ALLOCATION OF PROGRAM STORE MEMORY MANUAL TRANSLATION MODIFICATION PROCEDURE NO. 2/2B ELECTRONIC SWITCHING SYSTEM

CONTENTS PAGE

1. GENERAL

A. Objective

1.01 This procedure is designed to cover all operations necessary to add, delete, or modify the contents in any spare translation store translator table. The procedure requires a 10-word master table index (MTI) called SPAREPS (Fig. 1). The table is used to locate, use, and release translation store blocks. The table provides a bookkeeping capability for up to 200 blocks of translation spare area. The translation store translator can independently have up to ten subtranslators. Each subtranslator is 40 decimal (50 octal) words long and contains 20 two-word entries. Each entry uses one word to store the block size and one word to store the block address. Translation store blocks can be at any unused translation address, but may not extend over a store boundary or maintenance location.

1.02 This section is reissued to include forms originally contained in Section 232-127-302, Appendix 1, and to add information pertaining to the 2BE3 generic program. Revision arrows are used to emphasize significant changes.

1.03 ***The use of a manual translation change procedure is not intended to be a part of the day-to-day routine or course of action. Manual translation changes should be performed only when there is no practical alternative and normal scheduling of an office data administration (ODA) update is not feasible.***

1.04 The ODA update procedures can be performed with greater accuracy due to the inherent error check in the ODA routine. The manual translation modification procedure contains a much greater probability of error due to hand manipulation and recording of the address numbers and memory contents. ***When performing any manual transla-***

tion change procedure, the process must be performed error free. The parity of the bits on any word that is changed must be even. In the No. 2 ESS, if the parity is not even when the word is addressed by the ESS program, a system initialization will occur.

B. Purpose

1.05 This procedure must always be called for by one of the other manual translation modification procedures. It will never be executed by itself. ▶If the office is equipped with an EF-2, 2B-EF-2, or 2BE3 generic, this procedure can be done by a Recent Change message. (Refer to Input Message Manual 2H200-04 [for EF-2] or 2H200-05 [for 2B-EF-2], or 2H200-06 [for 2BE3].)◀

1.06 The procedure requires a set of translation change forms, TSM-1 and TSM-2 (Fig. 2 and 4, respectively). The forms are used to map out each SPAREPS translation table location and its initial contents. Prior to any manipulation of translation store area, users are required to follow the initial procedures of the TSM-1 and TSM-2 forms which use a No. 2/2B Electronic Switching System (ESS) maintenance TTY to read out the current translator contents. After the entries on the forms have been made, the forms will show any changes from the initial contents for each word in each translator involved. Parity for each of the entries on the TSM-1 and TSM-2 forms will be calculated in Section 232-127-303 for CHIPS.

C. Contents of TSM-1 and TSM-2 Forms

TSM-1 FORM

1.07 The TSM-1 form represents the spare translation store memory translator table for a No. 2/2B ESS central office. The translation store memory translator is used to keep a file in the translation store memory of blocks of spare or unassigned translation store. This form must be the ***first*** form initiated before any translation store memory area can be allocated from, or restored to, spare in the office. In addition, this form should not be reused each time that translation store memory is required or restored to spare and updated by the change in program store (CHIPS) procedure, Section 232-127-303.

TSM-2 FORM

1.08 The TSM-2 form represents ***one*** of a possible ten translation store subtranslators. The form has been designed to show the address of the initial contents of and sequential changes to every word in the subtranslator between CHIPS updates. This form should be used each time changes on the form are to be transferred into memory and when additional memory allocation from, or return to, spare is needed.

1.09 If TSM-1 and TSM-2 forms are not available to record the translator change information, reproducible forms may be obtained from Fig. 3 and 5.

1.10 The ability to add and subtract in octal is essential to the successful utilization of the procedures in this section. The size and address of each block will be read out of the No. 2/2B ESS program store in octal in response to a TTY input message. The standard CHIPS procedure required to change the program store cards requires an octal input. All address calculation and indexing is done by octal addition and subtraction. Refer to Section 232-127-101, Manual Translation Modification Procedure—General Description, for methods of addition and subtraction in octal, binary-to-octal conversions, and tables for decimal-to-octal conversion.

2. PROCEDURES

2.01 The following procedures detail the steps required to allocate changes in program store.

INITIAL PROCEDURE

TSM-1 FORM

2.02 The use of TSM-1 and TSM-2 forms is described below:

(1) From the No. 2/2B ESS maintenance TTY, read the initial contents of each of ten MTI locations listed on the appropriate TSM-1 form (Fig. 2).

For No. 2 ESS LO-1 and EF-1 generic use input message:

UB PS:RR:aaaaaa bbbbbb c!

▶For No. 2B ESS with the 2B-EF-1 generic use input message:

DMP:PS aa, LENGTH nn,RC:Lx:ONC!

For other No. 2B ESS generics use input message:

DMP:PS aa, LENGTH nn,RC!◖

Refer to the Input Message Manual (IM-2H200) for an explanation of the variable fields.

(2) Record the initial contents of the ten MTI words in the Translator Initial Contents column on the appropriate TSM-1 form.

TSM-2 FORM

Note: The translator initial contents column of the TSM-1 form, for the appropriate generic program (example Fig. 2), must have been completed before this procedure for the TSM-2 form is used.

(1) On the TSM-1 form, select from the translator initial contents column, a number (less the parity) other than zero. This number contains the table head address of the subtranslator to be used later in this procedure.

(2) Enter the subtranslator table number (0-9 from the TSM-1 form) of the subtranslator selected, at the top of the TSM-2 form (Fig. 4) for reference.

(3) Write the Table Head Address (less parity) in the top bracketed slot of the ***address*** column.

(4) Enter the remaining 39 addresses (1 through 47) on the TSM-2 form by adding the octal increment given on the TSM-2 form to the Table Head Address.

(5) Perform a utility TTY read of Program Store.

For No. 2 ESS use input message:

UB PS:RR:aaaaaa bbbbbb c!

◗For No. 2B ESS with the 2B-EF-1 generic use input message:

DMP:PS aa, LENGTH nn,RC:Lx:ONC!

For other No. 2B ESS generics use input message:

DMP:PS aa, LENGTH nn,RC!◖

From the maintenance TTY at each location in the table, enter the initial contents in the column to the right of the Address column, titled Initial Subtranslator Contents.

MEMORY ALLOCATION FROM SPARE REQUEST

2.03 This procedure tells how to allocate the storage required.

(1) Attempt to select a block on the TSM-2 form that has enough words to meet the necessary octal size requirements. The block size is contained in the least significant seven digits of the data recorded in the size slot in the initial subtranslator contents column. It should be noted that the block size of memory is recorded on the TSM-2 form in octal and that the necessary size requirements must be expressed in octal also to be compatible. If no blocks are large enough to meet the octal size requirements, perform the Initial Procedure, TSM-2 form, for another subtranslator table. If all assigned subtranslator tables have been tried and no memory blocks of adequate size can be found, an ODA run is necessary to construct new blocks.

(2) The address of the first word of the memory words selected is the address of the block. This address is the least significant seven digits of the data located in the initial subtranslator contents column for the block number selected. It will be necessary to record this address and use the block when so directed by the procedure requesting the Memory Allocation From Spare Request.

(3) Calculate the result of the allocation changes to the size and address of the block selected using the following formula. It will be necessary to convert the number of words, or block size of memory required, to octal. To do this, use the Decimal-to-Octal Number Conversion Table provided in Section 232-127-101 as an aid. After making the calculations, enter the size and address into the lowest numbered vacant change slots for that block on the TSM-2 form. Right-justify this number so as to have seven digits contained on the allotted line; ie, to return a block of 15 words to spare, the digits in the change column would appear as 0000015.

Latest Size − Words Requested (in octal) = New Block Size

Latest Block Address + Words Requested (in octal) = New Block Address, if new block size is not equal to zero

or

New Block Address = (0), if new block size is equal to zero.

MEMORY RETURN TO SPARE REQUEST

2.04 This procedure tells how unused storage may be returned to spare.

(1) From the maintenance TTY, read each word of the translation memory block to be returned to spare; all words should be zero.

For No. 2 ESS for LO-1 and EF-1 generic use input message:

UB PS:RR:aaaaaa bbbbbb c!

For No. 2B ESS use input message:

DMP:PS aa,LENGTH nn!

If a word is found to be nonzero, recheck each step leading up to this one. In addition, look for missed recent change procedures and update. ***Do not return a block to spare if it is nonzero.***

(2) Select a block pointer on the TSM-2 form which has the initial or change size and address equal to zero. If no pointer can be found, execute one of the following steps:

(a) If no zero pointer was found and a TSM-2 form has not been initialized for each nonzero translator initial contents (address), initialize a new TSM-2 form and repeat Step 2 of the Memory Return to Spare Request procedure.

(b) If all of the entries in all of the subtranslators are nonzero, and at least one of the ten translators initial contents on the TSM-2 form is zero, execute the procedure to build a new subtranslator table. (Refer to Request to Build a New Memory Subtranslator Table.) After a new subtranslator table has been added, repeat the Memory Return to Spare Request procedure.

(c) If no all zero block pointers can be found on the TSM-2 form, find the entry with the smallest block size and use it as if it were zero, but only if that entry is smaller than the block to be stored. Lost blocks will be recovered by ODA update.

(3) On the TSM-2 form, next to the block number chosen, write the octal size of the block to be returned to spare into the lowest numbered vacant change column. Right-justify this number so as to have seven digits on the allotted line; ie, to return a block of 15 words to spare, the digits in the change column would appear as 0000015.

(4) On the TSM-2 form, write the octal address of the block to be returned to spare into the lowest numbered vacant change column under the size entered by Step 3. Right-justify this number so as to have seven digits on the allotted line; when necessary add zeros until seven digits are obtained.

REQUEST TO BUILD A NEW MEMORY SUBTRANSLATOR TABLE

2.05 This procedure tells how to start a new memory subtranslator table.

(1) Select a block size equal to 40 decimal (50 octal) words, or larger, from the TSM-2 form. If a block is not available, an ODA run may be necessary.

(2) The address of the first word of the 40 decimal memory words selected is equal to the address of the block chosen. Record this address in the change column on the TSM-1 form next to one of the translator words having zero contents.

(3) Calculate the results of the allocation changes to the size and address of the block selected using the following formula. It will be necessary to convert the number of words, or block size of memory required, to octal. To do this, use the Decimal-to-Octal Number Conversion Table provided in Section 232-127-101 as an aid. After making the calculations, enter the size and address into the

lowest numbered vacant ***change*** slots for that block on the TSM-2 form. Right-justify this number so as to have seven digits on the allotted line; when necessary add zeros until seven digits are obtained.

Latest Size − Words Requested (in octal) = New Block Size

Latest Block Address + Words Requested (in octal) = New Block Address, if new block size is not equal to zero

or

New Block Address = (0), if new block size is equal to zero.

(4) Initiate a new TSM-2 form (Steps 2, 3, 4, and 5 of ***Initial Procedure*** using the new MTI address.

(5) The initial subtranslator contents determined in Step 5 of the ***Initial Procedure*** TSM-2 form must be zero.

(6) On the TSM-2 form, write the octal size of block to be returned to spare in the Size, Block 0, Change 1 slot. Right-justify this number so as to have seven digits on the allotted line; ie, to return a block of 15 words to spare, the digits in the change column would appear as 0000015.

(7) On the TSM-2 form, write the octal address of block to be returned to spare in the Address, Block 0, Change 1 slot. (The block address of the first word of block being returned.) Right-justify this number so as to have seven digits on the allotted line. When necessary, add zeros until seven digits are obtained.

RECENT CHANGE PROCEDURE

2.06 ▶If the office is No. 2 ESS (EF-2 generic) or No. 2B ESS (2B-EF-2 or later generic) this procedure can be done by a recent change message.◀

At the maintenance TTY—
Type in:

A RC:PST: ssss/
ADR 0 aaaaaaa/
END!

ssss = block size of call store wanted

ADR 0 aaaaaaa = beginning address of block of call store to be placed in spare table.

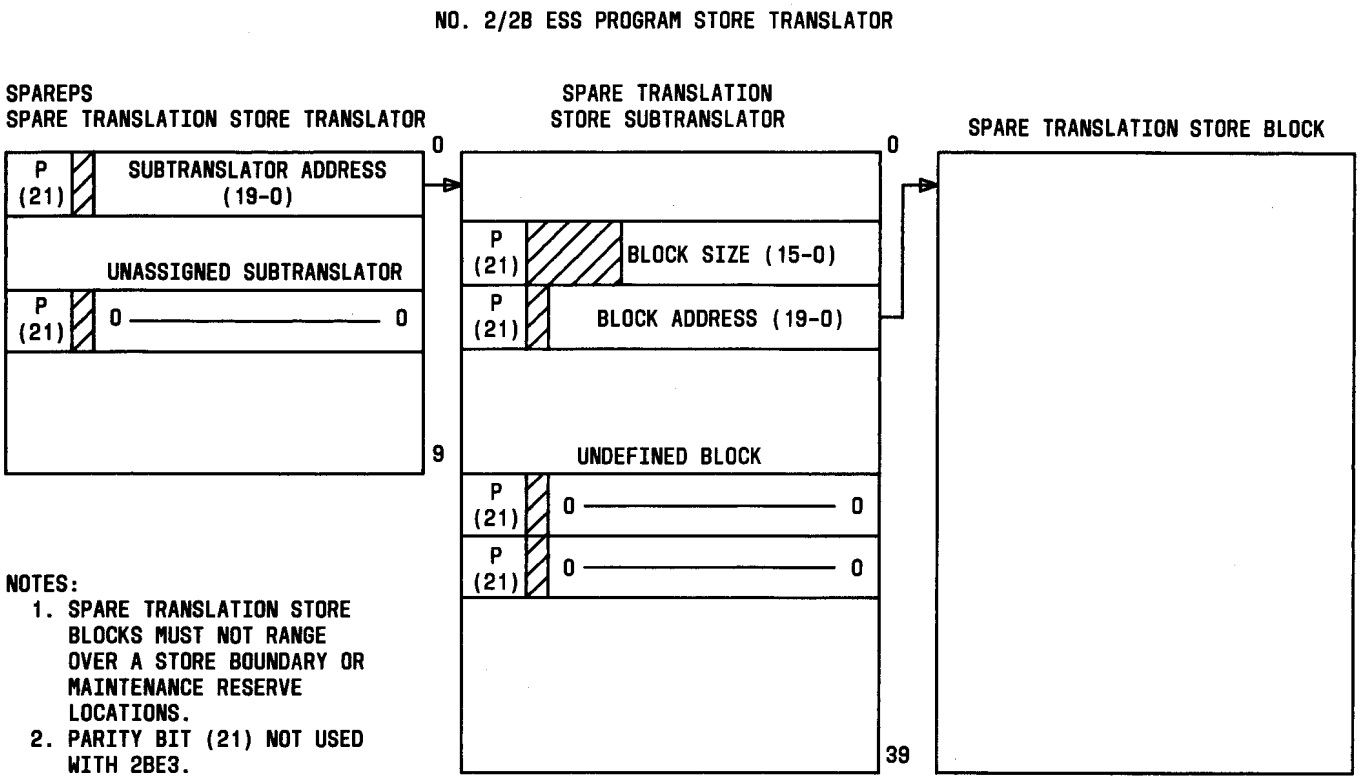

Fig. 1—No. 2/2B ESS Spare Program Store Translator

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY
TRANSLATOR CHANGE FORM TSM-1 FORM

OFFICE Mannsville
DATE 9/11/79

FORM CHIPS ADDRESS RANGE (342035) - (342042)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2	LO-1	0	241224	- - - - - - - -	- - - - - - - -
		1	241225	- - - - - - - -	- - - - - - - -
		2	241226	- - - - - - - -	- - - - - - - -
		3	241227	- - - - - - - -	- - - - - - - -
		4	241230	- - - - - - - -	- - - - - - - -
		5	241231	- - - - - - - -	- - - - - - - -
		6	241232	- - - - - - - -	- - - - - - - -
		7	241233	- - - - - - - -	- - - - - - - -
		8	241234	- - - - - - - -	- - - - - - - -
		9	241235	- - - - - - - -	- - - - - - - -
2	EF-1	0	342035	10214365	- - - - - - - -
		1	342036	10761032	- - - - - - - -
		2	342037	10547601	- - - - - - - -
		3	342040	10325476	- - - - - - - -
		4	342041	10103254	- - - - - - - -
		5	342042	00000000	05134520
		6	342043	- - - - - - - -	- - - - - - - -
		7	342044	- - - - - - - -	- - - - - - - -
		8	342045	- - - - - - - -	- - - - - - - -
		9	342046	- - - - - - - -	- - - - - - - -
2B	EF-1	0	642142	- - - - - - - -	- - - - - - - -
		1	642143	- - - - - - - -	- - - - - - - -
		2	642144	- - - - - - - -	- - - - - - - -
		3	642145	- - - - - - - -	- - - - - - - -
		4	642146	- - - - - - - -	- - - - - - - -
		5	642147	- - - - - - - -	- - - - - - - -
		6	642150	- - - - - - - -	- - - - - - - -
		7	642151	- - - - - - - -	- - - - - - - -
		8	642152	- - - - - - - -	- - - - - - - -
		9	642153	- - - - - - - -	- - - - - - - -

Fig. 2—Example Completed TSM-1 Form (Sheet 1 of 2)

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY
TRANSLATOR CHANGE FORM

OFFICE_____
DATE_____

TSM-1 FORM
FORM CHIPS ADDRESS RANGE (_ _ _ _ _ _) - (_ _ _ _ _ _)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2B	2B-EF-2	0	742624	- - - - - - - -	- - - - - - - -
		1	742625	- - - - - - - -	- - - - - - - -
		2	742626	- - - - - - - -	- - - - - - - -
		3	742627	- - - - - - - -	- - - - - - - -
		4	742630	- - - - - - - -	- - - - - - - -
		5	742631	- - - - - - - -	- - - - - - - -
		6	742632	- - - - - - - -	- - - - - - - -
		7	742633	- - - - - - - -	- - - - - - - -
		8	742634	- - - - - - - -	- - - - - - - -
		9	742635	- - - - - - - -	- - - - - - - -
2B	2BE3	0	1242624	- - - - - - - -	- - - - - - - -
		1	1242625	- - - - - - - -	- - - - - - - -
		2	1242626	- - - - - - - -	- - - - - - - -
		3	1242627	- - - - - - - -	- - - - - - - -
		4	1242630	- - - - - - - -	- - - - - - - -
		5	1242631	- - - - - - - -	- - - - - - - -
		6	1242632	- - - - - - - -	- - - - - - - -
		7	1242633	- - - - - - - -	- - - - - - - -
		8	1242634	- - - - - - - -	- - - - - - - -
		9	1242635	- - - - - - - -	- - - - - - - -

Fig. 2—Example Completed TSM-1 Form (Sheet 2 of 2)

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY
TRANSLATOR CHANGE FORM TSM-1 FORM

OFFICE_____
DATE_____

FORM CHIPS ADDRESS RANGE (_ _ _ _ _ _) - (_ _ _ _ _ _)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2	LO-1	0	241224	- - - - - - - -	- - - - - - - -
		1	241225	- - - - - - - -	- - - - - - - -
		2	241226	- - - - - - - -	- - - - - - - -
		3	241227	- - - - - - - -	- - - - - - - -
		4	241230	- - - - - - - -	- - - - - - - -
		5	241231	- - - - - - - -	- - - - - - - -
		6	241232	- - - - - - - -	- - - - - - - -
		7	241233	- - - - - - - -	- - - - - - - -
		8	241234	- - - - - - - -	- - - - - - - -
		9	241235	- - - - - - - -	- - - - - - - -
2	EF-1	0	342035	- - - - - - - -	- - - - - - - -
		1	342036	- - - - - - - -	- - - - - - - -
		2	342037	- - - - - - - -	- - - - - - - -
		3	342040	- - - - - - - -	- - - - - - - -
		4	342041	- - - - - - - -	- - - - - - - -
		5	342042	- - - - - - - -	- - - - - - - -
		6	342043	- - - - - - - -	- - - - - - - -
		7	342044	- - - - - - - -	- - - - - - - -
		8	342045	- - - - - - - -	- - - - - - - -
		9	342046	- - - - - - - -	- - - - - - - -
2B	EF-1	0	642142	- - - - - - - -	- - - - - - - -
		1	642143	- - - - - - - -	- - - - - - - -
		2	642144	- - - - - - - -	- - - - - - - -
		3	642145	- - - - - - - -	- - - - - - - -
		4	642146	- - - - - - - -	- - - - - - - -
		5	642147	- - - - - - - -	- - - - - - - -
		6	642150	- - - - - - - -	- - - - - - - -
		7	642151	- - - - - - - -	- - - - - - - -
		8	642152	- - - - - - - -	- - - - - - - -
		9	642153	- - - - - - - -	- - - - - - - -

Fig. 3—Reproducible TSM-1 Form (Sheet 1 of 2)

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY
TRANSLATOR CHANGE FORM TSM-1 FORM

OFFICE_____
DATE_____

FORM CHIPS ADDRESS RANGE (_ _ _ _ _ _) - (_ _ _ _ _ _)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2B	2B-EF-2	0	742624	- - - - - - - -	- - - - - - - -
		1	742625	- - - - - - - -	- - - - - - - -
		2	742626	- - - - - - - -	- - - - - - - -
		3	742627	- - - - - - - -	- - - - - - - -
		4	742630	- - - - - - - -	- - - - - - - -
		5	742631	- - - - - - - -	- - - - - - - -
		6	742632	- - - - - - - -	- - - - - - - -
		7	742633	- - - - - - - -	- - - - - - - -
		8	742634	- - - - - - - -	- - - - - - - -
		9	742635	- - - - - - - -	- - - - - - - -
2B	2BE3	0	1242624	- - - - - - - -	- - - - - - - -
		1	1242625	- - - - - - - -	- - - - - - - -
		2	1242626	- - - - - - - -	- - - - - - - -
		3	1242627	- - - - - - - -	- - - - - - - -
		4	1242630	- - - - - - - -	- - - - - - - -
		5	1242631	- - - - - - - -	- - - - - - - -
		6	1242632	- - - - - - - -	- - - - - - - -
		7	1242633	- - - - - - - -	- - - - - - - -
		8	1242634	- - - - - - - -	- - - - - - - -
		9	1242635	- - - - - - - -	- - - - - - - -

Fig. 3—Reproducible TSM-1 Form (Sheet 2 of 2)

TSM-2 FORM

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY SUBTRANSLATOR CHANGE FORM

OFFICE Mannsville

DATE 9/11/79 SUBTRANSLATOR TABLE NUMBER 3 FORM CHIPS ADDRESS RANGE = (234567)-(234570)

	ADDRESS	INITIAL SUBTRANSLATOR CONTENTS		CHANGE 1	CHANGE 2	CHANGE 3	CHANGE 4	CHANGE 5
TABLE HEAD	(0234567)	SIZE (10000100)	<-BLOCK 0	(0000050)	( )	( )	( )	( )
TABLE HEAD+OCTAL	1=(0234570)	ADDR. (00054325)		(0054375)	( )	( )	( )	( )
TABLE HEAD+OCTAL	2=(0234571)	SIZE (00000030)	<-BLOCK 1	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	3=(0234572)	ADDR. (00043210)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	4=(0234573)	SIZE (10000010)	<-BLOCK 2	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	5=(0234574)	ADDR. (00032100)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	6=(0234575)	SIZE (00000005)	<-BLOCK 3	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	7=(0234576)	ADDR. (00021000)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	10=(0234577)	SIZE (10000007)	<-BLOCK 4	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	11=(0234600)	ADDR. (00010111)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	12=(0234601)	SIZE (10000002)	<-BLOCK 5	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	13=(0234602)	ADDR. (10000222)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	14=(0234603)	SIZE (00000006)	<-BLOCK 6	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	15=(0234604)	ADDR. (00022333)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	16=(0234605)	SIZE (00000003)	<-BLOCK 7	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	17=(0234606)	ADDR. (00033431)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	20=(0234607)	SIZE (00000035)	<-BLOCK 8	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	21=(0234610)	ADDR. (00044542)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	22=(0234611)	SIZE (10000023)	<-BLOCK 9	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	23=(0234612)	ADDR. (00000210)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	24=(0234613)	SIZE (00000014)	<-BLOCK 10	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	25=(0234614)	ADDR. (10000214)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	26=(0234615)	SIZE (00000033)	<-BLOCK 11	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	27=(0234616)	ADDR. (10000217)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	30=(0234617)	SIZE (10000026)	<-BLOCK 12	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	31=(0234620)	ADDR. (00000216)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	32=(0234621)	SIZE (10000031)	<-BLOCK 13	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	33=(0234622)	ADDR. (00000125)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	34=(0234623)	SIZE (00000006)	<-BLOCK 14	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	35=(0234624)	ADDR. (00000134)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	36=(0234625)	SIZE (00000003)	<-BLOCK 15	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	37=(0234626)	ADDR. (00000132)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	40=(0234627)	SIZE (00000024)	<-BLOCK 16	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	41=(0234630)	ADDR. (10000133)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	42=(0234631)	SIZE (10000023)	<-BLOCK 17	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	43=(0234632)	ADDR. (10000212)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	44=(0234633)	SIZE (00000022)	<-BLOCK 18	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	45=(0234634)	ADDR. (00000311)		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	46=(0234635)	SIZE (10000034)	<-BLOCK 19	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL	47=(0234626)	ADDR. (00000333)		( )	( )	( )	( )	( )

Fig. 4—Example Completed TSM-2 Form

TSM-2 FORM

NO. 2/2B ESS SPARE TRANSLATION STORE MEMORY SUBTRANSLATOR CHANGE FORM

OFFICE _____

DATE _____ SUBTRANSLATOR TABLE NUMBER _____ FORM CHIPS ADDRESS RANGE = ( )-( )

ADDRESS	INITIAL SUBTRANSLATOR CONTENTS		CHANGE 1	CHANGE 2	CHANGE 3	CHANGE 4	CHANGE 5
TABLE HEAD ( )	SIZE ( )	<-BLOCK 0	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 1=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 2=( )	SIZE ( )	<-BLOCK 1	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 3=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 4=( )	SIZE ( )	<-BLOCK 2	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 5=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 6=( )	SIZE ( )	<-BLOCK 3	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 7=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 10=( )	SIZE ( )	<-BLOCK 4	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 11=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 12=( )	SIZE ( )	<-BLOCK 5	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 13=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 14=( )	SIZE ( )	<-BLOCK 6	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 15=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 16=( )	SIZE ( )	<-BLOCK 7	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 17=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 20=( )	SIZE ( )	<-BLOCK 8	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 21=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 22=( )	SIZE ( )	<-BLOCK 9	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 23=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 24=( )	SIZE ( )	<-BLOCK 10	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 25=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 26=( )	SIZE ( )	<-BLOCK 11	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 27=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 30=( )	SIZE ( )	<-BLOCK 12	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 31=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 32=( )	SIZE ( )	<-BLOCK 13	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 33=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 34=( )	SIZE ( )	<-BLOCK 14	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 35=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 36=( )	SIZE ( )	<-BLOCK 15	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 37=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 40=( )	SIZE ( )	<-BLOCK 16	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 41=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 42=( )	SIZE ( )	<-BLOCK 17	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 43=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 44=( )	SIZE ( )	<-BLOCK 18	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 45=( )	ADDR. ( )		( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 46=( )	SIZE ( )	<-BLOCK 19	( )	( )	( )	( )	( )
TABLE HEAD+OCTAL 47=( )	ADDR. ( )		( )	( )	( )	( )	( )

Fig. 5—Reproducible TSM-2 Form