
CHAPTER 2: TECHNICAL CHARACTERISTICS

2-1 DATA BASE CHARACTERISTICS. FORMS/CPD has been designed and developed as a grant tracking system to support grant control functions at HUD Regional and Area (Field) Offices and also provide Headquarters CPD Program Management with the information they require to administer the Block Grant Program. The physical structure of the FORMS/CPD Data Base is determined primarily from three considerations:

- a. Headquarters CPD Program Management has indicated that certain information is required to satisfy its own (1) Reporting requirements, i.e from Congress and (2) Program analysis which will directly affect proposed future budgets, regulations, legislation, etc.
- b. Field Office CPD Staff has submitted a formal request for additional data element processing capability to support its own administration of the Block Grant Program. (Refer to Chapter 7 for requirements for submitting request for additional data elements).
- c. The Request for Additional Data Reporting Requirements is made indirectly by CPD Program Management; for example, through additional required CDBG Annual report tables.

The FORMS/CPD Data Base is actually comprised of ten Regional Data Bases primarily for the purpose of integrity. Each data base is structured into levels called repeating groups. Each repeating group consists of several data elements which belong to or provide the characteristics of the respective repeating group such as the grant or unit of government. Refer to Chapter 7, Use of FORMS/CPD As A Management Tool for a complete description of the structure of the Data Base.

2-2 DATA ELEMENT CHARACTERISTICS. Each FORMS/CPD data element may be described by a number of characteristics.

- a. Mandated/Optional. Mandated data elements are those which are required by Headquarters CPD Program Management. These data are identified as critical by Headquarters since they are used to affect policy, regulations or to insure that the objectives of the Block Grant Program are being attained. Mandated data elements on FORMS/CPD are identified via "C" numbers normally from 1 thru 500 and with the presence of the respective definition in Chapter 5. Use of optional data elements is at the discretion of each Regional Director of CPD. Headquarters will not use optional data nor provide a definition. Optional elements are generally identified with a 600 thru 999 "C" number or, often with the word "optional" in the data name.

- b. Key/Non key. A data element identified as "key" may be used to select or bypass a record (depending upon the given criteria for the report) on the Data Base depending on the key element's value. A "non key" data element may only be printed on a report and not to select data for print. (With the implementation of Version 2.95 of System 2000, retrieval of non-key element values is possible). A data element is considered "key" unless "non key" is specified on the data element dictionary. Refer to Paragraph 5-1. For example, in RG 500, Unit of Government, C18, UOG - Population is "key"; therefore, Units of Government may be selected based upon population size. However, C30, E-CUM-ENTITLEMENT is "non key", thus, you may not select records based on the amount of total approved Entitlement funds a grantee has received.
- c. Qualifier/Subordinate. Qualifier data elements are used to place data onto and access data from the Data Base. Qualifiers tie or relate the various levels/repeating groups of data together. For example, C200 is used to access data pertaining to any specific grant record. For this reason, each qualifier must be unique within the Data Base. Subordinate data values cannot be entered to or extracted from the Data Base without the corresponding qualifier. For example, Date Grant Approved does not need to be "unique" to the Data Base.
- d. Cumulative vs Overlay. The system processes cumulative data values (always numeric, money data elements) by adding or subtracting the value on the input transaction from the data value already entered into the Data Base. Negative amounts are indicated with a minus sign in the extreme right (justified) position of the transaction. For overlay data elements, the system will erase any values which currently exist for the data element and move the value from the input transaction directly onto the Data Base.

2-3 ENTERING DATA INTO FORMS/CPD. Data values are entered into FORMS/CPD via two separate processes.

- a. HTN II Network. The primary source of FORMS/CPD data element values is the HUD HTN II (HUD Teleprocessing Network II) System. Data entry input sheets are filled out by CPD Program staff and submitted to the MID staff (generally the Management Information Assistant) in the respective Area Office. Note that no data is currently being entered at Regional Offices. The MIA, noting the frame number found on each data entry sheet will bring up an exact replica of the input sheet on the HTN terminal screen. This feature provides a one to one transcription of data from the input sheet onto the screen format for visual edit checks. The keyed data is transmitted from the screen to a disk
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file in an off-line mode terminal. The data keyed to the disk file will be transmitted to the UNIVAC 1108 computer at Headquarters where the appropriate Regional Data Base will be updated overnight.

- b. Match To Other Computer Systems. Certain data are directly into the FORMS/CPD Data Base by linking to other computer systems automatically. Refer to Chapter 3 for a complete description of the interaction between the FORMS/CPD Data Base and other computer systems.

2-4 EXTRACTING DATA FROM FORMS/CPD. Data values maintained on Forms/CPD are used to satisfy the information requirements - in both Headquarters and Field Offices. The methods used to extract these data may be categorized in general, as report production (both scheduled, standard reports and ad hoc queries) and automated interface to other computer systems.

- a. Report Production Standard reports are provided by Headquarters on a monthly and/or weekly basis. Chapter 8 describes each report including formats and timing. Chapter 3 describes how ad hoc queries into the Data Base may be developed in each Field Office.
- b. Automated Data Extraction. Refer to Chapter 3 for a complete description of how data is extracted from FORMS/CPD and inputted automatically into other computer systems.

2-5 Field Office Accessing of Data. Each time Area Office CPD staff enters data into FORMS.CPD, careful consideration must be given to the effect on data already transmitted and the effect on data which will be entered in the future.

- a. Create vs Update. Each data entry screen is identified as "create/update" or "update only". Only the data entry sheet/screens marked "create/update" may be used to add a new repeating group occurrence (e.g. grant record) to the Data Base. The system will match the qualifier data element values found on the input transaction to the Data Base. If the systems matches these data to data values already entered, the only processing which will occur will be updates to the subordinate data elements found on the data entry screen. If no match occurs

(e.g. when entering a new grant number), the system will automatically add the new occurrence to the Data Base, based upon the unmatched qualifiers. Mistakes in qualifier data element values will either update the wrong record or create an unwanted new record. Take all possible precautions to avoid errors in qualifier values. Data entry sheets/screens marked "update only" require that the qualifier data values be already entered onto the Data Base.

- b. **Correct A Qualifier.** A situation often occurs where a qualifier data value, already entered onto the Data Base, needs to be changed. For example, a grant number was originally entered with the incorrect serial number. The "create/update" data entry sheet for the repeating group affected provides a feature which will change/correct a qualifier data value without effecting any of the subordinate data values already entered. Enter the current incorrect data value in the usual place on the data entry sheet; enter the new correct value within the bracket marked "change" qualifier. The incorrect value must be provided to allow the system to find the values to be corrected.
- c. **Remove A Qualifier/Repeating Group.** A situation can occur whereby a qualifier value and subordinate data values, if any, needs to be removed from the Data Base. For example, a duplicate grant record was found on the Data Base. In this situation both the data values and the space on the Data Base in which these data resides must be removed. This process can only be done by the Regional Management Information Director who should maintain an audit record of these situations.
- d. **Remove A Data Element Value.** To remove a data element value from the Data Base, write "REMOVE" in the space provided for the data element on the data entry sheet. Remember to provide the qualifier data values.
- e. **Correct/Change A DataElement Value.** To change the value of a subordinate data element, simply write in the correct value onto the data entry sheet, again, with the required qualifier values. For cumulative data elements, enter a minus sign to the immediate RIGHT of the "net change" data value to decrease the amount currently on the Data Base.