 3334-ATAB (1-75)
(F 1293)

TRUNK ORDER

Order Control TAB A <input checked="" type="checkbox"/> Z <input type="checkbox"/>		Assoc. Order <input type="checkbox"/> LL <input type="checkbox"/> IC <input type="checkbox"/> ESSO <input type="checkbox"/> SSO <input type="checkbox"/> PNB <input type="checkbox"/> IR <input type="checkbox"/> SSN <input type="checkbox"/> CTX <input type="checkbox"/>		T.O. Page <u>1</u> of Pages <u>2</u>	
Location "A" SHOK CA 01 98H		Pulse M-		Location "Z" SHOK CA 01 20T	
TGID No. H9468165		Control Office SHOK CA 01 X2		TFC-CLS OFC-CLS Use Modifier AF 50 TO GRPB	
CGSN No. AB051470		PAC Reporting Office		Project Coordination Office	
Trunk Quantity Before 55 After 68		No. of Trks. Affected Add 13 Disc 0 Repr (R) 20		Description of Work and Coordinate with Information	
A D R		Manual Asgnmts. Mech. Asgnmts.		ADD 13 TRUNKS TO MEET EXPECTED GROWTH REARRANGE TO SPLIT SENDER GROUP. USE SNDR GRP 101 & 108 AND TRUNK ALLOTTER.	
A 34 01		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		W/W XH3M-692770	
40 02				Design No. 0103 Trunk Numbers 40, 47, 67, 68	
47 04				Location "A" Equip. or Assembly Code 1C5 Location "Z" Equip. or Assembly Code A605	
54 05				Location "A" Equip. or Assembly Code 2C5 Location "Z" Equip. or Assembly Code A605	
56 06				Alt. Route Before Loc'n "A" --- Loc'n "Z" ---	
57 07				Routing Chg. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
64 09				Alt. Route After Loc'n "A" --- Loc'n "Z" ---	
65 10				Notes: NON-MECH	
66 11				Date Sent To CPB or Plant	
67 12				Assumes Completion of Last Order Written for this Group	
68 13				Order Number H52-747638 Due Date 11-6-82	
69 14				Tel. Nos. For Control or Reporting Office Use Only 621-5481	
70 15				Contact ↓	
Orig. DOT		Orig. DOB 6-6-82		Reschedule ↓	
Resch. DOT		Resch. DOB		Completion Report	
T A <input type="checkbox"/> Clean/Unclean Reason Code		Z P L <input type="checkbox"/>		Actual Completion Date	
Missed > <input type="checkbox"/>		B <input type="checkbox"/>		CPB Module LA 6 Date to Repr 4-20-82	
XMT: B/P <input type="checkbox"/> ML <input type="checkbox"/> Non-Mech <input type="checkbox"/>		Distribution IHT05, 4H118, 1GS59, 1HT00, 1HT14, 1HE10, 1HT12		Repro 10	
Order		Reschedule Notice		Completion Notice	
				Digits Out 7 Canc Held Decline Date	

Assigning Allotter
Exhibit 16A

TRUNK RECORD

TGID No./CGSN H9468165		Control Office SHOK CA 01 X2														Page 1 of 7				
Location "A" SHOK CA 01 98H		Pulse M-		Location "Z" SHOK CA 01 20T		Tfc.-Cls. AF	Ofc.-Cls. 50	Use TO	Modifier GRP B		Order Number SH3M-670651A									
Office LOC "A"														Office LOC "Z"						
H M L	Trunk No.	On Off Act.	TL		OSL		TRK EQUIP.				RST						Dsn. Num.			
			FR	SL	FR	TRK	SV	aisle	FR	CKT	FR	COT	TLF	SLF						
H	1		125	A85	112	129	79R	426	14	10						24	16	07	10	
	2		125	A95	112	130	78R	426	14	11						19	06	00	0	
	3		106	A55	103	67	24L	412	15	17			**			19	54	01	1	
	4		106	A95	103	71	25L	412	15	21			**			20	06	01	2	
	5		107	A65	103	164	82L	412	19	16			**			20	58	02	3	
	6		107	A75	103	165	84L	412	19	17			**			20	49	02	3	
	7		108	A85	104	70	25L	412	14	20			**			21	32	03	5	
	8		108	A95	104	71	24L	412	14	21			**			21	10	03	4	
	9		109	A85	104	153	84L	412	18	06			**			21	50	04	5	
	10		110	A45	105	14	27L	413	16	14						25	01	09	11	
* HYCI (520,1) USE TRKS 12, 13, 31 ONLY ON FTC 136 + 44, 45																				
** SDR GRP 108																				
Trunk Group Common Assign	On Off Act.	INITIAL ACCESS			LAST ACCESS															
		IB	TG	SDR	FTC	IB	TG	SDR	FTC											
		3	12	103	131	136	132													

SECTION 218-040-022PT
APPENDIX 1

LINE CLASS	REGISTRATION FOR	CONNECTING CIRCUIT		CONN TO 12588.11 12 OR 13 FIG NO OR ASSPEC'D	QUANTITY OF JACKS		REMARKS
		LEAD	NAME OF CIRCUIT		ASSIGNED	CABLED	
271 A	DIR BAT JK	S		4	60	60	DIR BAT SUPPLY
B	CONT BAT JK	SI		2	60	60	CONT BAT SUP (S1)
C							
D							
275 E	LC IDENT ALL TRKS BUSY	PB		35			
F							
G	CLOCK REGISTER	P	CLOCK	6	2	2	
H	LINE LINK ORIG	LCB	LLL & CONN	1			
J	ORIG REG TT	PCD	DT MKR	1	4	4	
280 K	TOTAL INC PC	TIP	CPL MKR	1	8	8	
L	TOTAL ORIG PC DP	TDR		1A	8	8	
M	ORIG REG TT	PCMF	DT MKR	1			CONN TO MAG CTR UNITS TRC 01
N	INTRA OFFICE TRK GRP, DGT. GRP,	PC	MKR	20V1240	75	15	1-60 TRK IN GRP
P	INTER-MKR GRP TPK GRP, COMB TONE	IPC		20V1221	16	16	61-100 TRK IN GRP
285 Q	TRK GRP & COMMON OFL TRK GRP	IPC		20V1221	16	16	101-UP TRK IN GRP
R	INC TRK GRP TERM CALLS	PC100	TRK	35			
S	INC TRK GRP TERM CALLS	PC100	TRK				

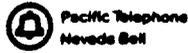
Central Office Drawing — Office Without TUR-DF or TRDF
Exhibit 17A

WIRING LIST OF JACK FIELDS SEE TABLES A, B, C, D FOR ASSIGNMENT							
LINE CLASS	REGISTRATION FOR	CONNECTING CIRCUIT		CONN FIG OR TRAF REG CKT	QUANTITY OF JACKS		REMARKS
		LEAD	NAME OF CIRCUIT		ASSIGNED	CABLED	
176 A				4			-DIR BAT SUPPLY
177 B				2			-CONT BAT SUP (S1)
178 C				2			(S2)
179 D							
180 E							
181 F							
182 G	CLOCK REGISTER	M	CLOCK	30			
183 H	LL ORIG	LCB	LL CONN	1			
184 J	CAMA IMG TRK GR, CAMA JTR GR, JTR GR	PC	MKR	24			1-60 TRK IN GR
185 K	IMG TRK GR, IAO TRK GR, DGT GR,	IPC		23			SEE NOTE II
186 L	COMB TONE TRK GR & COM OVFL TRK GR	IPC		20			61-100 TRK IN GR
187 M	INC TRK GR TERM & TOM DR THRU CALLS	SEE RMK	INC TRK	35			101-UP TRK IN GR
188 N	AMA RCDR SEIZURE	TPC	RCDR	1	21	21	PC OR PCL FOR LOCAL PC OR PCL FOR TOW ON THRU
189 P	ABANDONED PARTIAL DIAL	APD	ORIG REG	1	1	1	
190 Q	ORIG CLASS OF SERVICE	S	MKR	1	100	100	
R	IG SDR GR	OSG			90	90	

Central Office Drawing — Office With TUR-DF
Exhibit 17B

WIRING LIST OF LEADS CABLED TO TRDF - 00 SEE T-0H16-157 FOR ASSIGNMENTS										
LINE CLASS	REGISTRATION FOR	CONNECTING CIRCUIT		CONN. FIG OR TRAF. REG. CKT.	QUANTITY OF LEADS			VTROF LOCATION		
		LEAD	NAME OF CIRCUIT		REQUIRED	CABLED TO TRDF-00	TERM STRIP	ROW	PCMG	
176 A	INTERFACE UNIT					32	32	4 C	12-16/17	1-6/1-2
177 B	DELAY UNIT					32	32	4 C	17/18-22	34/1-6
178 C										
179 D										
180 E										
181 F										
182 G	CLK REG	M	CLK	39	1/PC	2		10 C	50	1-6
183 H	LL ORIG	LCB	LL CONN	1	1/LL	60		10 D	1-10	1-6
184 J	CAMA IMG TRK GR, CAMA JTR GR, JTR GR, IMG TRK GR,	PC	MKR	26	1/RTE REL	200		18 A	1-17	1-6
185 K	IAO TRK GR, DGT GR, COMB TONE TRK GR & COM OVFL TRK GR	IPC		22	10/MKR	80		10A, 12A	35-50/35-42	1-6
186 L										
187 M										
188 N	RECORDER SEIZURE	TPC	RCD UNIT	1	1/RCD UNIT	12		10 C	45, 46, 47	1-6
189 P	ABANDONED PARTIAL DIAL	APD/APPB	ORIG REG	1	1/OR GR	3		10 C	30	1-6
190 Q	ORIG CLASS OF SERVICE	S	MKR	1	10/MKR	80		10B/12A	1-16/43-50	1-6
R	IG SDR GR					12 MKR		10B/12B	17-32/1-8	1-6

Central Office Drawing — Office With TRDF
Exhibit 17C



P 3108-ATAB (1-75)

CROSSBAR SYSTEM NO. 5
CROSS-CONNECTIONS
PREROUTE RELAY AND ALLOTTERS

Office SNJS CA 14 26K

MKR Group 100

Order C 392907

Effective Date 4-29-82

Issue 3

Issue Date 4-13-82

Pre-Route Relay No.	Cross-Connect			Reference	Pre-Route Relay No.	Cross-Connect			Reference
	RP Pchg. To	PR Pchg. To	PC Pchg. To			RP Pchg. To	PR Pchg. To	PC Pchg. To	
00	22829	RC46	SC27	MMU-CNCR CAD100T	28				
01	237839	RC46	SC28	TOLL-CNCR CAD100T	29				
02					30				
03					31				
04					32				
05					33				
06					34				
07					35				
08					36				
09					37				
10					38				
11					39				
12									
13									
14									
15					Trk. & Sdr. Allotting Relays				
16					AL-0	AL-1	AL-2	AL-3	
17					Gen. Supply	Gen. Supply	Gen. Supply	Gen. Supply	
18					AL-15	AL-26	AL-16	AL-27	AL-17
19					AL-11	AL-22	AL-12	AL-23	AL-13
20					RCL-0	265	RCL-1	RG-05	RCL-2
21					RL-0	RG-04	RL-1	RG-05	RL-2
22					LA-0	RC-71	LA-1	RC-51	LA-2
23					LB-0	RC-70	LB-1	RC-53	LB-2
24					RAL-0	RAG-19	RAL-1	RAG-39	RAL-2
25					SAL-0	25G	SAL-1	25G	SAL-2
26									
* Located on trk. grp. allotter term. strip in TR Bay.									
Individual Peg Count Relays IP & IR Cross-Connect									
IPC-No	IP-To	IR-To	Reference	IPC-No	IP-To	IR-To	Reference	IPC-No	IP-To
00	SEE SC24	RC 71	IAD FLAT	05	SEE SC30	RC 95	MLPS CA 11 26C		
01	SC25	RC 51	IMG FLAT	06	SEE SC26	RC 52	SNJS CA 13 22C		
02	SC25	RC 64	IMG MSG	07					
03				08					
04				09					

**SECTION 218-040-022PT
APPENDIX 1**

MECHANIZED TRUNK ORDER

DATE 10-01-81

SENT TO PRINTER P3270123

INTRA REGIONAL

LOCATION A	PS	LOCATION Z	TFC-CLS	OFC-CLS	USE	MODIFIER	CONTROL TAB
CNPKCA0134J	M-	NHLICA0147T	PH	54	DD	_____	LAG
TGID		CGSN	ORDER NUMBER		UNDERTKG		CONTROL NO
H2294709		AB044231	ALA6.980710		_____		980710
ORD-ACTION:CRG /_/_ /_/_			ORD-CLS N				

TRK QUANTITY	TRUNK NUMBERS	ITEMS	RESCHEDULE DATES	DATES
WKG: 000	<u>1-6</u>	<u>01-06</u>	<u> </u>	DOT <u> </u>
PDA: _____	_____	_____	<u> / </u>	DOB <u>12-01-81</u>
PDD: _____	_____	_____	<u> / </u>	DUE <u>06-01-82</u>
TOT: <u>006</u>	_____	_____		PTD <u>05-28-82</u>
			ACTUAL COMPLETION DATE	<u> </u>

CW-NOTE: REARR TRK GRP OFF T34, TG05, SDR 0 ONTB1, TG10, SDR2 TO PROV SP EQPT _____
W/W XLDA-982037

CONTROL OFC	PAC RPT OFC	PROJ COOR OFC	PROJECT	D/O	INSEP	RETURN CODE
CNPKCA0170	_____	_____	_____	<u>5</u>	130	LA6
LAST ORD DUE	A/O _____		R/EST _____			

ALA9-
994500 1 07-03-79

		LOC A	LOC Z
TELEPHONE NUMBER FOR:	TR PGS AFFECTED :	<u>#1</u>	_____
CONTACT/RESCHEDULE	TAP CODE :	<u>LA6</u>	_____
<u>213 - 975-5981</u>	PREPARED BY :	<u>P. DIXON</u>	_____
COMPLETION	TELEPHONE NO :	<u>975-5981</u>	_____
<u>213 - 956-5070</u>	DATE WRITTEN :	<u>10-2-81</u>	_____
	APPROVED BY :	<u>pd 10-2-81</u>	_____

MANUAL DIST: _____ TO REPRO 10-9-81

Exhibit 19