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16. Abstract

This report presents a bridge management system module to be used in assessing needs, determining district allocations, and selecting and prioritizing projects for bridge rehabilitation and replacement. The process starts with a budget to be allocated to the Texas districts and ends with the selection of projects to be submitted for plan development and contracting within the allotted funding limits. The ranking process included in both the allocation and selection processes is based on multi-objective decision theory, with the developed system comprised of six computer modules—five at the state level and one at the district level. The district-level module appropriates and makes use of the expertise of the district engineers in the selection process. The system, now fully implemented, is available for use in the TxDOT mainframe computer system.

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OPERATING THE TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM (TEBSS)

by

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Research Report 1911-1F

Research Project 3-5-90/1-1911

Implementation of a Bridge Rehabilitation Replacement Selection System on the TxDOT Mainframe Computer

conducted for the

Texas Department of Transportation

by the

CENTER FOR TRANSPORTATION RESEARCH
Bureau of Engineering Research
The University of Texas at Austin

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ABSTRACT

This report presents a bridge management system module to be used in assessing needs, determining district allocations, and selecting and prioritizing projects for bridge rehabilitation and replacement. The process starts with a budget to be allocated to the Texas districts and ends with the selection of projects to be submitted for plan development and contracting within the allotted funding limits. The ranking process included in both the allocation and selection processes is based on multi-objective decision theory, with the developed system comprised of six computer modules—five at the state level and one at the district level. The district-level module appropriates and makes use of the expertise of the district engineers in the selection process. The system, now fully implemented, is available for use in the TxDOT mainframe computer system.

KEY WORDS: bridge management, bridge rehabilitation, bridge replacement, bridge inventory, ranking, life-cycle costs, multi-attribute criteria, prioritization, development of bridge work programs.

SUMMARY

This research project and its accompanying report serve to update the TxDOT bridge selection and budget apportioning system developed in Research Project 439, "Strategies for Bridge Replacement." Using statistical analysis (SAS) language, this computer tool consists of a two-level, closed-loop bridge selection system termed the Texas Eligible Bridge Selection System (TEBSS). For operator convenience, the system has been designed for use with both microcomputers and mainframe computers.

IMPLEMENTATION STATEMENT

The Texas Eligible Bridge Selection System (TEBSS) developed in this project is currently implemented and available for use in the TxDOT ROSCOE computer system for both Bridge Division (D-5) and district officials.

TABLE OF CONTENTS

CHAPTER 3. PROGRAM MANUALS

CHAPTER 1. THEORETICAL BACKGROUND FOR THE RANKING ROUTINE USED IN THE TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM (TEBSS)

INTRODUCTION

This report presents a bridge management system module to be used in assessing needs, determining district allocations, and selecting and prioritizing projects for bridge rehabilitation and replacement. Representing an update to the TxDOT bridge selection and budget apportioning system developed in Research Project 439, "Strategies for Bridge Replacement," this computer tool uses Statistical Analysis (SAS) language in a two-level, closed-loop bridge selection system termed the Texas Eligible Bridge Selection System (TEBSS). For operator convenience, the system has been designed for use with both microcomputers and mainframe computers. The process starts with a budget to be allocated to Department districts and ends with the selection of projects to be submitted for plan development and contracting within the allotted funding limits. The ranking process included in both the allocation and selection processes is based on multi-objective decision theory, with the developed system comprised of six computer modules—five at the state level and one at the district level. The district-level module appropriates and makes use of the expertise of the district engineers in the selection process. The system, now fully implemented, is available for use in the TxDOT mainframe computer system.

This chapter examines some concepts associated with a bridge rehabilitation selection process. Specifically, the concepts of multi-objective decision analysis—including its associated multi-attribute-based ranking process—are presented and recommended as processes to be applied to a network-level ranking module for the selection of bridge rehabilitation and replacement projects.

BACKGROUND

Following the success of the scientific decision-making approaches used by the U.S. during World War II, a variety of techniques were developed and applied to non-military decisionmaking problems in a variety of fields, including engineering, business, government, the social sciences, and economics. Because these problems were often characterized by the need to achieve an objective using limited resources, the developed techniques shared a common feature: the formulation of a single criterion (or objective) function, with the optimization subject to a set of prescribed constraints. Yet increasingly over the last two decades there has been a perceived need to consider several objectives simultaneously in attempting to solve large-scale system problems related to resource allocation (Ref 17). Multi-objective analysis was thus developed in response to this need.

COMPONENTS OF MULTI-OBJECTIVE ANALYSIS

Multi-objective analysis, which can provide some useful analytical techniques to the decision-maker concerned with a bridge-project-selection problem, has associated with it the following steps:

- initiation,
- problem formulation,
- system modeling,
- analysis, and
- implementation.

An illustration of a typical multi-objective analysis process, incorporating the above steps, is presented in Figure 1.1 (Ref 11). In the initiation step, the decisionmaker recognizes the need for a change (in the case of a bridge official, this recognition might be occasioned by observing specific bridge network deterioration). Within problem formulation—the next step—there are four further operations: (1) stating the general goals relating to the situation, (2) identifying the alternatives, (3) establishing a common set of evaluation criteria, and (4) determining the levels of the criteria for each alternative.

In the system-modeling step, a model based on a formal or informal evaluation procedure is constructed. A formal evaluation procedure would

treat the bridge project selection process as a choice among a finite number of discrete project alternatives that are evaluated using the common set of multiple criteria to be determined. Since alternatives need to be compared, a set of attributes or objective measures must be clearly specified. The levels of these attributes, measured on an appropriate scale for each alternative, serve as yardsticks by which the degree of attainment of the particular objectives specified in the preceding step can be assessed. The techniques for solving these types of problems are classified in the specialized literature as discrete methods with prior articulation of preferences (Ref 17).

In the analysis step, the model constructed in the previous phase is utilized to establish the ranking of the alternatives; the results are then used to reach a decision, with that decision then implemented in the last step, i.e., implementation. If the current result is found to be unsatisfactory, the output can be used to return to the problem formulation step in a closed-loop process.

In recognizing the need to manage the state bridge network adequately, Texas officials have effectively undertaken the first step, i.e., initiation (see Fig 1.1).

It is the undertaking of the following steps—problem formulation and system modeling—that this chapter examines in particular and within the context of Texas. In the problem-formulation step, work has already been performed for Texas, with alternatives identified and attributes for evaluation criteria established. For the system-modeling step, models (used in the analysis step to aid project selections; see Refs 4, 5, and 6) not based on formal multi-objective decision-theory selection procedures were built.

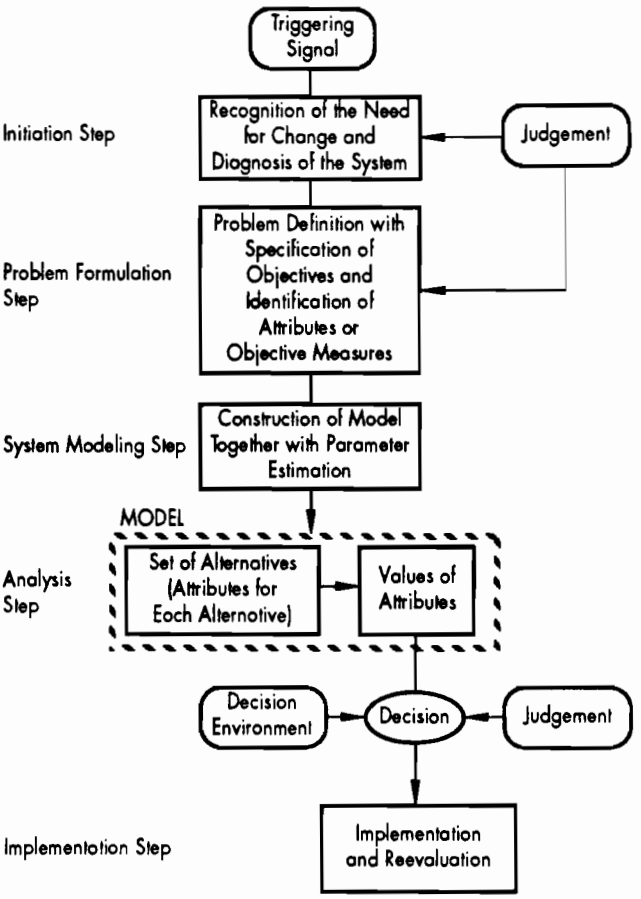

Figure 1.1 Typical multi-objective decision-making process

PROBLEM FORMULATION STEP

A broad overall objective reflecting the concern for providing adequate bridges to Texas travelers could be stated as follows: "To provide bridge facilities that serve the public adequately in terms of safety and cost-effectiveness." While such a broad objective provides little, if any, insight as to which project (out of a number of alternative projects within a planned budget) may be the best or most worthwhile to pursue, it does provide a useful starting point for specifying detailed objectives in more operational terms.

For example, a set of more detailed objectives might include the following: "to serve the highest number of users"; "to rehabilitate or replace structurally unsafe bridges and preserve investment"; "to implement cost effective projects"; and "to maximize user safety." For each of these more detailed objectives it is possible to associate an attribute that will indicate the degree to which alternative bridge projects meet this objective. For example, the objective "serve the highest number of users" may be measured by the attribute "average daily traffic over the candidate bridge project (ADT)"; in the same manner, the objective "repair or replace structurally unsafe bridges" may be measured by the attribute "minimum of the deck substructure and superstructure condition ratings (DSS)."

The association of more detailed objectives with the attributes is depicted in Figure 1.2. In each of these cases the attribute provides a scale for measuring the degree to which its respective objective is met. A more detailed objective indicates the direction in which the search for the best solution should be oriented to meet the broad objective.

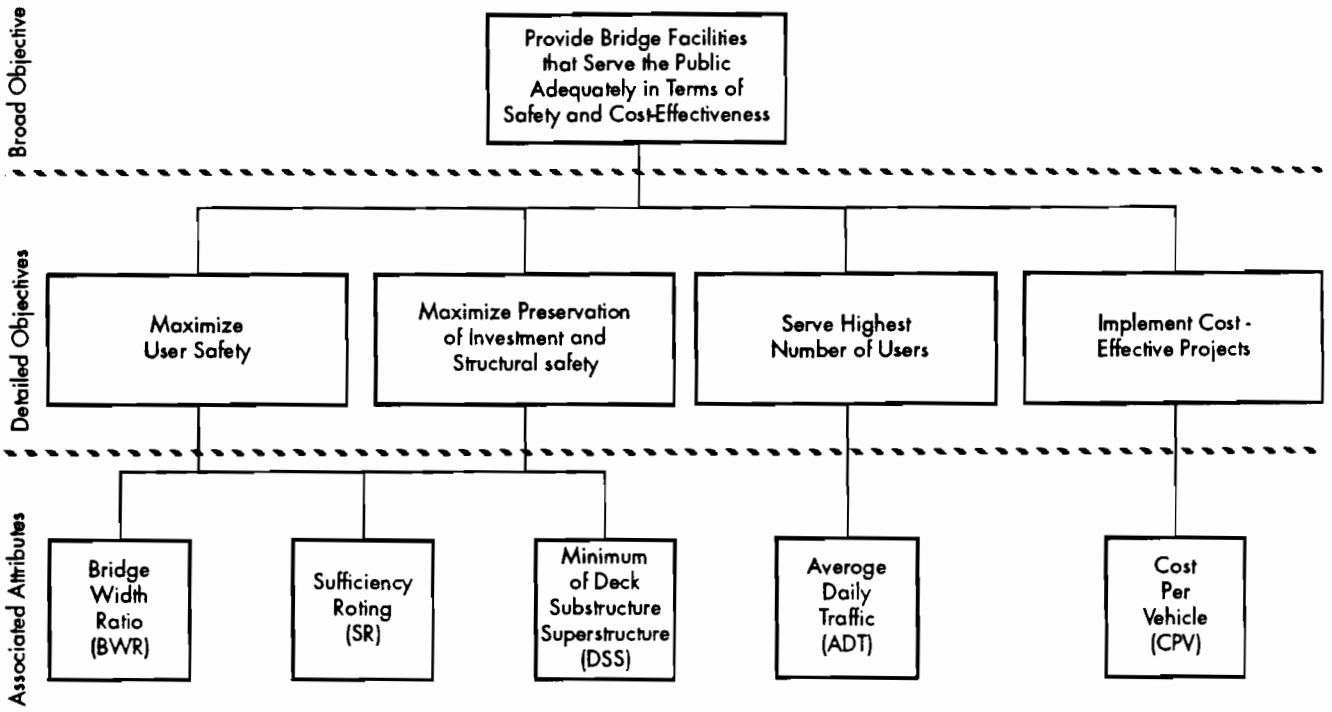

Figure 1.2 Objectives and associated attributes for Texas

ATTRIBUTE CHARACTERISTICS

We now turn to a discussion of the relevant attributes chosen by TxDOT officials involved in the bridge replacement rehabilitation decision process, with an explanation of their relevance in the bridge project selection process. These attributes, presently used in the overall selection system, are also used for the district module presented in the following chapter.

First of all, the attributes are divided into the broad categories of safety and service, with such division determined by the coded information for each structure on the BRINSAP tape (either calculated by the computer programs that compose the overall selection system presented in the following chapter, or read directly as stored in the BRINSAP database). The attributes are comprised of the following:

ADT: Average daily traffic over the structure: This measure rates the importance of the bridge relative to service provided to the vehicle users. If the bridge is posted or closed, users suffer immediate economic impacts leading to higher travel costs. Such impacts could result from detouring, which would require longer travel times and higher fuel and vehicle maintenance expenditures. The ideal approach would be to combine the Average Daily Truck Traffic (ADTT), detour length, and a measure of the load deficiency as quantified by the inability to meet a desired capacity goal for a road functional classification. This approach has been used, with ADT instead of ADTT, by several states. ADT also measures indirectly the number of vehicles exposed to accidents or traffic delays by a geometrically deficient bridge. Ideally, this purpose would be achieved by having it combined with an attribute that measures the inability of a particular structure to meet desired geometric characteristics, such as clear bridge deck widths, in a process that has some similarity with the approach used by other states.

CPV: Cost per vehicle, defined as the cost of the proposed project divided by the ADT levels: This provides a measure of the cost-effectiveness of the project. In the future, with more data available, adequate life-cycle cost analysis can be used to quantify benefit-cost ratios for every candidate project. This benefit-cost ratio will more adequately quantify the benefits (usually the reduction of the user costs) achieved by undertaking the project. This process is illustrated in Figure 1.3, where the impact provided by the benefits of investing on a particular project is quantified by the reduction in the user costs. The CPV is an informal way of measuring the benefit-cost ratio, since it measures the number of users that benefit from funds invested in a particular project.

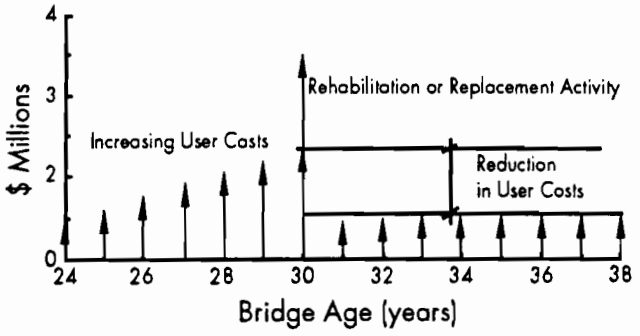

Figure 1.3 Reduction in user costs resulting from improvements

DSS: The attribute that comprises the minimum of the bridge's deck, substructure, and superstructure condition ratings. These ratings are 0 to 9 integer values, where 0 represents a critical condition, and 9 represents a new condition. Table 1.1 includes a description of the ratings (from Ref 19, Plate III-1). Assigned to each bridge structure component during BRINSAP inspections, they give a measure of the current degree of deterioration of different bridge components.

Because each bridge component is composed of elements, the condition rating for a component begins with ratings for each of its elements. A component condition rating is the minimum rating given to any of its elements. A condition rating of 0 for a superstructure could be the result of rating one element 0 or by rating four elements 0. (For a discussion of condition ratings, see Ref 4.)

SR: The sufficiency rating index, created by FHWA staff, uses a 0-to-100 scale that reflects the ability of a structure to remain in service in its present condition. The FHWA manual (Ref 16) defines the elements of the SR attribute (and their associated weights) as:

(1) structural adequacy and safety, weighted 55 percent;
(2) serviceability and functional obsolescence, weighted 30 percent; and
(3) essentiality of public use, weighted 15 percent.

BWR: This is a bridge-width ratio, defined as the ratio between the existing roadway width and the standardized width, where the latter is a function of the ADT crossing the structure. The standardized values for the structure widths are defined in TxDOT design standards. In measuring the geometric safety of the bridge (which could translate into higher accident rates and consequently higher user costs), this attribute measures specifically the degree to which a level of service of providing a standardized clear deck width is accomplished by a particular structure. North Carolina (Ref 18) approaches the problem in a similar way by establishing desired levels of service for the bridge's width and vertical clearance, and combining them with ADT. The desired levels of service for the roadway width for the on- and off-systems are presented in Table 1.2. (These values were established by TxDOT.)

Table 1.1 Condition rating descriptions

9 - New condition	
8 - Good condition -	no repairs needed
7 - Generally good condition -	potential exists for minor maintenance
6 - Fair condition -	potential exists for major maintenance
5 - Generally fair condition -	potential exists for minor rehabilitation
4 - Marginal condition -	potential exists for major rehabilitation
3 - Poor condition -	repair or rehabilitation required immediately
2 - Critical condition -	bridge should be closed until repairs are complete
1 - Critical condition -	bridge closed, but repairable
0 - Critical condition -	bridge closed and beyond repair
N - Not applicable	

Source: Ref 19, Plate III-1

Table 1.2 Roadway width, curb to curb, goals for Texas

ADT	Urban Freeway	Rural Freeway	Mainlane Expressway	Arterial	Collector	Local
0 – 250	38	38	38	34	30	24
251 – 400	38	38	38	34	30	28
401 – 750	38	38	38	36	30	30
751 – 1,500	38	38	38	38	30	30
1,501 – 3,000	38	38	38	44	44	38
Over 3,000	–	–	–	44	44	40
3,001 – 22,000	38	–	–	–	–	–
3,001 – 10,400	–	38	–	–	–	–
3,001 – 8,100	–	–	38	–	–	–
22,001 – 33,000	56	–	–	–	–	–
10,401 – 15,600	–	56	–	–	–	–
8,101 – 11,800	–	–	56	–	–	–
33,001 – 44,000	68	–	–	–	–	–
Over 15,601	–	68	–	–	–	–
11,801 – 14,700	–	–	68	–	–	–
Over 44,000	80	–	–	–	–	–
Over 14,700	–	–	68	–	–	–

Widths in ft (Source: TxDOT)

THE SYSTEM-MODELING STEP

The discrete bridge project selection problem can be represented by a payoff matrix such as that shown in Figure 1.4. The rating of the j^{th} alternative on the i^{th} criterion is represented by r_{ij}. In the bridge selection problem the alternatives are the projects to be selected for funding, while the criteria are the attributes used for ranking the projects. In this case there are five attributes, as defined above; the number of alternatives are the projects to be funded.

Clearly, the task of selecting alternatives in a problem such as depicted in Figure 1.4 is sufficiently complex to require some type of formal assistance. Because of the severe limitations of an intuitive decisionmaking process, analytical methods are needed to help determine the worth of multi-attribute alternatives, such as those involved in a bridge-selection problem.

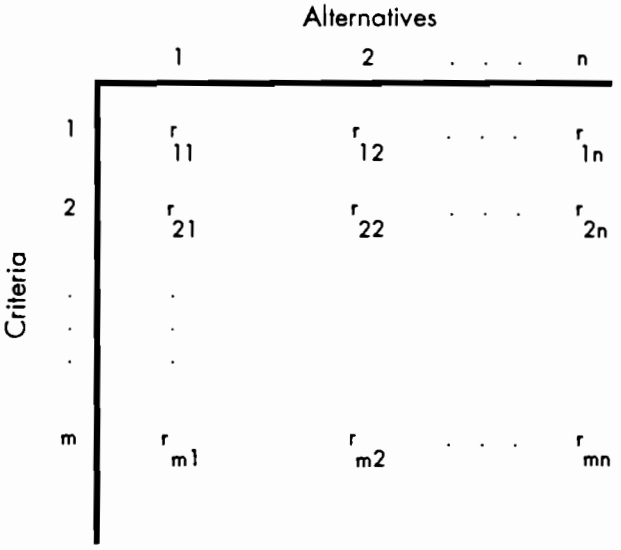

Figure 1.4 Payoff matrix

The technique presented below selects those projects that maximize the preferences of the decisionmaker by applying concepts of utility theory (Refs 11, 14, and 17). This theory assumes that an individual can choose among alternatives available in such a manner that the satisfaction derived from his/her choice is as complete as possible. This, of course, implies that the decisionmaker (1) is aware of the alternatives, (2) knows the projects to be funded, and (3) is capable of evaluating them under a set of common criteria. Moreover, it is assumed that the decisionmaker is able to translate his preference structure through a value function that is a formal mathematical representation of his preference structure.

These concepts provide the formal theoretical background for applying the weighted average method, probably the most common evaluation procedure applied from the multi-objective decisionmaking theory. The result of this weighted average technique is a score in a 0-to-100 or 0-to-1 scale. This score, calculated for each alternative project to be funded, measures the priority of the project for funding from the decisionmaker's point of view. A score of 100 means high priority for funding, while 0 represents low priority. This weighted average technique is defined as:

$$U_j = \sum_{i=1}^{n} \lambda_i v_i\left(x_{ij}\right) \qquad (1.1)$$

where:

λ_i = scaling constant or weight for the i^{th} attribute;

U_j = worth or score for the j^{th} project;

$v_i(x_{ij})$ = value of the ith attribute for the j^{th} project; and

n = number of attributes.

A SUBSTITUTE FOR VALUE FUNCTIONS: PERCENTILE SCALING OF THE ATTRIBUTES

A question that arises when using a weighted average technique centers on how to value the attributes involved in the decision process. The ideal way to perform this operation is to assess the value function for each attribute in an evaluation process with the decisionmaker. These value functions reflect the decisionmaker's preference structure when choosing between different alternatives characterized by attributes. However, the numerical range of the attributes, combined with the number of projects involved in the decision process, makes this task cumbersome to accomplish in a consistent manner. Another issue relates to the dynamic aspects of the bridge selection problem: because the priorities of the bridge population, as measured by the bridge attributes, are always changing, a solution to the problem requires a technique that reflects the results of recent updates of the bridge ranking. The proposed solution, which is termed attribute percentile scaling, addresses these dynamics.

Percentile scaling is defined as a statistically based methodology meant to substitute the value function assessment for the attributes involved in the decisionmaking process. As a simple example of this technique, the selection criteria are assumed to be based on one attribute, average daily traffic (ADT), and applied to a reduced bridge population comprising 200 projects. Table 1.3 shows the frequency distribution for the ADT attribute for this hypothetical bridge population.

Percentile scaling, in the recommended approach, corresponds to the cumulative frequency of the attribute. This means that by choosing a project with an ADT of 9,000, this project, as a funding candidate, is better than, or equal to, 80 percent of all projects in the bridge population, since 80 percent

Table 1.3 Frequency distribution for a hypothetical bridge population using the ADT attribute

ADT	Number of Projects	Cumulative Number of Projects	Frequency (%)	Cumulative Frequency (%)
800	60	60	30	30
2,500	40	100	20	50
5,500	40	140	20	70
9,000	20	160	10	80
14,000	20	180	10	90
50,000	20	200	10	100
Totals	200			100

of the projects have an ADT that is less than 9,000 vehicles. The percentile scaling numeric value is therefore a function of the numeric value of a particular attribute, and measures the position of a project (as a candidate for funding) relative to the rest of the projects in the set. This approach is based on concepts of descriptive statistics, where the cumulative frequency distributions of the attributes are used as a measure of the position of one project relative to the other projects in the bridge population. It is important to stress the fact that this idea does not involve any probabilistic concepts; the technique is deterministic by definition.

In the system presented in the next chapter, this technique is extended to all attributes involved in the decision process. The range for the value function will be adopted as 0 to 100 so that the values for the weighted average technique described by Equation 1.1 will be expressed on a scale of 0 to 100, and so the percentile scaling values can be used in lieu of the value function.

Figures 1.5 through 1.9 depict the percentile scaling curves for both the on-system bridges (as determined from data extracted from the BRINSAP database) and for the bridges eligible for federal funding. Because the BRINSAP database is being updated constantly, it is important to observe that these percentile scaling curves (determined from the BRINSAP/1988 computer tape) are valid as of a certain date. Consequently, the frequency distributions, as well as the percentile scaling for the attributes, reflect the value of the attributes for each bridge as of the last available inspection.

In the system presented in the next chapter, one of the modules of the ranking system calculates all percentile scaling values based on the frequency distributions for each attribute; it then makes the results available to other modules of the system that utilize the weighted average ranking process described by Equation 1.1.

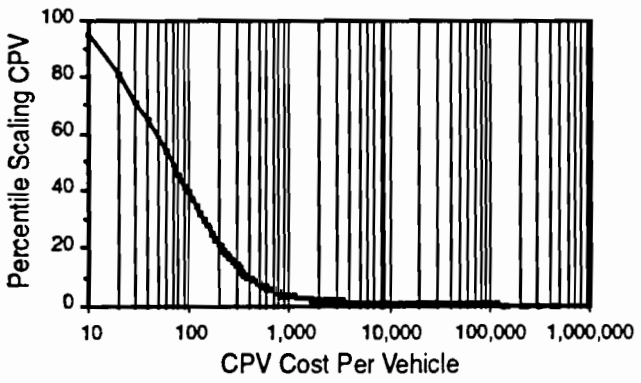

Figure 1.5 Percentile scaling curve for the attribute CPV (cost per vehicle), on system

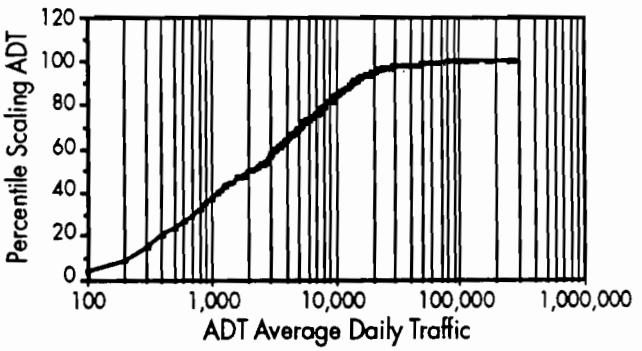

Figure 1.6 Percentile scaling curve for the attribute ADT (average daily traffic), on system

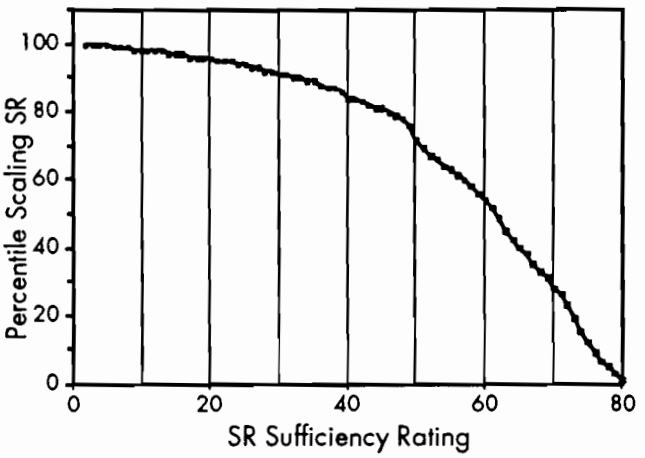

Figure 1.7 Percentile scaling curve for the attribute SR (sufficiency rating), on system

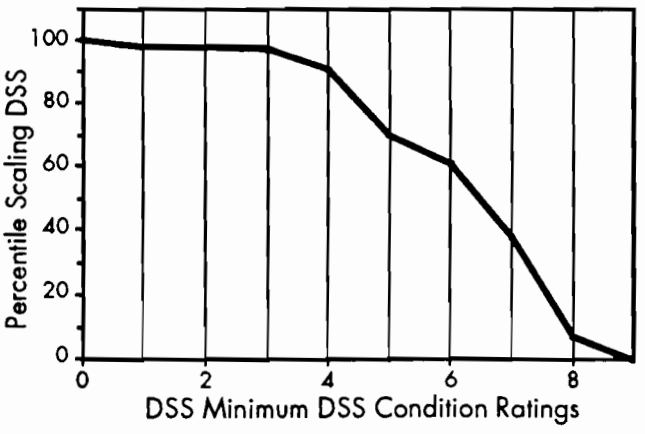

Figure 1.8 Percentile scaling curve for the attribute DSS (minimum of the deck substructure superstructure condition ratings), on system

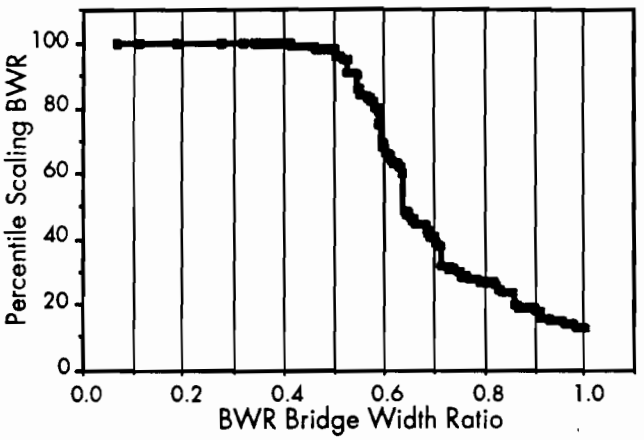

Figure 1.9 Percentile scaling curve for the attribute BWR (bridge-width ratio), on system

AUTOMATIC QUALIFICATION

Another feature in the ranking process utilized by the system presented in the next chapter and in the district-level reporting module is the automatic qualification of bridge projects by means of user-selected attribute thresholds. Automatic qualification uses critical values for the attributes, established by the decisionmaker, to position projects at the top of the ranked list. This concept, introduced by Boyce (Ref 4), reflects the selection flexibility desired by TxDOT officials in that one or more of the attributes may be used for this purpose. As an example, the user might want to include all structures with DSS less than or equal to 3, or an SR less than or equal to 20. The use of the automatic qualifying feature bypasses the previously defined weighted average technique. A project with these DSS or SR attribute values would be included at the top of the ranked list, regardless of the weighted average score. The appeal of this feature is that it adds flexibility to the system by allowing the decisionmaker to include projects that might not be selected using the basic weighted combination process. Finally, bypassing the automatic qualification feature is an option available to the user as well (this feature links the ranking process solely to the weighted average scoring technique previously defined).

EXAMPLE OF COMPARISON OF TWO PROJECTS

Assume that two projects A and B, depicted in Table 1.4, need to be compared to identify the one representing the better candidate for funding, and, further, that they belong to the eligible on-system bridge population. Using the values for the attributes of each project, and by consulting Figures 1.5 through 1.9, it is possible to determine the percentile scaling values for each of the projects, for each attribute value. Calculation of the multi-attribute value for each project, as defined by the weighted average technique, is performed using Equation 1.1. The weights or scaling factors are assumed to be directly assessed by decisionmakers either at the state or at the district levels, with such assessments made especially for the on-system eligible bridges. This example also assumes that the decisionmaker is willing to take advantage of the automatic qualification feature for projects having a DSS value less than or equal to 3. This is explained as follows: in Table 1.4 it can be observed that project A has a weighted average score or value of 74—greater than the one for project B, which has a value of 69. If the choice between the two projects was to be based solely on the score for the projects, project A would receive higher priority for funding than project B. In this example, however, an auto-qualifying threshold for projects with a DSS less or equal to 3 was established. This would cause project B to receive higher priority than project A, since it has for the attribute DSS a value of 3, making it an automatically qualified project.

CHAPTER SUMMARY

This chapter presented the concepts of the multi-objective decision analysis required for the development of a multi-attribute-based ranking process. This process will be applied to a network-level ranking module for the selection of projects relating to bridge rehabilitation and replacement (presented in the next chapter). The proposed ranking process is known in the literature as a weighted average technique. Refined techniques for the assessment of the weights are included in Center for Transportation Research Report 439-4F, which was the final report for the research project now being implemented.

In addition, this chapter recommended a technique for substituting the single attribute component value functions by a percentile scaling curve. Such a technique will add flexibility to the system and will permit an automatic update of the percentile scaling curves as updated inspections are made available from the BRINSAP database.

Table 1.4 Example of comparison of two on-system eligible projects

Attributes	Scaling Factors	Project A		Project B	
		Attribute Value	Percentile Scaling	Attribute Value	Percentile Scaling
CPV	0.15	40	65	20	81
ADT	0.23	3,000	58	1,000	37
SR	0.18	60	54	50	72
DSS	0.22	4	91	3	97
BWR	0.22	0.5	98	0.6	68
Value			74		69

CHAPTER 2. A RANKING MODULE FOR THE SELECTION OF REHABILITATION AND REPLACEMENT PROJECTS

INTRODUCTION

Federal funding programs, which can provide up to 80 percent of each project's contract price, are available through the national Highway Bridge Replacement and Rehabilitation Program (HBRRP) for both on- and off-state systems of bridges. With such funds available, states must make accurate assessments as to which bridges to replace or rehabilitate. This chapter examines a tool for making such assessments—a bridge management module for the statewide selection of projects for rehabilitation and replacement funding. This module has two main objectives: (1) to provide a consistent and systematic method for distributing funds statewide, and (2) to make project selections for rehabilitation and replacement. Both objectives use the theoretical background presented in the previous chapter.

The selection system relies on data stored in the Department's BRINSAP (Bridge Inventory, Inspection, and Appraisal Program) database. Periodically, copies of this database are forwarded for processing by the FHWA as a requirement for the state's eligibility for federal funds. The BRINSAP file includes updated information about the inventoried bridges in Texas, while an accompanying manual (Ref 7) describes the contents and the data-storage format. Selected data items from BRINSAP are retrieved and read by a computer program (described in this chapter) that allows other components of the system to apply the ranking techniques presented in Chapter 1.

The statistically and decision-theory based bridge prioritization techniques presented in Chapter 1 are incorporated in each of the system's computerized component modules, making extensive use of data stored in the BRINSAP file. All programs in the system presented in this chapter are written in SAS (Statistical Analysis System), primarily because the SAS programming language operates on both personal and mainframe computers, and, in addition, contains powerful statistical analysis and database management routines. To provide a high level of user friendliness, the computer programs involved in the proposed selection system take advantage of RPFs, a full screen product interface available within the ROSCOE computer system at TxDOT. This fully tested system was used for determining the 1987 program of work for bridge replacement and rehabilitation.

THE SELECTION MODULE

The proposed computerized bridge project selection management module, termed Texas Eligible Bridge Selection System (TEBSS), is a closed-loop system (see Figure 2.1) operating at two levels, i.e., a state level and a district level. The state level applies general statewide selection criteria to the full bridge inventory, while the district level takes into account specific local criteria based on local engineering and planning knowledge about candidate bridge projects. This district-level information is then fed back to the state level.

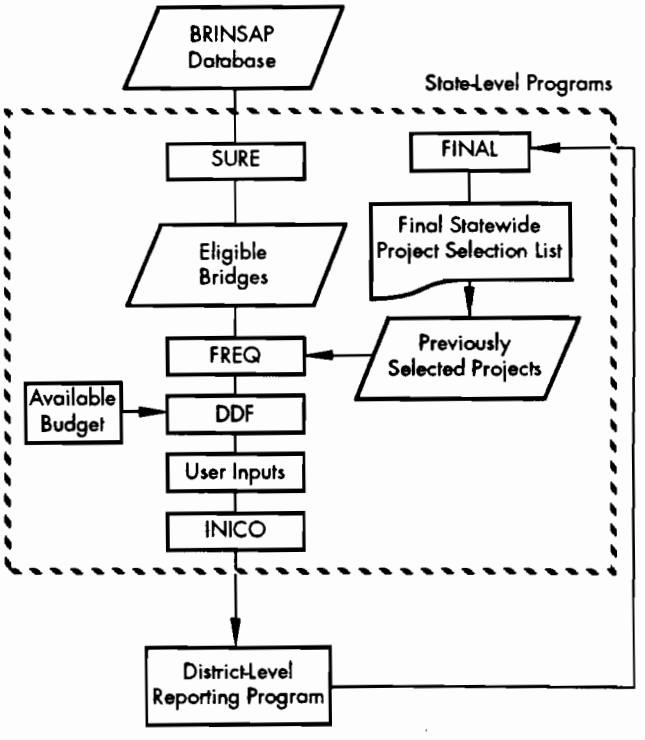

Figure 2.1 The TEBSS (Texas Eligible Bridge Selection System)

The system corresponds to the analysis and implementation steps for a multi-objective decisionmaking process, as depicted in Figure 1.1. Characteristics of the computerized components of this system are described below, with the numerical data presented corresponding to a BRINSAP database from early 1988.

THE STATE-LEVEL PROGRAM SURE

The first computer program—termed the Sufficiency Rating Evaluator (SURE)—was originally developed by FHWA (Ref 2). Modified for interactive mode operation for use in this system, SURE reads appropriate data from the BRINSAP database and applies the FHWA criteria to determine eligibility of the inventoried bridges for federal funding. The FHWA criteria for eligibility require that the Sufficiency Rating SR be less than or equal to 80, and also that the structure be determined as either structurally deficient or functionally obsolete (Ref 16). If the SR for the bridge is less than or equal to 80, and if the bridge is also determined to be either structurally deficient or functionally obsolete, the bridge is eligible for FHWA rehabilitation funding. If the sufficiency rating for the bridge is less than or equal to 50, and if the bridge is also determined to be either structurally deficient or functionally obsolete, the bridge is eligible for FHWA replacement funding. In the case of the latest Texas on-system set, the federal criteria for funding reduce the approximately 30,000 inventoried bridges to nearly 3,000 eligible candidate projects. In the case of the off-system bridge set, they reduce the approximately 17,000 bridges to nearly 9,000 eligible candidate projects.

The SURE mainframe version reads the data (stored on disk or tape) directly from the BRINSAP database. The final product of SURE is a federally eligible SAS data set that includes all the data required by the subsequent modules in the computer system. The on- or off-system BRINSAP database is processed automatically, depending on the user's input.

SURE also assigns a Bridge Identification number (BRID), the unique number by which data for a specific bridge will be retrieved in any of the component programs of the system. This twelve-digit number follows the format XXX-XXXX-XX-XXX, where

(1) the first three digits correspond to the county number,
(2) the next four digits correspond to the control number,
(3) the next two digits represent the section number, and
(4) the last three digits represent the structure number.

A flowchart of the SURE program is depicted in Figure 2.2, while listings of the source code for the mainframe version of SURE are included in Appendix A. The next chapter includes a users' manual for the SURE program.

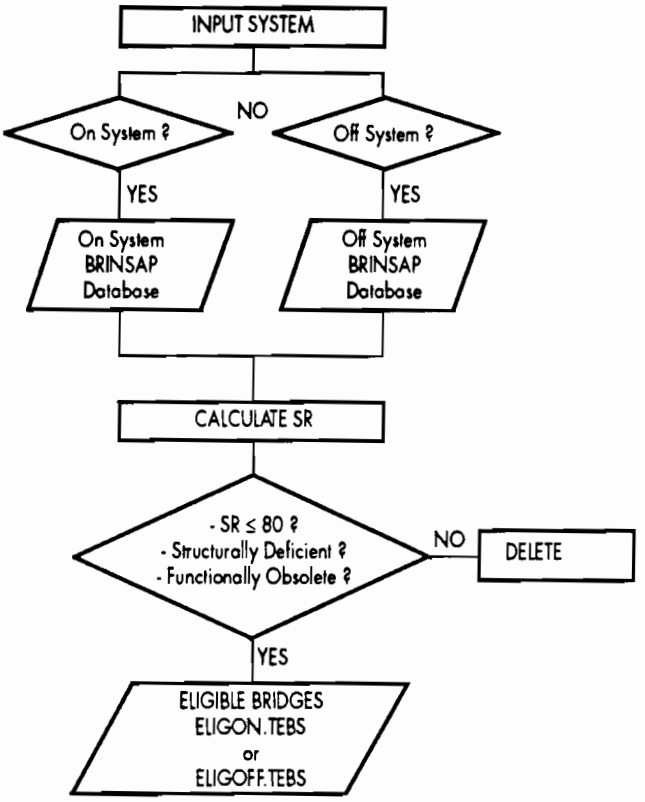

Figure 2.2 The program SURE (Sufficiency Rating Evaluator)

THE STATE-LEVEL PROGRAM FREQ

The program FREQ (designating "Frequencies") calculates the frequency distributions of the decision attributes to allow the percentile scaling methodology described in the previous chapter to be used by the other programs that comprise the selection system. This FREQ program performs the following functions:

(1) processes the federally eligible bridge set stored by the program SURE;
(2) deletes the bridge projects already funded in previous HBRRP allocations;
(3) screens and deletes projects whose cost exceeds $5,000,000;
(4) screens, deletes, and stores separately control number 8000 series or on/off projects;

(5) calculates the frequency distributions for each attribute; and
(6) merges the corresponding percentile scaling values for each bridge project.

There is a modified version of the program FREQ that prepares data for a modified version of the program DDF, which is used only for planning purposes. Termed FREQ2, this modified FREQ program does not delete the bridge projects already selected in previous HBRRP allocations, as discussed in item (2) above. These modified versions of FREQ and DDF are utilized to calculate current needs, while taking into account all the eligible projects still recorded in the BRINSAP file.

Percentile Scaling Calculations

The percentile scaling values are used by related programs in the system whenever ranking of the eligible set is needed in the weighted average process that was described in Equation 1.1 of the previous chapter. After the FREQ program is run, each of the eligible projects will have five percentile scaling values, one for each attribute presently used by the weighted average technique represented by Equation 1.1. These percentile scaling values are stored with variables describing bridge identity, location, and other physical, geometric, and cost data. The program prints a summary table of the number of eligible bridge projects by district, and includes associated cost estimates for rehabilitating or replacing the federally eligible bridges. An example of this summary table is presented in Table 2.1, where it is observed that if all the eligible on-system projects in the state were to be funded, a total budget of $572,768,300 would be needed (according to this version of the BRINSAP database). Also printed by the program are complete percentile scaling tables containing information similar to that used to plot Figures 1.5 through 1.9.

Deleting Previously Selected Projects

The process that culminates in the actual rehabilitation or replacement of the bridges selected for funding by the TEBSS system (see Figure 2.1) is a lengthy one. After the final list of projects is generated, it is submitted for plan preparation and contracting. During this process, the BRINSAP database is not updated; even after it is completed it takes some time for the update to take place. In the meantime, if another bridge funding program needs to be processed, the projects that have been considered in previous programs and are still included in the BRINSAP database must be withdrawn from further consideration. The primary reason for this is to avoid selecting projects that were already selected in previous programs; the second reason is that the calculations of the percentile scaling factors need to reflect the statistics of the current eligible set. This is achieved in the TEBSS system by maintaining a database of the previously selected projects, in SAS format, separated for the on- and off-systems. A sample of a printout of the partial contents of this database is presented in Table 2.2 for the on-system. This database is linked to the eligible set generated by the program SURE by the BRID number; the projects in common are deleted from the eligible set. The program FREQ also determines which bridge projects have already been deleted from the BRINSAP database and updates the previously selected projects database.

Table 2.1 Eligible bridge statistics for the on-system after deleting previously selected projects

District	Number of Eligible Bridges	Cost ($)	Percent of Total Cost
1	344	51,928,000	9.07
2	148	43,085,000	7.52
3	63	11,915,000	2.08
4	11	3,667,000	0.64
5	13	5,670,000	0.99
6	1	220,000	0.04
7	23	5,762,000	1.01
8	74	14,053,000	2.45
9	92	32,218,000	5.62
10	143	17,820,000	3.11
11	80	15,060,000	2.63
12	120	35,057,000	6.12
13	100	18,923,000	3.30
14	80	14,653,000	2.56
15	118	32,192,300	5.62
16	204	41,623,000	7.27
17	49	13,770,000	2.40
18	506	123,736,000	21.60
19	99	20,128,000	3.51
20	134	49,912,000	8.71
21	15	2,946,000	0.51
23	11	468,000	0.08
24	16	7,526,000	1.31
25	38	10,436,000	1.82
Totals	2,482	572,768,300	100.00

Table 2.2 Format of the previously selected projects database for the on-system (partial list)

Bridge ID Number	District	Flag	Program Year
075-0279-02-002	1	PREV	1987
139-0221-01-004	1	PREV	1987
112-0780-02-001	2	PREV	1987
120-0134-05-016	2	PREV	1987
120-0249-06-016	2	PREV	1987
120-1333-03-004	2	PREV	1987
182-0314-03-013	2	PREV	1987
184-0008-02-033	2	PREV	1987

A utility program, PREV (previously selected projects), allows the user of the system to make manual modifications to the previously selected project's database via interactive screens. The listing of the source code for PREV is included in Appendix A, while a user's manual is included in the next chapter.

Splitting the Data on a District Basis

The statewide eligible data set, including the percentile scaling numbers, is separated by district in order to make the appropriate data available to the District Level Reporting Module. Each district receives an SAS data set containing federally eligible project data to be used with the District Level Reporting Module. The data are available via the mainframe computer system.

The flowchart for the program FREQ is depicted in Figure 2.3, the source code listing is included in Appendix A, and the manual for the program is presented in the next chapter.

Modified Version of FREQ

There is a modified version of the program FREQ that prepares data for a modified version of the program DDF, which is used only for planning purposes. Termed FREQ2, this program does not delete the bridge projects already selected in previous HBRRP allocations. These modified versions of FREQ and DDF are used to calculate current needs considering all the eligible projects still recorded in the BRINSAP file.

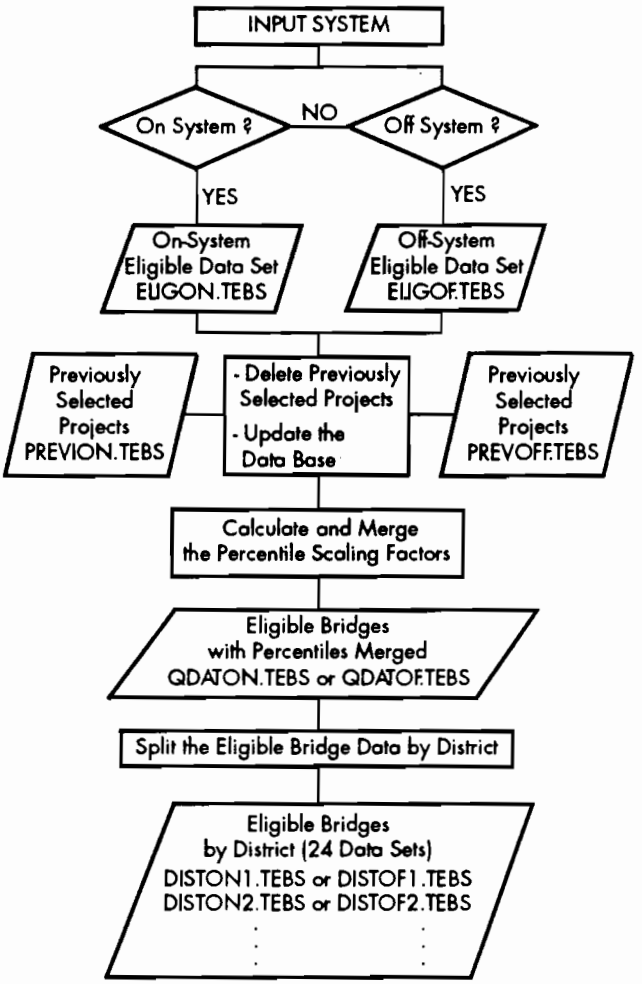

Figure 2.3 Flowchart for the program FREQ (Frequencies)

THE PROGRAM DDF

The program DDF (District Distribution Factors) calculates a budget allocation to the districts by using the weighted average technique combined with the automatic qualification method presented in Chapter 1. The projects are scored with Equation 1.1, for which the percentile scaling values have already been calculated and stored in a permanent SAS data set by the program FREQ. The required scaling factors discussed in Chapter 1 are input (via interactive computer screens) with the budget to be allocated and the system, On or Off. The format for these screens is presented in the next chapter, where manuals for all the computer

programs that comprise the TEBSS system are included.

The scaling factors are obtained via a direct assessment process with the decisionmaker. The program allows the user to input seven different combinations for the scaling factors or weights for the attributes to undertake a sensitivity analysis. A sample of a possible combination of scaling factors is depicted in Table 2.3.

Table 2.3 Scaling factor sets as used by the program DDF

Method	CPV	ADT	SR	DSS	BWR
1	0.20	0.20	0.20	0.20	0.20
2	0.20	0.15	0.25	0.20	0.20
3	0.15	0.15	0.25	0.25	0.20
4	0.15	0.10	0.25	0.25	0.25
5	0.10	0.10	0.30	0.25	0.25
6	0.10	0.05	0.30	0.30	0.25
7	0.05	0.05	0.30	0.30	0.30

Another screen allows the user to input automatic qualification criteria for ranking the projects. The multi-attribute value for all the eligible projects and for the seven methods is calculated using Equation 1.1; at the same time the thresholds for automatic qualification are checked and the qualifying projects flagged. The projects are then sorted—for each of the seven methods—in order of decreasing score, with all the automatically qualified projects at the top of the list. The ranked projects are selected sequentially until the cumulative cost of the projects chosen matches the available state budget; at that point the list is cut off. The chosen projects are then sorted by district, with a budget allocation for every district determined by accumulating the project costs on a district-by-district basis. The final results are seven different sets of budget allocation factors, one for each set of scaling factors.

Program results are presented in the form of tables, graphs, and an allocation map. Table 2.4 shows a summary of the district distribution factors (in terms of a percentage of a planned budget) for the seven sets of scaling factors included in Table 2.3. Table 2.5, also generated by the program, shows the listing of a full allocation with a planned budget of $150 million to the districts, using equal scaling factors for all attributes (as in Method 1 in Table 2.3), and automatic qualification of all projects with a DSS less than or equal to 3. This table shows how the planned budget is divided into districts and, within each district, how much is being allocated to the auto-qualified projects. In this example, a total of 572 projects were selected, of which 143 were selected via the auto-qualifying threshold of DSS $\leq$ 3, which corresponds to $37,230,000 of the total allocated budget.

Table 2.4 Summary of the allocation factors for the seven sets of scaling factors

District	Method 1	Method 2	Method 3	Method 4	Method 5	Method 6	Method 7	Average
1	3.87	3.61	3.54	3.82	3.68	12.51	12.84	6.27
2	11.27	11.38	13.50	11.40	11.33	10.17	9.51	11.22
3	2.44	2.39	2.23	1.97	2.09	2.11	2.12	2.19
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	3.44	3.44	3.47	3.44	2.92	2.69	2.74	3.16
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.90	1.07	1.08	0.90	0.95	0.88	0.43	0.89
8	3.36	3.36	3.20	3.18	3.46	3.31	3.30	3.31
9	0.42	0.16	0.09	0.26	0.10	0.09	0.10	0.18
10	0.72	0.75	0.64	0.66	0.69	0.67	1.12	0.75
11	0.32	0.37	2.02	2.01	2.19	2.03	2.05	1.57
12	13.86	13.63	12.18	11.85	11.51	10.32	10.43	11.97
13	1.79	1.79	2.00	2.02	2.12	2.17	3.35	2.18
14	3.67	3.68	2.89	3.34	3.12	2.88	2.94	3.22
15	4.16	4.30	3.82	3.84	3.69	3.52	3.37	3.82
16	9.04	9.39	9.65	9.57	10.27	11.21	11.37	10.07
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	34.33	33.17	32.15	31.26	31.76	25.57	24.52	30.40
19	1.83	1.83	1.85	2.01	2.00	1.96	2.00	1.93
20	3.44	4.52	4.52	7.33	6.90	6.76	6.63	5.73
21	0.24	0.24	0.24	0.24	0.26	0.24	0.25	0.25
23	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.88	0.88	0.88	0.88	0.95	0.88	0.90	0.89

Table 2.5 Listing of an allocation with a planned budget of $15 million (equal weights and DSS≤3)

District	Number of Projects	Dollars $ Allocated	Percent of Budget	Number of Auto-Qualified Projects	Dollars ($) Allocated to Auto-Qualified Projects
1	40	5,792,000	3.87	21	3,455,000
2	53	16,833,000	11.27	4	7,295,000
3	21	3,649,000	2.44	9	270,000
4	0	0	0.00	0	0
5	11	5,152,000	3.44	9	4,016,000
6	0	0	0.00	0	0
7	3	1,344,000	0.90	0	0
8	15	5,041,000	3.36	10	4,241,000
9	3	626,000	0.42	0	0
10	10	1,083,000	0.72	2	433,000
11	4	486,000	0.32	2	69,000
12	55	20,767,000	13.86	12	6,354,000
13	8	2,676,000	1.79	1	322,000
14	16	5,500,000	3.67	8	1,440,000
15	31	6,232,000	4.16	3	507,000
16	17	13,550,000	9.04	2	83,000
17	0	0	0.00	0	0
18	237	51,442,000	34.33	37	4,363,000
19	18	2,748,000	1.83	12	1,472,000
20	23	5,159,000	3.44	6	1,565,000
21	2	363,000	0.24	0	0
23	1	31,000	0.02	1	31,000
24	0	0	0.00	0	0
25	4	1,314,000	0.88	4	1,314,000
Totals	572	149,838,000	100.00	143	37,230,000

Figure 2.4 shows an example of an allocation map generated by this program module that summarizes the allocation of the planned budget on a district-by-district basis in terms of percentage of the total budget. A flowchart for the program is presented in Figure 2.6, the listing of the source code is included in Appendix A, and the manual for the program is presented in Chapter 3.

Discussion of the Results of DDF

It is important to note that some of the districts may receive a zero apportionment of the budget. One such district, District 6, has only one project that is eligible for federal funds, as can be observed in Table 2.1. The number of eligible projects that are screened by the program SURE is, of course, a significant factor influencing the results of the program DDF. It is expected that, as the bridge network acquires more uniformity through systematic investment on high priority projects, the budget distributions calculated by the program DDF will more closely approximate the distributions, by district, of the area or of the cost of the eligible projects statewide.

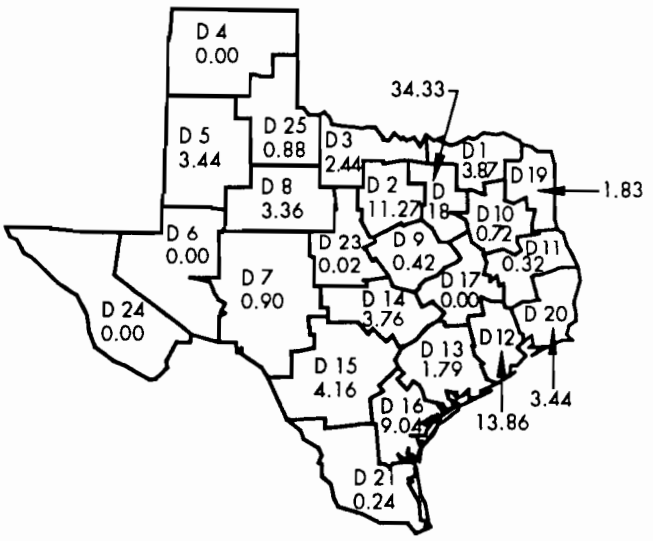

Figure 2.4 Allocation map with percentages of a planned budget of $150 million

The allocation results of DDF from Table 2.5 are compared with the distributions by district of eligible area (obtained from the BRINSAP database) and eligible cost (from Table 2.1). These

comparisons, shown in Figure 2.5, are valid for the analysis of the data as of a particular edition of the BRINSAP database. It is observed that significant deviations between DDF and eligible area or eligible cost distributions occur for Districts 12 and 18. These deviations may reflect the allocation of insufficient funds for both districts on the previous HBRRP programs, which most likely resulted in an increased deterioration of bridges in these districts as compared with the other districts. This deterioration is measured by the deviation from the detailed objectives stated in Figure 1.2. These differences will probably be leveled by the continuous application of consistent allocation techniques, such as the ones included in the formulation of DDF.

Modified Version of DDF

As with the other programs, there is a modified version of the program DDF that uses the data generated by the modified version of the program FREQ and which is used only for planning purposes. Termed DDF2, this program also considers the bridge projects already selected in previous HBRRP allocations. It is used to calculate current needs, taking into account all the eligible projects still recorded in BRINSAP. In addition, it generates an allocation table, by district, similar to the one depicted in Table 2.5.

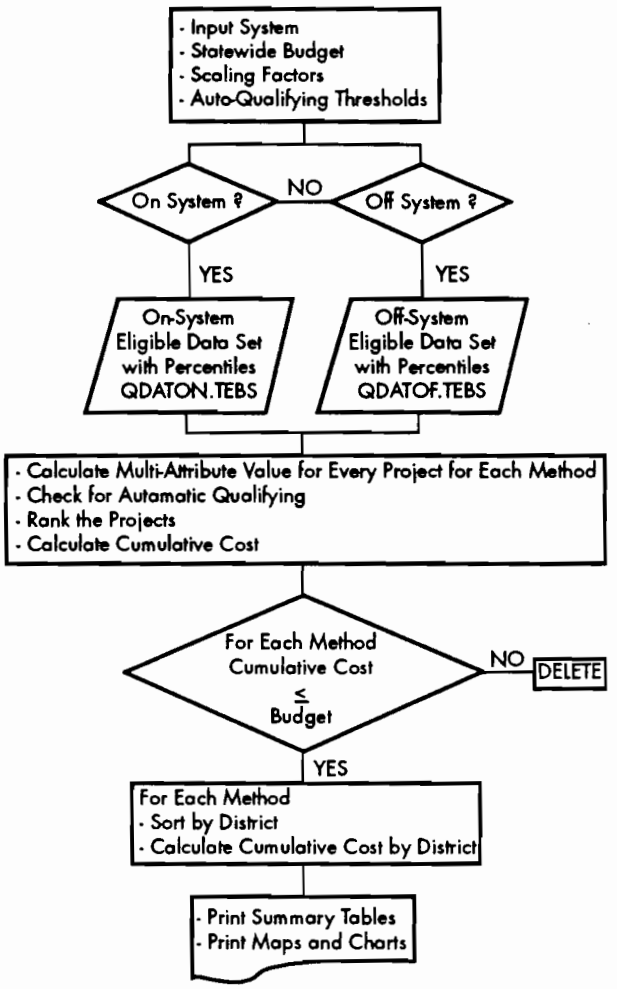

Figure 2.6 Flowchart for the program DDF (District Distribution Factors)

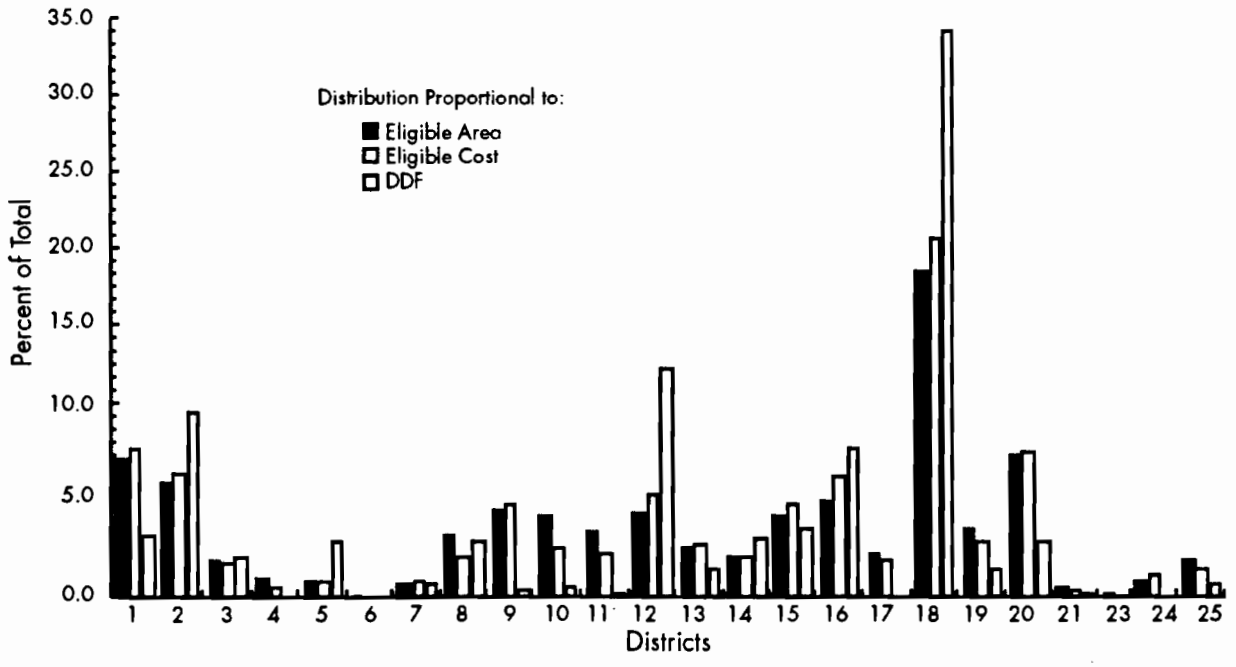

Figure 2.5 Comparison of the results of DDF with the distributions by district of eligible deck area and eligible cost

THE USER INPUTS

This component of the proposed ranking system allows the decisionmaker to adjust the budget allocations generated by the program DDF before forwarding the statewide allocations and suggested projects list to the districts. This adds flexibility to the overall process, allowing the decisionmaker to take into account specific needs of the districts and TxDOT administration. After going through this process the decisionmaker has the dollar amounts, based on the allocations generated with the help of the program DDF, to be invested in each of the districts. These amounts are submitted to the next program of the TEBSS system, the program INICO. The allocation map (after adjustments) is shown in Figure 2.7, which is also an output for the INICO program.

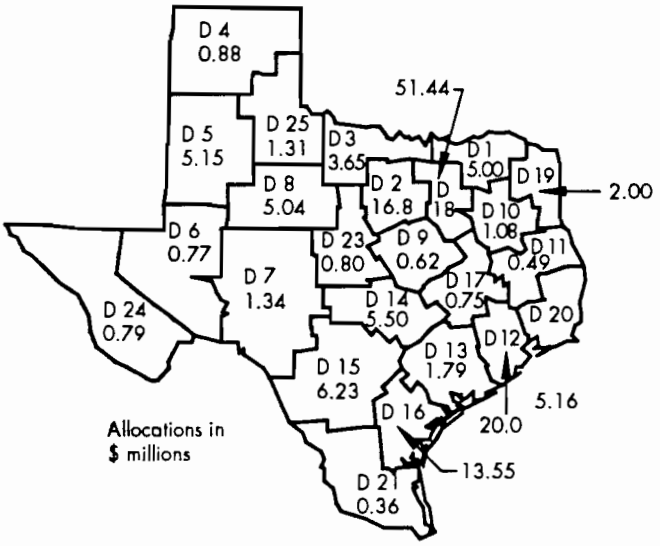

Figure 2.7 Allocation map after adjustments for a planned budget of $150 million

THE PROGRAM INICO

The program INICO (Initially Considered Projects) uses the budget allocations, by district, determined with the help of the program DDF and modified by any user's inputs to generate a list of projects to be submitted to the districts for their review. This is accomplished through the weighted average technique and the automatic qualification methodology described in Chapter 1. The user is asked to input a set of scaling factors for the attributes and a set of automatic qualifying thresholds. The set of eligible projects generated by the program FREQ are scored with the multiattribute value generated by Equation 1.1; those that meet automatic qualification thresholds are flagged, with the resulting set then sorted by automatic qualification, score, and district. For each district, the project cost is accumulated (while selecting the projects sequentially) until it meets the amount allocated for each district as an input for the program. The resulting list, for each district, is then submitted to the districts for review in hardcopy format and by means of SAS data sets. The SAS data sets, one for each district, are stored in the computer's mass storage and are accessible at the districts with the District Level Reporting module.

The information contained in these data sets has a format similar to that depicted in Table 2.6. The program prints a statewide report containing the projects selected that will be submitted to the districts. A sample is included in Table 3.5, with a chart and an allocation map summarizing the allocations depicted in Figures 3.11 and 3.12. The flowchart of the program is depicted in Figure 2.8, the listing of the source code is included in Appendix A, and the manual for the program is presented in Chapter 3.

Discussion of INICO Results

If INICO receives the same inputs of the program DDF for the scaling factors of Method 1 (as in Table 2.4) and the same auto-qualifying thresholds (DSS $\leq$ 3), and if the budget to be allocated to each district is the same as depicted in Table 2.5, then the list generated by the program INICO, for each district, will be composed of the same "anonymous" projects that were included in the distribution generated by the program DDF. This can be observed in Table 2.6, where the projects selected by the program INICO, under these conditions, are depicted for District 16; the accumulated cost for the 17 selected projects matches exactly the DDF allocated budget for this district.

Table 2.6 Initially considered projects for District 16

Observation	Bridge Identification Number	Cost of Proposed Improvements ($)	Flag Variable
1	126-0086-11-028	70,000	INI
2	129-0100-06-073	48,000	INI
3	129-0100-12-052	23,000	INI
4	149-0542-06-015	70,000	INI
5	178-0101-06-033	11,969,000	INI
6	178-0102-01-003	58,000	INI
7	178-0102-01-030	26,000	INI
8	178-0989-02-003	38,000	INI
9	178-0989-02-004	53,000	INI
10	178-0989-02-005	32,000	INI
11	178-0989-02-008	66,000	INI
12	178-1052-01-024	45,000	INI
13	178-1052-01-025	126,000	INI
14	178-1052-01-026	808,000	INI
15	178-1088-03-002	40,000	INI
16	205-0994-01-001	60,000	INI
17	205-1052-03-029	18,000	INI
	Total Allocated Budget	13,550,000	

THE DISTRICT-LEVEL REPORTING PROGRAM

District-level staff receive two data files in SAS format. One contains the percentile scaling and bridge description data of the eligible bridges for their particular district generated earlier by the program FREQ; the other file contains a list of the initially considered projects in the format depicted in Table 2.6. Several options are then available within the district-level reporting module available for use by the 24 Department districts. These options include:

(1) print and review the list generated at the state level by the program INICO,
(2) rank the district's eligible projects,
(3) add comments to the selected and non-selected projects,
(4) modify the project estimated cost recorded in BRINSAP, and
(5) forward a district-selected list to the state level of the system.

Print and Review the List Generated at the State Level

The first option generates a listing of the projects selected by the program INICO for the district that is using the reporting module. A sample of this output is included in Table 3.6. A flowchart for this option is presented in Figure 2.9.

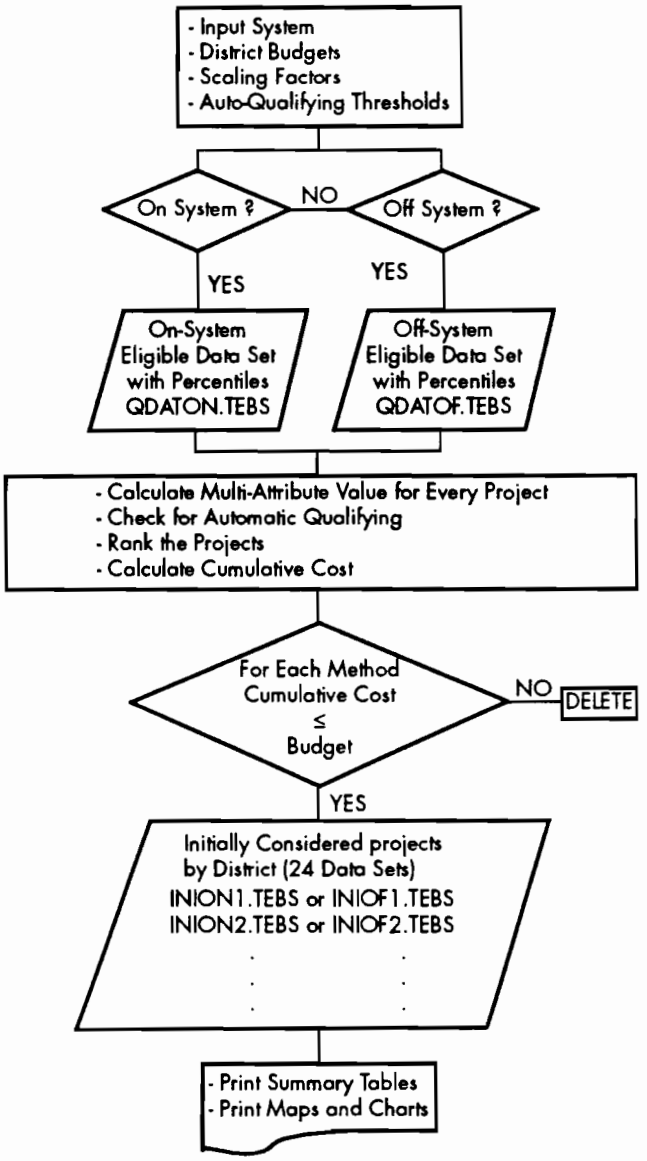

Figure 2.8 Flowchart for the program INICO

Ranking the District's Eligible Projects

The second option is designed to allow the user at the district level to apply his/her own scoring and auto-qualifying process to the district eligible bridge set. This procedure, similar to the one used by the program INICO for the statewide population of eligible bridges, takes advantage of the fact that the district engineers are in the best position to select appropriate scaling factors and auto-qualifying thresholds for the bridges in their region, since they possess local knowledge of the structures. To take further advantage of district-engineer knowledge, the district-level reporting module includes another option for ranking the district's bridge projects. Termed "automatic inclusion," this

feature allows the district engineer to include bridges for reasons not directly covered by either the attribute scoring process or the auto-qualification procedure (included in the general statewide selection process). An example would be the coordination of adjacent pavement rehabilitation programs with bridge-deck replacement or rehabilitation projects. In this district automatic-inclusion process, the district engineer inputs the BRID number of the desired bridge structure; the program then automatically places the project at the top of the district priority list of bridges selected for rehabilitation and replacement.

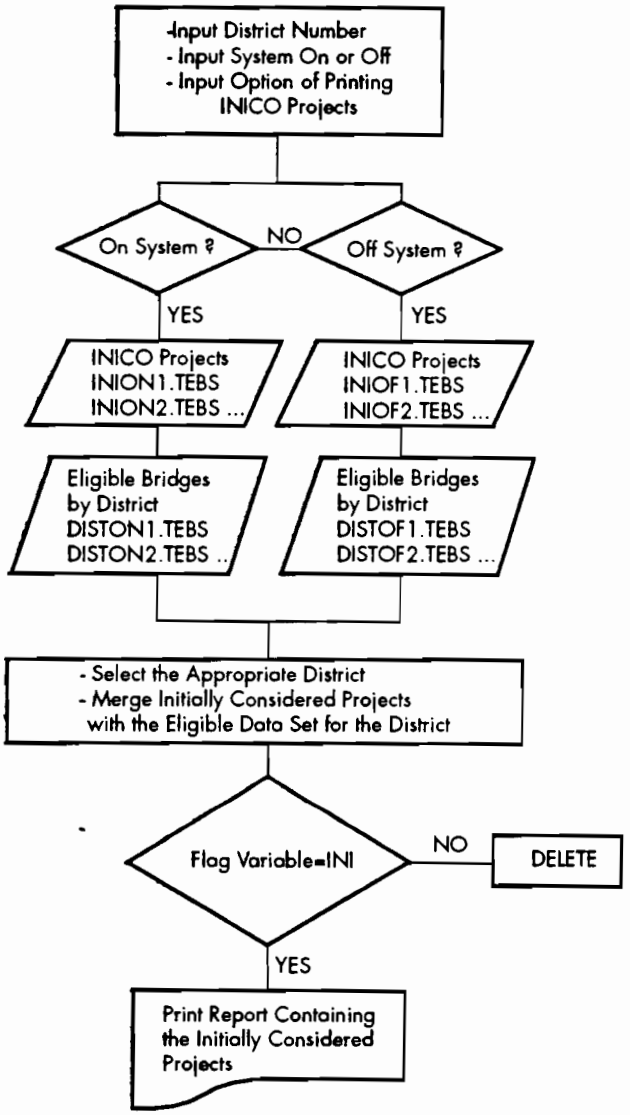

Figure 2.9 The option of printing the initially considered projects

The final product of this option is a list of all eligible projects in the district, ranked by descending score, with both the automatically included and the automatic-qualified projects at the top. This list, reflecting the district engineer's priorities, is recorded in the form of individual project and cumulative program cost streams. District engineers are therefore able, with the help of this ranked list, to generate their own list of projects based on the budget established by the program INICO. This list may differ significantly from the listing selected at the state level by the program INICO alone. The only restriction is a financial one: District engineers must limit the selected projects funding so that their total program funding does not exceed the statewide money allocation figures assigned to the district by the program INICO. An example of the financial restriction would be the total allocated budget depicted in Table 2.6 for District 16, which amounts to $13,550,000.

Table 2.7 presents the partial results of this option for District 16, the straight equal scaling factors, the automatic qualification of projects with DSS $\leq$ 3, and three district projects automatically included. (A more detailed table for this option is included in Chapter 3, Table 3.7.) Table 2.7 shows that three projects are indeed placed at the top of the ranked list regardless of their multi-attribute value or automatic qualification thresholds—a result of their being automatically included by the district decisionmakers. Projects with particularly low multi-attribute values were selected to illustrate the automatic inclusion process.

The list needs to be cut off, for these criteria, at the project with BRID 178-1052-01-026, depending on the allowance for a variation over the state-established budget for the district. Reports are also printed for the eligible projects by county-descending score. When the user ranks the off-system eligible bridges, a list of the eligible control series 8000 projects, or on-federal-aid, off-state-system projects, is also included at the bottom of this option and is sorted on a county basis. The district decisionmaker can perform several runs of this option, modifying scaling factors, automatic qualification thresholds, and automatically included projects until a satisfactory ranked list is established. A flowchart for this option is depicted in Figure 2.10.

Table 2.7 Federally eligible projects for District 16 ranked with district criteria (partial list)

Observation	Bridge Identification Number	Cost of Proposed Improvements ($)	Flag Variable
1	126-0086-11-028	70,000	INI
2	129-0110-06-073	48,000	INI
3	129-0100-12-052	23,000	INI
4	149-0542-06-015	70,000	INI
5	178-0101-06-033	11,969,000	INI
6	178-0102-01-003	58,000	INI
7	178-0102-01-030	26,000	INI
8	178-0989-02-003	38,000	INI
9	178-0989-02-004	53,000	INI
10	178-0989-02-005	32,0000	INI
11	178-0989-02-008	66,000	INI
12	178-1052-01-024	45,000	INI
13	178-1052-01-025	126,000	INI
14	178-1052-01-026	808,000	INI
15	178-1088-03-002	40,000	INI
16	205-0994-01-001	60,000	INI
17	205-1052-03-029	18,000	INI
	Total Allocated Budget	13,550,000	

Add Comments to the Selected Projects

This option allows the user of the district-level reporting module to add comments to the selected project list (for example, comments justifying the selections for priority treatment, or comments explaining why a project was not selected). It prints a report of the current status of the comments for each project (see sample in Chapter 3, Table 3.8). This option process can be repeated several times, until the district-level decisionmaker is satisfied with the results of the comments list. A flowchart for this option is depicted in Figure 2.11.

Modify the Project Estimated Cost Recorded in BRINSAP

With this option of the district-level reporting module, the user has the ability to modify the cost recorded in the BRINSAP file so that a more realistic estimate for the project cost may be considered. This option prints a report of the current status of the project cost modifications, the corrected values for the CPV attribute, and the associated corrected percentile values associated with the updated CPV. This option process can be repeated several times, until the district-level decisionmaker is satisfied with the modifications. The value of the original estimate recorded in the BRINSAP database is recorded and reported for the projects that have their cost estimates modified, making it easy to reverse modifications to their original values. The results of the option of ranking the eligible projects are modified when the project cost is modified. A sample of the report printed by this option can be found in Chapter 3, Table 3.10.

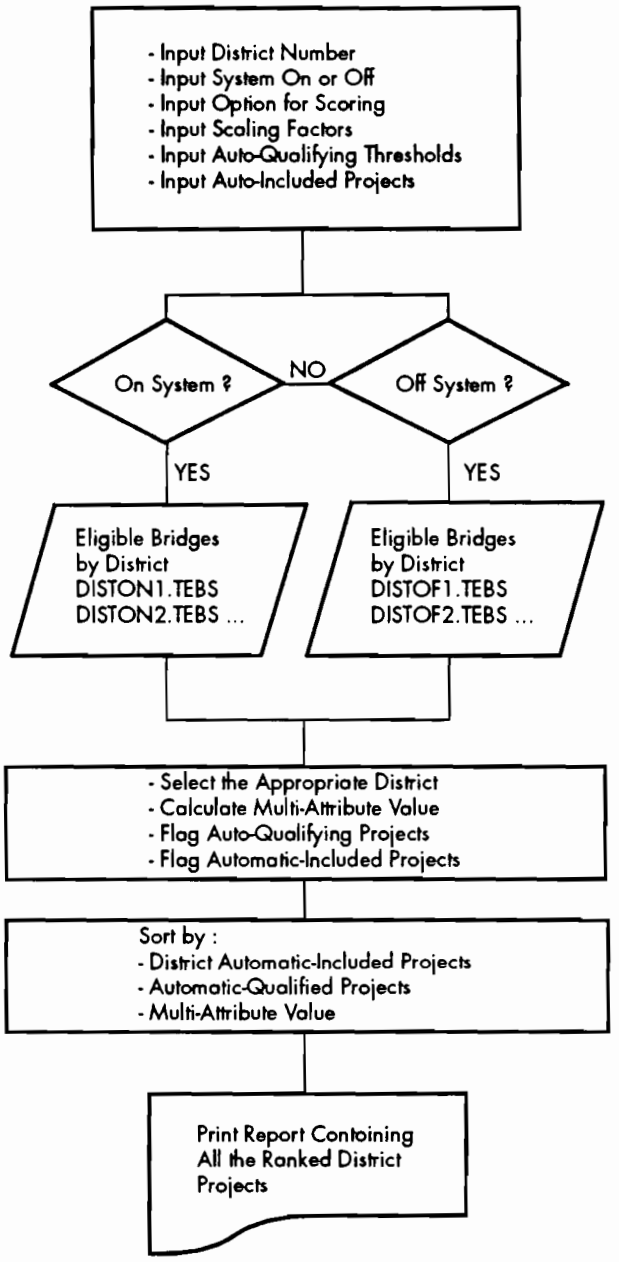

Figure 2.10 Flowchart for the option of ranking the district's eligible projects

Forward List to the State Level of the System

A final option is to forward through a closed loop a list of district selected projects, ranked by district priority, to the state level of the system for consideration. The final product of the district-level reporting module is a list of projects

recommended for funding for every district in the state, together with comments for each project. This list, from each district, is transferred to the state centralized bridge administration via file sharing for the mainframe system. The SAS data set forwarded to the state level of the system has a format similar to the one depicted in Table 2.8, which represents a hypothetical list for District 16. A table in the next chapter depicts the list (printed by the program) of district-selected projects in more detail. Figure 2.12 depicts the flowchart for this option. A manual for the operation of the district-level reporting module is included in Chapter 3, while a listing of the source code is included in Appendix A.

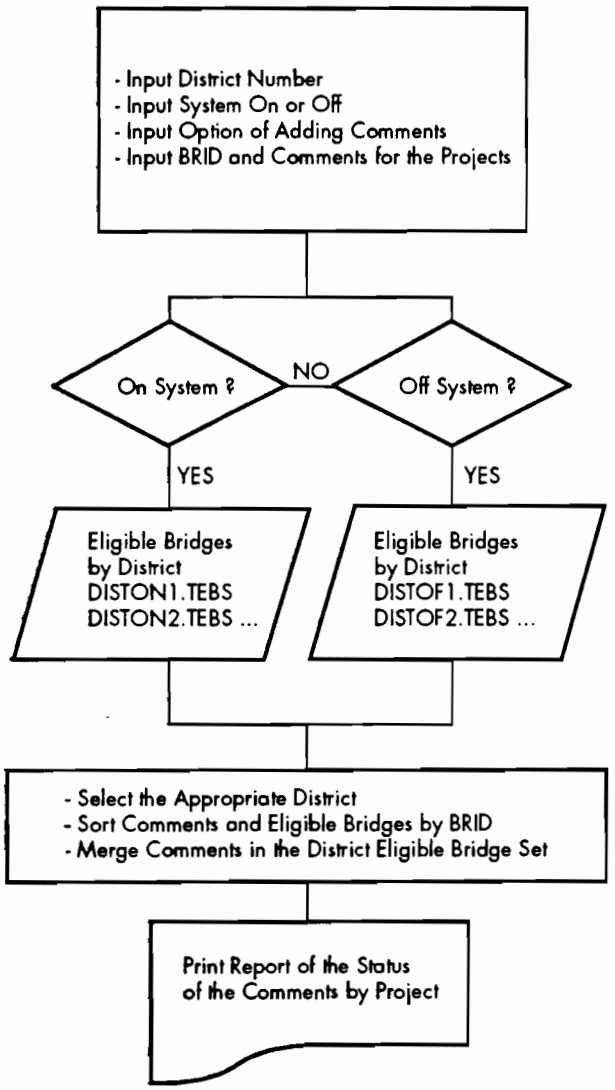

Figure 2.11 Flowchart for the option of adding comments to the projects

Table 2.8 Format of the SAS data set that contains the projects selected by a district and forwarded to the state level (for District 16)

Observation	Bridge Identification Number	Flag Variable	District Priority
1	089-1958-01-001	DISEL	1
2	089-2342-01-001	DISEL	2
3	013-2024-01-003	DISEL	3
4	205-0994-01-001	DISEL	4
5	129-0100-12-052	DISEL	5
6	178-0102-01-030	DISEL	6
7	178-0989-02-003	DISEL	7
8	178-0989-02-004	DISEL	8
9	178-0102-01-003	DISEL	9
10	205-1052-03-029	DISEL	10
11	126-0086-11-028	DISEL	11
12	178-1088-03-002	DISEL	12
13	178-0989-02-008	DISEL	13
14	178-1052-01-024	DISEL	14
15	178-0101-06-033	DISEL	15
16	178-0989-02-005	DISEL	16
17	149-0542-06-015	DISEL	17
18	129-0100-06-073	DISEL	18
19	178-1052-01-025	DISEL	19
20	196-0371-03-031	DISEL	20
21	178-0989-02-002	DISEL	21
22	126-0255-01-026	DISEL	22
23	178-1742-01-002	DISEL	23
24	004-0507-04-007	DISEL	24
25	178-1093-01-004	DISEL	25
26	178-1069-01-004	DISEL	26
27	196-0371-02-023	DISEL	27

THE STATE-LEVEL PROGRAM FINAL

The state-level reporting program FINAL is used to make the final statewide TxDOT project selections, combining these into a coherent engineering and financial program. Several options are available to the state-level decisionmaker, which are accessed via interactive screens through the following:

(1) browsing through the district selections;
(2) adding or deleting projects to the district selections;
(3) assembling the statewide list of projects for all districts; and
(4) updating the data set of previously selected projects.

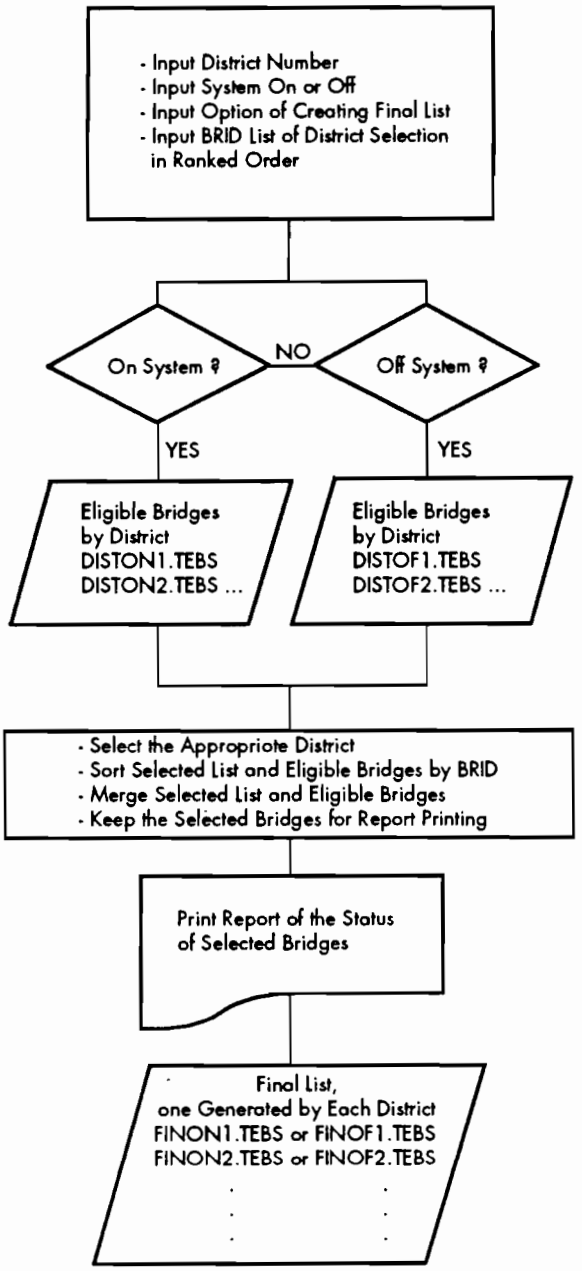

Figure 2.12 Flowchart for forwarding the district-selected list to the state level of the system

The Option of Browsing through the District Selections

In this option the user of the program is able to print the projects selected by each district, one district at a time. A sample of the output for this option is included in Table 3.11 in Chapter 3.

The Option of Adding or Deleting Projects to the District Selections

Two sub-options are available within this option of the program, both working on a district-by-district basis. In the first case, there is a list of projects, in SAS data set format, available from the district's selections and stored in the computer system. Here the state-level decisionmaker is able to add or delete projects to the existing selection via computer terminal screens. A project can be added by filling the BRID field; Figure 2.13 shows the computer screen active when adding or deleting projects.

In the second case, where a district selection is not available, the state-level decisionmaker has the option of building the list for the district from scratch by inputting all the projects as additions in the computer screen depicted in Figure 2.13.

In both cases the state-level decisionmaker gets a printout of the results of the modifications made to the district's selection as of the last run. A sample of this output is included in Table 3.12. The state-level decisionmaker can perform these options until the selected list for each district is satisfactory. In this process, the state-level decisionmaker is encouraged to exchange information with the district-level engineers, to get their input for the final selection process.

Assembling the Final Statewide List of Projects for All Districts

With the aid of the previous options of the program, this option is used when the selections for all the districts are already established. This option merges together all the final district project selections into a final statewide project selection list to be submitted for bidding and contracting. This is accomplished by inputting to the program the districts that have projects included in the final statewide selection list. The interactive screen for this option is depicted in Figure 2.14.

A statewide project selection list, by district, is printed for this option; a sample is included in Table 3.12.

Updating the Data Set of Previously Selected Projects

The last option available in the program FINAL is to update the previously selected projects set. It is recommended that the user make use of this option only when absolutely sure that the list submitted for plan development will not be modified further. The program gives a last chance for the user to change his/her mind after this option is run. This is accomplished by creating a back-up of the file that contains the previously selected projects. After this option is run, the previously selected list of projects is updated; the system is then ready for a new budget allocation, closing

the loop depicted in Figure 2.1. The user is able to check and modify the status of the previously selected projects data set by using the utility program, PREV, that was described at the beginning of this chapter.

A manual for the operation of the FINAL state-level computer program is included in Chapter 3; the listing of the source code is included in Appendix A.

CHAPTER SUMMARY

A bridge management module for the statewide selection of projects for rehabilitation and replacement funding was presented in this chapter. This system, which takes into account both statewide and district criteria, is designed to be user friendly, prompting the user through a series of screens in an interactive fashion.

```
        STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                        BRIDGE DIVISION

              TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                          T E B S S
                        (FINAL) PROGRAM
      ENTER THE BRIDS FOR THE PROJECTS TO BE ADDED OR DELETED.
      WHEN THE DATA GENERATED BY THE DISTRICT IS NOT AVAILABLE
         ENTER THE PROJECTS TO BE CONSIDERED AS ADDITIONS.

                 COUNTY CONT. SEC. STR.  (ADD/DEL)
                 1 ___  ____  __  ___      _     (A=ADD D=DEL)
                 2 ___  ____  __  ___      _
                 3 ___  ____  __  ___      _
                 4 ___  ____  __  ___      _
                 5 ___  ____  __  ___      _
                 6 ___  ____  __  ___      _
                 7 ___  ____  __  ___      _
                 8 ___  ____  __  ___      _
                 9 ___  ____  __  ___      _
                10 ___  ____  __  ___      _

PRESS ENTER FOR NEXT PAGE     PF12: TO SUBMIT JOB       PF1:TO QUIT
```

Figure 2.13 Computer screen for adding or deleting projects to the district's selection

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
BRIDGE DIVISION

TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
T E B S S

DIST	INCLUDE?	DIST	INCLUDE?	DIST	INCLUDE?	DIST	INCLUDE?
1	YES	8	YES	15	YES	23	YES
2	YES	9	YES	16	YES	24	YES
3	YES	10	YES	17	YES	25	YES
4	YES	11	YES	18	YES		
5	YES	12	YES	19	YES		
6	YES	13	YES	20	YES		
7	YES	14	YES	21	YES		

THIS SELECTION IS FOR THE 1988-1992 PROGRAM

PRESS ENTER TO CONTINUE

PF1:TO QUIT

Figure 2.14 Inputting the districts that have selected projects

CHAPTER 3. PROGRAM MANUALS

INTRODUCTION

This chapter provides the user with instructions for operating the computer program modules that comprise the Texas Eligible Bridge Selection System (TEBSS). The flowchart of TEBSS, depicted in Figure 2.1, shows the order in which the components of the system are to be run. Because of the interchange of data between the different computer modules, the precedence of one module over the other should be maintained throughout the loop within the system. The results generated by the state-level computer programs are forwarded automatically through the ROSCOE operating system available at TxDOT.

The interactive screens for TEBSS were programmed using the Roscoe Programming Facility (RPF); each module of TEBSS includes an RPF that modifies the JCL SAS code and submits the job for processing. Both the RPF and the SAS code are included in the appendix.

THE SUFFICIENCY RATING EVALUATOR (SURE) PROGRAM

The objectives of the program Sufficiency Rating Evaluator (SURE) are, first, to read the appropriate data from the BRINSAP database, and then create two output SAS data sets containing the on- and off-system eligible bridges, namely ELIGON.TEBS and ELIGOF.TEBS, respectively. The program must be run twice—once to generate the on-system eligible bridges, and again to generate the off-system eligible bridges. Each time the user needs to supply the subsequent modules (depicted in Figure 2.1) with updated information from the BRINSAP database, a run of the SURE computer module is required. (For further details refer to Chapter 2, where the components of the overall system are described.)

The program SURE is engaged by typing SURE to invoke the RPF, and then pressing the ENTER key to run the RPF. Once the job is submitted, screens will appear on the video terminal, prompting the user for inputs. The first and only computer screen for SURE is presented in Figure 3.1.

After this module is run successfully, it is possible to proceed to the subsequent modules. Printed output summarizing the eligible projects and costs by district is also generated by SURE and needs to be routed to the appropriate printer. A sample of the output printed by SURE is presented in Table 3.1.

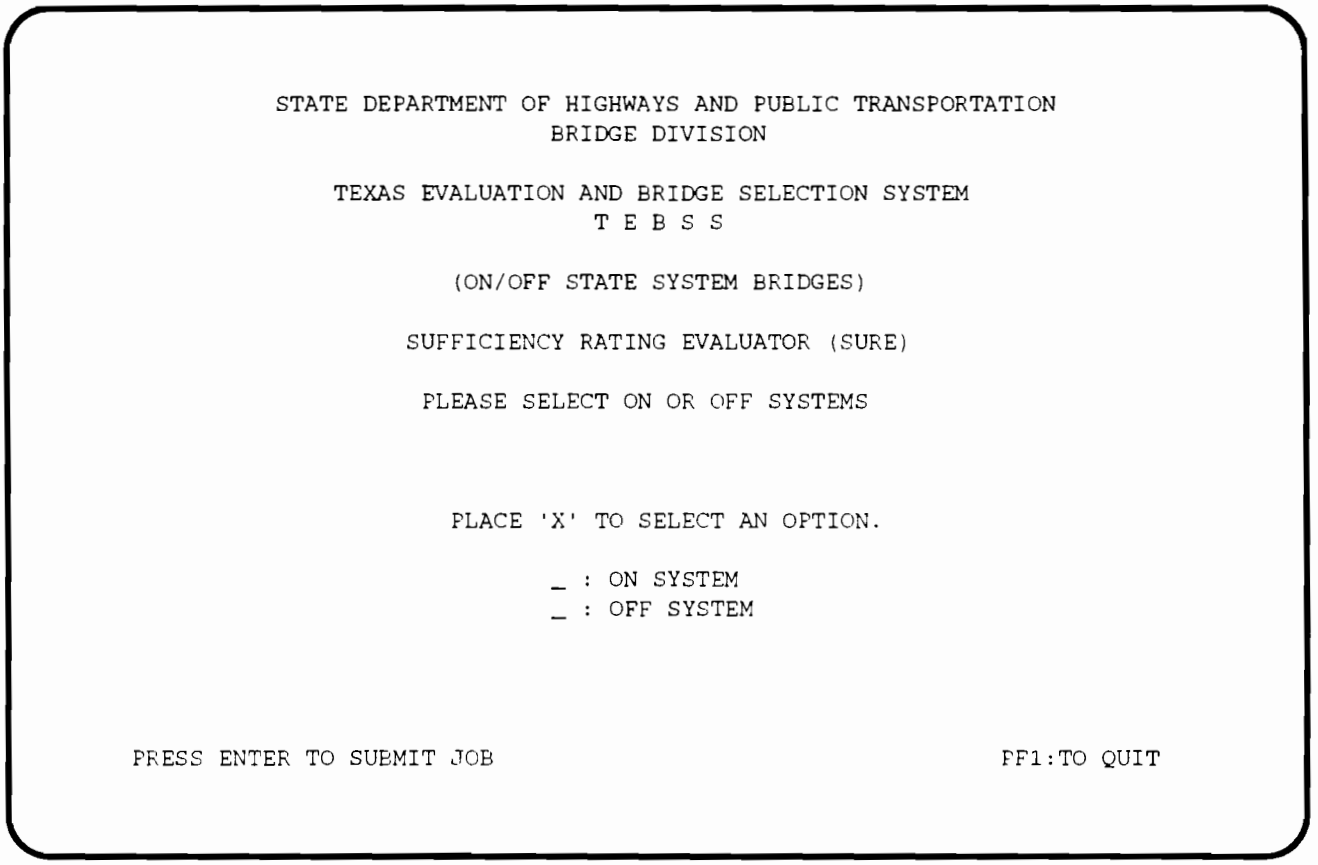

Figure 3.1 System selection with the program SURE

Table 3.1 Printout for the program SURE

1SAS 16:28 MONDAY, AUGUST 5, 1991 1

ON-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
ELIGIBLE BRIDGES PER DISTRICT BEFORE DELETING PREVIOUSLY SELECTED

	ELIGIBLE BRIDGES AND COST		
DISTRICT	N	COST(THOUSAND)	%
1	344	$51,928,000	9.07
2	148	$43,085,000	7.52
3	63	$11,915,000	2.08
4	11	$3,667,000	0.64
5	13	$5,670,000	0.99
6	1	$220,000	0.04
7	23	$5,762,000	1.01
8	74	$14,053,000	2.45
9	92	$32,218,000	5.62
10	143	$17,820,000	3.11
11	80	$15,060,000	2.63
12	120	$35,057,000	6.12
13	100	$18,923,000	3.30
14	80	$14,653,000	2.56
15	118	$32,192,300	5.62
16	204	$41,623,000	7.27
17	49	$13,770,000	2.40
18	506	$123,736,000	21.60
19	99	$20,128,000	3.51
20	134	$49,912,000	8.71
21	15	$2,946,000	0.51
23	11	$468,000	0.08
24	16	$7,526,000	1.31
25	38	$10,436,000	1.82
TOTALS	2482	$572,768,300	100.00

THE PROGRAM FREQ

The TEBSS module that follows the program SURE is the program FREQ (Frequencies), which calculates the frequency distributions of the attributes involved in the decision model as previously described in Chapter 2. FREQ merges the frequency distribution data in the eligible set generated by SURE, and also prepares other SAS data sets to be used by the following modules. FREQ needs the data set that contains the eligible bridges generated by the program SURE. Depending on whether the on- or the off-system is being processed, either ELIGOF.TEBS or ELIGON.TEBS will be required. A data set containing the structures selected in previous funding programs is also needed, so that FREQ deletes them from further consideration. The previously selected data sets are PREVION.TEBS for the on-system, and PREVOFF.TEBS for the off-system.

Submit the program for processing by typing FREQ to invoke the RPF that prompts the user for the different inputs and submits the JCL SAS program for processing. Use of the program is oriented by screens that appear on the video terminal (see Figure 3.2). For the on-system, it is possible to delete the control 8000 series of bridges if desired by the user. The 8000 series deleted from the eligible on-system set is stored in a separate SAS data set, termed EIGHT.TEBS, which is available for processing by the district engineers and for the final bridge selection list generated at the state level of TEBSS.

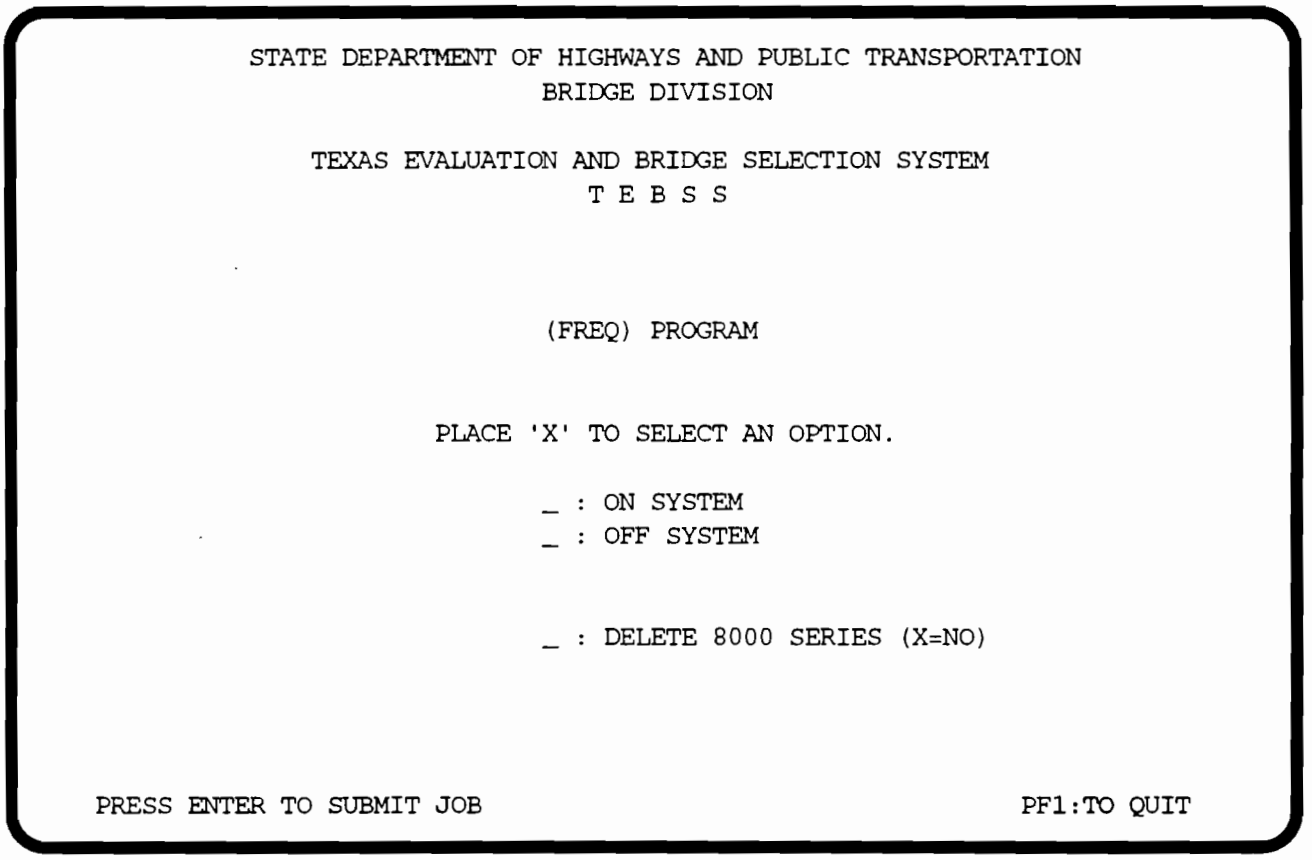

Figure 3.2 RPF screen for the program FREQ

After the job is submitted, the program takes a few minutes to process the information (since it has to sort and merge the percentile scaling factors and frequency tables for the five attributes used in the decision process). The program generates, as a final product, SAS data sets, QDATON.TEBS and QDATOF.TEBS, which contain statewide information needed by the subsequent modules. FREQ also subsets the eligible data, containing the percentiles, in SAS data sets for each district. At the end of the run 24 data sets will be available, one for every district. The program generates a summary table of all the eligible bridges by district, including the cost associated in their repair (this output is presented in Table 3.2). It also prints percentile scaling tables for all the attributes. A partial printout of such a table is presented in Table 3.3. At the bottom of the printed report, FREQ prints a list of the projects whose estimated cost exceeds $5,000,000; these are deleted from further consideration in the subsequent modules.

Table 3.2 Printout for the program FREQ

1 SAS 11:25 THURSDAY, AUGUST 10, 1989 1

ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
ELIGIBLE BRIDGES PER DISTRICT STATISTICS

ELIGIBLE BRIDGES AND COST			
DISTRICT	N	COST	%
1	344	$51,928,000	9.07
2	148	$43,085,000	7.52
3	63	$11,915,000	2.08
4	11	$3,667,000	0.64
5	13	$5,670,000	0.99
6	1	$220,000	0.04
7	23	$5,762,000	1.01
8	74	$14,053,000	2.45
9	92	$32,218,000	5.62
10	143	$17,820,000	3.11
11	80	$15,060,000	2.63
12	120	$35,057,000	6.12
13	100	$18,923,000	3.30
14	80	$14,653,000	2.56
15	118	$32,192,300	5.62
16	204	$41,623,000	7.27
17	49	$13,770,000	2.40
18	506	$123,736,000	21.60
19	99	$20,128,000	3.51
20	134	$49,912,000	8.71
21	15	$2,946,000	0.51
23	11	$468,000	0.08
24	16	$7,526,000	1.31
25	38	$10,436,000	1.82
TOTALS	2482	$572,768,300	100.00

THE PROGRAM FREQ2

The program FREQ2, a modified version of the program FREQ, allows the user to prepare data specifically for the program DDF2—an operation that will be discussed later in this chapter. The goal of the FREQ2 and DDF2 combination is to perform a statewide allocation of funds considering current needs. This is accomplished by calculating the frequencies considering the current status of the BRINSAP database, and by ignoring the previously selected projects (which may still be in the plan preparation process, without funds having been actually authorized to execute these projects). FREQ2 creates two permanent SAS data sets, one for the on-system QDAON2.TEBS, and one for the off-system QDAOF2.TEBS used by DDF2 to perform the funding allocations. To submit FREQ2 for processing, the operator types the word FREQ2 to invoke the RPF that submits the SAS JCL. The only inputs that are needed, as observed in Figure 3.3, are the choice of the system (i.e., on or off) and whether the control 8000 series of projects are to be deleted. The 8000 series option is only meaningful when processing the on-system bridges. The reports printed by FREQ2 are similar to those printed by FREQ and include all the eligible projects from BRINSAP for the calculations.

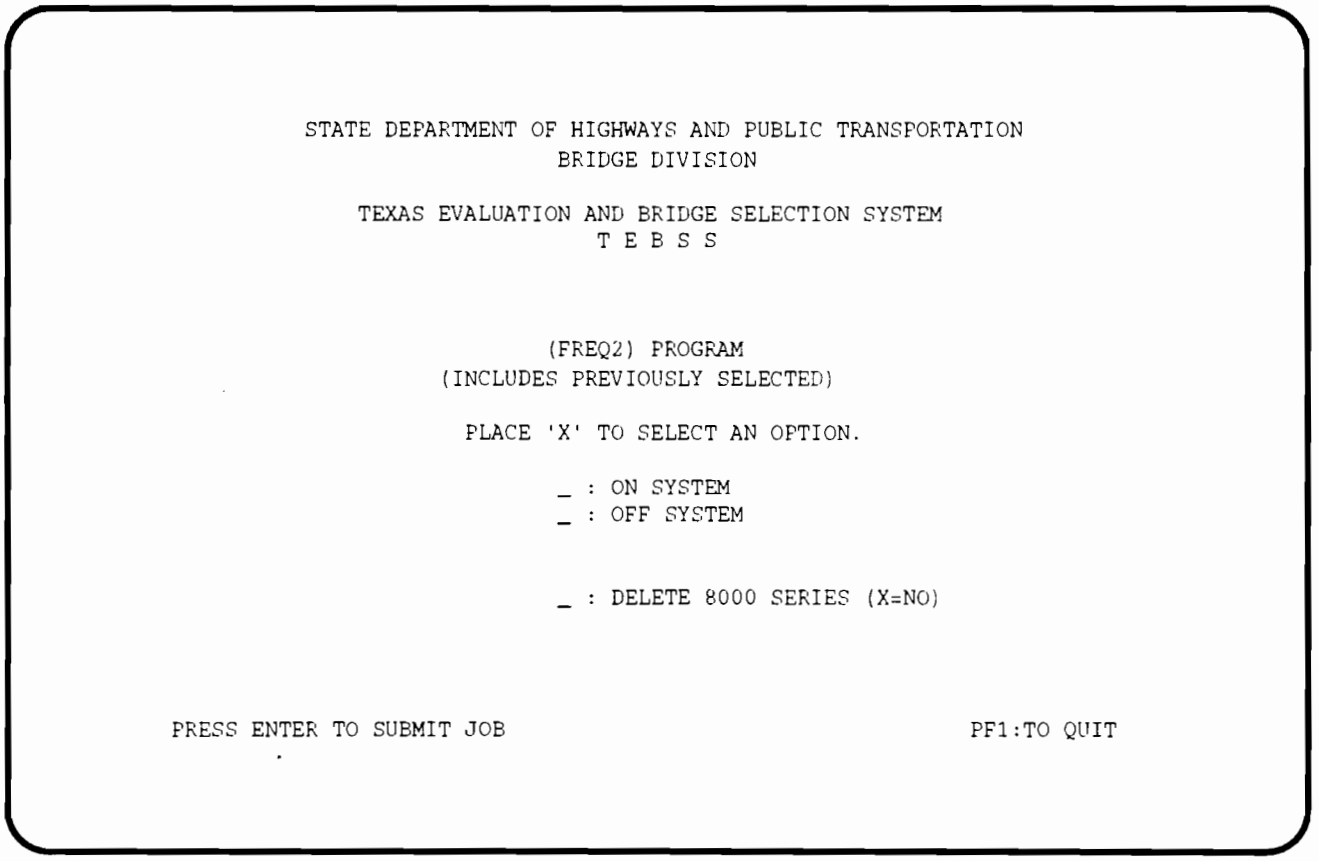

Figure 3.3 RPF screen for the program FREQ2

Table 3.3 Printout for the program FREQ2

1 THESE ARE THE TABLES OF THE FREQUENCY PERCENTILES FOR THE ATTRIBUTES
11:25 THURSDAY, AUGUST 10, 1989

OBS	SR	COUNT	PERCENT	SRPTL
1	2	4	0.16116	100
2	3	1	0.04029	100
3	5	4	0.16116	100
4	6	3	0.12087	100
5	7	2	0.08058	100
6	8	3	0.12087	99
7	9	3	0.12087	99
8	10	2	0.08058	99
9	12	2	0.08058	99
10	13	4	0.16116	99
11	14	1	0.04029	99
12	15	1	0.04029	99
13	16	2	0.08058	99
14	17	5	0.20145	99
15	18	1	0.04029	99
16	19	3	0.12087	98
17	20	7	0.28203	98
18	21	4	0.16116	98
19	22	5	0.20145	98
20	23	5	0.20145	98
21	24	4	0.16116	98
22	25	1	0.04029	97
23	26	4	0.16116	97
24	27	5	0.20145	97
25	28	9	0.36261	97
26	29	7	0.28203	97
27	30	4	0.16116	96
28	31	7	0.28203	96
29	32	5	0.20145	96
30	33	9	0.36261	96
31	34	7	0.28203	95
32	35	9	0.36261	95
33	36	10	0.40290	95
34	37	13	0.52377	94
35	38	20	0.80580	94
36	39	15	0.60435	93
37	40	12	0.48348	92
38	41	12	0.48348	92
39	42	18	0.72522	91
40	43	10	0.40290	91
41	44	13	0.52377	90
42	45	11	0.44319	90
43	46	13	0.52377	89
44	47	23	0.92667	89
45	48	41	1.65189	88
46	49	68	2.73973	86
47	50	63	2.53828	83
48	51	43	1.73247	81
49	52	44	1.77276	79
50	53	48	1.93392	77
51	54	34	1.36986	75
52	55	36	1.45044	74
53	56	40	1.61160	73
54	57	55	2.21595	71
55	58	55	2.21595	69

1 THESE ARE THE TABLES OF THE FREQUENCY PERCENTILES FOR THE ATTRIBUTES 40
11:25 THURSDAY, AUGUST 10, 1989

OBS	SR	COUNT	PERCENT	SRPTL
56	59	57	2.29654	67
57	60	65	2.61886	64
58	61	77	3.10234	62
59	62	92	3.70669	59
60	63	93	3.74698	55
61	64	69	2.78002	51
62	65	64	2.57857	48
63	66	65	2.61886	46
64	67	72	2.90089	43
65	68	59	2.37712	40
66	69	72	2.90089	38
67	70	62	2.49799	35
68	71	87	3.50524	32
69	72	131	5.27800	29
70	73	113	4.55278	24
71	74	102	4.10959	19
72	75	95	3.82756	15
73	76	70	2.82031	11
74	77	48	1.93392	8
75	78	75	3.02176	6
76	79	61	2.45770	3
77	80	23	0.92667	1

THE PROGRAM DDF

The program DDF calculates distribution factors that are applied to a planned total statewide budget to make apportionment of the available funds to the districts. The final result is a table of budget distribution factors for seven possible sets of weights for the decision attributes. To submit DDF for processing, SURE and FREQ must already have been processed to provide the necessary data for the DDF program. Type DDF followed by the ENTER key to invoke the RPF that submits the SAS code for DDF. The initial screen for the RPF, presented in Figure 3.4, allows the user to select a

system (on or off) and to input a budget amount to be distributed among the districts.

The next screen in the program DDF (see Fig 3.5) asks for the selection of the seven possible weight combinations to be used in the budget allocation process. The user can either accept the default weights or change them by using the arrow keys or the tab key to move around the screen from field to field. After the correct selection of weights is shown in the screen, type the ENTER key to accept the selected weights.

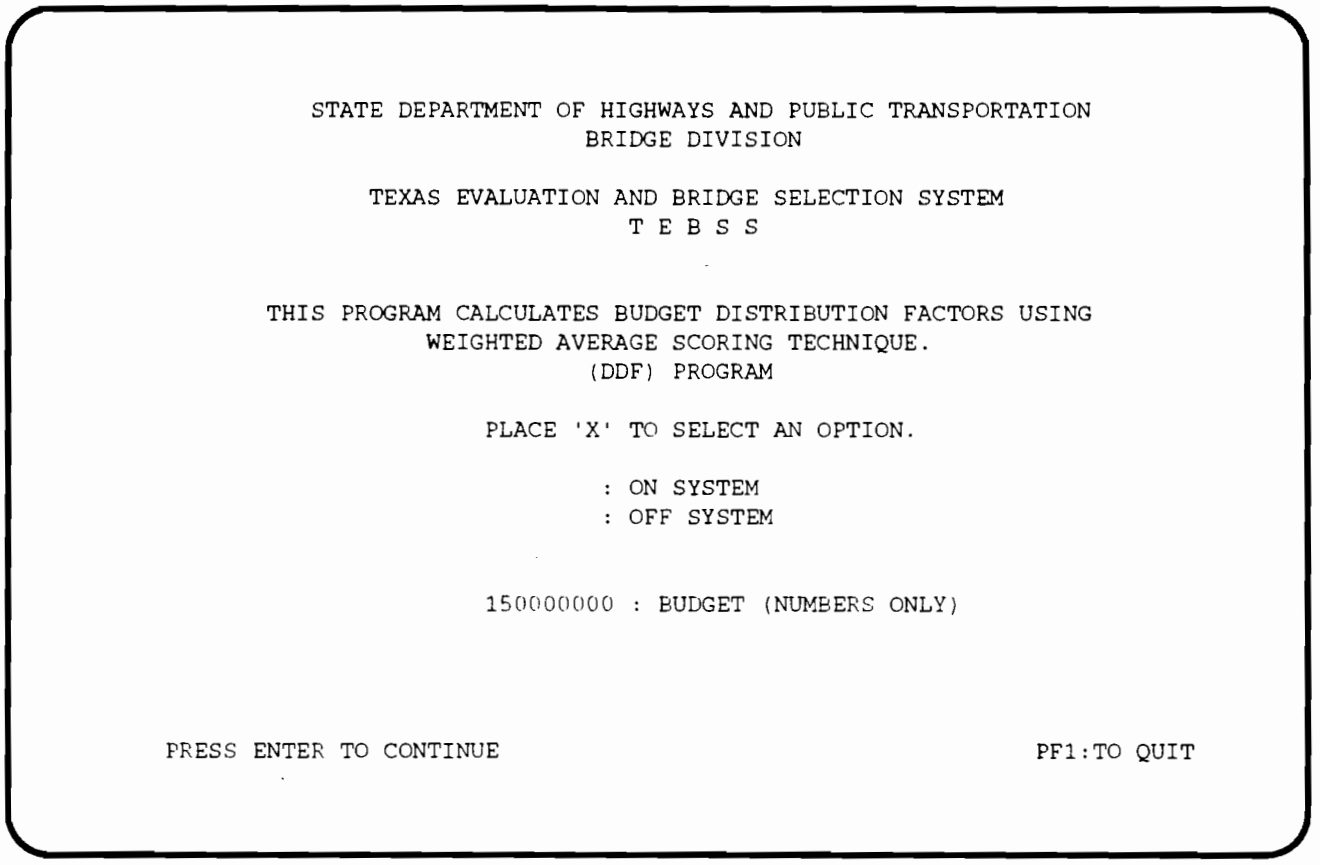

Figure 3.4 Initial RPF screen for the program DDF

The next screen allows for the selection of auto qualifying features to be used in the distribution of the planned budget. The default selection is the "no consideration" of the automatic qualifying features. If automatic qualification is desired, the answer to the question displayed in Figure 3.6 must be changed to "YES" and a desired selection of auto-qualifying thresholds should be selected. Leave the unused auto qualifying thresholds at their default blank values. (For further details about the automatic qualification concept, refer to Chapter 2.) Type the ENTER key when satisfied with the auto-qualifying thresholds and submit the JCL SAS job.

This is the last screen for the program. The program will run for a while and will generate a line printer file containing tables for the distribution factors for each one of the seven selected methods. An allocation map and a allocation chart, by district, of an average of the seven methods is also stored in a graphics output file. The graphics and the line printer outputs should be routed to the appropriate printing and plotting devices, using the computer system commands. A sample of the output file is presented in Table 3.4, while a sample of the graphics output is presented in Figures 3.7 and 3.8.

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
BRIDGE DIVISION

TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
T E B S S

THIS PROGRAM CALCULATES BUDGET DISTRIBUTION FACTORS USING
WEIGHTED AVERAGE SCORING TECHNIQUE.
(DDF) PROGRAM

METH	WCPV	WADT	WSR	WDSS	WBWR
1	0.20	0.20	0.20	0.20	0.20
2	0.30	0.10	0.20	0.20	0.20
3	0.20	0.30	0.10	0.20	0.20
4	0.20	0.20	0.30	0.10	0.20
5	0.20	0.20	0.20	0.30	0.10
6	0.10	0.20	0.20	0.20	0.30
7	0.15	0.10	0.25	0.25	0.25

PRESS ENTER TO CONTINUE PF1:TO QUIT

Figure 3.5 Selection of weights for the program DDF

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
BRIDGE DIVISION

TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
T E B S S

DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE ___ (YES/NO)

(DDF) PROGRAM

PROJECTS LESS OR EQUAL THAN AQCPV: _____
PROJECTS MORE OR EQUAL THAN AQADT: _____
PROJECTS LESS OR EQUAL THAN AQSR : _____
PROJECTS LESS OR EQUAL THAN AQDSS: _____
PROJECTS LESS OR EQUAL THAN AQBWR: _____

PRESS ENTER TO SUBMIT JOB PF1:TO QUIT

Figure 3.6 Selection of automatic qualification thresholds for the program DDF

Table 3.4 Printout for the program DDF

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 1

	WEIGHTS				
METHOD	CPV	ADT	SR	DSS	BWR
1	0.20	0.20	0.20	0.20	0.20
2	0.20	0.15	0.25	0.20	0.20
3	0.15	0.15	0.25	0.25	0.20
4	0.15	0.10	0.25	0.25	0.25
5	0.10	0.10	0.30	0.25	0.25
6	0.10	0.05	0.30	0.30	0.25
7	0.05	0.05	0.30	0.30	0.30

CPV = COST PER VEHICLE

ADT = AVERAGE DAILY TRAFFIC

SR = SUFFICIENCY RATING

DSS = MINIMUM OF CONDITION RATINGS

BWR = BRIDGE WIDTH RATIO

AUTO QUALIFYING FEATURES USED :

CPV	M
ADT	M
SR	M
DSS	3
BWR	M

M = MISSING

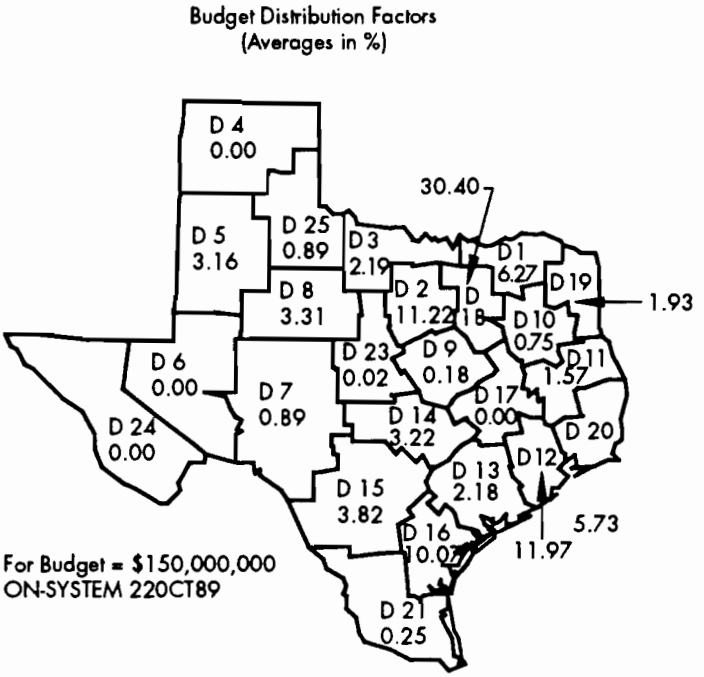

Figure 3.7 Map generated by the program DDF

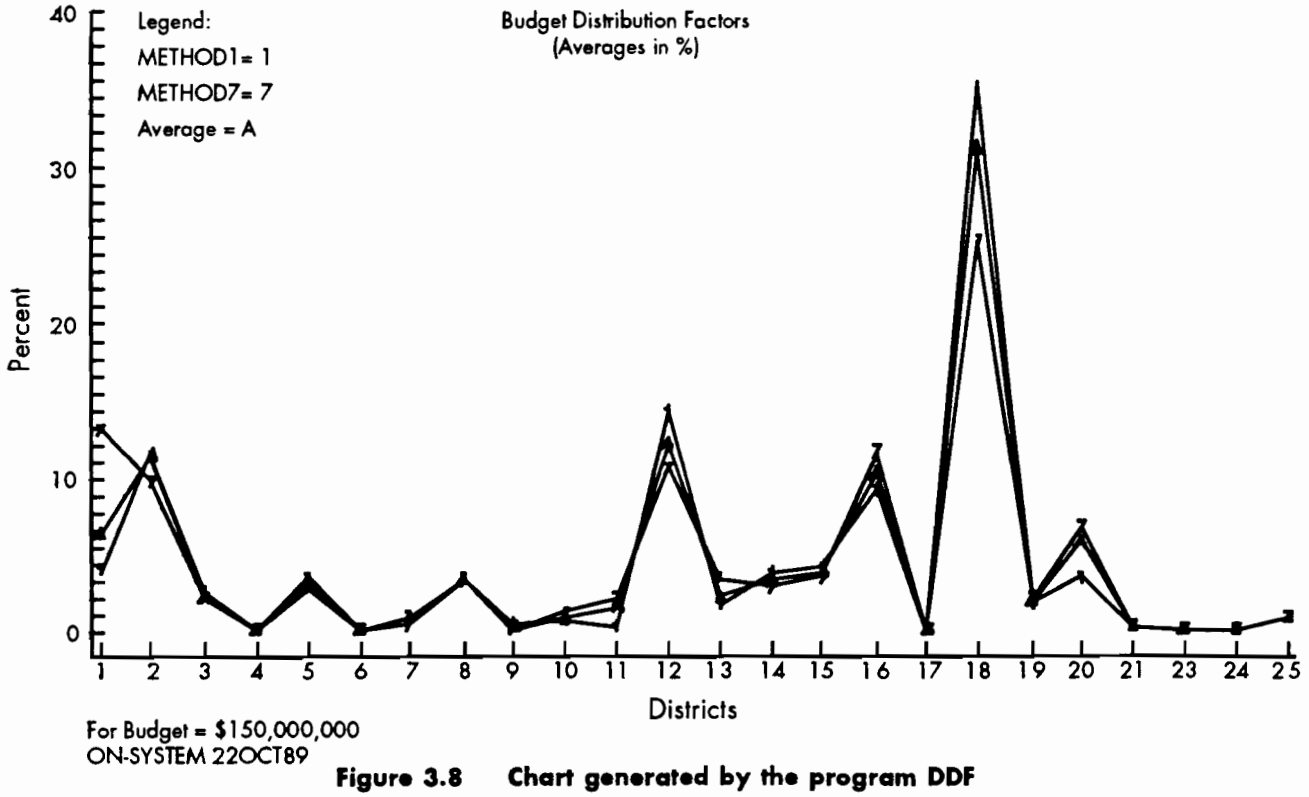

Figure 3.8 Chart generated by the program DDF

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 2

FOR BUDGET= $150,000,000 ON -SYSTEM

DISTRICT	M1	M2	M3	M4	M5	M6	M7	AVRG.
1	3.87	3.61	3.54	3.82	3.68	12.51	12.84	6.27
2	11.27	11.38	13.50	11.40	11.33	10.17	9.51	11.22
3	2.44	2.39	2.23	1.97	2.09	2.11	2.12	2.19
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	3.44	3.44	3.47	3.44	2.92	2.69	2.74	3.16
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.90	1.07	1.08	0.90	0.95	0.88	0.43	0.89
8	3.36	3.36	3.20	3.18	3.46	3.31	3.30	3.31
9	0.42	0.16	0.09	0.26	0.10	0.09	0.10	0.18
10	0.72	0.75	0.64	0.66	0.69	0.67	1.12	0.75
11	0.32	0.37	2.02	2.01	2.19	2.03	2.05	1.57
12	13.86	13.63	12.18	11.85	11.51	10.32	10.43	11.97
13	1.79	1.79	2.00	2.02	2.12	2.17	3.35	2.18
14	3.67	3.68	2.89	3.34	3.12	2.88	2.94	3.22
15	4.16	4.30	3.82	3.84	3.69	3.52	3.37	3.82
16	9.04	9.39	9.65	9.57	10.27	11.21	11.37	10.07
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	34.33	33.17	32.15	31.26	31.76	25.57	24.52	30.40
19	1.83	1.83	1.85	2.01	2.00	1.96	2.00	1.93
20	3.44	4.52	4.52	7.33	6.90	6.76	6.63	5.73
21	0.24	0.24	0.24	0.24	0.26	0.24	0.25	0.25
23	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.88	0.88	0.88	0.88	0.95	0.88	0.90	0.89

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 3
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 1			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	40	$5,792,000	3.87	21	$3,455,000
2	53	$16,883,000	11.27	4	$7,295,000
3	21	$3,649,000	2.44	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.44	9	$4,016,000
6	0	$0	0.00	0	$0
7	3	$1,344,000	0.90	0	$0
8	15	$5,041,000	3.36	10	$4,241,000
9	3	$626,000	0.42	0	$0
10	10	$1,083,000	0.72	2	$433,000
11	4	$486,000	0.32	2	$69,000
12	55	$20,767,000	13.86	12	$6,354,000
13	8	$2,676,000	1.79	1	$322,000
14	16	$5,500,000	3.67	8	$1,440,000
15	31	$6,232,000	4.16	3	$507,000
16	17	$13,550,000	9.04	2	$83,000
17	0	$0	0.00	0	$0
18	237	$51,442,000	34.33	37	$4,363,000
19	18	$2,748,000	1.83	12	$1,472,000
20	23	$5,159,000	3.44	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	572	$149,838,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 4
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 2			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	42	$5,417,000	3.61	21	$3,455,000
2	50	$17,061,000	11.38	4	$7,295,000
3	22	$3,590,000	2.39	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.44	9	$4,016,000
6	0	$0	0.00	0	$0
7	4	$1,608,000	1.07	0	$0
8	15	$5,041,000	3.36	10	$4,241,000
9	2	$238,000	0.16	0	$0
10	11	$1,123,000	0.75	2	$433,000
11	5	$557,000	0.37	2	$69,000
12	51	$20,433,000	13.63	12	$6,354,000
13	8	$2,676,000	1.79	1	$322,000
14	17	$5,520,000	3.68	8	$1,440,000
15	30	$6,451,000	4.30	3	$507,000
16	21	$14,079,000	9.39	2	$83,000
17	0	$0	0.00	0	$0
18	227	$49,730,000	33.17	37	$4,363,000
19	18	$2,748,000	1.83	12	$1,472,000
20	25	$6,775,000	4.52	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	566	$149,907,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 5
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 3			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	37	$5,257,000	3.54	21	$3,455,000
2	51	$20,061,000	13.50	4	$7,295,000
3	20	$3,317,000	2.23	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.47	9	$4,016,000
6	0	$0	0.00	0	$0
7	4	$1,608,000	1.08	0	$0
8	13	$4,759,000	3.20	10	$4,241,000
9	1	$141,000	0.09	0	$0
10	10	$952,000	0.64	2	$433,000
11	6	$3,008,000	2.02	2	$69,000
12	46	$18,105,000	12.18	12	$6,354,000
13	8	$2,973,000	2.00	1	$322,000
14	13	$4,296,000	2.89	8	$1,440,000
15	24	$5,682,000	3.82	3	$507,000
16	19	$14,347,000	9.65	2	$83,000
17	0	$0	0.00	0	$0
18	186	$47,771,000	32.15	37	$4,363,000
19	18	$2,748,000	1.85	12	$1,472,000
20	25	$6,715,000	4.52	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	499	$148,600,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 6
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 4			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	44	$5,727,000	3.82	21	$3,455,000
2	49	$17,084,000	11.40	4	$7,295,000
3	20	$2,952,000	1.97	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.44	9	$4,016,000
6	0	$0	0.00	0	$0
7	3	$1,344,000	0.90	0	$0
8	13	$4,759,000	3.18	10	$4,241,000
9	2	$391,000	0.26	0	$0
10	11	$992,000	0.66	2	$433,000
11	6	$3,008,000	2.01	2	$69,000
12	42	$17,760,000	11.85	12	$6,354,000
13	10	$3,027,000	2.02	1	$322,000
14	19	$5,006,000	3.34	8	$1,440,000
15	23	$5,760,000	3.84	3	$507,000
16	20	$14,349,000	9.57	2	$83,000
17	0	$0	0.00	0	$0
18	209	$46,857,000	31.26	37	$4,363,000
19	19	$3,012,000	2.01	12	$1,472,000
20	29	$10,990,000	7.33	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	537	$149,878,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 7
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 5			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	38	$5,070,000	3.68	21	$3,455,000
2	39	$15,589,000	11.33	4	$7,295,000
3	18	$2,877,000	2.09	9	$270,000
4	0	$0	0.00	0	$0
5	9	$4,016,000	2.92	9	$4,016,000
6	0	$0	0.00	0	$0
7	2	$1,307,000	0.95	0	$0
8	13	$4,759,000	3.46	10	$4,241,000
9	1	$141,000	0.10	0	$0
10	10	$952,000	0.69	2	$433,000
11	6	$3,008,000	2.19	2	$69,000
12	35	$15,845,000	11.51	12	$6,354,000
13	7	$2,918,000	2.12	1	$322,000
14	12	$4,288,000	3.12	8	$1,440,000
15	19	$5,075,000	3.69	3	$507,000
16	15	$14,131,000	10.27	2	$83,000
17	0	$0	0.00	0	$0
18	160	$43,714,000	31.76	37	$4,363,000
19	18	$2,748,000	2.00	12	$1,472,000
20	20	$9,492,000	6.90	6	$1,565,000
21	2	$363,000	0.26	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.95	4	$1,314,000
TOTALS	429	$137,638,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 8
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 6			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	41	$18,686,000	12.51	21	$3,455,000
2	37	$15,178,000	10.17	4	$7,295,000
3	22	$3,153,000	2.11	9	$270,000
4	0	$0	0.00	0	$0
5	9	$4,016,000	2.69	9	$4,016,000
6	0	$0	0.00	0	$0
7	2	$1,307,000	0.88	0	$0
8	14	$4,935,000	3.31	10	$4,241,000
9	1	$141,000	0.09	0	$0
10	12	$1,005,000	0.67	2	$433,000
11	7	$3,033,000	2.03	2	$69,000
12	32	$15,412,000	10.32	12	$6,354,000
13	11	$3,237,000	2.17	1	$322,000
14	13	$4,305,000	2.88	8	$1,440,000
15	19	$5,251,000	3.52	3	$507,000
16	20	$16,744,000	11.21	2	$83,000
17	0	$0	0.00	0	$0
18	148	$38,186,000	25.57	37	$4,363,000
19	20	$2,928,000	1.96	12	$1,472,000
20	23	$10,088,000	6.76	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	438	$149,313,000	100.00	143	$37,230,000

Table 3.4 Printout for the program DDF (cont.)

1 BUDGET DISTRIBUTION FACTORS 15:34 FRIDAY, AUGUST 11, 1989 9
FOR BUDGET= $150,000,000 ON -SYSTEM

	METHOD 7			AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	39	$18,814,000	12.84	21	$3,455,000
2	34	$13,933,000	9.51	4	$7,295,000
3	21	$3,105,000	2.12	9	$270,000
4	0	$0	0.00	0	$0
5	9	$4,016,000	2.74	9	$4,016,000
6	0	$0	0.00	0	$0
7	1	$630,000	0.43	0	$0
8	13	$4,832,000	3.30	10	$4,241,000
9	1	$141,000	0.10	0	$0
10	10	$1,646,000	1.12	2	$433,000
11	6	$3,008,000	2.05	2	$69,000
12	31	$15,280,000	10.43	12	$6,354,000
13	13	$4,903,000	3.35	1	$322,000
14	13	$4,305,000	2.94	8	$1,440,000
15	16	$4,943,000	3.37	3	$507,000
16	18	$16,660,000	11.37	2	$83,000
17	0	$0	0.00	0	$0
18	139	$35,920,000	24.52	37	$4,363,000
19	20	$2,928,000	2.00	12	$1,472,000
20	21	$9,706,000	6.63	6	$1,565,000
21	2	$363,000	0.25	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.90	4	$1,314,000
TOTALS	412	$146,478,000	100.00	143	$37,230,000

THE PROGRAM DDF2

The operation of the program DDF2 is very similar to the operation of DDF. Moreover, the tables, map, and graphs generated by DDF2 resemble those generated by the program DDF. The screens, however, are sufficiently different to alert the user that it is DDF2 and not DDF that is being processed. The main difference between DDF and DDF2 is the manner in which they handle the previously selected projects. DDF2 uses the data generated by a modified version of FREQ (termed FREQ2 and discussed earlier in this chapter) to reflect the current needs, including those projects that have been authorized for plan preparation but have not been let to contract. Because the RPF screens and outputs for DDF2 are very similar to those presented in the previous paragraph describing DDF, they will not be repeated here.

THE PROGRAM INICO

The program INICO (Initially Considered Projects) generates a list of projects to be forwarded for the district's consideration. It uses both the eligible bridge set generated by the program SURE and the percentile scaling of the attributes merged in the eligible set by the program FREQ. The data sets that are needed to process either the on- or the off-systems are respectively QDATON.TEBS and QDATOF.TEBS, which were previously generated by the program FREQ. The results of the program DDF are used in the User Inputs module (see Figure 2.1) to set the amount of money to be allocated for each district. (The budget for each district is one of the inputs for the program INICO.) The final result of the program INICO is a list of projects, one list per district, to be considered for funding and which is submitted for the district's approval.

The first screen (see Figure 3.9) asks for the budget to be allocated for each district. To modify the default budget allocations, use either the tab or arrow keys to move from field to field. After making corrections as needed, calculate the overall statewide budget by typing the ENTER key. When satisfied with the values, type the PF12 key to proceed to the next screen.

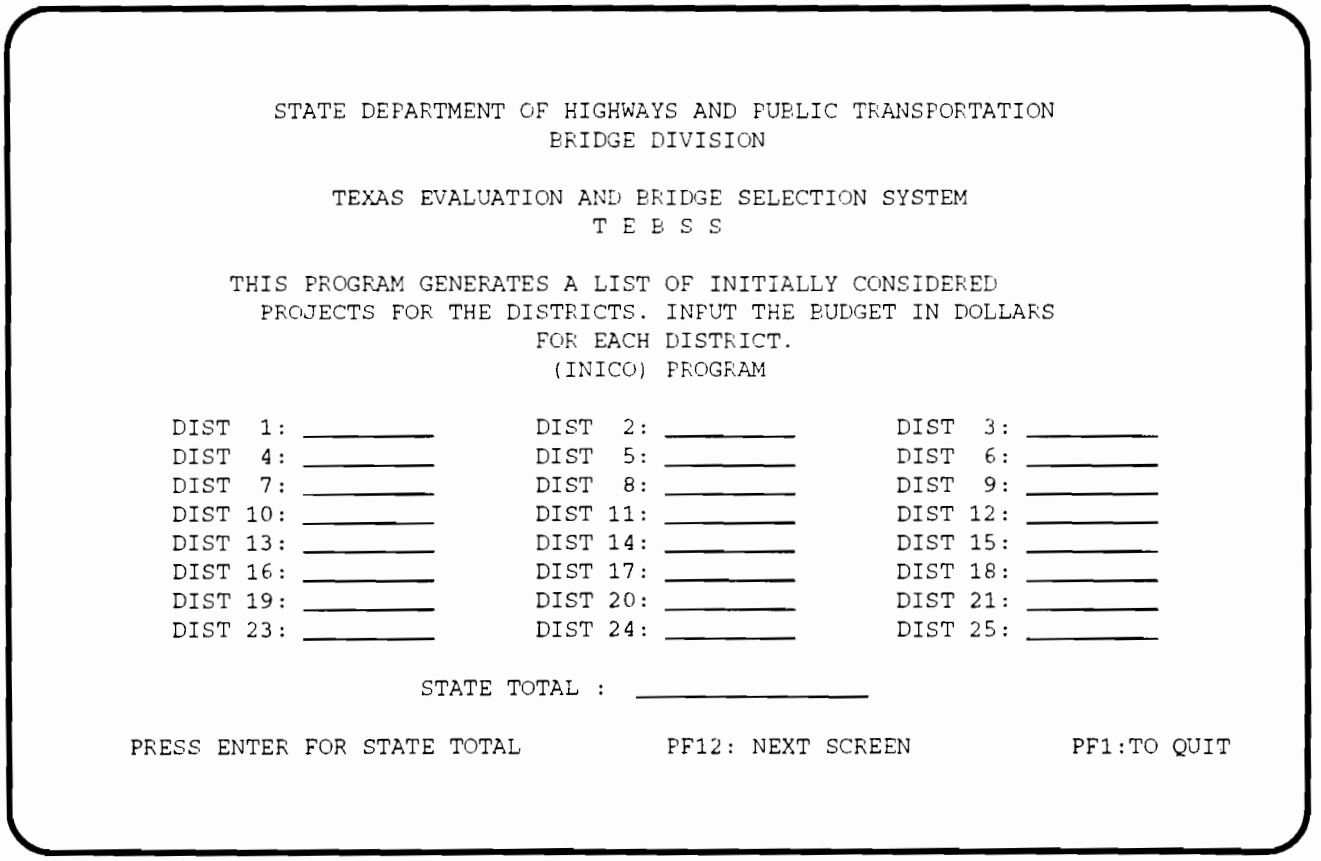

Figure 3.9 Initial screen for the program INICO

The next screen of the program INICO, depicted in Figure 3.10, allows for the selection of the weights for the attributes. The weights are used in the scoring process employed in ranking the projects statewide and generate the initially considered project list within the budget constraint for each district.

In this screen, the user is also asked whether the run is being performed for the on- or for the off-systems. Place the cursor over the appropriate field and type the weights and the system being processed; use the tab and arrow keys to move around the screen as before. Finally, the years that the budget allocation will cover need to be typed in the appropriate field. This entry is needed for including the correct headers in the printed reports generated by the program. When satisfied with the contents of the fields of this screen, type the ENTER key to proceed.

The next and last screen for this program, depicted in Figure 3.11., asks whether auto-qualifying features should be used. If auto-qualifying features are desired, change the default value from NO to YES in answer to the question whether auto qualifying features should be used. Use the tab and the arrow keys to move around the fields and make the appropriate changes and selections for auto-qualifying thresholds. Remember that it is mandatory that the answer to the question be filed as YES if auto-qualifying features are to be used. When satisfied with the contents of the fields of this screen, type the ENTER key to proceed.

When the program completes its operation, line printer and plotter output will be available. Line printer files will contain the list of initially considered projects sorted by district. Two plotter files will contain, respectively, a budget by district curve and a map with a final statewide allocation of the planned budget by district. The line printer and the plotter files should be routed to the appropriate output devices, using the commands available in the computer system. A sample of these outputs is presented in Table 3.5 and in Figures 3.12 and 3.13.

Because the information contained for each bridge record is wider than 132 columns, the line printer output is split into two parts. To read the output, the two parts of the output must be placed side by side and flipped together. The number that links the two parts of the line printer output is the control section structure number (CSS). This applies to all the two-part line printer outputs that are generated by the other computer modules of the system..

```
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                    BRIDGE DIVISION

    TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
                      T E B S S

                    (INICO) PROGRAM

          ATTRIBUTES                    WEIGHTS
    ============================      =======
    COST PER VEHICLE                  : 0.00
    AVERAGE DAILY TRAFFIC             : 0.00
    SUFFICIENCY RATING                : 0.00
    MINIMUM OF CONDITION RATINGS      : 0.00
    BRIDGE WIDTH RATIO                : 0.00
                                TOTAL =1.00

  DO YOU WANT TO RUN THE ON OR OFF SYSTEM ___  (OFF/ON)

  WHAT PROGRAM IS THIS RUN SUPPOSE TO COVER ?: _________

PRESS ENTER TO CONTINUE                          PF1:TO QUIT
```

Figure 3.10 Selection of weights and the system for the program INICO

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
BRIDGE DIVISION

TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
T E B S S

DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE ___ (YES/NO)

(INICO) PROGRAM

PROJECTS LESS OR EQUAL THAN AQCPV: _____
PROJECTS MORE OR EQUAL THAN AQADT: _____
PROJECTS LESS OR EQUAL THAN AQSR : _____
PROJECTS LESS OR EQUAL THAN AQDSS: _____
PROJECTS LESS OR EQUAL THAN AQBWR: _____

PRESS ENTER TO SUBMIT JOB PF1:TO QUIT

Figure 3.11 Selection of auto-qualifying thresholds for the program INICO

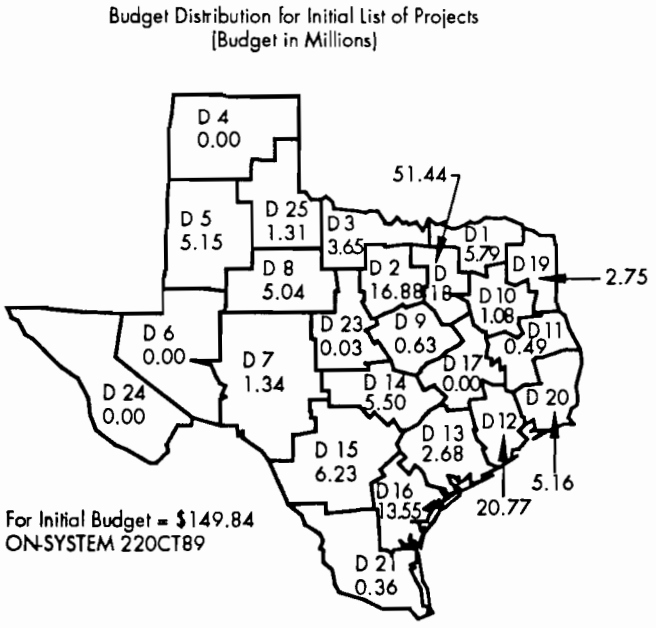

Figure 3.12 Map generated by the program INICO

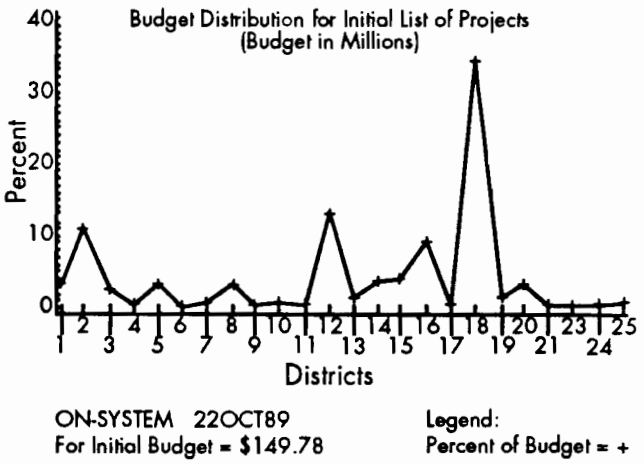

Figure 3.13 Chart generated by the program INICO

Table 3.5 Printout for the program INICO

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

INITIALLY CONSIDERED PROJECTS

WEIGHTS					
	CPV	ADT	SR	DSS	BWR
	0.20	0.20	0.20	0.20	0.20

CPV = COST PER VEHICLE

ADT = AVERAGE DAILY TRAFFIC

SR = SUFFICIENCY RATING

DSS = MINIMUM OF CONDITION RATINGS

BWR = BRIDGE WIDTH RATIO

- AUTO QUALIFYING FEATURES USED :

CPV	M
ADT	M
SR	M
DSS	3
BWR	M

M = MISSING

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

BUDGET DISTRIBUTION				AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	40	$5,792,000	3.87	21	$3,455,000
2	53	$16,883,000	11.27	4	$7,295,000
3	21	$3,649,000	2.44	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.44	9	$4,016,000
6	0	$0	0.00	0	$0
7	3	$1,344,000	0.90	0	$0
8	15	$5,041,000	3.36	10	$4,241,000
9	3	$626,000	0.42	0	$0
10	10	$1,083,000	0.72	2	$433,000
11	4	$486,000	0.32	2	$69,000
12	55	$20,767,000	13.86	12	$6,354,000
13	8	$2,676,000	1.79	1	$322,000
14	16	$5,500,000	3.67	8	$1,440,000
15	31	$6,232,000	4.16	3	$507,000
16	17	$13,550,000	9.04	2	$83,000
17	0	$0	0.00	0	$0
18	237	$51,442,000	34.33	37	$4,363,000
19	18	$2,748,000	1.83	12	$1,472,000
20	23	$5,159,000	3.44	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	572	$149,838,000	100.00	143	$37,230,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
23 BROWNWOOD	EASTLAND	00587	1239-01-001	REHABILITATE BRIDGE & APPROACHES	$31,000

BRIDGE LOCATION: COPPERAS CRK

EXISTING FACILITY: 2 LANE, 36 FT ROADWAY PROPOSED FACILITY: 2 LANE, 34 FT ROADWAY

DISTRICT TOTAL OF 1 INITIALLY CONSIDERED PROJECTS: $31,000

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 104

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
25 CHILDRESS	KING	00083	0032-05-020	REHABILITATE BRIDGE & APPROACHES	$125,000

BRIDGE LOCATION: WILLOW CREEK

EXISTING FACILITY: 2 LANE, 44 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

25 CHILDRESS	COLLINGSWORTH	00338	0230-03-012	REPLACE BRIDGE & APPROACHES	$413,000

BRIDGE LOCATION: BUCK CR

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

25 CHILDRESS	KNOX	00266	0758-01-001	REHABILITATE BRIDGE & APPROACHES	$750,000

BRIDGE LOCATION: SALT FK BRAZOS RIVER

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

25 CHILDRESS	HALL	02361	2253-01-002	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 30 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

DISTRICT TOTAL OF 4 INITIALLY CONSIDERED PROJECTS: $1,314,000
STATE TOTAL OF 572 INITIALLY CONSIDERED PROJECTS: $149,838,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
1 PARIS	GRAYSON	00131	2454-01-001	REPLACE BRIDGE & APPROACHES	$127,000

BRIDGE LOCATION: IRON CRK

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

1 PARIS	HOPKINS	00313	0009-18-362	REHABILITATE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: TOWN BRANCH

EXISTING FACILITY: 2 LANE, 25.5 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

1 PARIS	HOPKINS	01870	0735-05-018	REHABILITATE BRIDGE & APPROACHES	$100,000

BRIDGE LOCATION: ROCK CRK

EXISTING FACILITY: 2 LANE, 23.1 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

1 PARIS	HOPKINS	00313	0009-18-062	REHABILITATE BRIDGE & APPROACHES	$31,000

BRIDGE LOCATION: TOWNE BRANCH

EXISTING FACILITY: 2 LANE, 27 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

1 PARIS	RED RIVER	00410	0772-02-013	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DEAN CRK

EXISTING FACILITY: 2 LANE, 20.7 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

1 PARIS	GRAYSON	00075	0047-02-216	REHABILITATE BRIDGE & APPROACHES	$159,000

BRIDGE LOCATION: US 82 O PASS

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

DISTRICT TOTAL OF 31 INITIALLY CONSIDERED PROJECTS: $6,232,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 52

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16 CORPUS CHRISTI	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 53

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	LIVE OAK	00059	0542-06-015	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: TIMON CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 54

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	00666	1052-01-025	REPLACE BRIDGE & APPROACHES	$126,000
BRIDGE LOCATION: DRAW					
EXISTING FACILITY: 2 LANE, 20 FT ROADWAY			PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY		
16 CORPUS CHRISTI	KARNES	00181	0100-06-073	REHABILITATE BRIDGE & APPROACHES	$48,000
BRIDGE LOCATION: CREEK					
EXISTING FACILITY: 4 LANE, 40 FT ROADWAY			PROPOSED FACILITY: 4 LANE, 68 FT ROADWAY		
16 CORPUS CHRISTI	NUECES	00666	1052-01-026	REPLACE BRIDGE & APPROACHES	$808,000
BRIDGE LOCATION: DRAW					
EXISTING FACILITY: 2 LANE, 20 FT ROADWAY			PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY		
16 CORPUS CHRISTI	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000
BRIDGE LOCATION: DRAW					
EXISTING FACILITY: 2 LANE, 19 FT ROADWAY			PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY		
16 CORPUS CHRISTI	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000
BRIDGE LOCATION: DRAIN					
EXISTING FACILITY: 2 LANE, 24 FT ROADWAY			PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY		
				DISTRICT TOTAL OF 17 INITIALLY CONSIDERED PROJECTS:	$13,550,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM INITIALLY CONSIDERED PROJECTS

WEIGHTS				
CPV	ADT	SR	DSS	BWR
0.20	0.20	0.20	0.20	0.20

CPV = COST PER VEHICLE

ADT = AVERAGE DAILY TRAFFIC

SR = SUFFICIENCY RATING

DSS = MINIMUM OF CONDITION RATINGS

BWR = BRIDGE WIDTH RATIO

AUTO QUALIFYING FEATURES USED :

CPV	M
ADT	M
SR	M
DSS	3
BWR	M

M = MISSING

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

BUDGET DISTRIBUTION				AUTO-QUALIF. STATISTICS	
DISTRICT	N	SUM	%	N AQ	SUM AQ
1	40	$5,792,000	3.87	21	$3,455,000
2	53	$16,883,000	11.27	4	$7,295,000
3	21	$3,649,000	2.44	9	$270,000
4	0	$0	0.00	0	$0
5	11	$5,152,000	3.44	9	$4,016,000
6	0	$0	0.00	0	$0
7	3	$1,344,000	0.90	0	$0
8	15	$5,041,000	3.36	10	$4,241,000
9	3	$626,000	0.42	0	$0
10	10	$1,083,000	0.72	2	$433,000
11	4	$486,000	0.32	2	$69,000
12	55	$20,767,000	13.86	12	$6,354,000
13	8	$2,676,000	1.79	1	$322,000
14	16	$5,500,000	3.67	8	$1,440,000
15	31	$6,232,000	4.16	3	$507,000
16	17	$13,550,000	9.04	2	$83,000
17	0	$0	0.00	0	$0
18	237	$51,442,000	34.33	37	$4,363,000
19	18	$2,748,000	1.83	12	$1,472,000
20	23	$5,159,000	3.44	6	$1,565,000
21	2	$363,000	0.24	0	$0
23	1	$31,000	0.02	1	$31,000
24	0	$0	0.00	0	$0
25	4	$1,314,000	0.88	4	$1,314,000
TOTALS	572	$149,838,000	100.00	143	$37,230,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 1

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
2454-01-001	3,813	46	6	6	5	$33	0.545	79	5		$127,000
	COMMENTS:										
0009-18-362	4,497	56	6	7	6	$5	0.580	77	1		$150,000
	COMMENTS:										
0735-05-018	5,074	55	7	7	6	$20	0.525	76	2		$250,000
	COMMENTS:										
0009-18-062	4,892	55	6	7	7	$6	0.614	74	5		$281,000
	COMMENTS:										
0772-02-013	894	58	I	6	6	$20	0.545	73	0		$299,000
	COMMENTS:										
0047-02-216	13,592	71	5	6	6	$12	0.591	72	0		$458,000
	COMMENTS:										

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 52
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0102-01-030	8,886	61	7	8	8	$3	0.545	76	1		$26,000
	COMMENTS:										
0989-02-003	3,366	59	6	8	8	$11	0.545	74	20		$64,000
	COMMENTS:										
0989-02-004	3,366	57	7	8	6	$16	0.545	73	20		$117,000
	COMMENTS:										
0102-01-003	6,835	62	7	8	8	$8	0.523	72	1		$175,000
	COMMENTS:										
1052-03-029	1,299	56	7	8	6	$14	0.474	72	50		$193,000
	COMMENTS:										
0086-11-028	5,779	68	8	8	8	$12	0.545	71	1		$263,000
	COMMENTS:										

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 53
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1088-03-002	5,508	63	7	8	8	$7	0.545	71	4		$303,000
	COMMENTS:										
0989-02-008	2,722	36	8	7	4	$24	0.700	70	5		$369,000
	COMMENTS:										
1052-01-024	1,108	51	6	6	5	$41	0.526	70	45		$414,000
	COMMENTS:										
0101-06-033	13,344	38	6	6	4	$897	0.636	69	50		$12,383,000
	COMMENTS:										
0989-02-005	3,366	61	7	8	7	$10	0.545	68	20		$12,415,000
	COMMENTS:										
0542-06-015	9,330	69	7	7	8	$8	0.591	66	8		$12,485,000
	COMMENTS:										

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 54

1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1052-01-025	1,108	48	7	5	5	$114	0.526	66	45		$12,611,000
	COMMENTS:										
0100-06-073	3,366	52	8	6	4	$14	0.909	66	6		$12,659,000
	COMMENTS:										
1052-01-026	1,108	33	6	4	5	$729	0.526	65	45		$13,467,000
	COMMENTS:										
0994-01-001	164	20	6	7	3	$366	0.679	52	12		$13,527,000
	COMMENTS:										
0100-12-052	45	49	8	6	3	$511	0.857	43	12		$13,550,000
	COMMENTS:										

DISTRICT TOTAL OF 17 INITIALLY CONSIDERED PROJECTS: $13,550,000

Table 3.5 Printout for the program INICO (cont.)

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 103
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH	BRIDGE RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1239-01-001	473	67	I	8	8	$66	1.000		44	1		$31,000
COMMENTS:												

DISTRICT TOTAL OF 1 INITIALLY CONSIDERED PROJECTS: $31,000

1 SAS 15:36 WEDNESDAY, AUGUST 16, 1989 104
1988-1990 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH	BRIDGE RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0032-05-020	738	50	6	4	3	$169	1.000		48	0		$125,000
COMMENTS:												
0230-03-012	72	31	4	6	3	$5,736	0.714		47	9		$538,000
COMMENTS:												
0758-01-001	121	57	3	5	5	$6,198	0.857		40	28		$1,288,000
COMMENTS:												
2253-01-002	165	69	I	4	5	$158	1.000		36	6		$1,314,000
COMMENTS:												

DISTRICT TOTAL OF 4 INITIALLY CONSIDERED PROJECTS: $1,314,000
STATE TOTAL OF 572 INITIALLY CONSIDERED PROJECTS: $149,838,000

THE DISTRICT-LEVEL REPORTING MODULE

The following will explain the several options available within the District-Level Reporting Module (DLRM). It is recommended that the options be run in the order presented, even though each option is independent of the information generated by the other alternatives. The information provided to the user after running each option may help the user run the next option. In selecting any of the options, type RDIST to call the RPF program that controls the inputs for the program. The only mandatory option that must be run for the adequate performance of TEBSS is the FINAL option, which is described below. The main goal of the District-Level Reporting Module is to forward a list of projects to be considered for funding. The other options, such as the SCORE and INICO options, are designed to support district officials in the task of determining the list of projects to be forwarded to D-5.

The Option of Printing the Initially Considered Projects for the District

The first option available is to print a listing of the initially considered projects, generated by the program INICO at the state level. The screen for the RPF program that will appear after invoking the District-Level Reporting Module program by typing RDIST and striking the ENTER key is depicted in Figure 3.14. Within this screen, the first field to be typed is the district number; the next field is for the system that is being processed ON or OFF, while the next field includes the code for the option. Enter the word INICO to tell the program that the option chosen is the one that prints the initially considered list forwarded by the state level of the system. The screen should resemble that displayed in Figure 3.14, after all the appropriate entries for this option have been made (the example displayed is for District 16 and for the on-system). Submit the program for processing by striking the ENTER key. After the program runs, line printer files are available that include information about the initially considered bridges. These files should be routed to the appropriate device, using the operating system commands. A sample output for this option is presented in Table 3.6.

```
                STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                                BRIDGE DIVISION

                        TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                                      T E B S S

                        THIS IS THE DISTRICT LEVEL REPORTING MODULE


                                      (DISTR) PROGRAM

                                DISTRICT      : 16
(OFF INCLUDES 8000)             OFF/ON SYSTEM : ON
                                OPTION        : INICO  (INICO,SCORE,ADDCO,
                                                        FINAL,COST)

INICO: PRINT THE INITIAL LIST OF PROJECTS CREATED BY D-5
SCORE: SCORE AND RANK ALL THE ELIGIBLE PROJECTS FOR THE DISTRICT
ADDCO: ADD COMMENTS TO SPECIFIC PROJECTS
FINAL: SEND THE FINAL DISTRICT SELECTION TO D-5
COST : MODIFY PROJECT ESTIMATED COST

 PRESS ENTER TO CONTINUE                                        PF1:TO QUIT
```

Figure 3.14 RPF computer screen for the selection of options for the District-Level Reporting Module

Table 3.6 Printout for the district-level reporting program, INICO option

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.6 Printout for the district-level reporting program, INICO option (cont.)

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.6 Printout for the district-level reporting program, INICO option (cont.)

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	LIVE OAK	00059	0542-06-015	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: TIMON CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	KARNES	00181	0100-06-073	REHABILITATE BRIDGE & APPROACHES	$48,000

BRIDGE LOCATION: CREEK

EXISTING FACILITY: 4 LANE, 40 FT ROADWAY PROPOSED FACILITY: 4 LANE, 68 FT ROADWAY

16	NUECES	00666	1052-01-025	REPLACE BRIDGE & APPROACHES	$126,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00666	1052-01-026	REPLACE BRIDGE & APPROACHES	$808,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

DISTRICT TOTAL OF 17 INITIALLY CONSIDERED PROJECTS: $13,550,000

Table 3.6 Printout for the district-level reporting program, INICO option (cont.)

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0102-01-030	8,886	61	7	8	8	$3	0.545	76	1		$26,000
	COMMENTS:										
0989-02-003	3,366	59	6	8	8	$11	0.545	74	20		$64,000
	COMMENTS:										
0989-02-004	3,366	57	7	8	6	$16	0.545	73	20		$117,000
	COMMENTS:										
0102-01-003	6,835	62	7	8	8	$8	0.523	72	1		$175,000
	COMMENTS:										
1052-03-029	1,299	56	7	8	6	$14	0.474	72	50		$193,000
	COMMENTS:										

Table 3.6 Printout for the district-level reporting program, INICO option (cont.)

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0086-11-028	5,779	68	8	8	8	$12	0.545	71	1		$263,000
	COMMENTS:										
1088-03-002	5,508	63	7	8	8	$7	0.545	71	4		$303,000
	COMMENTS:										
0989-02-008	2,722	36	8	7	4	$24	0.700	70	5		$369,000
	COMMENTS:										
1052-01-024	1,108	51	6	6	5	$41	0.526	70	45		$414,000
	COMMENTS:										
0101-06-033	13,344	38	6	6	4	$897	0.636	69	50		$12,383,000
	COMMENTS:										
0989-02-005	3,366	61	7	8	7	$10	0.545	68	20		$12,415,000
	COMMENTS:										

Table 3.6 Printout for the district-level reporting program, INICO option (cont.)

1SAS 16:09 WEDNESDAY, AUGUST 16, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
INITIALLY CONSIDERED PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0542-06-015	9,330	69	7	7	8	$8	0.591	66	8		$12,485,000
	COMMENTS:										
0100-06-073	3,366	52	8	6	4	$14	0.909	66	6		$12,533,000
	COMMENTS:										
1052-01-025	1,108	48	7	5	5	$114	0.526	66	45		$12,659,000
	COMMENTS:										
1052-01-026	1,108	33	6	4	5	$729	0.526	65	45		$13,467,000
	COMMENTS:										
0994-01-001	164	20	6	7	3	$366	0.679	52	12		$13,527,000
	COMMENTS:										
0100-12-052	45	49	8	6	3	$511	0.857	43	12		$13,550,000
	COMMENTS:										

DISTRICT TOTAL OF 17 INITIALLY CONSIDERED PROJECTS: $13,550,000left

The Option of Scoring and Ranking the Eligible Projects for the District

The second option available with the District-Level Reporting Module is to score and rank the eligible bridges for the district. The ranking process utilizes the weighted average technique and the auto-qualifying technique described in Chapter 1, together with a district-level automatic inclusion described in Chapter 2. Type RDIST as before to invoke the program. The first field in the RPF screen must include the district number. The next field allows for the system selection (ON or OFF), while the next field must include the key word for the alternative being processed. The key word for selecting the option of scoring and ranking the eligible bridge set for the district is SCORE, as shown in Figure 3.15.

the attributes. In the same screen the values for the automatic qualifying thresholds must be included if desired, after the answer to the question if they are to be used in the ranking process, YES or NO, is filled in. In the example depicted in Figure 3.16, the only auto-qualifying threshold applied is the one for the attribute DSS. This threshold has a value of 3 for this example. Type ENTER to get to the next computer screen shown in Figure 3.16, which allows for the listing of the structures to be automatically included at the top of the ranked list, if so desired by the district user. In this particular example, two structures are to be included at the top of the ranked list and are represented by their bridge identification number (BRID). If more automatically included projects are desired, the list of bridge identification numbers should

```
          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                          BRIDGE DIVISION

                TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                             T E B S S

                THIS IS THE DISTRICT LEVEL REPORTING MODULE


                                (DISTR) PROGRAM

                           DISTRICT       : 16
(OFF INCLUDES 8000)        OFF/ON SYSTEM  : ON
                           OPTION         : SCORE  (INICO,SCORE,ADDCO,
                                                    FINAL,COST)

INICO: PRINT THE INITIAL LIST OF PROJECTS CREATED BY D-5
SCORE: SCORE AND RANK ALL THE ELIGIBLE PROJECTS FOR THE DISTRICT
ADDCO: ADD COMMENTS TO SPECIFIC PROJECTS
FINAL: SEND THE FINAL DISTRICT SELECTION TO D-5
COST : MODIFY PROJECT ESTIMATED COST

 PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
```

Figure 3.15 RPF computer screen for the selection of options for the District-Level Reporting Module with the SCORE option selected

Type ENTER to get the second RPF screen for this option. This screen includes the blank fields for the weights to be used in the scoring process in the following order, CPV ADT SR DSS BWR. In this particular example, as depicted in Figure 3.16, the weights are set to equal 0.2 for all

follow the already specified BRIDs. As the screen area fills, type ENTER to get a new screen and continue inputting BRIDs for the automatically included projects. If there are no more projects to be automatically included, type PF12 to submit the program for processing.

```
          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                             BRIDGE DIVISION

                   TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                                T E B S S

         DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE   YES    (YES/NO)

                             (DISTR) PROGRAM

WEIGHT FOR THE COST PER VEHICLE                WCPV :  ______0.2
WEIGHT FOR THE AVERAGE DAILY TRAFFIC           WADT :  ______0.2
WEIGHT FOR THE SUFFICIENCY RATING              WSR  :  ______0.2
WEIGHT FOR THE MINIMUM DSS RATING              WDSS :  ______0.2
WEIGHT FOR THE BRIDGE WIDTH RATIO              WBWR :  ______0.2

AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQCPV:  __________
AUTO-QUALIFY PROJECTS WITH MORE OR EQUAL THAN AQADT:  __________
AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQSR :  __________
AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQDSS:  ______3
AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQBWR:  __________

 PRESS ENTER TO CONTINUE                                  PF1:TO QUIT
```

Figure 3.16 RPF computer screen for the selection of weights and automatic qualifying thresholds for the SCORE option

```
          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                             BRIDGE DIVISION

                   TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                                T E B S S

                             (DISTR) PROGRAM
                    INPUT AUTOMATICALLY INCLUDED PROJECTS
              IN ANY ORDER, RESULTS WILL BE ORDERED BY SCORE

                      COUNTY CONT. SEC. STR.
                      1  205    0994    01      002
                      2  089    0155    04      007
                      3  ___    ____    __      ___
                      4  ___    ____    __      ___
                      5  ___    ____    __      ___
                      6  ___    ____    __      ___
                      7  ___    ____    __      ___
                      8  ___    ____    __      ___
                      9  ___    ____    __      ___
                     10  ___    ____    __      ___

 PRESS ENTER FOR NEXT PAGE      PF12: TO SUBMIT JOB         PF1:TO QUIT
```

Figure 3.17 RPF computer screen for the selection of automatically included projects for the SCORE option

The user is encouraged to run the SCORE option as many times as needed to obtain a final ranked list of projects that suits the district's project selections. The multiple runs for this option are fine-tuned by changing the weights and automatic qualification thresholds, and by automatically including projects by listing their bridge identification numbers. Satisfied with the ranked list that fulfills the state-level allocated budget, the operator can use this list to select the inputs for the option of forwarding a final list of projects to the state-level of the system. The FINAL option is described in more detail later in this chapter. The projects that had their project cost updated by using the COST option described later in this chapter are reported with their updated CPV and project estimated cost; they are then flagged by a (REVISED COST) label as observed in Table 3.7.

Once program processing has been completed, the user should route the line printer output file to the printing device using the appropriate system commands. A sample output for this option is presented in Table 3.7. The first part of the printout includes all the federally eligible projects for the district sorted by automatic qualification and by descending score. The second part of the printed report includes, again, all the federally eligible projects—this time sorted by county, automatic qualification, and descending score, with cumulative project cost reported by county. The final part of the report includes the control 8000 series eligible projects sorted by county. The 8000 projects are reported only when processing the off-system bridges.

Table 3.7 Printout for the district-level reporting program: SCORE option

```
     SAS   16:10 MONDAY, OCTOBER 22, 1990    1
     LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE
     WEIGHTS AND AUTO-QUALIFYING FEATURES USED:
     ------------------------------------------
     I                 WEIGHTS                I
     ------------------------------------------
     I      I CPV  I ADT  I SR   I DSS  I BWR  I
     ------------------------------------------
     I      I 0.2  I 0.2  I 0.2  I 0.2  I 0.2  I
     ------------------------------------------
     I      CPV = COST PER VEHICLE             I
     ------------------------------------------
     I      ADT = AVERAGE DAILY TRAFFIC        I
     ------------------------------------------
     I      SR = SUFFICIENCY RATING            I
     ------------------------------------------
     I      DSS = MINIMUM OF CONDITION RATINGS I
     ------------------------------------------
     I      BWR = BRIDGE WIDTH RATIO           I
     ------------------------------------------
          AUTO QUALIFYING FEATURES USED :
     ------------------------------------------
     I CPV   I   M                             I
     ------------------------------------------
     I ADT   I   M                             I
     ------------------------------------------
     I SR    I   M                             I
     ------------------------------------------
     I DSS   I   2                             I
     ------------------------------------------
     I BWR   I   M                             I
     ------------------------------------------
          M = MISSING
```

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 2
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE

BRIDGE ID. / STRUCTURE LOC. / HWY/FACILITY OVER	COUNTY	CPV / CPV%	ADT / ADT%	SR / SR%	DSS / DSS%	BWR / BWR%	SCORE / REHAB=RH / REPL.=RP	AUTO-Q. FLAG	PROJECT COST	CUMUL. COST
205-0994-01-002	SAN PATRICIO	$284	261	18	2	0.63	58	DS	$74,000	$74,000
DRAW		13	9	99	98	69		RP		
0630										
EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY										
089-0155-04-007	GOLIAD	$304	2,996	13	3	0.55	67	DS	$912,000	$986,000
SAN ANTONIO RV		12	47	99	93	82		RP	(REVISED COST)	
0183										
EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
178-0102-01-003	NUECES	$8	6,881	63	3	0.52	65	AQ	$58,000	$1,044,000
OSO CR		79	68	50	37	90		RH		
0044										
EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
178-1558-03-002	NUECES	$47	2,120	53	4	0.59	62	RH	$100,000	$1,144,000
PETRONILA CREEK		48	42	75	70	75		RH		
0070										
EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
178-1069-01-001	NUECES	$71	3,908	48	4	0.64	61	RH	$277,000	$1,421,000
LAJOLLA CREEK		38	55	82	70	59		RP		
0357										
EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
004-0585-01-001	ARANSAS	$472	127	5	3	0.37	61	RH	$60,000	$1,481,000
ST CHARLES BAY CH		8	3	100	93	99		RP		
0013										
EXISTING FACILITY: 1 LANE, 11 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY										

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 3
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE

BRIDGE ID. / STRUCTURE LOC. / HWY/FACILITY OVER	COUNTY	CPV / CPV%	ADT / ADT%	SR / SR%	DSS / DSS%	BWR / BWR%	SCORE	AUTO-Q. FLAG / REHAB=RH REPL.=RP	PROJECT COST	CUMUL. COST
004-0180-03-025	ARANSAS	$989	2,594	19	3	0.64	60	RP	$2,565,000	$4,046,000
CAVASSO CREEK		4	44	99	93	59				
0035	EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY									
004-0180-03-024	ARANSAS	$1,067	2,594	19	3	0.64	60	RP	$2,769,000	$6,815,000
SALT CREEK		3	44	99	93	59				
0035	EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY									
178-0326-03-062	NUECES	$14	16,160	70	7	0.4	59	RH	$219,000	$7,034,000
BROWNLEE ST.		71	86	33	8	98				
0286	EXISTING FACILITY: 2 LANE, 27 FT ROADWAY PROPOSED FACILITY: LANE, 68 FT ROADWAY									
178-1088-03-002	NUECES	$8	5,082	61	7	0.55	58	RH	$40,000	$7,074,000
DRAW		79	61	58	8	82				
1889	EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY									
205-0994-01-001	SAN PATRICIO	$230	261	18	3	0.63	57	RP	$60,000	$7,134,000
DRAW		16	9	99	93	69				
0630	EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY									
196-0371-03-034	REFUGIO	$63	8,825	58	6	0.64	55	RH	$559,000	$7,693,000
ARANSAS RIV		40	74	67	37	59				
0077	EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY									

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 18
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY COUNTY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE
WEIGHTS AND AUTO-QUALIFYING FEATURES USED:

WEIGHTS				
CPV	ADT	SR	DSS	BWR
0.2	0.2	0.2	0.2	0.2

CPV = COST PER VEHICLE
ADT = AVERAGE DAILY TRAFFIC
SR = SUFFICIENCY RATING
DSS = MINIMUM OF CONDITION RATINGS
BWR = BRIDGE WIDTH RATIO

AUTO QUALIFYING FEATURES USED :

CPV	M
ADT	M
SR	M
DSS	2
BWR	M

M = MISSING

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 19
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY COUNTY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE

BRIDGE ID. / STRUCTURE LOC. / HWY/FACILITY OVER	COUNTY	CPV / CPV%	ADT / ADT%	SR / SR%	DSS / DSS%	BWR / BWR%	SCORE	AUTO-Q. FLAG / REHAB=RH REPL.=RP	PROJECT COST	CUMUL. COST BY COUNTY
004-0585-01-001	ARANSAS	$472	127	5	3	0.37	61	RP	$60,000	$60,000
ST CHARLES BAY CH		8	3	100	93	99				
0013		EXISTING FACILITY: 1 LANE, 11 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY								
004-0180-03-025	ARANSAS	$989	2,594	19	3	0.64	60	RP	$2,565,000	$2,625,000
CAVASSO CREEK		4	44	99	93	59				
0035		EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY								
004-0180-03-024	ARANSAS	$1,067	2,594	19	3	0.64	60	RP	$2,769,000	$5,394,000
SALT CREEK		3	44	99	93	59				
0035		EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY								
004-0507-04-006	ARANSAS	$4	4,191	69	8	0.46	54	RH	$18,000	$5,412,000
DRAW		85	57	35	0	95				
0881		EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY								
004-0507-04-007	ARANSAS	$5	4,191	69	8	0.46	54	RH	$23,000	$5,435,000
DRAW		83	57	35	0	95				
0881		EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY								
004-0585-01-002	ARANSAS	$283	127	57	6	0.37	44	RH	$36,000	$5,471,000
ST CHARLES BAY CH		13	3	69	37	99				
0013		EXISTING FACILITY: 1 LANE, 11 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY								

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 20
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
BY COUNTY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE

BRIDGE ID. / STRUCTURE LOC. / HWY/FACILITY OVER	COUNTY	CPV / CPV%	ADT / ADT%	SR / SR%	DSS / DSS%	BWR / BWR%	SCORE	AUTO-Q. FLAG / REHAB=RH / REPL.=RP	PROJECT COST	CUMUL. COST BY COUNTY
013-0088-01-026	BEE	$18	5,494	71	6	0.64	51	RH	$97,000	$97,000
TALPACATE CREEK		67	63	30	37	59				
0059										
EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
013-0088-01-022	BEE	$87	3,285	58	6	0.64	49	RH	$287,000	$384,000
MEDIO CREEK		34	50	67	37	59				
0059										
EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
013-0101-07-022	BEE	$150	2,426	58	4	0.91	44	RH	$364,000	$748,000
POESTA CREEK		23	43	67	70	15				
0516										
EXISTING FACILITY: 2 LANE, 40 FT ROADWAY PROPOSED FACILITY: LANE, 44 FT ROADWAY										
013-1063-02-016	BEE	$197	431	54	4	0.8	39	RH	$85,000	$833,000
OLMOS CREEK		18	16	73	70	20				
0888										
EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY										
013-1118-01-001	BEE	$63	554	63	7	0.6	38	RH	$35,000	$868,000
DRAW		40	20	50	8	73				
0796										
EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY										
013-1207-03-003	BEE	$105	371	50	6	0.8	36	RP	$39,000	$907,000
DRAW		31	14	78	37	20				
1349										
EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: LANE, 30 FT ROADWAY										

Table 3.7 Printout for the district-level reporting program: SCORE option (cont.)

SAS 16:10 MONDAY, OCTOBER 22, 1990 35
LIST OF ELIGIBLE PROJECTS FOR DISTRICT-16
THESE ARE THE 8000 SERIES OR ON/OFF PROJECTS BY COUNTY

BRIDGE ID. / STRUCTURE LOC. / HWY/FACILITY OVER	COUNTY	CPV / CPV%	ADT / ADT%	SR / SR%	DSS / DSS%	BWR / BWR%	SCORE	AUTO-Q. FLAG / REHAB=RH / REPL.=RP	PROJECT COST	CUMUL. COST
178-8022-16-004	NUECES	$97	7,120	71	4	1		RH	$691,000	
CAYO DEL OSO										
R022	EXISTING FACILITY: 4 LANE, 58 FT ROADWAY PROPOSED FACILITY: LANE, 58 FT ROADWAY									
178-8047-16-014	NUECES	$14	3,998	61	6	1		RH	$57,000	
CANAL										
R047	EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: LANE, 24 FT ROADWAY									

The Option of Adding Comments to the Eligible Projects of the District

Type RDIST to invoke the District-Level Reporting Module as before. This option allows the user to add comments to the structures in the district. The first field of the RPF screen should contain, in the same way as before, the district number, the system, and the key word for selecting the option of adding comments to the projects. The key word in this case is ADDCO. The next RPF screen, shown in Figure 3.18, allows the user to input the comments for selected projects. The first field of the comments must include the bridge identification number. Following the bridge identification number, the first part of the comments may follow. This first part of the comments should not exceed 64 characters, including the separating blank spaces. The next line in the RPF computer screen allows for the input of the second part of the comments, which should not exceed 80 characters. Summarizing, each screen of comments for one project is comprised of two lines: one contains the bridge identification and up to 64 characters of commentary, while the second contains up to 80 characters of commentary. To get extra unfilled screens, type ENTER after each group of BRID and comments. Type PF12 to submit the job when comments are completed.

The final result for each run for this option is a file containing line printer output, including all the projects that have comments as of the last run. The user should route this line printer output to the appropriate device by using the mainframe computer system's commands. A sample of this output is shown in Table 3.8. It is possible to run this option as many times as desired until the comments are satisfactory.

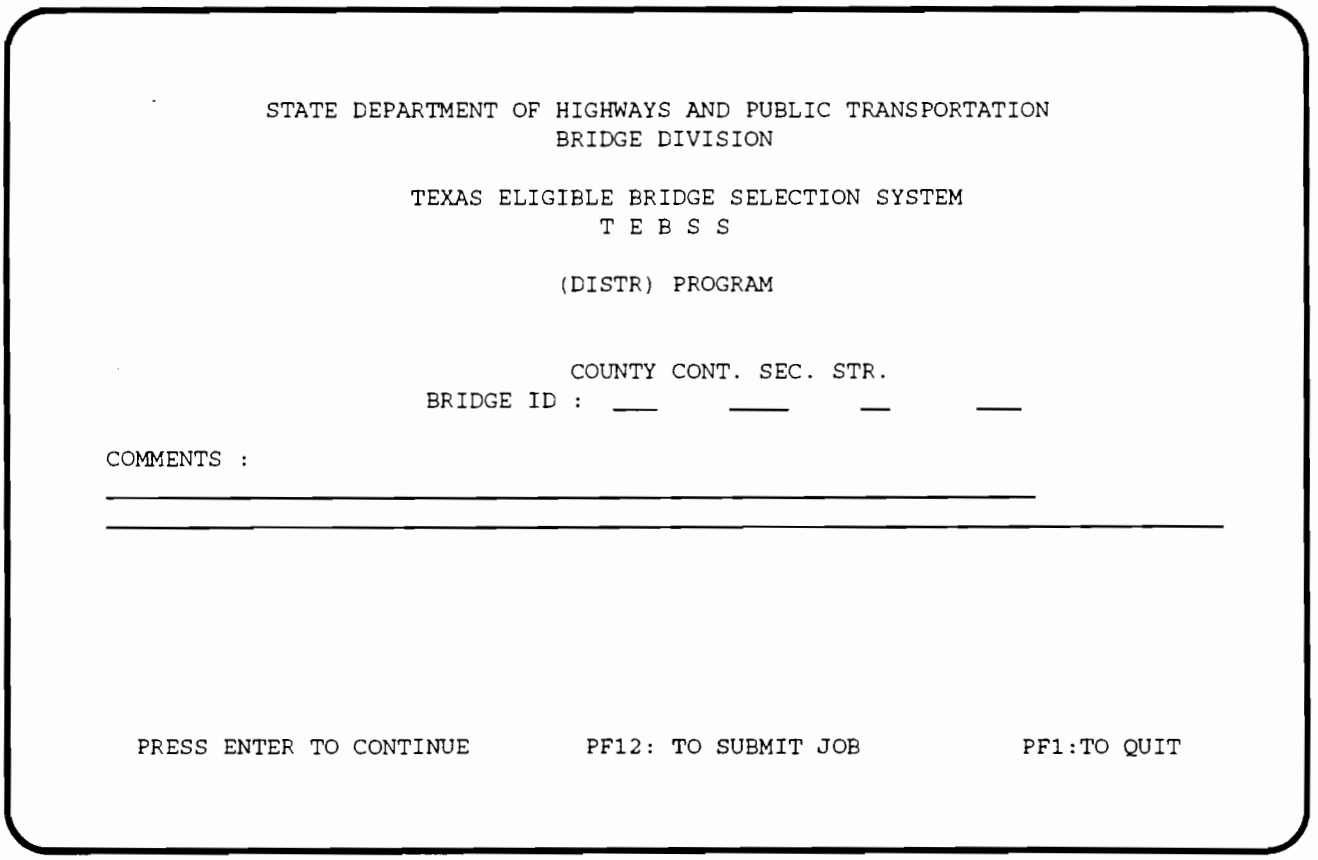

Figure 3.18 Format of the input screen for the option of adding comments to the district's eligible bridges

Table 3.8 Printout for the district-level reporting program: ADDCO option

1 THIS LIST INCLUDES ALL PROJECTS WITH COMMENTS UP TO THIS LAST RUN.
19:57 WEDNESDAY, AUGUST 16, 1989 1

OBS	BRID	FIRST LINE OF COMMENTS	SECOND LINE OF COMMENTS
1	013-2024-01-003	THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST	
2	089-1958-01-001	THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST	
3	089-2342-01-001	THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST	

The Option of Creating the Final List of District-Selected Projects (To Be Forwarded to the State Level of the System)

This option is used to forward the list of district-selected projects to the state level of the system. It is the last option to be employed by the district user within the district-level reporting program. At the state level the projects forwarded by the district will be examined and used to compose the final list of projects to be considered for funding. The list generated by the SCORE option, described earlier, could and should be used to establish the list of projects to be selected. The user should use the output of the SCORE option to establish the list of projects that fill the allocated budget for the district. The allocated budget for the district is the amount reported by the program INICO, described in the state level of the system and also printed with the INICO option of the DLRM. The allocated budget is relayed to the district by the amount presented at the end of Table 3.6.

The first screen for this option looks similar to those depicted in Figures 3.14 and 3.15. It should contain in the first field the district number, followed by the system (ON or OFF), and followed by the key word for this option, in this case FINAL. The next screen should include the bridge identity numbers (BRID) for all the district-selected structures, in the appropriate format and one per line. A sample of this input screen is depicted in Figure 3.19. In addition, the order in which the projects are included in the computer screens is important because it is automatically linked to the district's priority. This means that for this example the project with BRID 089-1958-01-001 is the first priority for the district, and that the project with BRID 089-2342-01-001 is the second priority, and so on. The effect of this feature can be observed by examining the district priority field in the printout shown in Table 3.9. If extra input screens are needed, type ENTER. At this point it is possible to select 8000 projects for the OFF-system selections.

The output of this option is a line printer file that includes a list of the projects to be considered by the state-level program, FINAL, in the assembly of the final statewide list of projects to be funded. This file also exists in the format of a SAS data set, which will be accessed by the FINAL state-level program (see Figure 2.1) described later. The user must be sure that the cumulative cost of the list does not violate the budget allocation initially apportioned by the state administrators. This can be checked by running the SCORE option with the list used in the FINAL option as an input for the automatically included projects. An example of the output obtained by running the FINAL option is depicted in Table 3.9. If a mistake occurs while inputting information, or if the district officials desire to change the list of selected projects, then this option may be run as many times as needed.

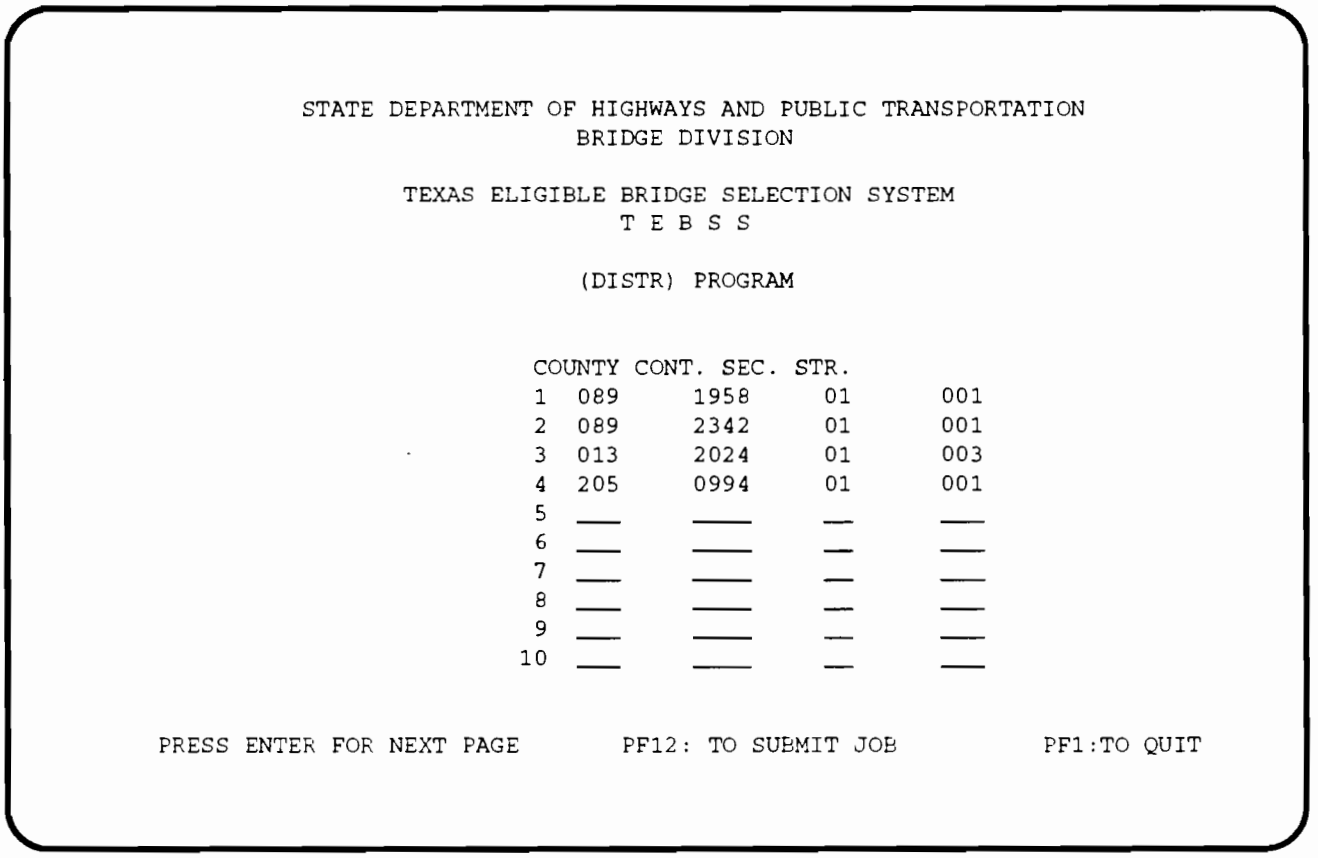

Figure 3.19 RPF screen for the option of forwarding the final list of selected projects to the state level of the system

Table 3.9 Printout for the district-level reporting program: FINAL option

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	GOLIAD	02043	1958-01-001	REHABILITATE BRIDGE & APPROACHES	$86,000

BRIDGE LOCATION: CABEZA CREEK

EXISTING FACILITY: 2 LANE, 23.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	GOLIAD	02442	2342-01-001	REHABILITATE BRIDGE & APPROACHES	$51,000

BRIDGE LOCATION: HORD CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	BEE	01465	2024-01-003	REHABILITATE BRIDGE & APPROACHES	$85,000

BRIDGE LOCATION: TOTO CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	LIVE OAK	00059	0542-06-015	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: TIMON CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 4

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	KARNES	00181	0100-06-073	REHABILITATE BRIDGE & APPROACHES	$48,000

BRIDGE LOCATION: CREEK

EXISTING FACILITY: 4 LANE, 40 FT ROADWAY PROPOSED FACILITY: 4 LANE, 68 FT ROADWAY

16	NUECES	00666	1052-01-025	REPLACE BRIDGE & APPROACHES	$126,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	REFUGIO	00077	0371-03-031	REHABILITATE BRIDGE & APPROACHES	$36,000

BRIDGE LOCATION: DRAINAGE

EXISTING FACILITY: 2 LANE, 40 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	00624	0989-02-002	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	JIM WELLS	00281	0255-01-026	REHABILITATE BRIDGE & APPROACHES	$31,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 36 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	01694	1742-01-002	REPLACE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 5

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	ARANSAS	00881	0507-04-007	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00763	1093-01-004	REPLACE BRIDGE & APPROACHES	$140,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00357	1069-01-004	REHABILITATE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 22 FT ROADWAY PROPOSED FACILITY: 0 LANE, 0 FT ROADWAY

16	REFUGIO	00077	0371-02-023	REHABILITATE BRIDGE & APPROACHES	$247,000

BRIDGE LOCATION: MELLON CR

EXISTING FACILITY: 2 LANE, 44 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

DISTRICT TOTAL OF 27 SELECTED PROJECTS: $13,544,000

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1958-01-001	21	80	7	8	7	$4,095	0.832		14	1	$86,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
2342-01-001	278	75	8	8	8	$183	0.929		25	2	$137,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
2024-01-003	280	78	8	8	8	$304	0.929		11	3	$222,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
0994-01-001	164	20	6	7	3	$366	0.679		12	4	$282,000
	COMMENTS:										
0100-12-052	45	49	8	6	3	$511	0.857		12	5	$305,000
	COMMENTS:										

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0102-01-030	8,886	61	7	8	8	$3	0.545		1	6	$331,000
	COMMENTS:										
0989-02-003	3,366	59	6	8	8	$11	0.545		20	7	$369,000
	COMMENTS:										
0989-02-004	3,366	57	7	8	6	$16	0.545		20	8	$422,000
	COMMENTS:										
0102-01-003	6,835	62	7	8	8	$8	0.523		1	9	$480,000
	COMMENTS:										
1052-03-029	1,299	56	7	8	6	$14	0.474		50	10	$498,000
	COMMENTS:										
0086-11-028	5,779	68	8	8	8	$12	0.545		1	11	$568,000
	COMMENTS:										

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1088-03-002	5,508	63	7	8	8	$7	0.545		4	12	$608,000
	COMMENTS:										
0989-02-008	2,722	36	8	7	4	$24	0.700		5	13	$674,000
	COMMENTS:										
1052-01-024	1,108	51	6	6	5	$41	0.526		45	14	$719,000
	COMMENTS:										
0101-06-033	13,344	38	6	6	4	$897	0.636		50	15	$12,688,000
	COMMENTS:										
0989-02-005	3,366	61	7	8	7	$10	0.545		20	16	$12,720,000
	COMMENTS:										
0542-06-015	9,330	69	7	7	8	$8	0.591		8	17	$12,790,000
	COMMENTS:										

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0100-06-073	3,366	52	8	6	4	$14	0.909		6	18	$12,838,000
	COMMENTS:										
1052-01-025	1,108	48	7	5	5	$114	0.526		45	19	$12,964,000
	COMMENTS:										
0371-03-031	7,328	61	8	8	6	$5	0.909		99	20	$13,000,000
	COMMENTS:										
0989-02-002	2,722	60	7	8	8	$7	0.600		17	21	$13,018,000
	COMMENTS:										
0255-01-026	6,892	64	7	8	8	$4	0.818		99	22	$13,049,000
	COMMENTS:										
1742-01-002	861	36	7	7	4	$81	0.632		17	23	$13,119,000
	COMMENTS:										

Table 3.9 Printout for the district-level reporting program: FINAL option (cont.)

1SAS 20:26 WEDNESDAY, AUGUST 16, 1989 5

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0507-04-007	3,496	73	7	8	8	$5	0.455		15	24	$13,137,000
	COMMENTS:										
1093-01-004	1,095	36	7	7	4	$128	0.632		14	25	$13,277,000
	COMMENTS:										
1069-01-004	2,678	67	7	8	8	$7	0.550		4	26	$13,297,000
	COMMENTS:										
0371-02-023	9,207	54	7	5	5	$27	1.000		99	27	$13,544,000
	COMMENTS:										
						DISTRICT TOTAL OF 27 SELECTED PROJECTS:					$13,544,000

The Option of Revising the Project Estimated Cost Recorded in BRINSAP

District-level decisionmakers have the option of updating the estimated project cost recorded in BRINSAP. The revised project cost is used to recalculate the values for the attribute CPV and the corresponding percentile scaling factor. To run this option of the DLRM, the user should type RDIST (as with the previous options) to invoke the RPF program; again, this program controls the inputs for the SAS job and provides an interface through a series of screens.

The first screen for this option looks similar to that depicted in Figures 3.14 and 3.15. It should contain in the first field the district number, followed by the system (ON or OFF), and followed by the key word for this option—in this case, COST. The next screen has empty fields for the BRIDs and the revised costs. This computer screen is depicted in Figure 3.20.

All projects within the district having a revised cost are reported after the program is submitted for processing and after the generated printer files are routed to the printer. A sample of this output is included in Table 3.10. If the user runs the SCORE option after revising costs for several projects, the calculations will take into account the revised project costs as they affect percentiles and cumulative costs.

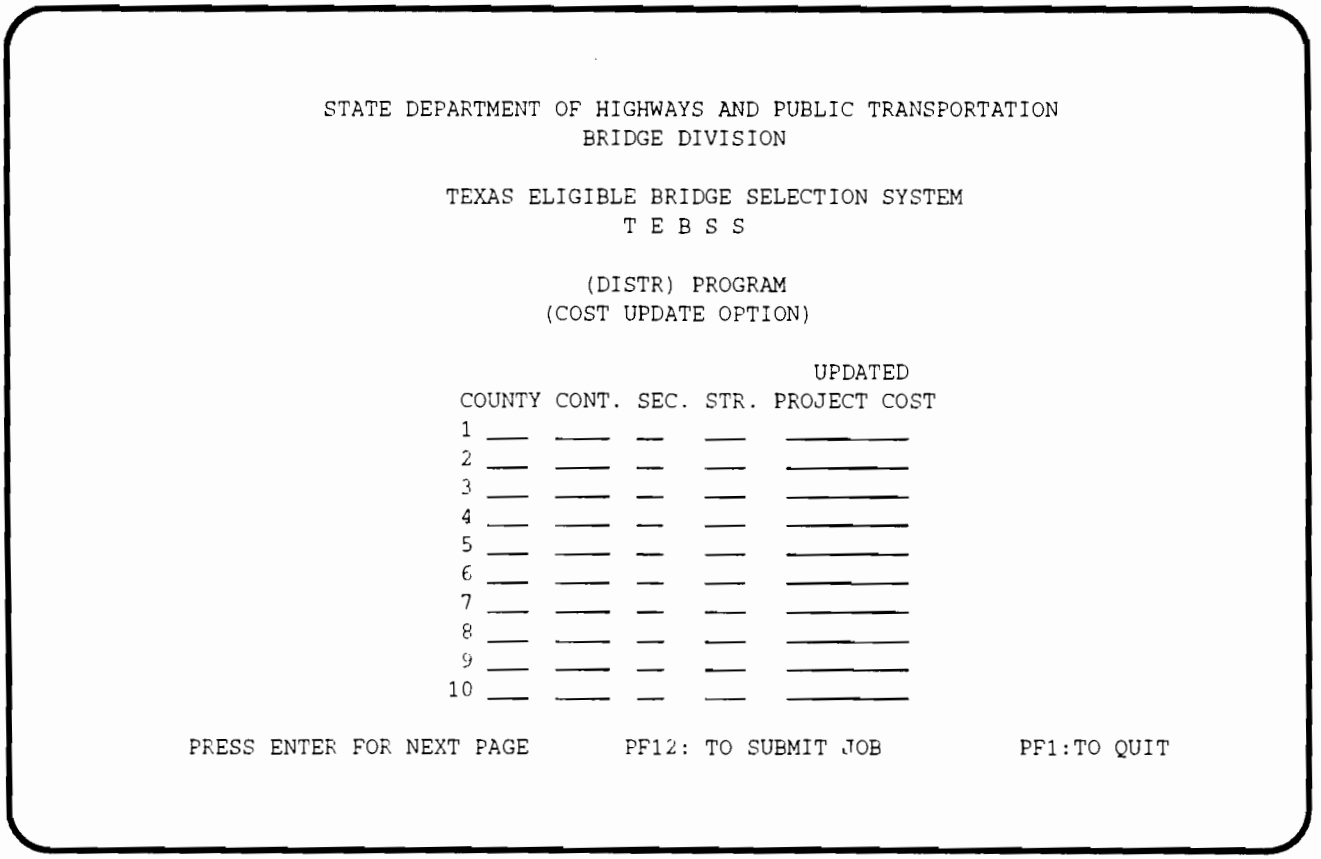

Figure 3.20 RPF screen for the option of revising estimated project cost recorded in BRINSAP

Table 3.10 Printout for the district-level reporting program: cost option

1 THIS IS THE CURRENT STATUS OF THE CHANGES TO PROJECT COST
15:28 MONDAY, AUGUST 12, 1991 1
(ON-SYSTEM)

OBS	BRID	COST ESTIMATE FROM BRINSAP	UPDATED COST ESTIMATE	REVISED CPV	REVISED CPV PERCENTILE
1	205-0994-01-002	$ 74,000	$100,000	383	9
2	089-0155-04-007	$800,000	$912,000	304	12
3	178-0102-01-003	$ 58,000	$150,000	22	60

THE STATE-LEVEL REPORTING MODULE FINAL

The FINAL reporting module, having several options available for processing the information forwarded by the districts, allows the state-level decisionmaker to assemble the final list of projects to be submitted for contracting. The first screen, shown in Figure 3.21, presents the user with several options. The user works on a district-by-district basis with options 1 and 2 of the program. Options 3 and 4 of the program will only be used when the user has already processed the data for all the districts in the state and has the final list of projects to be forwarded for bidding and contracting on a district-by-district basis. Type FINAL followed by the ENTER key to invoke the RPF that controls the inputs and submits the SAS jobs.

The Option of Browsing through the District Selections

The first option allows the user to print the district selections. To use this option, move the cursor to the OPTION field and type "1." Move the cursor to the SYSTEM field and type the proper system, ON or OFF. The next screen (see Fig 3.22) will prompt the user for the DISTRICT number. For this, move the cursor to the district field and type the district number that is being processed. Please note that if the district under processing has not forwarded any selections, the user needs to create the selections initially. This is accomplished by using option 2 of the main menu depicted in Figure 3.21 (discussed later in the chapter). Move the cursor to the field that asks if selections are available for the district being processed. If the district did not forward any selections, answer NO to the question; following this, the screen will appear as depicted in Figure 3.23. If selections generated with the DLRM are available and the user answers YES to the question displayed in the screen depicted in Figure 3.22, then the user types ENTER; the program is thus submitted for execution and a printout of the list selected by the district will be available. A sample of the generated printout (which resembles the one included in Table 3.9) is presented in Table 3.11.

```
          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                              BRIDGE DIVISION

                    TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                                T E B S S
                              (FINAL) PROGRAM

                    1 - PRINT THE  DISTRICT SELECTIONS

OPTIONS :           2 - ADD OR DELETE TO DISTRICT SELECTIONS

                    3 - ASSEMBLE THE FINAL STATEWIDE LIST

                    4 - UPDATE PREVIOUSLY SELECTED DATABASE

   OPTION (1,2,3,4):_

   SYSTEM (OFF/ON)___


PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
```

Figure 3.21 First screen for the program FINAL presenting several menu options

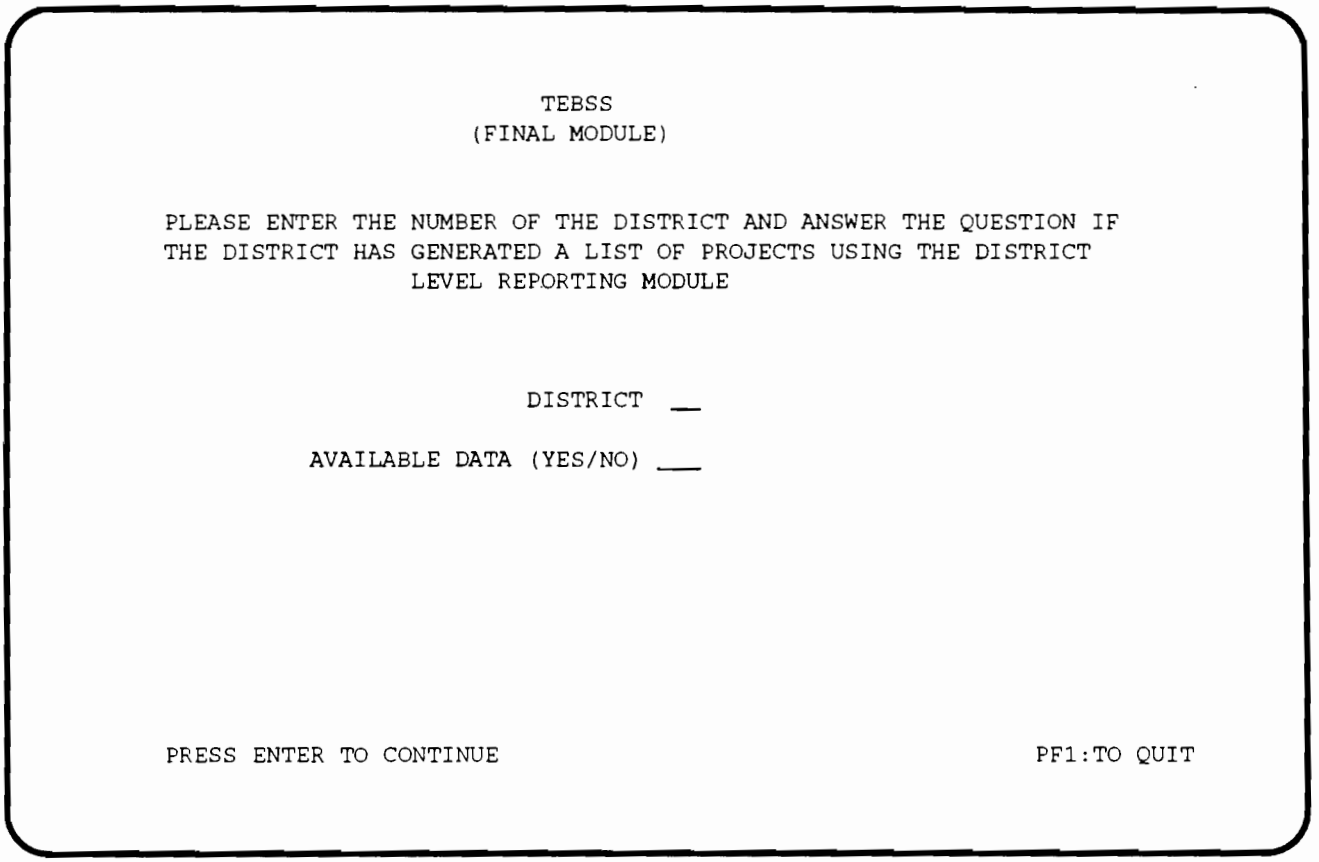

Figure 3.22 District selection for options 1 and 2 of the menu

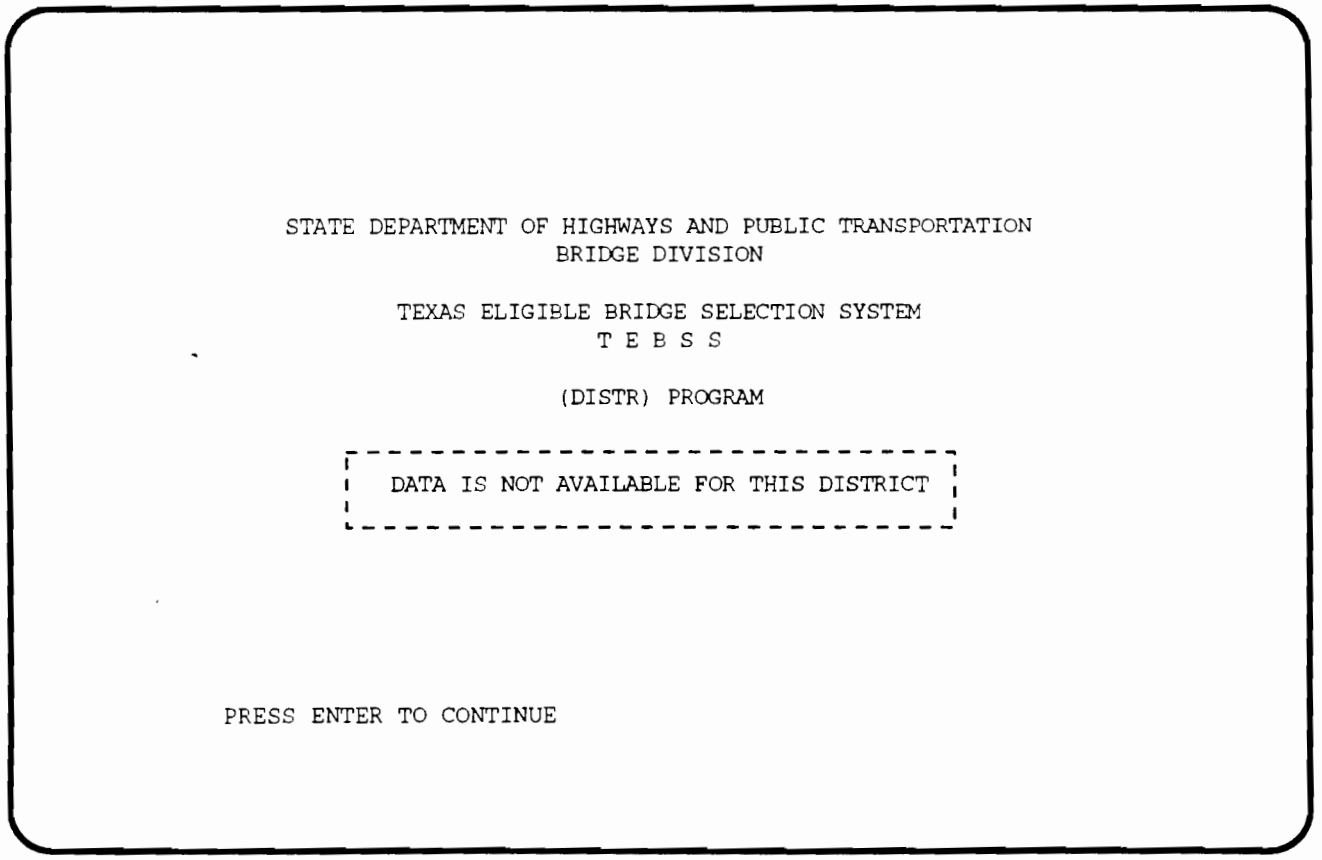

Figure 3.23 Screen displayed if the option NO is selected in Figure 3.22 for availability of data

Table 3.11 Printout of a district's selection at the state level

1SAS 12:03 THURSDAY, AUGUST 17, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	GOLIAD	02043	1958-01-001	REHABILITATE BRIDGE & APPROACHES	$86,000

BRIDGE LOCATION: CABEZA CREEK

EXISTING FACILITY: 2 LANE, 23.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	GOLIAD	02442	2342-01-001	REHABILITATE BRIDGE & APPROACHES	$51,000

BRIDGE LOCATION: HORD CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	BEE	01465	2024-01-003	REHABILITATE BRIDGE & APPROACHES	$85,000

BRIDGE LOCATION: TOTO CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	LIVE OAK	00059	0542-06-015	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: TIMON CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 4

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	KARNES	00181	0100-06-073	REHABILITATE BRIDGE & APPROACHES	$48,000

BRIDGE LOCATION: CREEK

EXISTING FACILITY: 4 LANE, 40 FT ROADWAY PROPOSED FACILITY: 4 LANE, 68 FT ROADWAY

16	NUECES	00666	1052-01-025	REPLACE BRIDGE & APPROACHES	$126,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	REFUGIO	00077	0371-03-031	REHABILITATE BRIDGE & APPROACHES	$36,000

BRIDGE LOCATION: DRAINAGE

EXISTING FACILITY: 2 LANE, 40 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	00624	0989-02-002	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	JIM WELLS	00281	0255-01-026	REHABILITATE BRIDGE & APPROACHES	$31,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 36 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	01694	1742-01-002	REPLACE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 5

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	ARANSAS	00881	0507-04-007	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00763	1093-01-004	REPLACE BRIDGE & APPROACHES	$140,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00357	1069-01-004	REHABILITATE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 22 FT ROADWAY PROPOSED FACILITY: 0 LANE, 0 FT ROADWAY

16	REFUGIO	00077	0371-02-023	REHABILITATE BRIDGE & APPROACHES	$247,000

BRIDGE LOCATION: MELLON CR

EXISTING FACILITY: 2 LANE, 44 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

DISTRICT TOTAL OF 27 SELECTED PROJECTS: $13,544,000

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
	21	80	7	8	7	$4,095	0.832		14	1	$86,000
1958-01-001											
COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
	278	75	8	8	8	$183	0.929		25	2	$137,000
2342-01-001											
COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
	280	78	8	8	8	$304	0.929		11	3	$222,000
2024-01-003											
COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
	164	20	6	7	3	$366	0.679		12	4	$282,000
0994-01-001											
COMMENTS: M M											
	45	49	8	6	3	$511	0.857		12	5	$305,000
0100-12-052											
COMMENTS: M M											

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0102-01-030	8,886	61	7	8	8	$3	0.545		1	6	$331,000
	COMMENTS: M M										
0989-02-003	3,366	59	6	8	8	$11	0.545		20	7	$369,000
	COMMENTS: M M										
0989-02-004	3,366	57	7	8	6	$16	0.545		20	8	$422,000
	COMMENTS: M M										
0102-01-003	6,835	62	7	8	8	$8	0.523		1	9	$480,000
	COMMENTS: M M										
1052-03-029	1,299	56	7	8	6	$14	0.474		50	10	$498,000
	COMMENTS: M M										
0086-11-028	5,779	68	8	8	8	$12	0.545		1	11	$568,000
	COMMENTS: M M										

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1088-03-002	5,508	63	7	8	8	$7	0.545		4	12	$608,000
	COMMENTS: M M										
0989-02-008	2,722	36	8	7	4	$24	0.700		5	13	$674,000
	COMMENTS: M M										
1052-01-024	1,108	51	6	6	5	$41	0.526		45	14	$719,000
	COMMENTS: M M										
0101-06-033	13,344	38	6	6	4	$897	0.636		50	15	$12,688,000
	COMMENTS: M M										
0989-02-005	3,366	61	7	8	7	$10	0.545		20	16	$12,720,000
	COMMENTS: M M										
0542-06-015	9,330	69	7	7	8	$8	0.591		8	17	$12,790,000
	COMMENTS: M M										

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 4

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0100-06-073	3,366	52	8	6	4	$14	0.909		6	18	$12,838,000
	COMMENTS: M M										
1052-01-025	1,108	48	7	5	5	$114	0.526		45	19	$12,964,000
	COMMENTS: M M										
0371-03-031	7,328	61	8	8	6	$5	0.909		99	20	$13,000,000
	COMMENTS: M M										
0989-02-002	2,722	60	7	8	8	$7	0.600		17	21	$13,018,000
	COMMENTS: M M										
0255-01-026	6,892	64	7	8	8	$4	0.818		99	22	$13,049,000
	COMMENTS: M M										
1742-01-002	861	36	7	7	4	$81	0.632		17	23	$13,119,000
	COMMENTS: M M										

Table 3.11 Printout of a district's selection at the state level (cont.)

1SAS 12:03 THURSDAY, AUGUST 17, 1989 5

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
DISTRICT SELECTION

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0507-04-007	3,496	73	7	8	8	$5	0.455		15	24	$13,137,000
	COMMENTS: M M										
1093-01-004	1,095	36	7	7	4	$128	0.632		14	25	$13,277,000
	COMMENTS: M M										
1069-01-004	2,678	67	7	8	8	$7	0.550		4	26	$13,297,000
	COMMENTS: M M										
0371-02-023	9,207	54	7	5	5	$27	1.000		99	27	$13,544,000
	COMMENTS: M M										

DISTRICT TOTAL OF 27 SELECTED PROJECTS: $13,544,000

The Option of Adding or Deleting Projects to the District's Selections

To use this option submit the FINAL program for processing by typing FINAL followed by the ENTER key. The screen depicted in Figure 3.21 will appear on the computer terminal screen. Select option 2 and the appropriate system (ON or OFF). As with option 1, the computer screen depicted in Figure 3.22 will appear. Make certain that data from the district selections are available for processing before answering the question asked. If YES is answered, the computer screen depicted in Figure 3.24 will appear, allowing the user to add or delete projects to the district list. Fill the spaces with the appropriate BRIDs and the A or D label to specify additions and deletions, respectively.

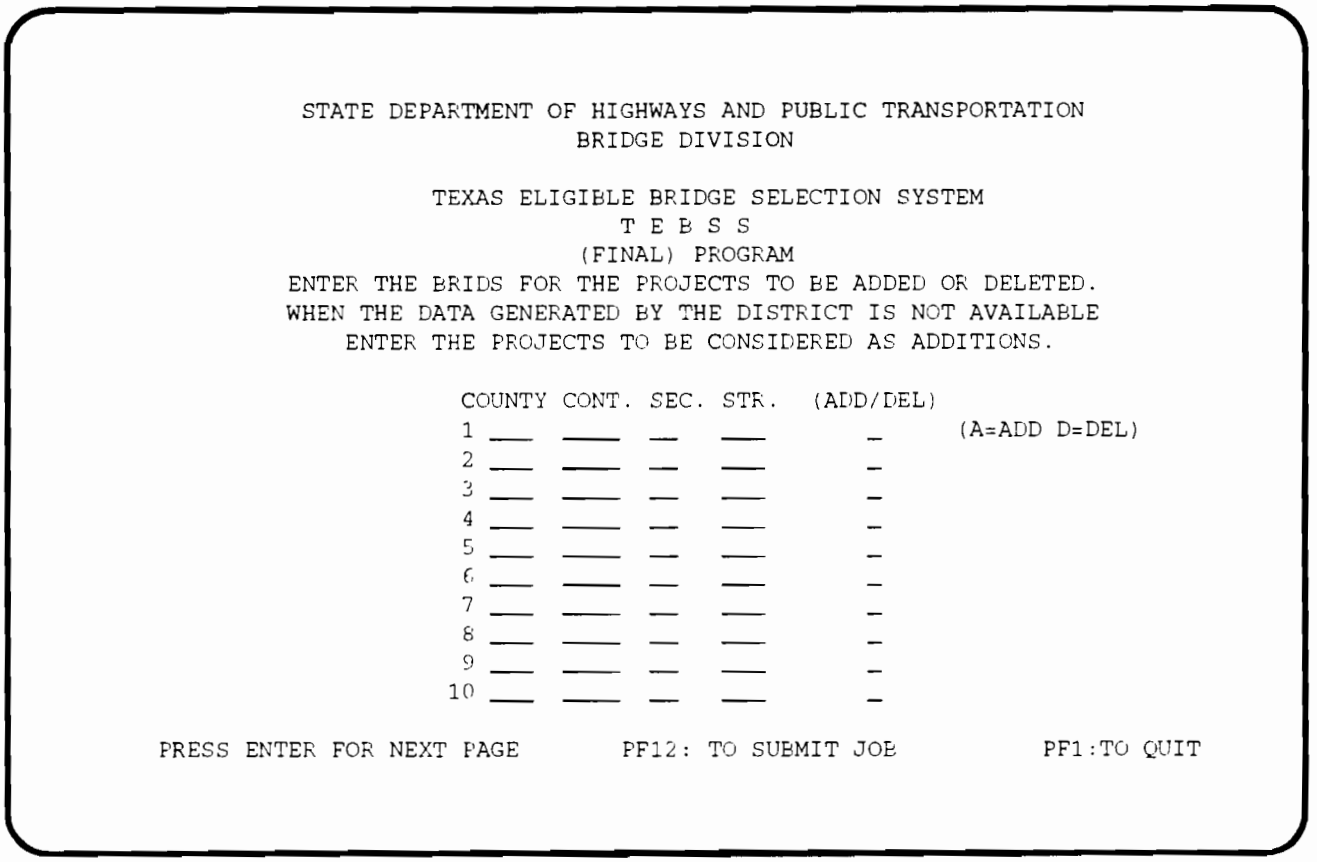

Figure 3.24 Adding or deleting projects to the district's selections

Table 3.12 Option to modify a district's selection

1SAS 14:50 THURSDAY, AUGUST 17, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	NUECES	00666	1052-01-026	REPLACE BRIDGE & APPROACHES	$808,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	GOLIAD	02043	1958-01-001	REHABILITATE BRIDGE & APPROACHES	$86,000

BRIDGE LOCATION: CABEZA CREEK

EXISTING FACILITY: 2 LANE, 23.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	GOLIAD	02442	2342-01-001	REHABILITATE BRIDGE & APPROACHES	$51,000

BRIDGE LOCATION: HORD CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	BEE	01465	2024-01-003	REHABILITATE BRIDGE & APPROACHES	$85,000

BRIDGE LOCATION: TOTO CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 4

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16	ARANSAS	00881	0507-04-007	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

DISTRICT TOTAL OF 18 SELECTED PROJECTS: $13,546,000

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 1

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH	RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1052-01-026	1,108	33	6	4	5	$729	0.526			45	M	$808,000
	COMMENTS: STATE LEVEL SELECTION											
1958-01-001	21	80	7	8	7	$4,095	0.832			14	1	$894,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
2342-01-001	278	75	8	8	8	$183	0.929			25	2	$945,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
2024-01-003	280	78	8	8	8	$304	0.929			11	3	$1,030,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST											
0994-01-001	164	20	6	7	3	$366	0.679			12	4	$1,090,000
	COMMENTS:											

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 2

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0100-12-052	45	49	8	6	3	$511	0.857		12	5	$1,113,000
	COMMENTS:										
0102-01-030	8,886	61	7	8	8	$3	0.545		1	6	$1,139,000
	COMMENTS:										
0989-02-003	3,366	59	6	8	8	$11	0.545		20	7	$1,177,000
	COMMENTS:										
0989-02-004	3,366	57	7	8	6	$16	0.545		20	8	$1,230,000
	COMMENTS:										
0102-01-003	6,835	62	7	8	8	$8	0.523		1	9	$1,288,000
	COMMENTS:										
1052-03-029	1,299	56	7	8	6	$14	0.474		50	10	$1,306,000
	COMMENTS:										

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 3

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0086-11-028	5,779	68	8	8	8	$12	0.545		1	11	$1,376,000
	COMMENTS:										
1088-03-002	5,508	63	7	8	8	$7	0.545		4	12	$1,416,000
	COMMENTS:										
0989-02-008	2,722	36	8	7	4	$24	0.700		5	13	$1,482,000
	COMMENTS:										
1052-01-024	1,108	51	6	6	5	$41	0.526		45	14	$1,527,000
	COMMENTS:										
0101-06-033	13,344	38	6	6	4	$897	0.636		50	15	$13,496,000
	COMMENTS:										
0989-02-005	3,366	61	7	8	7	$10	0.545		20	16	$13,528,000
	COMMENTS:										

Table 3.12 Option to modify a district's selection (cont.)

1SAS 14:50 THURSDAY, AUGUST 17, 1989 4

DISTRICT-16 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH	RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0507-04-007	3,496	73	7	8	8	$5	0.455			15	24	$13,546,000

COMMENTS:

DISTRICT TOTAL OF 18 SELECTED PROJECTS: $13,546,000

The Option of Generating the District's Selection at the State Level for Districts That Did Not Send Any Selections for the State Level of the System

This is a variation of option 2 of the main menu displayed in Figure 3.21, where the user is able to generate the district selection for a specific district, starting with no district selections. In this case, no selection from the specific district will be available to start with and to modify using option two. For the screen depicted in Figure 3.22, the user should answer NO in the field that asks whether data are available for the district under processing. Figure 3.22 will appear on the terminal's screen after running the FINAL program as usual with option 2. Next, the user will be prompted with the screen presented in Figure 3.24, with all the appropriate fields blank. Fill all the projects to be included in the district selection as additions, using the "A" label in Figure 3.24. If extra screens are needed, type ENTER. When satisfied with the list of projects, submit the program for processing by typing the PF12 key. A sample of the output for this option is included in Table 3.13.

Table 3.13 Create a district selection at the state level

1SAS 21:54 THURSDAY, AUGUST 17, 1989 1

DISTRICT-13 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
13	COLORADO	00090	0027-01-001	REHABILITATE BRIDGE & APPROACHES	$674,000

BRIDGE LOCATION: COLORADO RIVER

EXISTING FACILITY: 2 LANE, 22 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13	DEWITT	00087	0143-08-038	REHABILITATE BRIDGE & APPROACHES	$688,000

BRIDGE LOCATION: GUADALUPE RIVER

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13	DEWITT	00119	0359-01-002	REHABILITATE BRIDGE & APPROACHES	$228,000

BRIDGE LOCATION: SMITH CREEK

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

13	FAYETTE	00609	0267-03-019	REHABILITATE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: TAYLOR BR.

EXISTING FACILITY: 2 LANE, 23.5 FT ROADWAY PROPOSED FACILITY: 0 LANE, 0 FT ROADWAY

13	GONZALES	00097	0025-07-040	REHABILITATE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20.2 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.13 Create a district selection at the state level (cont.)

1SAS 21:54 THURSDAY, AUGUST 17, 1989 2

DISTRICT-13 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

DISTRICT	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
13	GONZALES	00097	0025-07-041	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: CLEAR FORK CREEK

EXISTING FACILITY: 2 LANE, 20.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13	JACKSON	0N065	8065-13-004	REPLACE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: POST OAK BRANCH

EXISTING FACILITY: 1 LANE, 17 FT ROADWAY PROPOSED FACILITY: 2 LANE, 18 FT ROADWAY

13	LAVACA	00532	1007-03-018	REHABILITATE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: S. FK LAVACA RIVER

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

13	VICTORIA	0N256	8256-13-001	REHABILITATE BRIDGE & APPROACHES	$9,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 1 LANE, 18.4 FT ROADWAY PROPOSED FACILITY: 2 LANE, 18 FT ROADWAY

13	WHARTON	00183	0089-10-039	REHABILITATE BRIDGE & APPROACHES	$992,000

BRIDGE LOCATION: COLORADO RIVER

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13	WHARTON	0N113	8113-13-001	REPLACE BRIDGE & APPROACHES	$34,000

BRIDGE LOCATION: TRES PALACIOS CREEK

EXISTING FACILITY: 2 LANE, 23.4 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

DISTRICT TOTAL OF 11 SELECTED PROJECTS: $2,774,000

Table 3.13 Create a district selection at the state level (cont.)

1SAS 21:54 THURSDAY, AUGUST 17, 1989 1

DISTRICT-13 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0027-01-001	3,321	61	7	6	7	$203	0.500		2		$674,000
	COMMENTS:										
0143-08-038	5,140	61	7	7	7	$134	0.545		5		$1,362,000
	COMMENTS:										
0359-01-002	992	64	7	7	7	$230	0.526		20		$1,590,000
	COMMENTS:										
0267-03-019	4,054	76	8	8	8	$5	0.534		0		$1,610,000
	COMMENTS:										
0025-07-040	3,048	58	6	6	6	$8	0.459		16		$1,633,000
	COMMENTS:										

Table 3.13 Create a district selection at the state level (cont.)

1SAS 21:54 THURSDAY, AUGUST 17, 1989 2

DISTRICT-13 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0025-07-041	3,048	58	6	6	7	$9	0.461		16		$1,659,000
	COMMENTS:										
8065-13-004	400	37	7	8	5	$50	0.500		0		$1,679,000
	COMMENTS:										
1007-03-018	814	53	8	8	7	$74	0.526		5		$1,739,000
	COMMENTS:										
8256-13-001	600	78	7	8	8	$15	0.541		7		$1,748,000
	COMMENTS:										
0089-10-039	2,387	59	6	6	7	$416	0.500		1		$2,740,000
	COMMENTS:										
8113-13-001	3,600	20	7	8	5	$9	0.532		2		$2,774,000
	COMMENTS:										

DISTRICT TOTAL OF 11 SELECTED PROJECTS: $2,774,000

The Option of Assembling the Final Statewide Project Selection List

Once the decisionmaker is satisfied with the selections for all the districts statewide, it is possible to use option 3, as depicted in Figure 3.21, to assemble the final list of projects to be submitted for bidding and contracting. The user should submit the FINAL program for processing the usual way by typing FINAL followed by the ENTER key. When the screen depicted in Figure 3.21 appears, choose option 3 by typing 3 in the OPTION field. Choose the appropriate system (ON or OFF) by making the appropriate modification in the SYSTEM field. Use the arrow and tab key to move around the screen. When satisfied with the contents of the fields, type ENTER to get the next screen. As illustrated in Figure 3.25, that next screen will prompt the user to identify which districts are to be included in the composition of the final list of selected projects. For this, the user should answer YES or NO for each one of the districts. In order to print the appropriate headers in the reports, the user should update the program field with the years that the project selection is supposed to encompass. The user should remember that data need to be available for each of the districts included. The availability of data for each district may be checked by using option 1 of the FINAL program.

Use the arrow and tab keys to make the appropriate changes. When satisfied with the inputs, type the ENTER key to submit the job for processing. After running for a short while, the program will print an output file that includes a list of all the projects to be submitted for bidding and contracting. If any changes are needed in the selections, the user should go back to the previous options to modify the selected projects on a district-by-district basis. A sample of the output generated by this option is presented in Table 3.14.

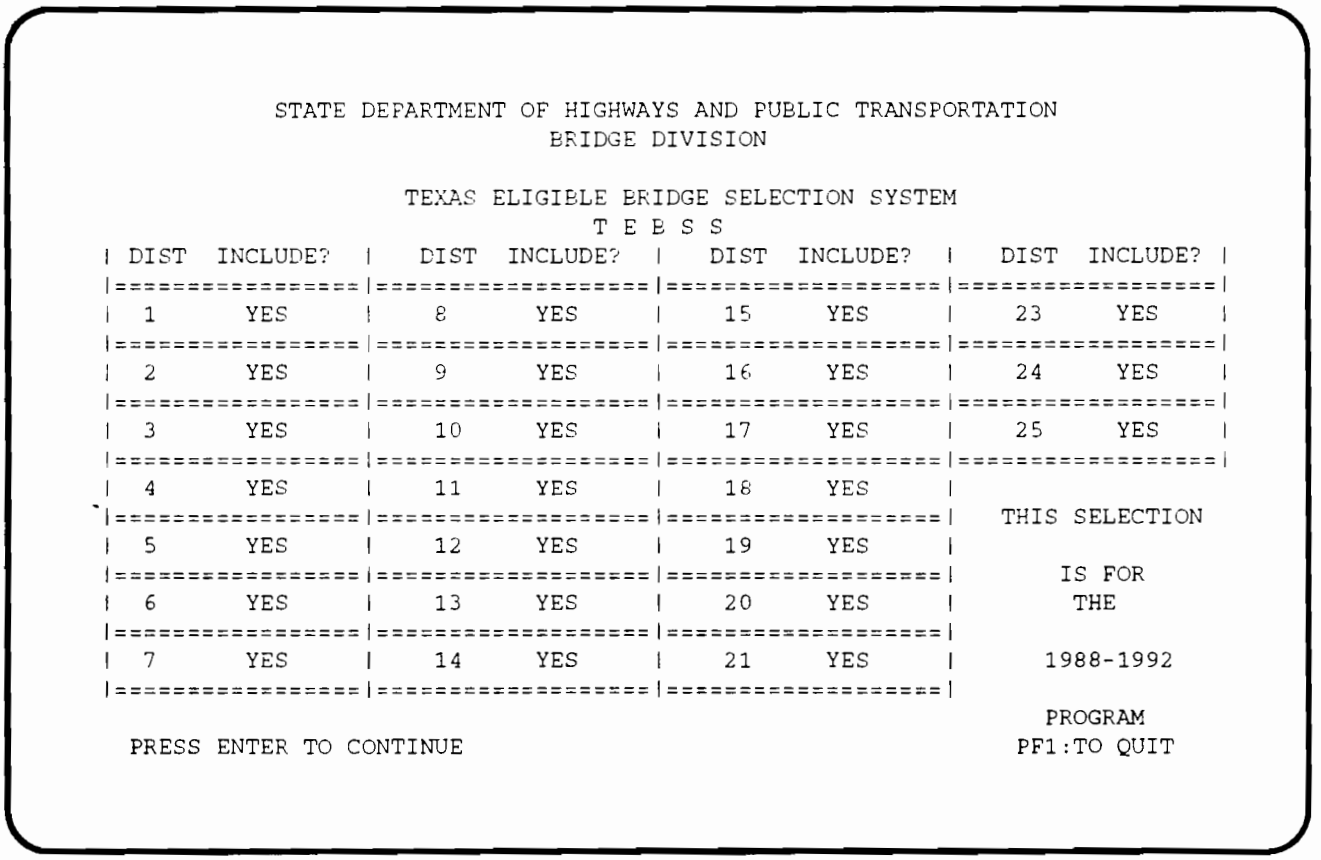

Figure 3.25 Assembling the final list of projects to be submitted for contracting

Table 3.14 Printout of the final statewide selection

1SAS 22:13 THURSDAY, AUGUST 17, 1989 1

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
13 YOAKUM	COLORADO	00090	0027-01-001	REHABILITATE BRIDGE & APPROACHES	$674,000

BRIDGE LOCATION: COLORADO RIVER

EXISTING FACILITY: 2 LANE, 22 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13 YOAKUM	DEWITT	00087	0143-08-038	REHABILITATE BRIDGE & APPROACHES	$688,000

BRIDGE LOCATION: GUADALUPE RIVER

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13 YOAKUM	DEWITT	00119	0359-01-002	REHABILITATE BRIDGE & APPROACHES	$228,000

BRIDGE LOCATION: SMITH CREEK

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

13 YOAKUM	FAYETTE	00609	0267-03-019	REHABILITATE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: TAYLOR BR.

EXISTING FACILITY: 2 LANE, 23.5 FT ROADWAY PROPOSED FACILITY: 0 LANE, 0 FT ROADWAY

13 YOAKUM	GONZALES	00097	0025-07-040	REHABILITATE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20.2 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13 YOAKUM	GONZALES	00097	0025-07-041	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: CLEAR FORK CREEK

EXISTING FACILITY: 2 LANE, 20.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 2

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
13 YOAKUM	JACKSON	0N065	8065-13-004	REPLACE BRIDGE & APPROACHES	$20,000

BRIDGE LOCATION: POST OAK BRANCH

EXISTING FACILITY: 1 LANE, 17 FT ROADWAY PROPOSED FACILITY: 2 LANE, 18 FT ROADWAY

13 YOAKUM	LAVACA	00532	1007-03-018	REHABILITATE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: S. FK LAVACA RIVER

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

13 YOAKUM	VICTORIA	0N256	8256-13-001	REHABILITATE BRIDGE & APPROACHES	$9,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 1 LANE, 18.4 FT ROADWAY PROPOSED FACILITY: 2 LANE, 18 FT ROADWAY

13 YOAKUM	WHARTON	00183	0089-10-039	REHABILITATE BRIDGE & APPROACHES	$992,000

BRIDGE LOCATION: COLORADO RIVER

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

13 YOAKUM	WHARTON	0N113	8113-13-001	REPLACE BRIDGE & APPROACHES	$34,000

BRIDGE LOCATION: TRES PALACIOS CREEK

EXISTING FACILITY: 2 LANE, 23.4 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

DISTRICT TOTAL OF 11 CONSIDERED PROJECTS: $2,774,000

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 3

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	00666	1052-01-026	REPLACE BRIDGE & APPROACHES	$808,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	GOLIAD	02043	1958-01-001	REHABILITATE BRIDGE & APPROACHES	$86,000

BRIDGE LOCATION: CABEZA CREEK

EXISTING FACILITY: 2 LANE, 23.3 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16 CORPUS CHRISTI	GOLIAD	02442	2342-01-001	REHABILITATE BRIDGE & APPROACHES	$51,000

BRIDGE LOCATION: HORD CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16 CORPUS CHRISTI	BEE	01465	2024-01-003	REHABILITATE BRIDGE & APPROACHES	$85,000

BRIDGE LOCATION: TOTO CREEK

EXISTING FACILITY: 2 LANE, 26 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16 CORPUS CHRISTI	SAN PATRICIO	00630	0994-01-001	REPLACE BRIDGE & APPROACHES	$60,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 19 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

16 CORPUS CHRISTI	KARNES	02509	0100-12-052	REPLACE BRIDGE & APPROACHES	$23,000

BRIDGE LOCATION: DRAIN

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 28 FT ROADWAY

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 4

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	00044	0102-01-030	REHABILITATE BRIDGE & APPROACHES	$26,000

BRIDGE LOCATION: DONIGAN FLAT

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 36 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-003	REHABILITATE BRIDGE & APPROACHES	$38,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-004	REHABILITATE BRIDGE & APPROACHES	$53,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00044	0102-01-003	REHABILITATE BRIDGE & APPROACHES	$58,000

BRIDGE LOCATION: OSO CR

EXISTING FACILITY: 2 LANE, 23 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

16 CORPUS CHRISTI	SAN PATRICIO	00666	1052-03-029	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 18 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	JIM WELLS	00359	0086-11-028	REHABILITATE BRIDGE & APPROACHES	$70,000

BRIDGE LOCATION: INTERMITTENT CR

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 44 FT ROADWAY

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 5

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

DISTRICT-HDQRTRS	COUNTY	HWY NO	CONT-SECT-STR	TYPE OF WORK	ESTIMATED COST
16 CORPUS CHRISTI	NUECES	01889	1088-03-002	REHABILITATE BRIDGE & APPROACHES	$40,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-008	REPLACE BRIDGE & APPROACHES	$66,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00666	1052-01-024	REHABILITATE BRIDGE & APPROACHES	$45,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00181	0101-06-033	REPLACE BRIDGE & APPROACHES	$11,969,000

BRIDGE LOCATION: NUECES BAY CAUSEWAY

EXISTING FACILITY: 2 LANE, 28 FT ROADWAY PROPOSED FACILITY: 3 LANE, 56 FT ROADWAY

16 CORPUS CHRISTI	NUECES	00624	0989-02-005	REHABILITATE BRIDGE & APPROACHES	$32,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 24 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

16 CORPUS CHRISTI	ARANSAS	00881	0507-04-007	REHABILITATE BRIDGE & APPROACHES	$18,000

BRIDGE LOCATION: DRAW

EXISTING FACILITY: 2 LANE, 20 FT ROADWAY PROPOSED FACILITY: 2 LANE, 40 FT ROADWAY

DISTRICT TOTAL OF 18 CONSIDERED PROJECTS: $13,546,000
STATE TOTAL OF 29 SELECTED PROJECTS: $16,320,000

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 1

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0027-01-001	3,321	61	7	6	7	$203	0.500		2	M	$674,000
	COMMENTS: STATE LEVEL SELECTION										
0143-08-038	5,140	61	7	7	7	$134	0.545		5	M	$1,362,000
	COMMENTS: STATE LEVEL SELECTION										
0359-01-002	992	64	7	7	7	$230	0.526		20	M	$1,590,000
	COMMENTS: STATE LEVEL SELECTION										
0267-03-019	4,054	76	8	8	8	$5	0.534		0	M	$1,610,000
	COMMENTS: STATE LEVEL SELECTION										
0025-07-040	3,048	58	6	6	6	$8	0.459		16	M	$1,633,000
	COMMENTS: STATE LEVEL SELECTION										
0025-07-041	3,048	58	6	6	7	$9	0.461		16	M	$1,659,000
	COMMENTS: STATE LEVEL SELECTION										

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 2

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
8065-13-004	400	37	7	8	5	$50	0.500		0	M	$1,679,000
COMMENTS: STATE LEVEL SELECTION											
1007-03-018	814	53	8	8	7	$74	0.526		5	M	$1,739,000
COMMENTS: STATE LEVEL SELECTION											
8256-13-001	600	78	7	8	8	$15	0.541		7	M	$1,748,000
COMMENTS: STATE LEVEL SELECTION											
0089-10-039	2,387	59	6	6	7	$416	0.500		1	M	$2,740,000
COMMENTS: STATE LEVEL SELECTION											
8113-13-001	3,600	20	7	8	5	$9	0.532		2	M	$2,774,000
COMMENTS: STATE LEVEL SELECTION											

DISTRICT TOTAL OF 11 SELECTED PROJECTS: $2,774,000

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 3

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1052-01-026	1,108	33	6	4	5	$729	0.526		45	M	$808,000
	COMMENTS: STATE LEVEL SELECTION										
1958-01-001	21	80	7	8	7	$4,095	0.832		14	1	$894,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
2342-01-001	278	75	8	8	8	$183	0.929		25	2	$945,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
2024-01-003	280	78	8	8	8	$304	0.929		11	3	$1,030,000
	COMMENTS: THIS WAS A PROJECT WITH A LOW SCORE THAT WAS AT THE END OF THE PRIORITIZED LIST										
0994-01-001	164	20	6	7	3	$366	0.679		12	4	$1,090,000
	COMMENTS:										
0100-12-052	45	49	8	6	3	$511	0.857		12	5	$1,113,000
	COMMENTS:										

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 4

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
0102-01-030	8,886	61	7	8	8	$3	0.545		1	6	$1,139,000
	COMMENTS:										
0989-02-003	3,366	59	6	8	8	$11	0.545		20	7	$1,177,000
	COMMENTS:										
0989-02-004	3,366	57	7	8	6	$16	0.545		20	8	$1,230,000
	COMMENTS:										
0102-01-003	6,835	62	7	8	8	$8	0.523		1	9	$1,288,000
	COMMENTS:										
1052-03-029	1,299	56	7	8	6	$14	0.474		50	10	$1,306,000
	COMMENTS:										
0086-11-028	5,779	68	8	8	8	$12	0.545		1	11	$1,376,000
	COMMENTS:										

Table 3.14 Printout of the final statewide selection (cont.)

1SAS 22:13 THURSDAY, AUGUST 17, 1989 5

1988-1992 ON -STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING

	ADT	SUFFICIENCY RATINGS	CONDITION RATINGS RDWY	SUPR	SUB	COST/VEH	BRIDGE WIDTH RATIO	TEBS SCORE	DETOUR LENGTH	DISTRICT PRIORITY	DISTRICT ACCUM COST
1088-03-002	5,508	63	7	8	8	$7	0.545	4		12	$1,416,000
	COMMENTS:										
0989-02-008	2,722	36	8	7	4	$24	0.700	5		13	$1,482,000
	COMMENTS:										
1052-01-024	1,108	51	6	6	5	$41	0.526	45		14	$1,527,000
	COMMENTS:										
0101-06-033	13,344	38	6	6	4	$897	0.636	50		15	$13,496,000
	COMMENTS:										
0989-02-005	3,366	61	7	8	7	$10	0.545	20		16	$13,528,000
	COMMENTS:										
0507-04-007	3,496	73	7	8	8	$5	0.455	15		24	$13,546,000
	COMMENTS:										

DISTRICT TOTAL OF 18 SELECTED PROJECTS: $13,546,000
STATE TOTAL OF 29 CONSIDERED PROJECTS: $16,320,000

The Option of Updating the Data Set of Previously Selected Projects

The last option available in the program FINAL is to update the previously selected projects set. It is recommended that the user employ this option only when certain that the list submitted for bidding and contracting is not going to be modified further. The program provides the user a last chance for making changes after this option is run by creating a back-up of the file that contains the previously selected projects. This file has an extension BUP that needs to be renamed in case the user wants to change anything after running this option. To run this option, select option 4 in the screen depicted in Figure 3.21. The appropriate system (ON or OFF) also needs to be selected. To verify user choices before submitting the data for processing, the program presents the computer screen depicted in Figure 3.26, prompting the user to confirm the desire to update the previously selected database. The user should make the appropriate selection and type ENTER to submit the job for processing. After option 4 is run, the previously selected list of projects will be updated. The system is then ready for a new budget allocation, closing the loop shown in Figure 2.1.

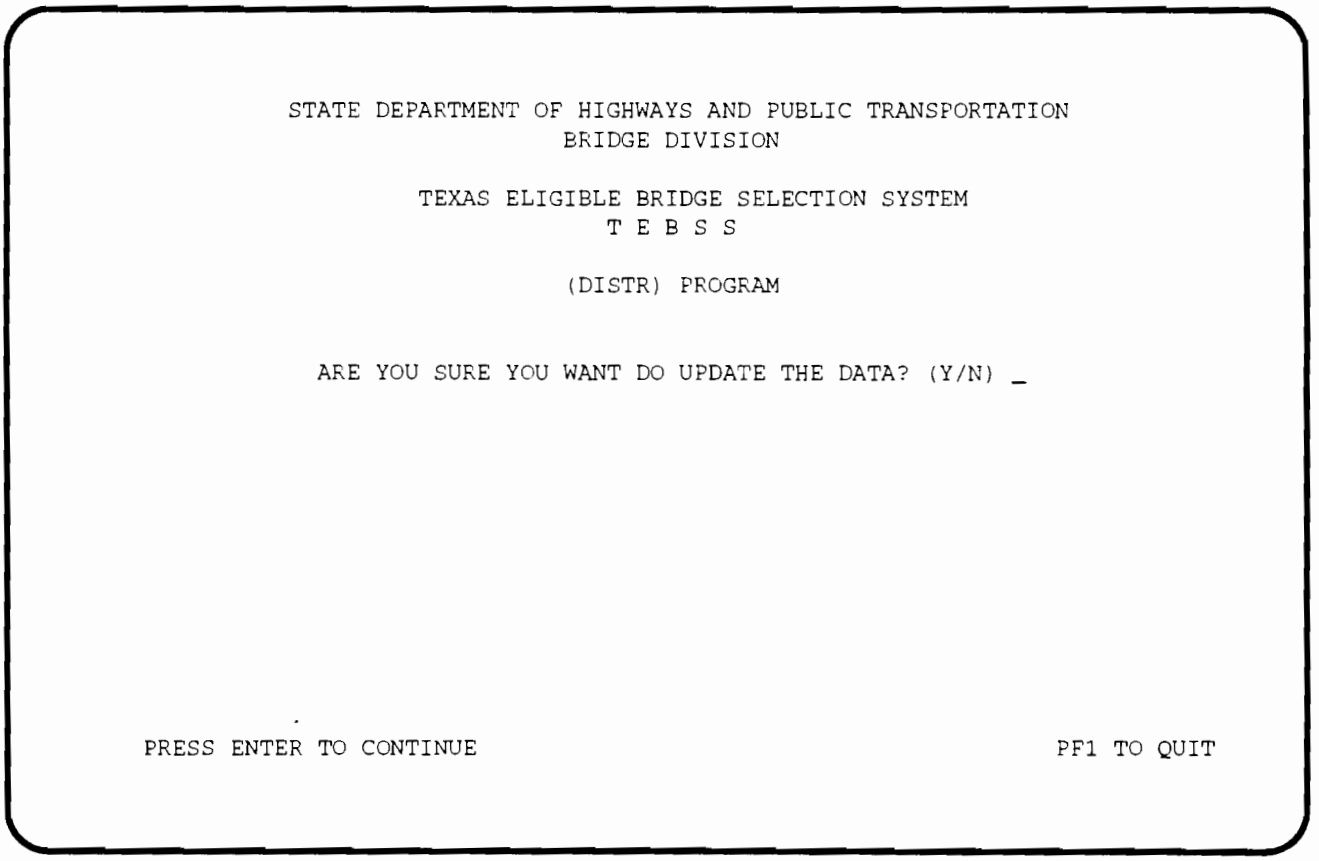

Figure 3.26 Confirming the desire to update the previously selected database

THE PROGRAM PREV

The program PREV has two purposes: to allow the user to (1) print a report of the status, and (2) modify the previously selected project list. It is a utility supplied with TEBSS that provides an easy and user-friendly way of managing the data of the previously selected project list. This program is not included in the TEBSS flowchart depicted in Figure 2.1; however, it provides the user with the possibility of adding and deleting projects to the previously selected project list. To run PREV, submit it for processing by typing PREV followed by the ENTER key (to invoke the RPF that controls the program). The screen depicted in Figure 3.27 will be presented on the computer's terminal.

```
        STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                        BRIDGE DIVISION

            TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
                        T E B S S
        PROGRAM TO MANAGE THE PREVIOUSLY SELECTED DATABASE




      PLEASE ENTER THE SYSTEM TO BE PROCESSED


                    SYSTEM (OFF/ON) ___


PRESS ENTER TO CONTINUE                              PF1:TO QUIT
```

Figure 3.27 The first screen of the PREV computer program

Select the appropriate system (ON or OFF) and then press the ENTER key to continue. The next screen, shown in Figure 3.28, allows the user to add or delete projects to the previously selected database. If extra screens are needed for performing the additions and deletions, press the ENTER key. After entering the projects to be added and deleted, the user should press the PF12 key to submit the program for processing. The program prints a report of the current status of the previously selected project list as presented in Table 3.15.

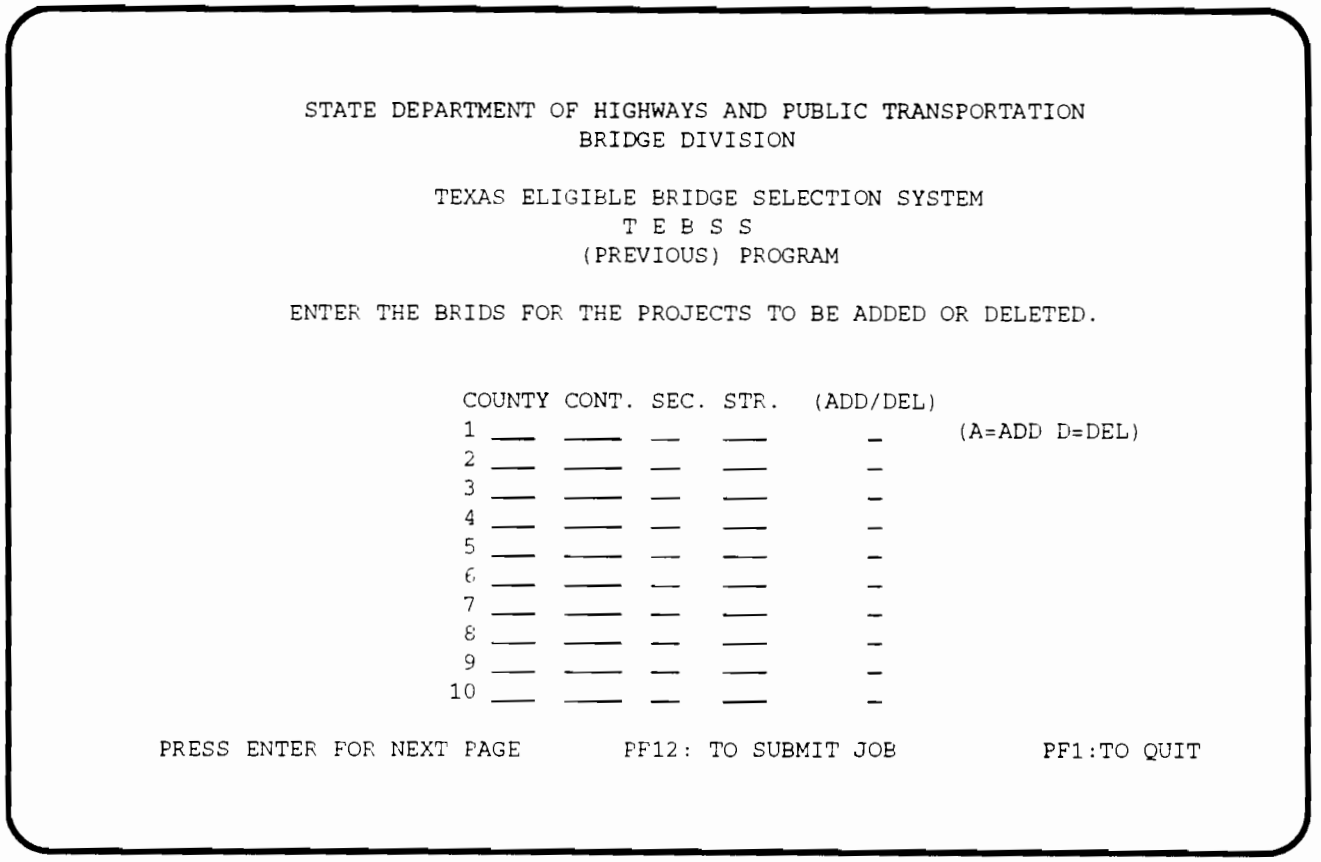

Figure 3.28 Screen for modifying the previously selected project list

Table 3.15 Printout for the state-level program PREV

1 THIS IS THE PRESENT STATUS OF THE LIST OF PROJECTS NOT TO BE CONSIDERED
12:31 MONDAY, AUGUST 21, 1989 1

OBS	BRID	DIST	YEAR
1	075-0174-04-037	1	1979
2	075-0174-04-038	1	1979
3	075-0690-01-008	1	1979
4	075-0690-01-010	1	1979
5	092-0729-01-021	1	1979
6	092-0729-01-022	1	1979
7	092-0729-01-023	1	1979
8	092-0729-01-024	1	1979
9	092-0729-01-025	1	1979
10	117-0009-07-370	1	1979
11	117-0009-07-371	1	1979
12	117-1496-02-008	1	1979
13	139-0749-02-035	1	1979
14	194-0189-03-052	1	1979
15	194-0189-03-053	1	1979
16	112-0385-03-022	2	1979
17	220-0747-03-044	2	1979
18	249-0352-02-032	2	1979
19	039-0224-01-022	3	1979
20	039-0224-01-023	3	1979
21	039-0391-02-064	3	1979
22	049-1357-01-002	3	1979
23	224-1076-01-012	3	1979
24	224-1076-01-013	3	1979
25	188-0090-06-020	4	1979
26	188-0090-06-021	4	1979
27	188-0168-10-018	4	1979
28	188-0168-10-029	4	1979
29	188-0168-10-038	4	1979
30	188-0168-10-127	4	1979
31	191-0168-09-039	4	1979
32	191-0168-09-041	4	1979
33	191-0168-09-042	4	1979
34	191-0168-09-051	4	1979
35	191-0168-09-052	4	1979
36	078-0740-02-001	5	1979
37	078-0740-02-002	5	1979
38	078-1128-01-002	5	1979
39	096-0563-05-003	5	1979
40	052-0866-03-002	6	1979
41	186-0292-06-022	6	1979
42	048-0035-02-009	7	1979
43	200-0035-01-001	7	1979
44	216-3462-01-003	7	1979
45	226-0070-01-041	7	1979
46	226-0070-01-042	7	1979
47	233-0412-05-025	7	1979
48	017-0558-03-047	8	1979
49	017-3276-01-007	8	1979
50	105-0360-02-026	8	1979
51	132-1361-02-003	8	1979
52	208-1532-02-003	8	1979
53	221-0054-01-063	8	1979
54	221-0054-01-064	8	1979

THE PROGRAMS AREA AND FUT

The programs AREA and FUT are utilities that permit a simplified life-cycle cost analysis for forecasting future funding needs. (Neither program is part of the TEBSS; they are included as planning supporting tools.) AREA retrieves updated information on deck areas constructed by year from the BRINSAP database, while FUT uses this information to forecast future needs based on a simplified life-cycle cost profile for the bridges, which is depicted in Figure 3.29. This simplified life-cycle cost assumes rehabilitation and replacement at a certain structure age. The model also assumes an expansion factor for the replacement (to account for widening). The model does not account for new construction, and the results reported are only for maintaining the existing network of bridges.

To invoke the program AREA, type AREA followed by the ENTER key to retrieve deck area information from the BRINSAP database. Once AREA is run there is no need to run it again every time a sensitivity analysis needs to be performed with the program FUT. The deck area distribution by year of construction retrieved from the BRINSAP file should be valid for a given period and may be used repeatedly for different runs of the FUT program. The only screen that appears for the program AREA is depicted in Figure 3.30; this prompts the user for the system (ON or OFF) to be processed. The program prints a table of the distribution of the deck area constructed by year.

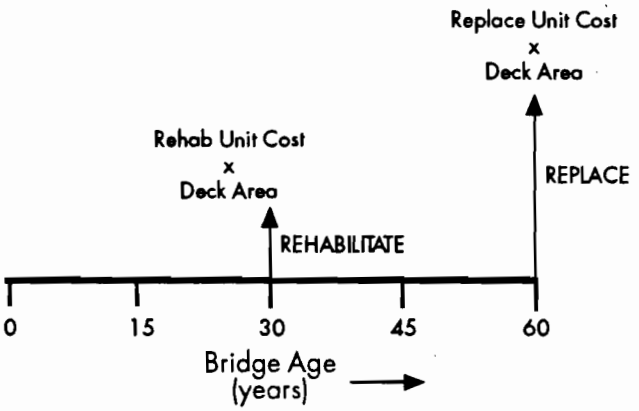

Figure 3.29 Life-cycle activity profile for an average bridge rehabilitation and replacement activity cycle

```
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
BRIDGE DIVISION

TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
T E B S S

(ON/OFF STATE SYSTEM BRIDGES)

PROGRAM TO RETRIEVE THE DISTRIBUTION OF DECK AREA CONSTRUCTED
BY YEAR FROM BRINSAP

PLEASE SELECT ON OR OFF SYSTEMS


PLACE 'X' TO SELECT AN OPTION.

: ON SYSTEM
: OFF SYSTEM




PRESS ENTER TO SUBMIT JOB                          PF1:TO QUIT
```

Figure 3.30 RPF screen for the program AREA

The FUT program uses the life-cycle cost model depicted in Figure 3.29 to generate a forecast of funds needed in the future to replace and rehabilitate the existing network of bridges. FUT is submitted for processing by typing FUT followed by the ENTER key. These keystrokes invoke the RPF program that allows the user-friendly input of the variables needed for the life-cycle cost analysis used for the forecast. The RPF screen that appears for FUT is depicted in Figure 3.31.

The user should input the planning horizon in years (e.g., 20), the expansion factor (e.g., 1.5, since every replaced bridge contains 50 percent more deck area), rehabilitation unit cost, first year of planning horizon (e.g., 1992), replacement unit cost, bridge age at rehabilitation, bridge age at replacement, and the system (ON or OFF). The program will generate a table and a chart (depicted in Figure 3.32) giving a forecast of funding needs necessary to rehabilitate and replace the existing bridge network.

```
                STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
                                BRIDGE DIVISION

                    TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
                                T E B S S


            THIS PROGRAM CALCULATES THE FUTURE BUDGET NEEDS BASED ON THE
                  DISTRIBUTION OF DECK AREA BUILT BY YEAR.
                              (FUTURE PROGRAM)


                                PLANNING HORIZON : _____
                                EXPANSION FACTOR : _____
                REHABILITATION COST PER SQFT : _____
                  FIRST YEAR PLANNING HORIZON: _____
                   REPLACEMENT COST PER SQFT : ____
                         BRIDGE AGE AT REHABH: _____
                     BRIDGE AGE AT REPLACEMENT: _____
                                    SYSTEM : ___


PRESS ENTER TO CONTINUE                                          PF1:TO QUIT
```

Figure 3.31 RPF screen for the program FUT

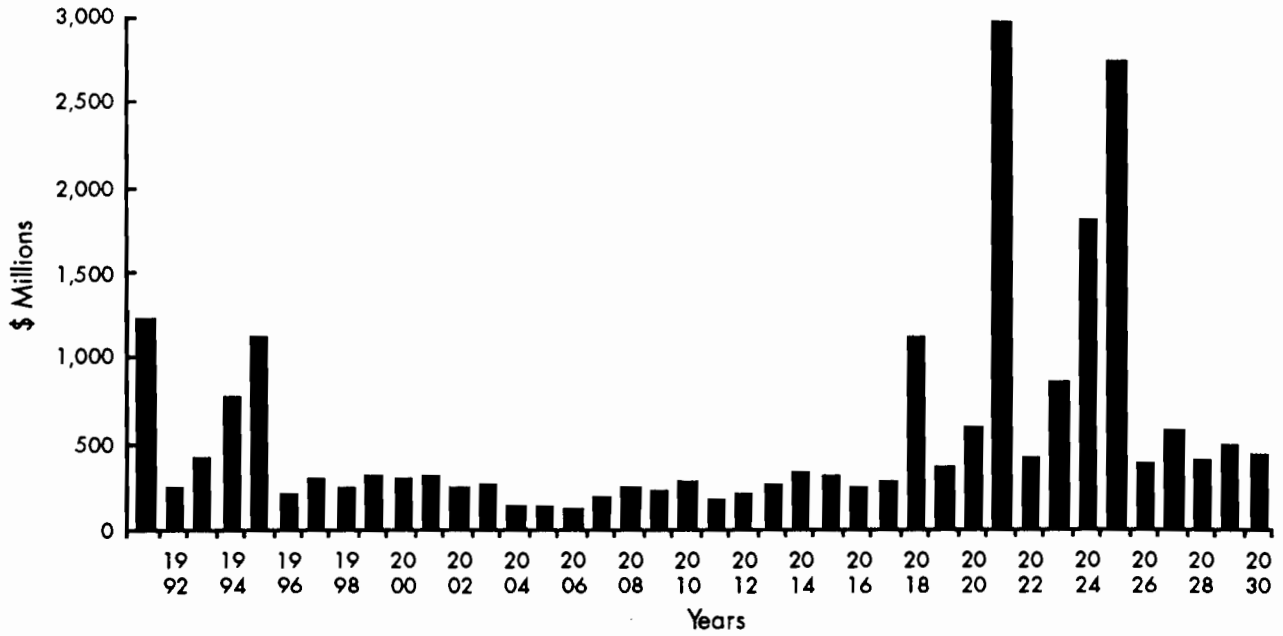

Figure 3.32 Forecast of replacement and rehabilitation needs

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APPENDIX: TEBSS PROGRAMS

SURE RPF

```
<<TEBS>>
:*****************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF
TAG % HUM ERRMSG
CURSOR ON
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$                    (ON/OFF STATE SYSTEM BRIDGES)
@
@                  SUFFICIENCY RATING EVALUATOR (SURE)
@
@                   PLEASE SELECT ON OR OFF SYSTEMS
@
@
@
@                     PLACE 'X' TO SELECT AN OPTION.
@
@                          õ_@: ON SYSTEM
@                          õ_@: OFF SYSTEM
@
@
@
@              %                                          @
$  PRESS ENTER TO SUBMIT JOB                                 PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
:*****************************************************************
<<OK>>
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
```

```
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<BEGIN>>
F A4Y.SUREJCL
R 1 1
TRAP ON
+FIND  /ACC   , BRG   , RRX   , RLF   , R12/ +L1+ +L2+
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
IF P.OFF EQ 'X'
   LET P2=48
   LET P3=72
ELSE
   LET P2=72
   LET P3=48
ENDIF
LET L3=SEQ
+READ AWS +L3+ L4
+LET L4=MODIFY(L4,' ',+P2+)
+LET L4=MODIFY(L4,'X',+P3+)
+DELETE +L3+
+WRITE AWS +L3+ L4
TRAP ON
FIND /INSERT POINT FOR ON-OFF SYS/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER. CANNOT FIND CARDS LINE'
   DEL
   GOTO <<END>>
ENDIF
IF P.ON EQ 'X'
   +WRITE AWS +SEQ+ 'ON'
ELSE
   +WRITE AWS +SEQ+ 'OFF'
ENDIF
JJSUB
<<END>>
POP
RETURN
```

SURE JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW SUREJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(0,0),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=RISSAS
//DUMP.CARD DD *
  ACC   , BRG   , RRX   , RLF   , R12   , BGI  X, MPE   , PST   , BIO   ,
// EXEC PROC=SAS
//SAS.FILEIN DD DSN=&DMPA,DISP=(OLD,DELETE)
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
DATA _NULL_;
     /*                          S U R E 4

                    SUFFICIENCY RATING EVALUATOR PROGRAM

                              VERSION 4.0


                              WRITTEN BY:
                          JEANNETTE M. GARCIA
                              UPDATED BY:
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                              ON:  MAY  1986
                        LAST UPDATED:  AUGUST 90


   SURE4 IS THE FIRST PROGRAM IN A TWO PART SERIES OF SAS PROGRAMS
DEVELOPED AND WRITTEN TO COMPUTERIZE THE TEXAS SDHPT BRIDGE PROJECT
SELECTION PROCESS. THIS PROGRAM WAS DEVELOPED UNDER CTR RESEARCH PROJECT
439.  FOR MORE INFORMATION ABOUT THIS PROGRAM OR THE OTHER IN THE SERIES,
REFER TO CTR REPORT 439-1,439-4.

   SURE4 IS A SAS PROGRAM TO CHECK FOR DEFICIENCY/OBSOLECENCE, CALCULATE
SUFFICIENCY RATING SCORES AND DETERMINE ELIGIBILITY ON THE SDHPT-
FORMATTED ON-SYSTEM BRINSAP (BRIDGE INVENTORY INSPECTION AND APPRAISAL
PROGRAM) DATA TAPE.  ALL THE ALGORITHMS IN THIS PROGRAM ARE BASED ON THE
SDHPT BRINSAP MANUAL OF PROCEDURES. THE FINAL RESULT IS A SAS DATA SET
WITH THE FEDERALLY ELEGIBLE BRIDGES.THE RESULTING SAS DATA SET IS USED BY
 THE NEXT PROGRAM, FREQ , TO CALCULATE THE FREQUENCY PERCENTILES FOR
THE ATTRIBUTES USED IN THE PROGRAMS INICO AND DDF.
   DEVELOPED AND WRITTEN IN SAS (STATISTICAL ANALYSIS SYSTEM)
VERSION 5 (RELEASE 5.08) FOR THE IBM 3081-D RUNNING UNDER VM/SP.


A NOTE ON MISSING OR ILLEGAL DATA:
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   THIS PROGRAM WILL ESTIMATE THE SUFFICIENCY RATING (SR)
VALUE WHEN ANY VALUE INVOLVED IN THE SR CALCULATION IS MISSING OR
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ILLEGAL. THE SPECIFIC COMPONENT OR SUBINDEX REQUIRING THE MISSING OR ILLEGAL DATA IS MADE AS LARGE AS POSSIBLE IN ORDER TO GENERATE A CONSERVATIVE SR VALUE.

INPUT AND OUTPUT:

INPUT: BRINSAP ON-SYSTEM DATA TAPE IN SDHPT FORMAT. FOR SDHPT FORMAT REFER TO CTR REPORT 439-1 OR TO THE SDHPT BRIDGE DIVISION. TAPE SPECIFICATIONS: 9-TRACK, 1600 BPI, UNLABELED, EBCDIC, 510 CHARACTERS/RECORD, 5100 RECORDS/BLOCK, FIXED BLOCK LENGTH. NOTE: IF TAPE SPECS ARE CHANGED, THEN THE SYSTEM FILE DEFINITIONS MUST BE CHANGED TO BE CONSISTENT WITH THE TAPE SPECS.

OUTPUT: THE PROGRAM PRODUCES TWO OUTPUTS: A REPORT OUTPUT FILE AND (SURE2 LISTING) AND THE ELIGIBLE DATA SET OUTPUT FILE (ELIGIBLE BRINSAP). THE REPORT FILE CONTAINS A LIST OF ALL THE DATA ITEMS FOR THOSE BRIDGE RECORDS CONTAINING MISSING OR ILLEGAL DATA. THE ELIGIBLE DATA SET OUTPUT FILE IS A PERMANENT SAS DATA SET CONTAINING ALL THE BRIDGES ELIGIBLE FOR FEDERAL FUNDING. THE ELIGIBLE FILE IS IN SAS FORMAT AND CAN ONLY BE READ BY SAS.

THE SECOND VERSION OF SURE

IN THE SECOND VERSION OF SURE THE INPUTS TAKEN FROM THE BRINSAP TAPES HAVE BEEN INCREASED. THIS INCREASE OF VARIABLES IS REQUIRED TO COMPLETE THE TWO-LEVEL CLOSED-LOOP SELECTION PROCESS PROPOSED IN CTR RESEARCH REPORT 439-3. THAT SELECTION PROCESS REQUIRES ADDITIONAL VARIABLES TO CALCULATE NEW INDICES AND TO FACILITATE USE OF A REPORTING PROGRAM.

```
                                                                    */
    /*******************************************************************/
    /*   CMS SYSTEM COMMANDS:  INPUT/OUTPUT FILE DEFINITIONS           */
    /*******************************************************************/


    /* DATA INITIAL;INPUT FALSE;CARDS;
.
 PROC FSEDIT DATA=INITIAL SCREEN=TEBS.SUREINI;*/
DATA SYS;   LENGTH ONOF $ 3;
INPUT ONOF $;
CARDS; /* INSERT POINT FOR ON-OFF SYS */
;
  /* PROC FSEDIT DATA=SYS SCREEN=TEBS.SURESYS;*/
%GLOBAL ANSW;
DATA ANS;SET SYS;CALL SYMPUT('ANSW',ONOF);RETURN;
%MACRO CHOOS;
  %IF &ANSW=OFF %THEN %DO; INFILE FILEIN;%END;
  %IF &ANSW=ON  %THEN %DO; INFILE FILEIN;%END;
%MEND CHOOS;

 /*******************************************************************/

OPTIONS REPLACE CENTER INVALIDDATA=I MISSING=M        ;
```

```
DATA SRDATA;

 /*   DROP ALL TEMPORARY VARIABLES   */
 DROP TS2 A B C D E F G H I J K AI AIT GH AB COUNT DIG1 DIG2 X Y;

 /*LENGTH EST $ 1;*/
 MISSING M;
 LABEL DIST='DISTRICT'                    STRUCT='STRUCTURE'
      RSTR='ROUTE:STRUCT.:FUNCT.' SR='SUFF.:RATING'
      DODRSN='DOD ROAD:SECTION NO.' BDL='BYPASS:DETOUR:LENGTH'
      LOS='LANES:OVER:STRUCT.' LUS='LANES:UNDER:STRUCT.'
      AWIDTH='APPROACH:WIDTH' TS='TYPE:SERVICE' MST='MAIN:SPAN:TYPE'
      ROWI='ROADWAY:WIDTH' VCO='VERT.:CLEAR.:OVER'
      DECO='DECK:COND.' SSCO='SUPER-:STRUCT.:COND.'
      SUBCO='SUB-:STRUCT.:COND.' INVRA='INV.:RATING'
      SCO='STRUCT.:COND.' DEGE='DECK:GEOM.'
      UCVL='UNDER:CLEAR.:VERT.& LAT.'
      WA='WATER:ADEQ.' AR='APPR.:ROADWAY' TYWO='TYPE:WORK'

      COPRI='COST OF:PROP.:IMPROV.' TRASA='TRAFFIC:SAFETY'
      ORBDL='OR:BYPASS:LENGTH' ORADT='OR:ADT'
      W_ADT='ADT'   W_BDL='BYPASS:DETOUR:LENGTH'
      FX='BRIDGE LOCATION' RNUM='HWY NO.'
      CPCO='CHANNEL COND. RATING' ARCO='APPR. RDWY. COND. RATING'
      CUCO='CULVERT CONDITION RATING'
                              SLC='SAFE LOAD CONDITION';

  %CHOOS;

 INPUT DIST 2-3 COUNTY $ 4-6 CONTROL $ 7-10 SECTION $ 11-12
      STRUCT $ 18-20 RSTR $ 22    RNUM $ 32-35         FX $ 53-76
      SURA $ 462-465 DODRSN 408 BDL 149-150 FCO $ 91-108
      FCLASS 171-172 YB 173-176 LOS 177-178 LUS 179-180 ADT 181-186
      AWIDTH 190-192 TS 215-216 MST 217-220 CULVERT 229-230
      STRLEN 262-267
      ROWI 274-277 .1 VCO 282-285 DECO 303 SSCO 304 SUBCO 305
      CPCO 306 ARCO 311 CUCO 307
      INVRA 312-314  SCO 315 DEGE 316 UCVL 317 SLC 318 WA 319
      AR 320 TYWO 321-323 LOI 324-329 TPC 380-385
      COPRI 368-373 TRASA $ 197-200 ORBDL 576-577 ORADT 581-586
                ;

   /***DELETE THE RAILROAD, PEDESTRIAN, UTILITY STRUCT UNDERPASSES
    AND TUNNELS MODIFIED 7/20/90 BY J. WEISSMANN*****/
  IF RSTR = '5' THEN DELETE;
  IF RSTR = '6' THEN DELETE;
  IF RSTR = '7' THEN DELETE;
  IF RSTR = '8' THEN DELETE;

    /***SET THE ROADWAY WIDTH TO APPROACH WIDTH IF THE ROADWAY WIDTH
    IS EQUAL TO ZERO. MODIFIED 7/20/90 PER RALPH BANKS REQUEST BY
    JOSE WEISSMANN *********/

    IF ROWI = 0 THEN ROWI = AWIDTH;

   /***SET THE COST OF PROPOSED IMPROVEMENTS TO 1.25 OF BRIDGE
     IMPROVEMENT COST (ITEM # 94 NEW CODING GUIDE 7/3/90 J. WEISS.**/
```

```
      COPRI=1.25*COPRI;
     /****SET THE COST OF IMPROVEMENTS TO TOTAL PROJECT COST ITEM #96
      IF THE BRIDGE IMPROVEMENT COST #94 IS MISSING MODIFIED 7/6/90
       BY JOSE WEISSMANN*******/
IF COPRI=. THEN COPRI=TPC;
 /*   CREATE UNIQUE BRIDGE ID NUMBER    */

   LENGTH BRID $ 16;
   BRID = TRIM(LEFT(COUNTY)) || ('-') || TRIM(LEFT(CONTROL)) || ('-')
   || TRIM(LEFT(SECTION)) || ('-') || TRIM(LEFT(STRUCT));

    /* CREATE FLAG VARIABLE TO INDENTIFY PREVIOUSLY SELECTED
     PROJECTS THAT WERE DELETED FROM THE BRINSAP TAPE AND NEED TO BE
     DELETED FROM THE LIST OF PREVIOUSLY SELECTED PROJECTS.THIS VARIABLE
     IS USED BY THE PROGRAM FREQ.  */

     UPDA='UP';

 /*********************************************************************/
 /*    CHECK FOR MISSING AND ILLEGAL DATA                             */
 /*********************************************************************/

 SR_EST = ' ';

 /*   CHECK FOR MISSING AND ILLEGAL VALUES IN NUMERIC VARIABLES   */

 IF (RSTR<=.Z) OR (LOS<=.Z) OR (LUS<=.Z) OR (TS<=.Z) OR (ROWI<=.Z) OR
    (VCO<=.Z) OR (INVRA<=.Z) OR (CULVERT=.I) OR (AWIDTH=.I) OR
    (MST=.I) OR (DECO<=.I) OR (SSCO<=.I) OR (SUBCO<=.I) OR (SCO<=.I) OR
    (DEGE<=.I) OR (UCVL<=.I) OR (WA<=.I) OR (AR<=.I)
 THEN SR_EST = '*';

 /*   SET WORKING ADT AND BDL VARIABLES (W_ADT AND W_BDL) DEPENDING ON
    WHICH IS THE INVENTORY ROUTE                                    */
  /***MODIFIED 7/18/90 AS A RESULT OF THE NEW CODING OF BRINSAP**/
 IF (RSTR = '2') OR ('A' <= RSTR <= 'Z')
   THEN DO;
        IF (ORADT<=.Z) OR (ORBDL<=.Z) THEN SR_EST = '*';
        W_ADT = ORADT;
        W_BDL = ORBDL;
        END;
   ELSE DO;
        IF (ADT<=.Z) OR (BDL<=.Z) THEN SR_EST = '*';
        W_ADT = ADT;
        W_BDL = BDL;
        END;

 /*   CHECK FOR MISSING VALUES IN CHARACTER VARIABLES   */

 IF (DODRSN= .) OR (TRASA='    ') THEN SR_EST = '*';



 /*********************************************************************/
 /*   CHECK FOR "STRUCTURAL DEFICIENCY" (DEF=1) OR                    */
 /*   "FUNCTIONAL OBSOLESCENCE" (OBS=1)                               */
 /*********************************************************************/
```

```
  /*   INITIALIZE DO & SPCL   */

 DEF = 0;   OBS = 0;   /***  SPCL = 0 ***/

 /*   EXTRACT LAST (SECOND) DIGIT OF TS VARIABLE   */

 TS2 = TS - INT(TS/10)*10;

 /*   STRUCTURALLY DEFICIENT   */

 IF (0 <= DECO <= 4) OR (0 <= SSCO <= 4) OR (0 <= SUBCO <= 4) OR
    (0 <= SCO <= 2)
   THEN DEF = 1;
   ELSE IF ((TS2 = 0) OR (5 <= TS2 <= 9)) AND (0 <= WA <= 2)
         THEN DEF = 1;


 /*   FUNCTIONALLY OBSOLETE   MODIFIED 8/16/90 BY J. WEISSMANN */

 IF (0 <= DEGE <= 3)         THEN
   IF   ((  0 <= W_ADT <=   250)  AND (ROWI < 20)) OR
        (( 250 < W_ADT <=   750)  AND (ROWI < 22)) OR
        (( 750 < W_ADT <=  2700)  AND (ROWI < 24)) OR
        ((2700 < W_ADT <=  5000)  AND (ROWI < 30)) OR
        ((5000 < W_ADT <=  9000)  AND (ROWI < 44)) OR
        ((W_ADT > 9000)  AND (ROWI < 56))
   THEN OBS = 1;
   ELSE IF W_ADT > 35000 THEN SPCL = 1;
        ELSE;
 ELSE IF ((0 <= UCVL <= 3) AND
         (TS2=0 OR TS2=1 OR TS2=2 OR TS2=4 OR TS2=6 OR TS2=7 OR TS2=8))
        OR (0 <= AR <= 3)
      THEN OBS = 1;
ELSE IF ((0 <= WA <= 3) AND ((TS2 = 0) OR (5 <= TS2 <= 9)))
   OR (0 <= SCO <= 3)
         THEN OBS = 1;



 /*********************************************************************/
 /*   CALCULATE S1 - STRUCTURAL ADEQUACY AND SAFETY                   */
 /*********************************************************************/
  /****MODIFIED 8/22/90 BY JOSE WEISSMANN ******/
 S1 = 0;      /*   INITIALIZE S1 A              *****/
SMIN=MIN(SSCO,SUBCO);A=0;

 /*** CALCULATE  A  -  REDUCTION FOR DETERIORATION ***/

 IF (0 <= SMIN <= 2) THEN A = 55;
     IF (SMIN = 3) THEN A = 40;
          IF (SMIN = 4) THEN A = 25;
           IF (SMIN = 5) THEN A = 10;
                 IF (SMIN >= 6) THEN A = 0;


  IF CULVERT > 0 THEN DO;
     A =0 ;
```

```
   IF (0 <= CUCO <= 2) THEN A = 55;
      IF CUCO = 3 THEN A = 40;
        IF CUCO = 4 THEN A = 25;
          IF CUCO = 5 THEN A = 10;  END;
/*** CALCULATE  I  -  REDUCTION FOR LOAD CAPACITY ***/

/*   CALCULATE AIT -  ADJUSTED INVENTORY TONNAGE   */

/*   EXTRACT FIRST DIGIT (TYPE OF LOADING) FROM VARIABLE INVRA   */

 DIG1 = INT(INVRA/100);
 IF DIG1 = 1 THEN AIT = (INVRA-100)*1.56;
 ELSE IF DIG1 = 2 THEN AIT = (INVRA-200)*1.00;
     ELSE IF DIG1 = 3 THEN AIT = (INVRA-300)*1.56;
         ELSE IF DIG1 = 4 THEN AIT = (INVRA-400)*1.00;
             ELSE IF DIG1 = 5 THEN AIT = (INVRA-500)*1.21;
                 ELSE IF DIG1 = 6 THEN AIT = (INVRA-600)*1.21;
                 ELSE IF DIG1 = 9 THEN AIT = (INVRA-900)*1.0;
                     ELSE IF (DIG1 = 7) OR (DIG1 = 8)
                           THEN DO; SR=999.9; GOTO SKIP; END;
                           ELSE DO; AIT = 36; SR_EST = '*'; END;


 IF (36 - AIT) > 0 THEN I = (36 - AIT)**1.5 * 0.2778;
                ELSE I = 0;
 AI = A + I;
 IF (AI > 55) THEN AI = 55;

/*   CALCULATE S1   */

 S1 = 55 - AI;



/*********************************************************************/
/*   CALCULATE S2 - SERVICEABILITY AND FUNCTIONAL OBSOLESCENCE       */
/*********************************************************************/

  /*   INITIALIZE S2  AND TEMPORARY VARIABLES   */

S2 = 0;
A = .;  I = .;


/*** CALCULATE  J  -  RATING REDUCTIONS ***/

/*   CALCULATE  A   */

IF  (0 <= DECO <= 3) THEN A = 5;
ELSE IF DECO = 4 THEN A = 3;
     ELSE IF DECO = 5 THEN A = 1;
         ELSE IF (DECO >= 6) THEN A = 0;
             ELSE A = 0;

/*   CALCULATE  B   */

IF (0 <= SCO <= 3) THEN B = 4;
```

```
ELSE IF SCO = 4 THEN B = 2;
    ELSE IF SCO = 5 THEN B = 1;
        ELSE IF (SCO >= 6) THEN B = 0;
            ELSE B = 0;

/*  CALCULATE  C  */

IF (0 <= DEGE <= 3) THEN C = 4;
ELSE IF DEGE = 4 THEN C = 2;
    ELSE IF DEGE = 5 THEN C = 1;
        ELSE IF (DEGE >= 6) THEN C = 0;
            ELSE C = 0;

/*  CALCULATE  D  */

IF (0 <= UCVL <= 3) THEN D = 4;
ELSE IF UCVL = 4 THEN D = 2;
    ELSE IF UCVL = 5 THEN D = 1;
        ELSE IF (UCVL >= 6) THEN D = 0;
            ELSE D = 0;

/*  CALCULATE  E  */

IF (0 <= WA <= 3) THEN E = 4;
ELSE IF WA = 4 THEN E = 2;
    ELSE IF WA = 5 THEN E = 1;
        ELSE IF (WA >= 6) THEN E = 0;
            ELSE E = 0;

/*  CALCULATE  F  */

IF (0 <= AR <= 3) THEN F = 4;
ELSE IF AR = 4 THEN F = 2;
    ELSE IF AR = 5 THEN F = 1;
        ELSE IF (AR >= 6) THEN F = 0;
            ELSE F = 0;

J = A + B + C + D + E + F;
IF J > 13 THEN J = 13;

/*** CALCULATE  G & H  -  "WIDTH OF ROADWAY" INSUFFICIENCY ***/
  /***MODIFIED 7/20/90 TO ACCOMODATE CHANGES IN BRINSAP J.W.****/
/*  CALCULATE  X  */

IF (RSTR NE '1') AND (RSTR NE '2') AND NOT('A' <= RSTR <= 'Z')  AND
  (RSTR NE '8')
 THEN DO; SR=999.9; GOTO SKIP; END;    /*  BRIDGE N/A  */
 ELSE IF LOS > 0 THEN X = W_ADT/LOS;
              ELSE X = 0;

/*  IF ADT OR ORADT ARE MISSING THEN X = 0  */
IF X < 0 THEN X = 0;


/*  CALCULATE  G  */

IF (CULVERT = 0) OR (CULVERT=.) THEN
```

```
  IF (ROWI > 0) AND (AWIDTH > 0) THEN
    IF (ROWI+2) < AWIDTH  THEN G = 5;
    ELSE  G = 0;
  ELSE G = 0;
ELSE G = 0;

/*  CALCULATE  H  */

IF (ROWI > 0) AND (LOS > 0) THEN Y = ROWI/LOS;
                            ELSE Y = 0;

IF (LOS = 1)
  THEN IF (0 < Y < 14)  THEN H = 15;
       ELSE IF (14 <= Y < 18) THEN H = ((18-Y)*15)/4;
            ELSE H = 0;


/*  NOTE:  IF ONE OF THE FOLLOWING FOUR CONDITIONS ARE MET, NO LANE
    WIDTH REDUCTIONS ARE ALLOWED.                                  */

  ELSE IF ((LOS = 2) AND (Y >= 16)) OR
          ((LOS = 3) AND (Y >= 15)) OR
          ((LOS = 4) AND (Y >= 14)) OR
          ((LOS >= 5) AND (Y >= 12))
         THEN H = 0;
         ELSE IF (0 <= X <= 50)
                THEN IF (0 < Y < 9) THEN H = 7.5;
                     ELSE H = 0;
                ELSE IF (50 < X <= 125)
                       THEN IF (0 < Y < 10) THEN H = 15;
                       ELSE IF (10 <= Y < 13) THEN H = (15*(13-Y))/3;
                            ELSE H = 0;
                     ELSE IF (125 < X <= 375)
                            THEN IF (0 < Y < 11) THEN H = 15;
                                 ELSE IF (11 <= Y < 14)
                                        THEN H = (15*(14-Y))/3;
                                        ELSE H = 0;
                            ELSE IF (375 < X <= 1350)
                                   THEN IF (0 < Y < 12) THEN H = 15;
                                        ELSE IF (12 <= Y < 16)
                                               THEN H=(15*(16-Y))/4;
                                               ELSE H = 0;
                                   ELSE IF (X > 1350)
                                          THEN IF (0 <= Y < 15)
                                                 THEN H = 15;
                                                 ELSE IF (15 <= Y < 16)
                                                        THEN H=15*(16-Y);
                                                        ELSE H = 0;
                                               ELSE H = 0;

GH = G + H;
IF GH > 15 THEN GH = 15;


/*** CALCULATE  I  -  "VERTICAL CLEARANCE" INSUFFICIENCY ***/

IF (DODRSN = 0) THEN
```

```
  IF (VCO >= 1400)
    THEN I = 0;
    ELSE I = 2;
ELSE IF (DODRSN NE 0)
      THEN IF (VCO >= 1600)      /*  DEFENSE ROAD  */
            THEN I = 0;
            ELSE I = 2;
      ELSE I = 0;

IF VCO < 0 THEN I = 0;     /*  IF VCO IS MISSING THEN I = 0  */

/*  CALCULATE S2  */

S2 = 30 - (J + GH + I);

     /****ADDED 8/28/90 BY J. WEISSMANN****/
 IF S2 < 0 THEN S2 = 0 ; IF S2 > 30 THEN S2 = 30 ;
/*********************************************************************/
/*  CALCULATE S3 - ESSENTIALITY                                      */
/*********************************************************************/


  /*  INITIALIZE S3  AND TEMPORARY VARIABLES  */

S3 = 0;
A = .;  B = .;


/*** CALCULATE  A  -  PUBLIC USE ***/

K = (S1 + S2) / 85;

IF (RSTR NE '1') AND (RSTR NE '2') AND NOT('A' <= RSTR <= 'Z')  AND
   (RSTR NE '8')
  THEN DO; SR=999.9; GOTO SKIP; END;    /*  BRIDGE N/A  */
  ELSE IF K > 0
        THEN A = (W_ADT*W_BDL*15)/(200000*K);
        ELSE IF K = 0 THEN A = 15;
                    ELSE A = 0;

/*  IF ADT OR BDL ARE MISSING THEN A = 0  */
IF A < 0 THEN A = 0;
IF A > 15 THEN A = 15 ; /***ADDED 8/28/90****/
/*** CALCULATE  B  -  MILITARY USE ***/

IF (DODRSN = 0)
  THEN B = 0;
  ELSE IF (DODRSN NE 0)
        THEN B = 2;
        ELSE B = 0;

/*  CALCULATE  S3  */

AB = A + B;
IF AB > 15 THEN AB = 15;
S3 = 15 - AB;
```

```
/*********************************************************************/
/*   CALCULATE S4 - SPECIAL REDUCTIONS                               */
/*********************************************************************/


/*   INITIALIZE S4 AND TEMPORARY VARIABLES   */

S4 = 0;
A = .;  B = .;  C = .;  DIG1 = .;


/*   NOTE:  CALCULATE S4 ONLY IF (S1+S2+S3) >= 50   */

IF (S1 + S2 + S3) < 50
  THEN DO;
       S4 = 0;
       GOTO SKIPS4;
       END;


/*** CALCULATE  A  -  "DETOUR LENGTH" REDUCTION ***/

IF (RSTR NE '1') AND (RSTR NE '2') AND NOT('A' <= RSTR <= 'Z')  AND
   (RSTR NE '8')

  THEN DO; SR=999.9; GOTO SKIP; END;    /*   BRIDGE N/A   */
  ELSE A = (W_BDL**4) * 5.205 * (10**(-8));

IF A < 0 THEN A = 0;      /* IF BDL OR ORBDL ARE MISSING THEN A = 0   */
        ELSE IF A > 5 THEN A = 5;        /*   SET MAX TO 5   */

/*** CALCULATE  B  -  "STRUCTURE TYPE" REDUCTION ***/

/*   EXTRACT FIRST AND SECOND DIGITS OF VARIABLE MST   */

DIG1 = INT(MST/1000);
DIG2 = INT(MST/100) - DIG1*10;

IF (DIG1 = 7) OR (DIG1 = 8) OR (2 <= DIG2 <= 7)
  THEN B = 5;
  ELSE B = 0;

/*** CALCULATE  C  -  "HIGHWAY SAFETY" REDUCTION ***/

/*   COUNT THE NUMBER OF 0'S IN THE VARIABLE TRASA   */

COUNT = 0;
DO I=1 TO 4;
  IF SUBSTR(TRASA,I,1)='0' THEN COUNT=COUNT + 1;
END;
IF COUNT = 2 THEN C = 1;
ELSE IF COUNT = 3 THEN C = 2;
     ELSE IF COUNT = 4 THEN C = 3;
          ELSE C = 0;

/*   CALCULATE S4   */
```

```
  S4 = A + B + C;

  SKIPS4: ;

  /*********************************************************************/
  /*   CALCULATE SUFFICIENCY RATING                                    */
  /*********************************************************************/

  IF (SR NE 999.9) THEN SR = S1 + S2 + S3 - S4;
  IF (SR < 0) THEN SR = 888.8;
  SR=ROUND(SR,.1);


 SKIP:  RUN;        /*   END OF SRDATA DATA STEP   */
PROC FREQ DATA=SRDATA;TABLES CULVERT; RUN;
  /*********************************************************************/
  /*   DETERMINE ELIGIBILITY                                           */
  /*********************************************************************/
%MACRO CHOOS2;
      %IF &ANSW=OFF %THEN %DO; TEBS.ELIGOF;%END;
      %IF &ANSW=ON %THEN %DO; TEBS.ELIGON;%END;
%MEND CHOOS2;

    DATA %CHOOS2;

  SET SRDATA;

  /*   INITIALIZE ELIG AND WT VARIABLES    */

     ELIG = 0;
     WT = '  ';

  /*   SCREEN BRIDGES TO SELECT THOSE WHICH ARE ELIGIBLE FOR
     FOR REPLACEMENT (WT='RP') OR REHABILITATION (WT='RH').

     DEF=1 —> BRIDGE IS DEFICIENT;  OBS=1 —> BRIDGE IS OBSOLETE    */

    IF (DEF = 1)  OR  (OBS = 1)  THEN
      IF (SR <= 80)  AND  (SR >= 50)
        THEN DO;
            ELIG = 1;
            WT = 'RH';
            END;
        ELSE IF (SR < 50)
              THEN DO;
                  ELIG = 1;
                  WT = 'RP';
                  END;

  /*   SELECT ONLY THOSE BRIDGES WHICH ARE ELIGIBLE   */

   IF  ELIG = 0   THEN DELETE;

RUN;

  PROC SUMMARY DATA=%CHOOS2;
CLASS DIST; VAR COPRI;OUTPUT OUT=TABM1 N=CPIC1 NMISS=CPIC2 SUM=CPIS1;
```

```
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;
DATA DISLIST;INPUT DIST;CARDS;
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
;
DATA FINAL;MERGE DISLIST TABM1;
          BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIC2=0;CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;
END;
KEEP DIST _TYPE_ CPIC1 CPIC2 CPIS1 CPIP1 TOT1;


OPTIONS PAGESIZE=60            ;


  DATA _NULL_;FILE PRINT HEADER=B;
     IF _N_=1 THEN SET SYS;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC DOLLAR14.;
     IF DIST= . THEN DO;TOTN=CPIC1+CPIC2;TOTC=CPIS1;TOTP=CPIP1;

     RETAIN TOTN TOTC TOTP ;DELETE; END;
       IF DIST=1 THEN PUT @44 46*'-' /
           @44 'I' @60 'ELIGIBLE BRIDGES AND COST' @89 'I' /
           @44 46*'-' /
       @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I'
@66 'COST(THOUSAND)' @81 'I'
       @83 '%' @89 'I' /
       @44 46*'-';CPIC=CPIC1+CPIC2;

   PUT @44 'I' @47 DIST @56 'I' @58 CPIC @64 'I' @66 CPIS1 @81 'I'
      @83 CPIP1 @89 'I' /
      @44 46*'-';
```

```
    IF DIST=25 THEN
   PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
        @83 TOTP @89 'I' /
         @44 46*'-'; RETURN;
B: PUT @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
@45 'ELIGIBLE BRIDGES PER DISTRICT BEFORE DELETING PREVIOUSLY SELECTED'
/ ; RETURN;RUN;
  /*****************************************************************/
  /*   PRINT LIST OF ELIGIBLE BRIDGES                              */
  /*****************************************************************/
  /*
PROC SORT                              ;
  BY DIST ;

TITLE1 'SUFFICIENCY RATING EVALUATION PROGRAM - VERSION 1.0';
TITLE2 '  ';
TITLE3 'ELIGIBLE BRIDGES';
TITLE4 'SORTED BY DISTRICT';
TITLE5 ' ';
TITLE6 'M - MISSING  DATA      I -ILLEGAL DATA';
TITLE5 ' ';

PROC PRINT                     ;
*/

  /*****************************************************************/
  /*   GENERATE AND PRINT LIST OF BRIDGES WITH MISSING OR ILLEGAL DATA   */
  /*****************************************************************/
  /*
DATA MISSILL;
  SET SRDATA;
  IF SR_EST = '*';
RUN;

TITLE1 'SUFFICIENCY RATING EVALUATION PROGRAM - VERSION 1.0';
TITLE2 ' ';
TITLE3 'BRIDGE RECORDS WITH MISSING OR ILLEGAL DATA';
TITLE4 'SORTED BY DISTRICT';
TITLE5 ' ';
TITLE6 'M - MISSING DATA      I - ILLEGAL DATA';
TITLE7 ' ';

PROC PRINT;
  VAR DIST COUNTY CONTROL SECTION STRUCT RSTR W_ADT DECO SSCO SUBCO ROWI
     SCO WA DEGE UCVL AR TS TYWO INVRA LOS LUS CULVERT AWIDTH PNL
     PRW W_BDL DODRSN VCO MST TRASA SR;
  BY DIST NOTSORTED;
  PAGEBY DIST;       */
```

FREQ RPF

```
<<TEBS>>
:*********************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF,IOTO
TAG % HUM ERRMSG
CURSOR ON
@
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                            T E B S S
@
$
@
@                            (FREQ) PROGRAM
@
@
@                       PLACE 'X' TO SELECT AN OPTION.
@
@                            õ_@: ON SYSTEM
@                            õ_@: OFF SYSTEM
@
@
@                            õ_@: DELETE 8000 SERIES (X=NO)
@
@
@
@               %                                          @
$  PRESS ENTER TO SUBMIT JOB                                  PF1:TO QUIT
ENDDEF
PANEL SEND
:*********************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
:*********************************************************************
<<OK>>
E 1 255
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
```

```
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<BEGIN>>
F A4Y.FREQJCL
R 1 1
TRAP ON
FIND  /INSERT POINT FOR OFF-ON (AJJ)/
TRAP OFF
:**********************************************************************
IF TC NE 0
  RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
  DEL
  GOTO <<END>>
ENDIF
:**********************************************************************
IF P.ON EQ 'X'
  +WRITE AWS +SEQ+ 'ON'
ELSE
  +WRITE AWS +SEQ+ 'OFF'
ENDIF
:**********************************************************************
IF P.IOTO EQ 'X'
  TRAP ON
  E /ROITO='YES';/ROITO='NO';/
  TRAP OFF
  IF TC NE 0
    RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER. CANNOT FIND OITO LINE'
    DEL
    GOTO <<END>>
  ENDIF
ENDIF
:**********************************************************************
JJSUB
<<END>>
POP
RETURN
```

FREQ JCL

```
/*PRIORITY      10
//R575004B JOB (00226329,C454300),'D45 JW FREQJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=SAS
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
//WORK DD UNIT=SYSDA,SPACE=(CYL,(10),,,ROUND)
DATA _NULL_;
  /*
THIS PROGRAM CALCULATES THE FREQUENCIES FOR THE ATTRIBUTES THAT ARE
NECESSARY FOR RUNNING THE PROGRAMS DDF AND INICO. IT CREATES TWO DATA
SETS QDATON OUT OR QDATOF OUT DEPENDING OF THE CHOICE OF EITHER ON OR
OFF SYSTEMS. ONCE IS RUN IT REPLACES THE EXISTING DATA SET ON THE DISK.
IT PROMPTS THE USER WITH SCREENS FOR THE CHOICE OF EITHER ON OR OFF
SYSTEM. IT ALSO PERFORMS THE MANAGEMENT OF THE PREVIOUSLY SELECTED
PROJECTS DELETING THE ONES THAT WERE PREVIOUSLY SELECTED IN PAST PROGRAMS
IN ORDER TO CALCULATE THE FREQUENCIES.IT ALSO CHECKS IF THE PREVIOUSLY
SELECTED PROJECTS WERE ALREADY DELETED FROM THE BRINSAP DATA BASE, IN
CASE OF A POSITIVE ANSWER IT ALSO UPDATES THE DATA SET OF THE PREVIOUSLY
SELECTED PROJECTS BY DELETING THESE PROJECTS.

              WRITEN BY JOSE WEISSMANN 11/25/88

      VARIABLE
      NAME       VARIABLE DESCRIPTION
      ---------  ------------------------------------------------------
      CFRH       REHABILITATION COST, IN DOLLARS/SQ. FT.  DEFAULT IS 25.
                 USED TO ESTIMATE THE BRIDGE PROJECT COST IF MISSING.
      CFRP       REPLACEMENT COST, IN DOLLARS/SQ. FT.  DEFAULT IS 35.
                 USED TO ESTIMATE THE BRIDGE PROJECT COST IF MISSING. */

   /* CMS COMMANDS */
     /* CMS FI BRINS DISK ELIGON BRINS A;
CMS FI BRINSAP DISK ELIGOF BRINSAP A;
CMS FI OUT DISK QDATON OUT A;
CMS FI OUP DISK QDATOF OUP A;
CMS FI DON DISK PREVION DON A;
CMS FI DOF DISK PREVOFF DOF A;*/
        /*   SAS OPTIONS CHOSEN   */
                %GLOBAL ANSW ;
OPTIONS REPLACE CENTER MISSING='M' INVALIDDATA=I /** NOLABEL **/       ;
    DATA INITIAL;INPUT FALSE;CARDS;

.
   /*  PROC FSEDIT DATA=INITIAL SCREEN=TEBS.STATINI;*/
  DATA SYS;   LENGTH ONOF $ 3;
INPUT ONOF $;
CARDS; /* INSERT POINT FOR OFF-ON (AJJ) */
;
  /* PROC FSEDIT DATA=SYS SCREEN=TEBS.STATSYS;*/
DATA ANS; SET SYS;CALL SYMPUT('ANSW',ONOF);RETURN;

    /* MACRO TO UPDATE THE PREVIOUSLY SELECTED DATA SET */
     /* MACRO TO DELETE PREVIOUSLY SELECTED PROJECTS  */
   %MACRO CHOOS;
  %IF &ANSW=OFF %THEN %DO;
```

```
      /****NEXT LINE DELETES THE DISTRICT SUBSETS TO CLEAR
      SPACE IN THE TEBS LIBRARY**************/
PROC DATASETS LIBRARY=TEBS;DELETE DISTOF1-DISTOF25;
PROC SORT DATA=TEBS.ELIGOF OUT=ELIGOF; BY BRID;
    /*** NEXT LINE DELETES ELIGOF AND QDATOF TO CLEAR SPACE
  IN THE TEBS LIBRARY***************/
PROC DATASETS LIBRARY=TEBS; DELETE /*** ELIGOF**/  QDATOF;
      PROC SORT DATA=TEBS.PREVOFF;BY BRID;
      DATA TEBS.PREVOFF;MERGE ELIGOF TEBS.PREVOFF; BY BRID;
      IF FLAG='PREV' AND UPDA='UP';KEEP FLAG BRID DIST YEAR ;
      DATA QDATA; MERGE ELIGOF TEBS.PREVOFF; BY BRID;
      IF FLAG='PREV' THEN DELETE;DROP FLAG YEAR ; %END;
  %IF &ANSW=ON %THEN %DO;
      /****NEXT LINE DELETES THE DISTRICT SUBSETS TO CLEAR
      SPACE IN THE TEBS LIBRARY**************/
PROC DATASETS LIBRARY=TEBS;DELETE DISTON1-DISTON25;
      DATA OITO;ROITO='YES';RETURN; /* INSERT POINT FOR OITO (AJJ)*/
  /*  PROC FSEDIT DATA=OITO SCREEN=TEBS.EIGHT;*/
      DATA OITO;SET OITO;CALL SYMPUT('RMACR',ROITO);RETURN;
  PROC SORT DATA=TEBS.ELIGON OUT=ELIGON ;
      BY BRID;
    /*** NEXT LINE DELETES ELIGON AND QDATON TO CLEAR SPACE
  IN THE TEBS LIBRARY***************/
PROC DATASETS LIBRARY=TEBS; DELETE QDATON /***ELIGON***/  ;
      PROC SORT DATA=TEBS.PREVION;BY BRID;
      DATA TEBS.PREVION;MERGE ELIGON TEBS.PREVION; BY BRID;
      IF FLAG='PREV' AND UPDA='UP';KEEP FLAG BRID DIST YEAR ;
      DATA QDATA; MERGE ELIGON TEBS.PREVION; BY BRID;
      IF FLAG='PREV' THEN DELETE;DROP FLAG YEAR ;
      %IF &RMACR=YES %THEN %DO;
   /** NEXT STEPS CREATE A PERMANENT DATA SET FOR THE 8000 SERIES
 (ONOF) AND DELETE THOSE FROM THE ELIGIBLE SET FOR THE ON SYSTEM
      ADDED 9/11/90 BY J. WEISSMANN *****/
        DATA QDATA TEBS.EIGHT ; SET QDATA ;
           A=INT(CONTROL/1000);DROP A ;
         IF A = 8 THEN DO;        OUTPUT TEBS.EIGHT; END;
      IF A NE 8 THEN DO;          OUTPUT QDATA; END ;
    DATA TEBS.EIGHT; SET TEBS.EIGHT ;

  /*   INITIALIZE ESTIMATE FLAGS AND SCORE
    UPDATED 7/3/90 BY J. WEISSMANN *****/
    CPI_EST = ' ';   CPV_EST = ' ';   DSS_EST = ' ';
    AQ = '  ';       SCR_EST = ' ';CFRH=31;CFRP=44;

  /*   GET CONTROL-SECTION-STRUCTURE NUMBER  */
    LENGTH CSS $ 12;
    IF (CONTROL = '     ') OR (SECTION = '  ') OR (STRUCT = '    ')
      THEN  CSS = .N;
ELSE  CSS = (TRIM(LEFT(CONTROL)) || ('-') || TRIM(LEFT(SECTION)) ||
        ('-') || TRIM(LEFT(STRUCT)));

LENGTH COMM1 $ 64 COMM2 $ 80;
COMM1= ' '; COMM2= ' ';   /**INITIALIZE COMMENT FIELDS***/
    /**TABLE FOR THE CALCULATIONS OF THE PROPOSED ROADWAY WIDTH
ADDED IN 6/19/90 BY J. WEISSMANN AS PER RALPH BANKS REQUEST*****/

IF FCLASS=11 OR FCLASS=21 OR FCLASS=41 THEN DO;
```

```
    IF W_ADT < 22001 THEN PRW=38;
      IF W_ADT GE 22001 AND W_ADT < 33001 THEN PRW=56;
        IF W_ADT GE 33001 AND W_ADT < 44000 THEN PRW=68;
IF W_ADT GE 44000 THEN PRW=80;END;

    IF FCLASS=1 THEN DO;
  IF W_ADT < 10401 THEN PRW=38;
   IF W_ADT GE 10401 AND W_ADT < 15601 THEN PRW=56;
    IF W_ADT GE 15601 THEN PRW=68;END;

IF FCLASS=12 OR FCLASS=22 OR FCLASS=42 THEN DO;
    IF W_ADT < 8101 THEN PRW=38;
      IF W_ADT GE 8101 AND W_ADT < 11801 THEN PRW=56;
        IF W_ADT GE 11801 THEN PRW=68;END;

       IF FCLASS=13 OR FCLASS=23 OR FCLASS=43 OR FCLASS=2
  OR FCLASS=14 OR FCLASS=24 OR FCLASS=44 OR FCLASS=3 THEN DO;
IF W_ADT < 401 THEN PRW=34;
   IF W_ADT GE 401 AND W_ADT < 751 THEN PRW=36;
       IF W_ADT GE 751 AND W_ADT < 1501 THEN PRW=38;
     IF W_ADT GE 1501 THEN PRW=44; END;
IF FCLASS=15 OR FCLASS=25 OR FCLASS=45 OR FCLASS=4 OR FCLASS=5
   THEN DO;
     IF W_ADT < 1501 THEN PRW=30;
      IF W_ADT GE 1501 THEN PRW=44; END;

IF FCLASS=16 OR FCLASS=26 OR FCLASS=46 OR FCLASS=6 OR FCLASS<= 0
  THEN DO;
   IF W_ADT < 251 THEN PRW=24;
    IF W_ADT GE 251 AND W_ADT < 401 THEN PRW=28;
     IF W_ADT GE 401 AND W_ADT < 1501 THEN PRW=30;
       IF W_ADT GE 1501 AND W_ADT < 3001 THEN PRW=38;
   IF W_ADT GE 3001 THEN PRW=40; END;
    /*SET THE PROPOSED ROADWAY WIDTH TO THE EXISTING ROADWAY WIDTH
      IF THE CALCUALATED PROPOSED ROADWAY WIDTH IS SMALLER THAN THE
      EXISTING ROADWAY WIDTH.MODIFIED 8/9/90 BY JOSE WEISSMANN****/
  IF PRW < ROWI THEN PRW = ROWI;
  /*   CHECK IF THE COST OF PROPOSED IMPROVEMENTS (COPRI) IS MISSING
     AND IF IT IS, ESTIMATE IT DEPENDING ON THE TYPE OF WORK OF THE
     BRIDGE PROJECT.                                    ***/

    IF (COPRI <= 0)
      THEN DO;
          CPI_EST = '*';
          CPV_EST = '*';
     /***MODIFIED 8/9/90 BY JOSE WEISSMANN*****/
          IF TYWO = 311 OR TYWO = 321              /*   REPLACEMENT    */
            THEN IF (LOI > 0) AND (PRW > 0)
                  THEN CPI = LOI * PRW * CFRP;
                  ELSE CPI = 20000;
            ELSE IF (LOI > 0) AND (PRW > 0)       /* REHABILITATION  */
                  THEN CPI = LOI * PRW * CFRH;
                  ELSE CPI = 20000;
          END;
     ELSE CPI = COPRI * 1000;
CPIBU = CPI;
  /*   CALCULATE COST PER VEHICLE MODIFIED 8/10/90 AND SETS CPV TO
```

```
 MISSING IF ADT IS MISSING OR NEGATIVE*****/
   IF (W_ADT > 0) THEN CPV = ROUND(CPI/W_ADT);
                ELSE DO; CPV_EST = '*'; CPV = .  ; END;


BWR=ROWI/PRW; IF BWR > 1 THEN BWR=1;BWR=ROUND(BWR,0.01);

 /*   CALCULATE MINIMUM OF DECK, SUBSTRUCTURE, SUPERSTRUCTURE CONDITION */

   IF (DECO<=.Z) OR (SSCO<=.Z) OR (SUBCO<=.Z) OR (CPCO<=.Z)
    THEN  DSS_EST='*';

   IF (DECO<=.Z) THEN W_DECO=0;
               ELSE W_DECO=DECO;
   IF (SSCO<=.Z) THEN W_SSCO=0;
               ELSE W_SSCO=SSCO;
   IF (SUBCO<=.Z) THEN W_SUBCO=0;
                ELSE W_SUBCO=SUBCO;
   IF (CPCO<=.Z) THEN W_CPCO=9;
                ELSE W_CPCO=CPCO;
   DSS = MIN(W_DECO,W_SUBCO,W_SSCO,W_CPCO);


    /*** THIS IS TO SET THE DSS TO THE CULVERT CONDITION RATING
    IF THE STRUCTURE IS A CULVERT.MODIFIED 7/20/90 AS PER RALPH
    BANKS REQUEST BY JOSE WEISSMANN******/
 IF CULVERT > 0 THEN DO; DSS = CUCO;
   DECO = .;
     SSCO = .;
       SUBCO = .;  END;
SR=ROUND(SR);
KEEP DIST COUNTY RNUM  CSS WT CPI FX LOS ROWI  PRW W_ADT SR DECO
CUCO SSCO SUBCO CPV  DSS  BWR  YB BRID FCO CPIBU COMM1 COMM2
    W_BDL;
          %END; %END;
      %MEND CHOOS;
   DATA QDATA; SET INITIAL;RETURN;
  %CHOOS;

   /*   DATA STEP TO CALCULATE VALUES FOR THE FREQUENCIES */
  DATA QDATA BIGPROJ;
 MISSING N D;
   IF _N_=1 THEN SET SYS;
               SET QDATA;
  KEEP  CFRP CFRH YB BRID  FCO
       CPI_EST SCR_EST DSS_EST SR_EST     CPV W_ADT SR DSS BWR
       DIST COUNTY WT ROWI CPI       CPV_EST W_BDL  /*ESRLI*/  DEGE
     UCVL WA SLC SCO CONTROL  SECTION STRUCT RNUM CSS FX LOS /* PNL*/
       PRW DECO SSCO SUBCO CUCO;

 /*   INITIALIZE ESTIMATE FLAGS AND SCORE
   UPDATED 7/3/90 BY J. WEISSMANN *****/
   CPI_EST = ' ';   CPV_EST = ' ';   DSS_EST = ' ';
   AQ = '  ';       SCR_EST = ' ';CFRH=31;CFRP=44;

   /**TABLE FOR THE CALCULATIONS OF THE PROPOSED ROADWAY WIDTH
ADDED IN 6/19/90 BY J. WEISSMANN AS PER RALPH BANKS REQUEST*****/
```

```
IF FCLASS=11 OR FCLASS=21 OR FCLASS=41 THEN DO;
   IF W_ADT < 22001 THEN PRW=38;
     IF W_ADT GE 22001 AND W_ADT < 33001 THEN PRW=56;
       IF W_ADT GE 33001 AND W_ADT < 44000 THEN PRW=68;
IF W_ADT GE 44000 THEN PRW=80;END;

   IF FCLASS=1 THEN DO;
  IF W_ADT < 10401 THEN PRW=38;
   IF W_ADT GE 10401 AND W_ADT < 15601 THEN PRW=56;
    IF W_ADT GE 15601 THEN PRW=68;END;

IF FCLASS=12 OR FCLASS=22 OR FCLASS=42 THEN DO;
   IF W_ADT < 8101 THEN PRW=38;
      IF W_ADT GE 8101 AND W_ADT < 11801 THEN PRW=56;
        IF W_ADT GE 11801 THEN PRW=68;END;

       IF FCLASS=13 OR FCLASS=23 OR FCLASS=43 OR FCLASS=2
  OR FCLASS=14 OR FCLASS=24 OR FCLASS=44 OR FCLASS=3 THEN DO;
IF W_ADT < 401 THEN PRW=34;
  IF W_ADT GE 401 AND W_ADT < 751 THEN PRW=36;
      IF W_ADT GE 751 AND W_ADT < 1501 THEN PRW=38;
     IF W_ADT GE 1501 THEN PRW=44; END;
IF FCLASS=15 OR FCLASS=25 OR FCLASS=45 OR FCLASS=4 OR FCLASS=5
  THEN DO;
     IF W_ADT < 1501 THEN PRW=30;
       IF W_ADT GE 1501 THEN PRW=44; END;

IF FCLASS=16 OR FCLASS=26 OR FCLASS=46 OR FCLASS=6 OR FCLASS<= 0
  THEN DO;
  IF W_ADT < 251 THEN PRW=24;
    IF W_ADT GE 251 AND W_ADT < 401 THEN PRW=28;
     IF W_ADT GE 401 AND W_ADT < 1501 THEN PRW=30;
       IF W_ADT GE 1501 AND W_ADT < 3001 THEN PRW=38;
  IF W_ADT GE 3001 THEN PRW=40; END;
   /*SET THE PROPOSED ROADWAY WIDTH TO THE EXISTING ROADWAY WIDTH
     IF THE CALCUALATED PROPOSED ROADWAY WIDTH IS SMALLER THAN THE
     EXISTING ROADWAY WIDTH.MODIFIED 8/9/90 BY JOSE WEISSMANN****/
  IF PRW < ROWI THEN PRW = ROWI;
 /*   CHECK IF THE COST OF PROPOSED IMPROVEMENTS (COPRI) IS MISSING
    AND IF IT IS, ESTIMATE IT DEPENDING ON THE TYPE OF WORK OF THE
    BRIDGE PROJECT.                                    ***/

   IF (COPRI <= 0)
     THEN DO;
          CPI_EST = '*';
          CPV_EST = '*';
    /***MODIFIED 8/9/90 BY JOSE WEISSMANN*****/
          IF TYWO = 311 OR TYWO = 321              /*   REPLACEMENT    */
            THEN IF (LOI > 0) AND (PRW > 0)
                   THEN CPI = LOI * PRW * CFRP;
                   ELSE CPI = 20000;
            ELSE IF (LOI > 0) AND (PRW > 0)       /* REHABILITATION  */
                   THEN CPI = LOI * PRW * CFRH;
                   ELSE CPI = 20000;
          END;
     ELSE CPI = COPRI * 1000;
 /*   GET CONTROL-SECTION-STRUCTURE NUMBER  */
```

```
   LENGTH CSS $ 12;
   IF (CONTROL = '    ') OR (SECTION = '  ') OR (STRUCT = '    ')
     THEN  CSS = .N;
ELSE  CSS = (TRIM(LEFT(CONTROL)) || ('-') || TRIM(LEFT(SECTION)) ||
        ('-') || TRIM(LEFT(STRUCT)));

 /*  CALCULATE COST PER VEHICLE MODIFIED 8/10/90 AND SETS CPV TO
 MISSING IF ADT IS MISSING OR NEGATIVE*****/
   IF (W_ADT > 0) THEN CPV = ROUND(CPI/W_ADT);
               ELSE DO; CPV_EST = '*'; CPV = .  ; END;


 /*  CALCULATE THE BRIDGE WIDTH CONDITION.THIS IS AN ATTRIBUTE NOT USED
    IN THIS VERSION
    BWC = 0  —>  BRIDGE WIDTH IS VERY CRITICAL
    BWC = 1  —>  BRIDGE WIDTH IS NOT CRITICAL

   IF ((W_ADT > 750) AND  (0 < ROWI < 24)) OR
     ((750 >= W_ADT > 400) AND  (0 < ROWI < 22)) OR
     ((W_ADT <= 400)  AND  (0 < ROWI < 20))
    THEN BWC = 0;
    ELSE BWC = 1;                                    */
    /***THIS TABLES SUBSTITUTED BY NEW ONES BY RALPH BANKS REQUEST
   ON 6/19/90 BY J.WEISSMANN SEE LINES ABOVE*****/
 /*  CALCULATE THE OFF-SYSTEM BRIDGE WIDTH RATIO      */
     /****  IF ONOF='OFF' THEN DO ;*****/
     /**************************
   IF W_ADT<50 THEN BWR=ROWI/24;
   IF W_ADT>=50 AND W_ADT<400 THEN BWR=ROWI/28;
   IF W_ADT>=400 AND W_ADT<750 THEN BWR=ROWI/34;
   IF W_ADT>=750 AND W_ADT<1500 THEN BWR=ROWI/40;
   IF W_ADT>=1500 THEN BWR=ROWI/44;
   IF BWR>1 THEN BWR=1.000;
   BWR=ROUND(BWR,0.001); END;**********/

 /*  CALCULATE THE ON-SYSTEM BRIDGE WIDTH RATIO      */
     /*****************
   IF ONOF='ON' THEN DO ;
   IF W_ADT<50 THEN BWR=ROWI/28;
   IF W_ADT>=50 AND W_ADT<400 THEN BWR=ROWI/28;
   IF W_ADT>=400 AND W_ADT<750 THEN BWR=ROWI/34;
   IF W_ADT>=750 AND W_ADT<1500 THEN BWR=ROWI/38;
   IF W_ADT>=1500 AND W_ADT<3000 THEN BWR=ROWI/40;
   IF W_ADT>=3000 THEN BWR=ROWI/44;
   IF BWR>1 THEN BWR=1.000;
   BWR=ROUND(BWR,0.001);END;*******/

BWR=ROWI/PRW; IF BWR > 1 THEN BWR=1;BWR=ROUND(BWR,0.001);

 /*  CALCULATE MINIMUM OF DECK, SUBSTRUCTURE, SUPERSTRUCTURE CONDITION */

   IF (DECO<=.Z) OR (SSCO<=.Z) OR (SUBCO<=.Z) OR (CPCO<=.Z)
     THEN  DSS_EST='*';

   IF (DECO<=.Z) THEN W_DECO=0;
               ELSE W_DECO=DECO;
   IF (SSCO<=.Z) THEN W_SSCO=0;
```

```
                ELSE W_SSCO=SSCO;
    IF (SUBCO<=.Z) THEN W_SUBCO=0;
                ELSE W_SUBCO=SUBCO;
    IF (CPCO<=.Z) THEN W_CPCO=9;
                ELSE W_CPCO=CPCO;
    DSS = MIN(W_DECO,W_SUBCO,W_SSCO,W_CPCO);


     /*** THIS IS TO SET THE DSS TO THE CULVERT CONDITION RATING
     IF THE STRUCTURE IS A CULVERT.MODIFIED 7/20/90 AS PER RALPH
     BANKS REQUEST BY JOSE WEISSMANN******/
  IF CULVERT > 0 THEN DO; DSS = CUCO;
    DECO = .;
      SSCO = .;
        SUBCO = .;  END;
SR=ROUND(SR);

  /*    CALCULATE STRUCTURAL SAFETY INDEX.THIS ATTRIBUTE IS NOT USED IN
      THIS VERSION;   /*

  /* IF SUBCO>.I THEN SUBWT=9; ELSE SUBWT=0;
IF SSCO>.I THEN SSWT=9; ELSE SSWT=0;
IF DECO>.I THEN DKWT=8; ELSE DKWT=0;
IF CPCO>.I THEN CPWT=5; ELSE CPWT=0;
IF ARCO>.I THEN ARWT=5; ELSE ARWT=0;
IF RWCO>.I THEN RWWT=4; ELSE RWWT=0;

SUMWT=SUBWT+SSWT+DKWT+CPWT+ARWT+RWWT;

SUBWT=SUBWT/SUMWT;
SSWT=SSWT/SUMWT;
DKWT=DKWT/SUMWT;
CPWT=CPWT/SUMWT;
ARWT=ARWT/SUMWT;
RWWT=RWWT/SUMWT;

IF SUBCO=9 OR SUBCO=8 OR SUBCO=7 THEN SUBCOM=3;
   ELSE IF SUBCO=6 OR SUBCO=5 THEN SUBCOM=2;
   ELSE IF SUBCO=4 OR SUBCO=3 THEN SUBCOM=1;
   ELSE SUBCOM=0;


IF SSCO=9 OR SSCO=8 OR SSCO=7 THEN SSCOM=3;
   ELSE IF SSCO=6 OR SSCO=5 THEN SSCOM=2;
   ELSE IF SSCO=4 OR SSCO=3 THEN SSCOM=1;
   ELSE SSCOM=0;


IF DECO=9 OR DECO=8 OR DECO=7 THEN DECOM=3;
   ELSE IF DECO=6 OR DECO=5 THEN DECOM=2;
   ELSE IF DECO=4 OR DECO=3 THEN DECOM=1;
   ELSE DECOM=0;


IF CPCO=9 OR CPCO=8 OR CPCO=7 THEN CPCOM=3;
   ELSE IF CPCO=6 OR CPCO=5 THEN CPCOM=2;
   ELSE IF CPCO=4 OR CPCO=3 THEN CPCOM=1;
```

```
   ELSE CPCOM=0;


IF ARCO=9 OR ARCO=8 OR ARCO=7 THEN ARCOM=3;
   ELSE IF ARCO=6 OR ARCO=5 THEN ARCOM=2;
   ELSE IF ARCO=4 OR ARCO=3 THEN ARCOM=1;
   ELSE ARCOM=0;


IF RWCO=9 OR RWCO=8 OR RWCO=7 THEN RWCOM=3;
   ELSE IF RWCO=6 OR RWCO=5 THEN RWCOM=2;
   ELSE IF RWCO=4 OR RWCO=3 THEN RWCOM=1;
   ELSE RWCOM=0;


SSI=ROUND(SUBWT*SUBCOM + SSWT*SSCOM + DKWT*DECOM + CPWT*CPCOM +
        ARWT*ARCOM + RWWT*RWCOM)*3;  */


  /* CALCULATE THE GEOMETRIC SAFETY INDEX THIS ATTRIBUTE IS NOT USED IN
   THIS VERSION OF FREQ

    IF TRASA<=.1 THEN TRGR=1;
   ELSE DO;
    D1=INT(TRASA/1000);
    D2=INT((TRASA-(1000*D1))/100);
    D3=INT((TRASA-(1000*D1)-(100*D2))/10);
    D4=INT(TRASA-(1000*D1)-(100*D2)-(10*D3));

    TRGR=(D1+D2+D3+D4)*9/4;
   END;

ROWI=ROUND(ROWI);

IF ROWI>=AWIDTH THEN TRWD=9;
   ELSE TRWD=0;

GSI=ROUND(0.375*DEGE + 0.0475*AR + 0.5475*TRGR + 0.0475*TRWD);

OUTPUT;   */


   /***NEXT LINES DELETE PROJECTS WITH COST GREATER OR EQUAL
  TO 5,000,000 AS PER RALPH BANKS REQUEST 4/12/90 *****/
 IF CPI GE 5000000 THEN DO;
OUTPUT BIGPROJ;DELETE; END;
OUTPUT QDATA;

  /*   DETERMINE THE FREQUENCIES FOR THE ELIGIBLE SET   */
PROC FREQ DATA=QDATA;
    TABLES CPV / OUT=CPVP NOPRINT;
    TABLES W_ADT /OUT=W_ADTP NOPRINT;
    TABLES SR  / OUT=SRP NOPRINT;
    TABLES DSS / OUT=DSSP NOPRINT;
    TABLES BWR / OUT=BWRP NOPRINT;
```

```
   /* TABLES SSI / OUT=SSIP NOPRINT;
    TABLES GSI / OUT=GSIP NOPRINT;
    TABLES W_BDL / OUT=BDLP NOPRINT;
    TABLES CPI / OUT=CPIP NOPRINT;
    TABLES SCO / OUT=SCOP NOPRINT;
    TABLES DEGE / OUT=DEGEP NOPRINT;
    TABLES SLC / OUT=SLCP NOPRINT;
    TABLES WA / OUT=WAP NOPRINT;
    TABLES UCVL / OUT=UCVLP NOPRINT;
    TABLES ESRLI / OUT=ESRLIP NOPRINT;  */


  /*   ASSIGN PERCENTILE VALUES TO THE FREQUENCIES       */

DATA TEBS.CPVP; SET CPVP;
DATA CPVP;
    SET CPVP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    CPVPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.W_ADTP; SET W_ADTP;
DATA W_ADTP;
    SET W_ADTP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    ADTPTL=ROUND(PERCTOT);
RETURN;
DATA TEBS.SRP; SET SRP;
DATA SRP;
    SET SRP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    SRPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.DSSP; SET DSSP;
DATA DSSP;
    SET DSSP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    DSSPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.BWRP;SET BWRP;

DATA BWRP;
    SET BWRP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    BWRPTL=ROUND(100-PERCTOT);
RETURN;

  /* DATA SSIP;
    SET SSIP;
    DROP COUNT PERCENT PERCTOT;
    SSIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;
```

```
DATA GSIP;
     SET GSIP;
     DROP COUNT PERCENT PERCTOT;
     GSIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA BDLP;
     SET BDLP;
     DROP COUNT PERCENT PERCTOT;
     BDLPTL=ROUND(PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA CPIP;
     SET CPIP;
     DROP COUNT PERCENT PERCTOT;
     CPIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA SCOP;
     SET SCOP;
     DROP COUNT PERCENT PERCTOT;
     SCOPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA DEGEP;
     SET DEGEP;
     DROP COUNT PERCENT PERCTOT;
     DEGEPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA UCVLP;
     SET UCVLP;
     DROP COUNT PERCENT PERCTOT;
     UCVLPTL=ROUND(100-PERCTOT);
     IF UCVL<=.Z THEN UCVLPTL=0;
     PERCTOT + PERCENT;
RETURN;

DATA SLCP;
     SET SLCP;
     DROP COUNT PERCENT PERCTOT;
     SLCPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA WAP;
     SET WAP;
     DROP COUNT PERCENT PERCTOT;
     WAPTL=ROUND(100-PERCTOT);
     IF WA<=.Z THEN WAPTL=0;
     PERCTOT + PERCENT;
RETURN;
```

```
DATA ESRLIP;
     SET ESRLIP;
     DROP COUNT PERCENT PERCTOT;
     ESRLIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;    */

  /*   MERGE THE PERCENTILES FOR EACH OF THE VARIABLES INTO THE WORKING
     DATA SET.                                                    */

PROC SORT DATA=QDATA;
     BY CPV;
PROC SORT DATA=CPVP;
     BY CPV;
DATA QDATA;
     MERGE QDATA CPVP;
     BY CPV;
  IF CPV <= .Z THEN CPVPTL = 50; /**ADDED 8/10/90***/
PROC SORT DATA=QDATA;
     BY W_ADT;
PROC SORT DATA=W_ADTP;
     BY W_ADT;
DATA QDATA;
     MERGE QDATA W_ADTP;
     BY W_ADT;
    /***IF W_ADT IS MISSING SET ADTPTL TO 50 ****/
     IF W_ADT <= .Z THEN ADTPTL=50;

PROC SORT DATA=QDATA;
     BY SR;
PROC SORT DATA=SRP;
     BY SR;
DATA QDATA;
     MERGE QDATA SRP;
     BY SR;
   IF SR <= .Z THEN SRPTL = 50; /***ADDED 8/10/90***/
PROC SORT DATA=QDATA;
     BY DSS;
PROC SORT DATA=DSSP;
     BY DSS;
DATA QDATA;
     MERGE QDATA DSSP;
     BY DSS;
   IF DSS <= .Z THEN DSSPTL = 50; /***ADDED 8/10/90****/

PROC SORT DATA=QDATA;
     BY BWR;
PROC SORT DATA=BWRP;
     BY BWR;
DATA QDATA;
     MERGE QDATA BWRP;
     BY BWR;
  /* IF BWR IS MISSING SET BWRPTL TO 50  */
     IF BWR <= .Z THEN BWRPTL=50;

   /* NEXT STEPS NOT USED IN THIS VERSION */
  /* PROC SORT DATA=QDATA;
```

```
    BY SSI;
PROC SORT DATA=SSIP;
    BY SSI;
DATA QDATA;
    MERGE QDATA SSIP;
    BY SSI;

PROC SORT DATA=QDATA;
    BY GSI;
PROC SORT DATA=GSIP;
    BY GSI;
DATA QDATA;
    MERGE QDATA GSIP;
    BY GSI;

PROC SORT DATA=QDATA;
    BY W_BDL;
PROC SORT DATA=BDLP;
    BY W_BDL;
DATA QDATA;
    MERGE QDATA BDLP;
    BY W_BDL;

PROC SORT DATA=QDATA;
    BY CPI;
PROC SORT DATA=CPIP;
    BY CPI;
DATA QDATA;
    MERGE QDATA CPIP;
    BY CPI;

PROC SORT DATA=QDATA;
    BY SCO;
PROC SORT DATA=SCOP;
    BY SCO;
DATA QDATA;
    MERGE QDATA SCOP;
    BY SCO;

PROC SORT DATA=QDATA;
    BY DEGE;
PROC SORT DATA=DEGEP;
    BY DEGE;
DATA QDATA;
    MERGE QDATA DEGEP;
    BY DEGE;

PROC SORT DATA=QDATA;
    BY UCVL;
PROC SORT DATA=UCVLP;
    BY UCVL;
DATA QDATA;
    MERGE QDATA UCVLP;
    BY UCVL;

PROC SORT DATA=QDATA;
    BY SLC;
```

```
PROC SORT DATA=SLCP;
    BY SLC;
DATA QDATA;
    MERGE QDATA SLCP;
    BY SLC;

PROC SORT DATA=QDATA;
    BY WA;
PROC SORT DATA=WAP;
    BY WA;
DATA QDATA;
    MERGE QDATA WAP;
    BY WA;

PROC SORT DATA=QDATA;
    BY ESRLI;
PROC SORT DATA=ESRLIP;
    BY ESRLI;
DATA QDATA;
    MERGE QDATA ESRLIP;
    BY ESRLI;          */


 /*    CALCULATE SERVICE INDICES  ESSENTIAL SERVICE, COST-EFFECTIVE
   SERVICE, AND FUNCTIONAL SERVICE.
     THIS ATTRIBUTES ARE NOT USED IN THIS VERSION OF THE MODEL */
 /* DATA QDATA;
    SET QDATA;
    CRSUME=ADTPTL+BDLPTL;
    CRSUMC=ADTPTL+CPIPTL;
    CRSUMF=SCOPTL+DEGEPTL+UCVLPTL+SLCPTL+WAPTL+ESRLIPTL;
RETURN;

PROC FREQ DATA=QDATA;
    TABLES CRSUME / OUT=ESIP NOPRINT;
    TABLES CRSUMC / OUT=CSIP NOPRINT;
    TABLES CRSUMF / OUT=FSIP NOPRINT;

DATA ESIP;
    SET ESIP;
    KEEP ESI CRSUME;
    ESI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
RETURN;

DATA CSIP;
    SET CSIP;
    KEEP CSI CRSUMC;
    CSI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
RETURN;

DATA FSIP;
    SET FSIP;
    KEEP FSI CRSUMF;
    FSI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
```

```
RETURN;

PROC SORT DATA=ESIP;
    BY CRSUME;
PROC SORT DATA=QDATA;
    BY CRSUME;
DATA QDATA;
    MERGE QDATA ESIP;
    BY CRSUME;

PROC SORT DATA=CSIP;
    BY CRSUMC;
PROC SORT DATA=QDATA;
    BY CRSUMC;
DATA QDATA;
    MERGE QDATA CSIP;
    BY CRSUMC;

PROC SORT DATA=FSIP;
    BY CRSUMF;
PROC SORT DATA=QDATA;
    BY CRSUMF;
DATA QDATA;
    MERGE QDATA FSIP;
    BY CRSUMF;
RETURN;

PROC FREQ DATA=QDATA;
    TABLES ESI / OUT=ESIP2 NOPRINT;

PROC FREQ DATA=QDATA;
    TABLES CSI / OUT=CSIP2 NOPRINT;

PROC FREQ DATA=QDATA;
    TABLES FSI / OUT=FSIP2 NOPRINT;

DATA ESIP2;
    SET ESIP2;
    KEEP ESI ESIPTL;
    ESIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA CSIP2;
    SET CSIP2;
    KEEP CSI CSIPTL;
    CSIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA FSIP2;
    SET FSIP2;
    KEEP FSI FSIPTL;
    FSIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;
PROC SORT DATA=ESIP2;
```

```
    BY ESI;
PROC SORT DATA=QDATA;
    BY ESI;
DATA QDATA;
    MERGE QDATA ESIP2;
    BY ESI;

PROC SORT DATA=CSIP2;
    BY CSI;
PROC SORT DATA=QDATA;
    BY CSI;
DATA QDATA;
    MERGE QDATA CSIP2;
    BY CSI;


PROC SORT DATA=FSIP2;
    BY FSI;
PROC SORT DATA=QDATA;
    BY FSI;
DATA QDATA;
    MERGE QDATA FSIP2;
    BY FSI;
RETURN;       */

     /* MACRO FOR OUTPUTING TO THE CORRECT DATA SET */

  %MACRO CHOIC       ;
  %IF &ANSW=ON %THEN %DO;
  DATA TEBS.QDATON;
      SET QDATA;
KEEP DIST COUNTY RNUM  CSS WT CPI FX LOS ROWI /*PNL*/ PRW W_ADT SR DECO
CUCO SSCO SUBCO CPV  DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL YB BRID
FCO /* SSI GSI CSI ESI FSI SSIPTL GSIPTL CSIPTL ESIPTL FSIPTL*/ W_BDL;
   DATA TEBS.DISTON1 TEBS.DISTON2 TEBS.DISTON3 TEBS.DISTON4 TEBS.DISTON5
        TEBS.DISTON6 TEBS.DISTON7 TEBS.DISTON8 TEBS.DISTON9 TEBS.DISTON10
        TEBS.DISTON11 TEBS.DISTON12 TEBS.DISTON13 TEBS.DISTON14
        TEBS.DISTON15 TEBS.DISTON16 TEBS.DISTON17 TEBS.DISTON18
        TEBS.DISTON19 TEBS.DISTON20 TEBS.DISTON21 TEBS.DISTON23
        TEBS.DISTON24 TEBS.DISTON25;  SET QDATA;
LENGTH COMM1 $ 64 COMM2 $ 80;  CPIBU = CPI;
COMM1= ' '; COMM2= ' ';   /***INITIALIZE COMMENT FIELDS***/
   IF DIST=1 THEN OUTPUT TEBS.DISTON1;IF DIST=2 THEN OUTPUT TEBS.DISTON2;
   IF DIST=3 THEN OUTPUT TEBS.DISTON3;IF DIST=4 THEN OUTPUT TEBS.DISTON4;
   IF DIST=5 THEN OUTPUT TEBS.DISTON5;IF DIST=6 THEN OUTPUT TEBS.DISTON6;
   IF DIST=7 THEN OUTPUT TEBS.DISTON7;IF DIST=8 THEN OUTPUT TEBS.DISTON8;
 IF DIST=9 THEN OUTPUT TEBS.DISTON9;IF DIST=10 THEN OUTPUT TEBS.DISTON10;
   IF DIST=11 THEN OUTPUT TEBS.DISTON11;
   IF DIST=12 THEN OUTPUT TEBS.DISTON12;
   IF DIST=13 THEN OUTPUT TEBS.DISTON13;
   IF DIST=14 THEN OUTPUT TEBS.DISTON14;
   IF DIST=15 THEN OUTPUT TEBS.DISTON15;
   IF DIST=16 THEN OUTPUT TEBS.DISTON16;
   IF DIST=17 THEN OUTPUT TEBS.DISTON17;
   IF DIST=18 THEN OUTPUT TEBS.DISTON18;
   IF DIST=19 THEN OUTPUT TEBS.DISTON19;
   IF DIST=20 THEN OUTPUT TEBS.DISTON20;
```

```
    IF DIST=21 THEN OUTPUT TEBS.DISTON21;
    IF DIST=23 THEN OUTPUT TEBS.DISTON23;
    IF DIST=24 THEN OUTPUT TEBS.DISTON24;
    IF DIST=25 THEN OUTPUT TEBS.DISTON25;
KEEP DIST COUNTY RNUM  CSS WT CPI FX LOS ROWI /*PNL*/ PRW W_ADT SR DECO
CUCO SSCO SUBCO CPV  DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL YB BRID
FCO   /* SSI GSI CSI ESI FSI SSIPTL GSIPTL CSIPTL ESIPTL FSIPTL*/ W_BDL
COMM1 COMM2 CPIBU;
    %END;

   %IF &ANSW=OFF %THEN %DO;
   DATA TEBS.QDATOF;
        SET QDATA;
KEEP DIST COUNTY RNUM  CSS WT CPI FX LOS ROWI /*PNL*/ PRW W_ADT SR DECO
CUCO SSCO SUBCO CPV  DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL YB BRID
FCO   /* SSI GSI CSI ESI FSI SSIPTL GSIPTL CSIPTL ESIPTL FSIPTL*/ W_BDL;
    DATA TEBS.DISTOF1 TEBS.DISTOF2 TEBS.DISTOF3 TEBS.DISTOF4 TEBS.DISTOF5
         TEBS.DISTOF6 TEBS.DISTOF7 TEBS.DISTOF8 TEBS.DISTOF9 TEBS.DISTOF10
         TEBS.DISTOF11 TEBS.DISTOF12 TEBS.DISTOF13 TEBS.DISTOF14
         TEBS.DISTOF15 TEBS.DISTOF16 TEBS.DISTOF17 TEBS.DISTOF18
         TEBS.DISTOF19 TEBS.DISTOF20 TEBS.DISTOF21 TEBS.DISTOF23
         TEBS.DISTOF24 TEBS.DISTOF25; SET QDATA;
LENGTH COMM1 $ 64 COMM2 $ 80; CPIBU = CPI;
COMM1= ' '; COMM2= ' ';   /**INITIALIZE COMMENT FIELDS***/
    IF DIST=1 THEN OUTPUT TEBS.DISTOF1;IF DIST=2 THEN OUTPUT TEBS.DISTOF2;
    IF DIST=3 THEN OUTPUT TEBS.DISTOF3;IF DIST=4 THEN OUTPUT TEBS.DISTOF4;
    IF DIST=5 THEN OUTPUT TEBS.DISTOF5;IF DIST=6 THEN OUTPUT TEBS.DISTOF6;
    IF DIST=7 THEN OUTPUT TEBS.DISTOF7;IF DIST=8 THEN OUTPUT TEBS.DISTOF8;
 IF DIST=9 THEN OUTPUT TEBS.DISTOF9;IF DIST=10 THEN OUTPUT TEBS.DISTOF10;
    IF DIST=11 THEN OUTPUT TEBS.DISTOF11;
    IF DIST=12 THEN OUTPUT TEBS.DISTOF12;
    IF DIST=13 THEN OUTPUT TEBS.DISTOF13;
    IF DIST=14 THEN OUTPUT TEBS.DISTOF14;
    IF DIST=15 THEN OUTPUT TEBS.DISTOF15;
    IF DIST=16 THEN OUTPUT TEBS.DISTOF16;
    IF DIST=17 THEN OUTPUT TEBS.DISTOF17;
    IF DIST=18 THEN OUTPUT TEBS.DISTOF18;
    IF DIST=19 THEN OUTPUT TEBS.DISTOF19;
    IF DIST=20 THEN OUTPUT TEBS.DISTOF20;
    IF DIST=21 THEN OUTPUT TEBS.DISTOF21;
    IF DIST=23 THEN OUTPUT TEBS.DISTOF23;
    IF DIST=24 THEN OUTPUT TEBS.DISTOF24;
    IF DIST=25 THEN OUTPUT TEBS.DISTOF25;
KEEP DIST COUNTY RNUM  CSS WT CPI FX LOS ROWI /*PNL*/ PRW W_ADT SR DECO
CUCO SSCO SUBCO CPV  DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL YB BRID
FCO   /* SSI GSI CSI ESI FSI SSIPTL GSIPTL CSIPTL ESIPTL FSIPTL*/ W_BDL
COMM1 COMM2 CPIBU;
    %END;
%MEND CHOIC ;
  PROC SUMMARY DATA=QDATA;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM1 N=CPIC1 SUM=CPIS1;
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;
DATA DISLIST;INPUT DIST;CARDS;
1
2
```

```
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
DATA FINAL;MERGE DISLIST TABM1;
          BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;END;

KEEP DIST _TYPE_ CPIC1 CPIS1 CPIP1 TOT1;


OPTIONS PAGESIZE=60            ;


  DATA _NULL_;FILE PRINT HEADER=B;
     IF _N_=1 THEN SET SYS;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC DOLLAR14.;
     IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;

     RETAIN TOTN TOTC TOTP ;DELETE; END;
       IF DIST=1 THEN PUT @44 46*'-' /
           @44 'I' @60 'ELIGIBLE BRIDGES AND COST' @89 'I' /
           @44 46*'-' /
       @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'COST' @81 'I'
       @83 '%' @89 'I' /
       @44 46*'-';

    PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
       @83 CPIP1 @89 'I' /
       @44 46*'-';
     IF DIST=25 THEN
    PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
        @83 TOTP @89 'I' /
         @44 46*'-'; RETURN;
B: PUT @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
       @54 'AND REHABILITATION PROGRAM'/
       @52 'ELIGIBLE BRIDGES PER DISTRICT STATISTICS' /  ; RETURN;
            %CHOIC  ;
```

```
TITLE
'THESE ARE THE TABLES OF THE FREQUENCY PERCENTILES FOR THE ATTRIBUTES' ;
DATA TEBS.CPVP;
     SET TEBS.CPVP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
     CUMFREQ+COUNT;
     PERCTOT + PERCENT;
     CPVPTL=ROUND(100-PERCTOT);
 IF CPV <= .Z THEN CPVPTL = 50;  /**ADDED 8/10/90 **/
RETURN;
PROC PRINT DATA=TEBS.CPVP;
VAR CPV COUNT CUMFREQ PERCENT PERCTOT CPVPTL;
DATA TEBS.W_ADTP;
     SET TEBS.W_ADTP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
     CUMFREQ+COUNT;
     PERCTOT + PERCENT;
     ADTPTL=ROUND(PERCTOT);
     IF W_ADT <= .Z THEN ADTPTL=50;
RETURN;
PROC PRINT DATA=TEBS.W_ADTP;
VAR W_ADT COUNT CUMFREQ PERCENT PERCTOT ADTPTL;
DATA TEBS.SRP;
     SET TEBS.SRP;
  LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
     CUMFREQ+COUNT;
     PERCTOT + PERCENT;
     SRPTL=ROUND(100-PERCTOT);
  IF SR <= .Z THEN SRPTL = 50;   /** ADDED 8/10/90 ***/
RETURN;
PROC PRINT DATA=TEBS.SRP;
VAR SR COUNT CUMFREQ PERCENT PERCTOT SRPTL;
DATA TEBS.DSSP;
     SET TEBS.DSSP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
     CUMFREQ+COUNT;
     PERCTOT + PERCENT;
     DSSPTL=ROUND(100-PERCTOT);
  IF DSS <= .Z THEN DSSPTL = 50;   /**ADDED 8/10/90***/
RETURN;
PROC PRINT DATA=TEBS.DSSP;
VAR DSS COUNT CUMFREQ PERCENT PERCTOT DSSPTL;

DATA TEBS.BWRP;
     SET TEBS.BWRP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
     CUMFREQ+COUNT;
     PERCTOT + PERCENT;
     BWRPTL=ROUND(100-PERCTOT);
     IF BWR <= .Z THEN BWRPTL=50;  /**ADDED 8/10/90 **/
RETURN;
PROC PRINT DATA=TEBS.BWRP;
VAR BWR COUNT CUMFREQ PERCENT PERCTOT BWRPTL;RUN;
TITLE
'THIS IS THE LIST OF PROJECTS THAT HAVE A COST GREATER OR EQUAL TO
 5,000,000';
PROC PRINT DATA=BIGPROJ;  RUN;
```

FREQ2 RPF

```
<<TEBS>>
:*****************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF,IOTO
TAG % HUM ERRMSG
CURSOR ON
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$
@
@                        (FREQ2) PROGRAM
@                    (INCLUDES PREVIOUSLY SELECTED)
@
@                     PLACE 'X' TO SELECT AN OPTION.
@
@                          õ_@: ON SYSTEM
@                          õ_@: OFF SYSTEM
@
@
@                          õ_@: DELETE 8000 SERIES (X=NO)
@
@
@
@              %                                          @
$  PRESS ENTER TO SUBMIT JOB                                PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
:*****************************************************************
<<OK>>
E 1 255
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
```

```
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<BEGIN>>
F A4Y.FREQJCL2
R 1 1
TRAP ON
FIND  /INSERT POINT FOR OFF-ON (AJJ)/
TRAP OFF
:**********************************************************************
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
:**********************************************************************
IF P.ON EQ 'X'
   +WRITE AWS +SEQ+ 'ON'
ELSE
   +WRITE AWS +SEQ+ 'OFF'
ENDIF
:**********************************************************************
IF P.IOTO EQ 'X'
   TRAP ON
   E /ROITO='YES';/ROITO='NO';/
   TRAP OFF
   IF TC NE 0
      RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER. CANNOT FIND OITO LINE'
      DEL
      GOTO <<END>>
   ENDIF
ENDIF
:**********************************************************************
JJSUB
<<END>>
POP
RETURN
```

FREQ2 JCL

```
/*PRIORITY      10
//R575004B JOB (00226329,C454300),'D45 JW FREQJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=SAS
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
//WORK DD UNIT=SYSDA,SPACE=(CYL,(10),,,ROUND)
DATA _NULL_;
  /*THIS VERSION OF FREQ IS USED TO PREPARE DATA FOR DDF2.
   DDF2 IS A PROGRAM THAT CALCULATES DISTRICT DISTRIBUTION FACTORS
WITHOUT DELETING OR USING THE PREVIOUSLY SELECTED STRUCTURES.
 WRITTEN BY JOSE WEISSMANN FROM THE CENTER FOR TRANSPORTATION RESEARCH
 AS PER RALPH BANKS (SDHPPT D-5) 9/13/90

THIS PROGRAM CALCULATES THE FREQUENCIES FOR THE ATTRIBUTES THAT ARE
NECESSARY FOR RUNNING THE PROGRAM  DDF2 . IT CREATES TWO DATA
SETS QDAON2 TEBS OR QDAOF2 TEBS DEPENDING OF THE CHOICE OF EITHER ON OR
OFF SYSTEMS. ONCE IS RUN IT REPLACES THE EXISTING DATA SETS ON THE DISK.
IT PROMPTS THE USER WITH SCREENS FOR THE CHOICE OF EITHER ON OR OFF
SYSTEM.

              WRITEN BY JOSE WEISSMANN   9/13/90

      VARIABLE
      NAME       VARIABLE DESCRIPTION
      ---------  ------------------------------------------------------
      CFRH        REHABILITATION COST, IN DOLLARS/SQ. FT.  DEFAULT IS 25.
                 USED TO ESTIMATE THE BRIDGE PROJECT COST IF MISSING.
      CFRP        REPLACEMENT COST, IN DOLLARS/SQ. FT.  DEFAULT IS 35.
                 USED TO ESTIMATE THE BRIDGE PROJECT COST IF MISSING. */

   /* CMS COMMANDS */
     /* CMS FI BRINS DISK ELIGON BRINS A;
CMS FI BRINSAP DISK ELIGOF BRINSAP A;
CMS FI OUT DISK QDATON OUT A;
CMS FI OUP DISK QDATOF OUP A;
CMS FI DON DISK PREVION DON A;
CMS FI DOF DISK PREVOFF DOF A;*/
        /*   SAS OPTIONS CHOSEN   */
                %GLOBAL ANSW ;
OPTIONS REPLACE CENTER MISSING='M' INVALIDDATA=I /** NOLABEL **/
            MPRINT;
    DATA INITIAL;INPUT FALSE;CARDS;
.
   /*  PROC FSEDIT DATA=INITIAL SCREEN=TEBS.STATINI;*/
  DATA SYS;   LENGTH ONOF $ 3;
INPUT ONOF $;
CARDS; /* INSERT POINT FOR OFF-ON (AJJ) */
;
  /* PROC FSEDIT DATA=SYS SCREEN=TEBS.STATSYS;*/
DATA ANS; SET SYS;CALL SYMPUT('ANSW',ONOF);RETURN;

      %MACRO CHOOS;
    %IF &ANSW=OFF %THEN %DO;
```

```
   DATA QDATA ; SET TEBS.ELIGOF  ; %END;
%IF &ANSW=ON %THEN %DO;
    DATA QDATA; SET TEBS.ELIGON;
      DATA OITO;ROITO='YES';RETURN; /* INSERT POINT FOR OITO (AJJ)*/
  /*  PROC FSEDIT DATA=OITO SCREEN=TEBS.EIGHT;*/
      DATA OITO;SET OITO;CALL SYMPUT('RMACR',ROITO);RUN;
      %IF &RMACR=YES %THEN %DO;
   /** NEXT STEPS DELETE THE 8000 SERIES
 (ONOF) FROM THE ELIGIBLE SET FOR THE ON SYSTEM******/
       DATA QDATA  ; SET QDATA ;
          A=INT(CONTROL/1000);
        IF A NE 8            ;DROP A ;RUN;

          %END; %END;
      %MEND CHOOS;
   DATA QDATA; SET INITIAL;RETURN;
  %CHOOS;

   /*  DATA STEP TO CALCULATE VALUES FOR THE FREQUENCIES */
  DATA QDATA BIGPROJ;
  MISSING N D;
    IF _N_=1 THEN SET SYS;
                SET QDATA;
   KEEP             BRID
                                    CPV W_ADT SR DSS BWR
        DIST              CPI

                        ;

  /*  INITIALIZE ESTIMATE FLAGS AND SCORE
    UPDATED 7/3/90 BY J. WEISSMANN *****/
    CPI_EST = ' ';   CPV_EST = ' ';   DSS_EST = ' ';
    AQ = '  ';       SCR_EST = ' ';CFRH=31;CFRP=44;

    /**TABLE FOR THE CALCULATIONS OF THE PROPOSED ROADWAY WIDTH
ADDED IN 6/19/90 BY J. WEISSMANN AS PER RALPH BANKS REQUEST*****/

IF FCLASS=11 OR FCLASS=21 OR FCLASS=41 THEN DO;
    IF W_ADT < 22001 THEN PRW=38;
      IF W_ADT GE 22001 AND W_ADT < 33001 THEN PRW=56;
        IF W_ADT GE 33001 AND W_ADT < 44000 THEN PRW=68;
IF W_ADT GE 44000 THEN PRW=80;END;

   IF FCLASS=1 THEN DO;
  IF W_ADT < 10401 THEN PRW=38;
   IF W_ADT GE 10401 AND W_ADT < 15601 THEN PRW=56;
    IF W_ADT GE 15601 THEN PRW=68;END;

IF FCLASS=12 OR FCLASS=22 OR FCLASS=42 THEN DO;
    IF W_ADT < 8101 THEN PRW=38;
      IF W_ADT GE 8101 AND W_ADT < 11801 THEN PRW=56;
        IF W_ADT GE 11801 THEN PRW=68;END;

       IF FCLASS=13 OR FCLASS=23 OR FCLASS=43 OR FCLASS=2
  OR FCLASS=14 OR FCLASS=24 OR FCLASS=44 OR FCLASS=3 THEN DO;
IF W_ADT < 401 THEN PRW=34;
  IF W_ADT GE 401 AND W_ADT < 751 THEN PRW=36;
```

```
      IF W_ADT GE 751 AND W_ADT < 1501 THEN PRW=38;
     IF W_ADT GE 1501 THEN PRW=44; END;
IF FCLASS=15 OR FCLASS=25 OR FCLASS=45 OR FCLASS=4 OR FCLASS=5
  THEN DO;
     IF W_ADT < 1501 THEN PRW=30;
      IF W_ADT GE 1501 THEN PRW=44; END;

IF FCLASS=16 OR FCLASS=26 OR FCLASS=46 OR FCLASS=6 OR FCLASS<= 0
 THEN DO;
  IF W_ADT < 251 THEN PRW=24;
    IF W_ADT GE 251 AND W_ADT < 401 THEN PRW=28;
     IF W_ADT GE 401 AND W_ADT < 1501 THEN PRW=30;
       IF W_ADT GE 1501 AND W_ADT < 3001 THEN PRW=38;
  IF W_ADT GE 3001 THEN PRW=40; END;
   /*SET THE PROPOSED ROADWAY WIDTH TO THE EXISTING ROADWAY WIDTH
     IF THE CALCUALATED PROPOSED ROADWAY WIDTH IS SMALLER THAN THE
     EXISTING ROADWAY WIDTH.MODIFIED 8/9/90 BY JOSE WEISSMANN****/
  IF PRW < ROWI THEN PRW = ROWI;
 /*   CHECK IF THE COST OF PROPOSED IMPROVEMENTS (COPRI) IS MISSING
    AND IF IT IS, ESTIMATE IT DEPENDING ON THE TYPE OF WORK OF THE
    BRIDGE PROJECT.                                    ***/

   IF (COPRI <= 0)
    THEN DO;
        CPI_EST = '*';
        CPV_EST = '*';
   /***MODIFIED 8/9/90 BY JOSE WEISSMANN*****/
        IF TYWO = 311 OR TYWO = 321              /*   REPLACEMENT    */
          THEN IF (LOI > 0) AND (PRW > 0)
                THEN CPI = LOI * PRW * CFRP;
                ELSE CPI = 20000;
          ELSE IF (LOI > 0) AND (PRW > 0)       /* REHABILITATION  */
                THEN CPI = LOI * PRW * CFRH;
                ELSE CPI = 20000;
        END;
    ELSE CPI = COPRI * 1000;


 /*   CALCULATE COST PER VEHICLE MODIFIED 8/10/90 AND SETS CPV TO
 MISSING IF ADT IS MISSING OR NEGATIVE*****/
  IF (W_ADT > 0) THEN CPV = ROUND(CPI/W_ADT);
              ELSE DO; CPV_EST = '*'; CPV = .  ; END;


 /*   CALCULATE THE BRIDGE WIDTH CONDITION.THIS IS AN ATTRIBUTE NOT USED
    IN THIS VERSION
    BWC = 0  —>  BRIDGE WIDTH IS VERY CRITICAL
    BWC = 1  —>  BRIDGE WIDTH IS NOT CRITICAL

  IF ((W_ADT > 750) AND  (0 < ROWI < 24)) OR
     ((750 >= W_ADT > 400) AND  (0 < ROWI < 22)) OR
     ((W_ADT <= 400)  AND  (0 < ROWI < 20))
    THEN BWC = 0;
    ELSE BWC = 1;                                 */
    /***THIS TABLES SUBSTITUTED BY NEW ONES BY RALPH BANKS REQUEST
  ON 6/19/90 BY J.WEISSMANN SEE LINES ABOVE*****/
 /*  CALCULATE THE OFF-SYSTEM BRIDGE WIDTH RATIO      */
```

```
      /**** IF ONOF='OFF' THEN DO ;*****/
      /*************************
   IF W_ADT<50 THEN BWR=ROWI/24;
   IF W_ADT>=50 AND W_ADT<400 THEN BWR=ROWI/28;
   IF W_ADT>=400 AND W_ADT<750 THEN BWR=ROWI/34;
   IF W_ADT>=750 AND W_ADT<1500 THEN BWR=ROWI/40;
   IF W_ADT>=1500 THEN BWR=ROWI/44;
   IF BWR>1 THEN BWR=1.000;
   BWR=ROUND(BWR,0.001); END;**********/

 /* CALCULATE THE ON-SYSTEM BRIDGE WIDTH RATIO      */
     /*****************
   IF ONOF='ON' THEN DO ;
   IF W_ADT<50 THEN BWR=ROWI/28;
   IF W_ADT>=50 AND W_ADT<400 THEN BWR=ROWI/28;
   IF W_ADT>=400 AND W_ADT<750 THEN BWR=ROWI/34;
   IF W_ADT>=750 AND W_ADT<1500 THEN BWR=ROWI/38;
   IF W_ADT>=1500 AND W_ADT<3000 THEN BWR=ROWI/40;
   IF W_ADT>=3000 THEN BWR=ROWI/44;
   IF BWR>1 THEN BWR=1.000;
   BWR=ROUND(BWR,0.001);END;*******/

BWR=ROWI/PRW; IF BWR > 1 THEN BWR=1;BWR=ROUND(BWR,0.001);

 /*   CALCULATE MINIMUM OF DECK, SUBSTRUCTURE, SUPERSTRUCTURE CONDITION */

   IF (DECO<=.Z) OR (SSCO<=.Z) OR (SUBCO<=.Z) OR (CPCO<=.Z)
     THEN  DSS_EST='*';

   IF (DECO<=.Z) THEN W_DECO=0;
               ELSE W_DECO=DECO;
   IF (SSCO<=.Z) THEN W_SSCO=0;
               ELSE W_SSCO=SSCO;
   IF (SUBCO<=.Z) THEN W_SUBCO=0;
                ELSE W_SUBCO=SUBCO;
   IF (CPCO<=.Z) THEN W_CPCO=9;
                ELSE W_CPCO=CPCO;
   DSS = MIN(W_DECO,W_SUBCO,W_SSCO,W_CPCO);


    /*** THIS IS TO SET THE DSS TO THE CULVERT CONDITION RATING
    IF THE STRUCTURE IS A CULVERT.MODIFIED 7/20/90 AS PER RALPH
    BANKS REQUEST BY JOSE WEISSMANN******/
  IF CULVERT > 0 THEN DO; DSS = CUCO;
   DECO = .;
     SSCO = .;
       SUBCO = .;  END;
SR=ROUND(SR);

 /*   CALCULATE STRUCTURAL SAFETY INDEX.THIS ATTRIBUTE IS NOT USED IN
    THIS VERSION;   /*

 /* IF SUBCO>.I THEN SUBWT=9; ELSE SUBWT=0;
IF SSCO>.I THEN SSWT=9; ELSE SSWT=0;
IF DECO>.I THEN DKWT=8; ELSE DKWT=0;
IF CPCO>.I THEN CPWT=5; ELSE CPWT=0;
IF ARCO>.I THEN ARWT=5; ELSE ARWT=0;
```

```
IF RWCO>.I THEN RWWT=4; ELSE RWWT=0;

SUMWT=SUBWT+SSWT+DKWT+CPWT+ARWT+RWWT;

SUBWT=SUBWT/SUMWT;
SSWT=SSWT/SUMWT;
DKWT=DKWT/SUMWT;
CPWT=CPWT/SUMWT;
ARWT=ARWT/SUMWT;
RWWT=RWWT/SUMWT;

IF SUBCO=9 OR SUBCO=8 OR SUBCO=7 THEN SUBCOM=3;
   ELSE IF SUBCO=6 OR SUBCO=5 THEN SUBCOM=2;
   ELSE IF SUBCO=4 OR SUBCO=3 THEN SUBCOM=1;
   ELSE SUBCOM=0;


IF SSCO=9 OR SSCO=8 OR SSCO=7 THEN SSCOM=3;
   ELSE IF SSCO=6 OR SSCO=5 THEN SSCOM=2;
   ELSE IF SSCO=4 OR SSCO=3 THEN SSCOM=1;
   ELSE SSCOM=0;


IF DECO=9 OR DECO=8 OR DECO=7 THEN DECOM=3;
   ELSE IF DECO=6 OR DECO=5 THEN DECOM=2;
   ELSE IF DECO=4 OR DECO=3 THEN DECOM=1;
   ELSE DECOM=0;


IF CPCO=9 OR CPCO=8 OR CPCO=7 THEN CPCOM=3;
   ELSE IF CPCO=6 OR CPCO=5 THEN CPCOM=2;
   ELSE IF CPCO=4 OR CPCO=3 THEN CPCOM=1;
   ELSE CPCOM=0;


IF ARCO=9 OR ARCO=8 OR ARCO=7 THEN ARCOM=3;
   ELSE IF ARCO=6 OR ARCO=5 THEN ARCOM=2;
   ELSE IF ARCO=4 OR ARCO=3 THEN ARCOM=1;
   ELSE ARCOM=0;


IF RWCO=9 OR RWCO=8 OR RWCO=7 THEN RWCOM=3;
   ELSE IF RWCO=6 OR RWCO=5 THEN RWCOM=2;
   ELSE IF RWCO=4 OR RWCO=3 THEN RWCOM=1;
   ELSE RWCOM=0;


SSI=ROUND(SUBWT*SUBCOM + SSWT*SSCOM + DKWT*DECOM + CPWT*CPCOM +
        ARWT*ARCOM + RWWT*RWCOM)*3;  */


  /* CALCULATE THE GEOMETRIC SAFETY INDEX THIS ATTRIBUTE IS NOT USED IN
   THIS VERSION OF FREQ

     IF TRASA<=.I THEN TRGR=1;
   ELSE DO;
    D1=INT(TRASA/1000);
```

```
    D2=INT((TRASA-(1000*D1))/100);
    D3=INT((TRASA-(1000*D1)-(100*D2))/10);
    D4=INT(TRASA-(1000*D1)-(100*D2)-(10*D3));

     TRGR=(D1+D2+D3+D4)*9/4;
   END;

ROWI=ROUND(ROWI);

IF ROWI>=AWIDTH THEN TRWD=9;
   ELSE TRWD=0;

GSI=ROUND(0.375*DEGE + 0.0475*AR + 0.5475*TRGR + 0.0475*TRWD);

OUTPUT;  */



   /***NEXT LINES DELETE PROJECTS WITH COST GREATER OR EQUAL
  TO 5,000,000 AS PER RALPH BANKS REQUEST 4/12/90 *****/
 IF CPI GE 5000000 THEN DO;
OUTPUT BIGPROJ;DELETE; END;
OUTPUT QDATA;

  /*   DETERMINE THE FREQUENCIES FOR THE ELIGIBLE SET   */
PROC FREQ DATA=QDATA;
    TABLES CPV / OUT=CPVP NOPRINT;
    TABLES W_ADT /OUT=W_ADTP NOPRINT;
    TABLES SR  / OUT=SRP NOPRINT;
    TABLES DSS / OUT=DSSP NOPRINT;
    TABLES BWR / OUT=BWRP NOPRINT;
   /* TABLES SSI / OUT=SSIP NOPRINT;
    TABLES GSI / OUT=GSIP NOPRINT;
    TABLES W_BDL / OUT=BDLP NOPRINT;
    TABLES CPI / OUT=CPIP NOPRINT;
    TABLES SCO / OUT=SCOP NOPRINT;
    TABLES DEGE / OUT=DEGEP NOPRINT;
    TABLES SLC / OUT=SLCP NOPRINT;
    TABLES WA / OUT=WAP NOPRINT;
    TABLES UCVL / OUT=UCVLP NOPRINT;
    TABLES ESRLI / OUT=ESRLIP NOPRINT;  */


  /*   ASSIGN PERCENTILE VALUES TO THE FREQUENCIES       */

DATA TEBS.CPVP; SET CPVP;
DATA CPVP;
    SET CPVP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    CPVPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.W_ADTP; SET W_ADTP;
DATA W_ADTP;
    SET W_ADTP;
    DROP COUNT PERCENT PERCTOT;
```

```
    PERCTOT + PERCENT;
    ADTPTL=ROUND(PERCTOT);
RETURN;
DATA TEBS.SRP; SET SRP;
DATA SRP;
    SET SRP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    SRPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.DSSP; SET DSSP;
DATA DSSP;
    SET DSSP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    DSSPTL=ROUND(100-PERCTOT);
RETURN;
DATA TEBS.BWRP;SET BWRP;

DATA BWRP;
    SET BWRP;
    DROP COUNT PERCENT PERCTOT;
    PERCTOT + PERCENT;
    BWRPTL=ROUND(100-PERCTOT);
RETURN;

 /* DATA SSIP;
    SET SSIP;
    DROP COUNT PERCENT PERCTOT;
    SSIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA GSIP;
    SET GSIP;
    DROP COUNT PERCENT PERCTOT;
    GSIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA BDLP;
    SET BDLP;
    DROP COUNT PERCENT PERCTOT;
    BDLPTL=ROUND(PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA CPIP;
    SET CPIP;
    DROP COUNT PERCENT PERCTOT;
    CPIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA SCOP;
    SET SCOP;
    DROP COUNT PERCENT PERCTOT;
```

```
    SCOPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA DEGEP;
    SET DEGEP;
    DROP COUNT PERCENT PERCTOT;
    DEGEPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA UCVLP;
    SET UCVLP;
    DROP COUNT PERCENT PERCTOT;
    UCVLPTL=ROUND(100-PERCTOT);
    IF UCVL<=.Z THEN UCVLPTL=0;
    PERCTOT + PERCENT;
RETURN;

DATA SLCP;
    SET SLCP;
    DROP COUNT PERCENT PERCTOT;
    SLCPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;

DATA WAP;
    SET WAP;
    DROP COUNT PERCENT PERCTOT;
    WAPTL=ROUND(100-PERCTOT);
    IF WA<=.Z THEN WAPTL=0;
    PERCTOT + PERCENT;
RETURN;

DATA ESRLIP;
    SET ESRLIP;
    DROP COUNT PERCENT PERCTOT;
    ESRLIPTL=ROUND(100-PERCTOT);
    PERCTOT + PERCENT;
RETURN;    */

 /*  MERGE THE PERCENTILES FOR EACH OF THE VARIABLES INTO THE WORKING
    DATA SET.                                                    */

PROC SORT DATA=QDATA;
    BY CPV;
PROC SORT DATA=CPVP;
    BY CPV;
DATA QDATA;
    MERGE QDATA CPVP;
    BY CPV;
 IF CPV <= .Z THEN CPVPTL = 50; /**ADDED 8/10/90***/
PROC SORT DATA=QDATA;
    BY W_ADT;
PROC SORT DATA=W_ADTP;
    BY W_ADT;
DATA QDATA;
```

```
    MERGE QDATA W_ADTP;
    BY W_ADT;
   /***IF W_ADT IS MISSING SET ADTPTL TO 50 ****/
    IF W_ADT <= .Z THEN ADTPTL=50;

PROC SORT DATA=QDATA;
    BY SR;
PROC SORT DATA=SRP;
    BY SR;
DATA QDATA;
    MERGE QDATA SRP;
    BY SR;
  IF SR <= .Z THEN SRPTL = 50; /***ADDED 8/10/90***/
PROC SORT DATA=QDATA;
    BY DSS;
PROC SORT DATA=DSSP;
    BY DSS;
DATA QDATA;
    MERGE QDATA DSSP;
    BY DSS;
  IF DSS <= .Z THEN DSSPTL = 50; /***ADDED 8/10/90****/

PROC SORT DATA=QDATA;
    BY BWR;
PROC SORT DATA=BWRP;
    BY BWR;
DATA QDATA;
    MERGE QDATA BWRP;
    BY BWR;
 /* IF BWR IS MISSING SET BWRPTL TO 50  */
    IF BWR <= .Z THEN BWRPTL=50;

  /* NEXT STEPS NOT USED IN THIS VERSION */
 /* PROC SORT DATA=QDATA;
    BY SSI;
PROC SORT DATA=SSIP;
    BY SSI;
DATA QDATA;
    MERGE QDATA SSIP;
    BY SSI;

PROC SORT DATA=QDATA;
    BY GSI;
PROC SORT DATA=GSIP;
    BY GSI;
DATA QDATA;
    MERGE QDATA GSIP;
    BY GSI;

PROC SORT DATA=QDATA;
    BY W_BDL;
PROC SORT DATA=BDLP;
    BY W_BDL;
DATA QDATA;
    MERGE QDATA BDLP;
    BY W_BDL;
```

```
PROC SORT DATA=QDATA;
     BY CPI;
PROC SORT DATA=CPIP;
     BY CPI;
DATA QDATA;
     MERGE QDATA CPIP;
     BY CPI;

PROC SORT DATA=QDATA;
     BY SCO;
PROC SORT DATA=SCOP;
     BY SCO;
DATA QDATA;
     MERGE QDATA SCOP;
     BY SCO;

PROC SORT DATA=QDATA;
     BY DEGE;
PROC SORT DATA=DEGEP;
     BY DEGE;
DATA QDATA;
     MERGE QDATA DEGEP;
     BY DEGE;

PROC SORT DATA=QDATA;
     BY UCVL;
PROC SORT DATA=UCVLP;
     BY UCVL;
DATA QDATA;
     MERGE QDATA UCVLP;
     BY UCVL;

PROC SORT DATA=QDATA;
     BY SLC;
PROC SORT DATA=SLCP;
     BY SLC;
DATA QDATA;
     MERGE QDATA SLCP;
     BY SLC;

PROC SORT DATA=QDATA;
     BY WA;
PROC SORT DATA=WAP;
     BY WA;
DATA QDATA;
     MERGE QDATA WAP;
     BY WA;

PROC SORT DATA=QDATA;
     BY ESRLI;
PROC SORT DATA=ESRLIP;
     BY ESRLI;
DATA QDATA;
     MERGE QDATA ESRLIP;
     BY ESRLI;          */
```

```
 /*    CALCULATE SERVICE INDICES  ESSENTIAL SERVICE, COST-EFFECTIVE
   SERVICE, AND FUNCTIONAL SERVICE.
     THIS ATTRIBUTES ARE NOT USED IN THIS VERSION OF THE MODEL */
 /* DATA QDATA;
    SET QDATA;
    CRSUME=ADTPTL+BDLPTL;
    CRSUMC=ADTPTL+CPIPTL;
    CRSUMF=SCOPTL+DEGEPTL+UCVLPTL+SLCPTL+WAPTL+ESRLIPTL;
RETURN;

PROC FREQ DATA=QDATA;
    TABLES CRSUME / OUT=ESIP NOPRINT;
    TABLES CRSUMC / OUT=CSIP NOPRINT;
    TABLES CRSUMF / OUT=FSIP NOPRINT;

DATA ESIP;
    SET ESIP;
    KEEP ESI CRSUME;
    ESI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
RETURN;

DATA CSIP;
    SET CSIP;
    KEEP CSI CRSUMC;
    CSI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
RETURN;

DATA FSIP;
    SET FSIP;
    KEEP FSI CRSUMF;
    FSI=ROUND(9*(100-PERCTOT)/100,1);
    PERCTOT + PERCENT;
RETURN;

PROC SORT DATA=ESIP;
    BY CRSUME;
PROC SORT DATA=QDATA;
    BY CRSUME;
DATA QDATA;
    MERGE QDATA ESIP;
    BY CRSUME;

PROC SORT DATA=CSIP;
    BY CRSUMC;
PROC SORT DATA=QDATA;
    BY CRSUMC;
DATA QDATA;
    MERGE QDATA CSIP;
    BY CRSUMC;


PROC SORT DATA=FSIP;
    BY CRSUMF;
PROC SORT DATA=QDATA;
    BY CRSUMF;
```

```
DATA QDATA;
     MERGE QDATA FSIP;
     BY CRSUMF;
RETURN;

PROC FREQ DATA=QDATA;
     TABLES ESI / OUT=ESIP2 NOPRINT;

PROC FREQ DATA=QDATA;
     TABLES CSI / OUT=CSIP2 NOPRINT;

PROC FREQ DATA=QDATA;
     TABLES FSI / OUT=FSIP2 NOPRINT;

DATA ESIP2;
     SET ESIP2;
     KEEP ESI ESIPTL;
     ESIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA CSIP2;
     SET CSIP2;
     KEEP CSI CSIPTL;
     CSIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

DATA FSIP2;
     SET FSIP2;
     KEEP FSI FSIPTL;
     FSIPTL=ROUND(100-PERCTOT);
     PERCTOT + PERCENT;
RETURN;

PROC SORT DATA=ESIP2;
     BY ESI;
PROC SORT DATA=QDATA;
     BY ESI;
DATA QDATA;
     MERGE QDATA ESIP2;
     BY ESI;

PROC SORT DATA=CSIP2;
     BY CSI;
PROC SORT DATA=QDATA;
     BY CSI;
DATA QDATA;
     MERGE QDATA CSIP2;
     BY CSI;


PROC SORT DATA=FSIP2;
     BY FSI;
PROC SORT DATA=QDATA;
     BY FSI;
DATA QDATA;
```

```
    MERGE QDATA FSIP2;
    BY FSI;
RETURN;       */


    /* MACRO FOR OUTPUTING TO THE CORRECT DATA SET */

  %MACRO CHOIC       ;
  %IF &ANSW=ON %THEN %DO;
  DATA TEBS.QDAON2;
      SET QDATA;
KEEP DIST CPI                                          W_ADT SR
          CPV   DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL  BRID;

   %END;

  %IF &ANSW=OFF %THEN %DO;
  DATA TEBS.QDAOF2;
      SET QDATA;
KEEP DIST                  CPI                         W_ADT SR
           CPV  DSS  BWR ADTPTL SRPTL DSSPTL CPVPTL BWRPTL   BRID;
   %END;
%MEND CHOIC ;
 PROC SUMMARY DATA=QDATA;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM1 N=CPIC1 SUM=CPIS1;
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;
DATA DISLIST;INPUT DIST;CARDS;
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
DATA FINAL;MERGE DISLIST TABM1;
        BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;END;
```

```
KEEP DIST _TYPE_ CPIC1 CPIS1 CPIP1 TOT1;


OPTIONS PAGESIZE=60            ;


  DATA _NULL_;FILE PRINT HEADER=B;
     IF _N_=1 THEN SET SYS;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC DOLLAR14.;
     IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;

     RETAIN TOTN TOTC TOTP ;DELETE; END;
       IF DIST=1 THEN PUT @44 46*'-' /
          @44 'I' @60 'ELIGIBLE BRIDGES AND COST' @89 'I' /
          @44 46*'-' /
       @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'COST' @81 'I'
       @83 '%' @89 'I' /
       @44 46*'-';

   PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
      @83 CPIP1 @89 'I' /
      @44 46*'-';
     IF DIST=25 THEN
   PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
       @83 TOTP @89 'I' /
        @44 46*'-'; RETURN;
B: PUT @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
  @44 'AND REHABILITATION PROGRAM (WITH PREVIOUSLY SELECTED PROJECTS)'/
      @52 'ELIGIBLE BRIDGES PER DISTRICT STATISTICS' /  ; RETURN;
           %CHOIC  ;
TITLE
'THESE ARE THE TABLES OF THE FREQUENCY PERCENTILES FOR THE ATTRIBUTES
(INCLUDES PREVIOUSLY SELECTED PROJECTS)';
DATA TEBS.CPVP;
    SET TEBS.CPVP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
    CUMFREQ+COUNT;
    PERCTOT + PERCENT;
    CPVPTL=ROUND(100-PERCTOT);
 IF CPV <= .Z THEN CPVPTL = 50;  /**ADDED 8/10/90 **/
RETURN;
PROC PRINT DATA=TEBS.CPVP;
VAR CPV COUNT CUMFREQ PERCENT PERCTOT CPVPTL;
DATA TEBS.W_ADTP;
    SET TEBS.W_ADTP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
    CUMFREQ+COUNT;
    PERCTOT + PERCENT;
    ADTPTL=ROUND(PERCTOT);
    IF W_ADT <= .Z THEN ADTPTL=50;
RETURN;
PROC PRINT DATA=TEBS.W_ADTP;
VAR W_ADT COUNT CUMFREQ PERCENT PERCTOT ADTPTL;
DATA TEBS.SRP;
    SET TEBS.SRP;
  LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
    CUMFREQ+COUNT;
```

```
    PERCTOT + PERCENT;
    SRPTL=ROUND(100-PERCTOT);
  IF SR <= .Z THEN SRPTL = 50;   /** ADDED 8/10/90 ***/
RETURN;
PROC PRINT DATA=TEBS.SRP;
VAR SR COUNT CUMFREQ PERCENT PERCTOT SRPTL;
DATA TEBS.DSSP;
    SET TEBS.DSSP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
    CUMFREQ+COUNT;
    PERCTOT + PERCENT;
    DSSPTL=ROUND(100-PERCTOT);
  IF DSS <= .Z THEN DSSPTL = 50;   /**ADDED 8/10/90***/
RETURN;
PROC PRINT DATA=TEBS.DSSP;
VAR DSS COUNT CUMFREQ PERCENT PERCTOT DSSPTL;

DATA TEBS.BWRP;
    SET TEBS.BWRP;
LABEL COUNT= 'FREQ.' PERCTOT= 'CUM PCT';
    CUMFREQ+COUNT;
    PERCTOT + PERCENT;
    BWRPTL=ROUND(100-PERCTOT);
    IF BWR <= .Z THEN BWRPTL=50;  /**ADDED 8/10/90 **/
RETURN;
PROC PRINT DATA=TEBS.BWRP;
VAR BWR COUNT CUMFREQ PERCENT PERCTOT BWRPTL;RUN;
TITLE
'THIS IS THE LIST OF PROJECTS THAT HAVE A COST GREATER OR EQUAL TO
 5,000,000';
PROC PRINT DATA=BIGPROJ;  RUN;
```

DDF RPF

```
<<DDF>>
:*****************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF,BUDGET
TAG % HUM ERRMSG
CURSOR ON
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                            T E B S S
@
$
@        THIS PROGRAM CALCULATES BUDGET DISTRIBUTION FACTORS USING
@                 WEIGHTED AVERAGE SCORING TECHNIQUE.
$                          (DDF) PROGRAM
@
@                      PLACE 'X' TO SELECT AN OPTION.
@
@                           õ_@: ON SYSTEM
@                           õ_@: OFF SYSTEM
@
@
@                    õ_150000000@: BUDGET (NUMBERS ONLY)
@
@
@
@              %                                          @
$  PRESS ENTER TO CONTINUE                                   PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
:*****************************************************************
<<OK>>
E 1 255
LET L1=LPAD(TRIM(LTRIM(P.BUDGET,'_'),'_'),'0')
IF CONFORM(L1,'N') NE 1
   LET P.ERRMSG = 'ERROR IN BUDGET AMOUNT, MUST BE NUMERIC ONLY..'
```

```
   PANEL RESEND CURSOR P.BUDGET
   GOTO <<BACK>>
ENDIF
IF L1 EQ 0
   LET P.ERRMSG = 'PLEASE ENTER BUDGET AMOUNT..'
   PANEL RESEND CURSOR P.BUDGET
   GOTO <<BACK>>
ENDIF
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<BEGIN>>
F  A4Y.DDFJCL
R 1 1
TRAP ON
FIND  /INSERT POINT BUDGET (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
IF P.ON EQ 'X'
   +WRITE AWS +SEQ+ "|L1|' ON'
ELSE
   +WRITE AWS +SEQ+ "|L1|' OFF'
ENDIF
:**********************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM N11,N12,N13,N14,N15
TAG õ HUM N21,N22,N23,N24,N25
TAG õ HUM N31,N32,N33,N34,N35
TAG õ HUM N41,N42,N43,N44,N45
TAG õ HUM N51,N52,N53,N54,N55
TAG õ HUM N61,N62,N63,N64,N65
TAG õ HUM N71,N72,N73,N74,N75
TAG % HUM ERRMSG
CURSOR N11
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                              T E B S S
@
$
@        THIS PROGRAM CALCULATES BUDGET DISTRIBUTION FACTORS USING
@                  WEIGHTED AVERAGE SCORING TECHNIQUE.
$                            (DDF) PROGRAM
@
```

```
@                METH   WCPV   WADT   WSR    WDSS   WBWR
@                 1    õ0.20@ õ0.20@ õ0.20@ õ0.20@ õ0.20@
@                 2    õ0.30@ õ0.10@ õ0.20@ õ0.20@ õ0.20@
@                 3    õ0.20@ õ0.30@ õ0.10@ õ0.20@ õ0.20@
@                 4    õ0.20@ õ0.20@ õ0.30@ õ0.10@ õ0.20@
@                 5    õ0.20@ õ0.20@ õ0.20@ õ0.30@ õ0.10@
@                 6    õ0.10@ õ0.20@ õ0.20@ õ0.20@ õ0.30@
@                 7    õ0.15@ õ0.10@ õ0.25@ õ0.25@ õ0.25@
@
@
@            %                                          @
$ PRESS ENTER TO CONTINUE                                  PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
TRAP ON
FIND /INSERT POINT WEIGHTS (AJJ)/
TRAP OFF
IF TC NE 0
  RESPONSE 'ERROR IN FINDING WEIGHT CARD IN DDFJCL.'
  GOTO <<END>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
  GOTO <<END>>
ENDIF
:*****************************************************************
<<BEGIN1>>
LET P1=SEQ
LET L1='P.N'
LET L2=1  :DOWN
LOOP 7 TIMES
  LET L3=1  :ACROSS
  LET L6=0  :LINE ACROSS MUST ADD TO 1
  LOOP 5 TIMES
    LET L4=L1|L2|L3
    +LET L5=+L4+
    LET L5=TRIM(LTRIM(L5,'_'),'_')
    IF (INDEX(L5,'.') EQ 0)
      <<ERROR>>
       LET P.ERRMSG='FORMAT FOR WEIGHTS IS X.XX'
       +PANEL RESEND CURSOR +L4+
       GOTO <<BEGIN1>>
    ENDIF
    IF INDEX(L5,'.') NE 2
      GOTO <<ERROR>>
    ENDIF
    IF INDEX(L5,'.',INDEX(L5,'.')+1) GT 0
      GOTO <<ERROR>>
    ENDIF
   +LET +L4+=L5
   LET L6=L6+SUBSTR(L5,1,1)*100+SUBSTR(L5,3,2)*1
   LET L3=L3+1
  ENDLOOP
  IF L6 NE 100
     LET P.ERRMSG='THE WEIGHTS ACROSS MUST ADD TO 1.00'
     +PANEL RESEND CURSOR +L1|L2|'1'+
     GOTO <<BEGIN1>>
```

```
   ENDIF
   LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L2=1  :DOWN
LOOP 7 TIMES
   LET L5=''
   LET L3=1  :ACROSS
   LOOP 5 TIMES
      LET L4=L1|L2|L3
      +LET L5=L5|' '|+L4+
     LET L3=L3+1
   ENDLOOP
   +WRITE AWS +P1+ L5
   LET P1=P1+1
   LET L2=L2+1
ENDLOOP
:*****************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ANSW,A1,A2,A3,A4,A5
TAG % HUM ERRMSG
CURSOR ANSW
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$
@          DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE õ___@ (YES/NO)
@
$                          (DDF) PROGRAM
@
@
@                PROJECTS LESS OR EQUAL THAN AQCPV:õ_________@
@                PROJECTS MORE OR EQUAL THAN AQADT:õ_________@
@                PROJECTS LESS OR EQUAL THAN AQSR :õ_________@
@                PROJECTS LESS OR EQUAL THAN AQDSS:õ_________@
@                PROJECTS LESS OR EQUAL THAN AQBWR:õ_________@
@
@
@
@
@              %                                        @
$  PRESS ENTER TO SUBMIT JOB                              PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<BACK2>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
```

```
  GOTO <<END>>
ENDIF
:*****************************************************************
LET P.ANSW=TRIM(LTRIM(P.ANSW,'_'),'_')
IF (P.ANSW EQ 'YES') OR (P.ANSW EQ 'NO')
  GOTO <<XXX>>
ENDIF
LET P.ERRMSG='ENTRY MUST YES OR NO.'
PANEL RESEND CURSOR P.ANSW
GOTO <<BACK2>>
:*****************************************************************
<<XXX>>
LET L1='P.A'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   LET L5=TRIM(LTRIM(L5,'0'),'0')
   LET L6=INDEX(L5,'.')
   IF L6 NE 0
       LET L5=MODIFY(L5,'0',L6)
   ENDIF
   IF (CONFORM(L5,'I') NE 1) AND (L5 NE '')
      LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
      +PANEL RESEND CURSOR +L4+
      GOTO <<BACK2>>
   ENDIF
   IF L6 NE 0
       LET L5=MODIFY(L5,'.',L6)
   ENDIF
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L1='P.A'
LET L2=1
LET L5=P.ANSW|' '
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
      +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*****************************************************************
TRAP ON
FIND /INSERT POINT AUTO-QUAL (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING WEIGHT CARD IN DDFJCL.'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ L5
JJSUB
:*****************************************************************
```

```
<<END>>
POP
RETURN
```

DDF JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW DDFJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*ROUTE PUNCH N9R82
//SASE  EXEC SASEXTR
//FT71F001 DD SYSOUT=B,HOLD=YES,DEST=N9R82
//FT06F001 DD DUMMY
/*JOBPARM CARDS=0,LINES=1,TIME=1
//TEBS DD DSN=D45.SAS.OUT2,DISP=SHR
GOPTIONS DEVICE=CAL1051 HSIZE=7.5 VSIZE=10  BORDER
      COLORS=(BLACK RED BLUE GREEN) NOTEXT82;
DATA _NULL_;
  /* SAS PROGRAM TO CALCULATE BUDGET DISTRIBUTION FACTORS. IT NEEDS A
DATA SET WITH THE PROJECT PERCENTILES NAMED QDATON.OUT */

  /* CMS FI PROJ DISK TEXAS PROJ Z;
CMS FI OUP DISK QDATON OUP Z;
CMS FI OUT DISK QDATOF OUT J;  */
    OPTIONS MISSING= M REPLACE;
   /* DATA INITIAL;INPUT FALSE;CARDS;
.
PROC FSEDIT DATA=INITIAL SCREEN=TEBS.INI;*/
  DATA BUDGET;
FORMAT BUDGET DOLLAR14. ;INFORMAT BUDGET COMMA. ;
INPUT BUDGET ONOF $; LENGTH ONOF $ 3;
CARDS; /*INSERT POINT BUDGET (AJJ)*/
;
   /* PROC FSEDIT DATA=BUDGET SCREEN=TEBS.BUDG;*/
  DATA BUDGET; SET BUDGET; CALL SYMPUT('SYS',ONOF);RETURN;

DATA WEIGHT;
FORMAT WCPV1 WADT1 WSR1 WDSS1 WBWR1
       WCPV2 WADT2 WSR2 WDSS2 WBWR2
       WCPV3 WADT3 WSR3 WDSS3 WBWR3
       WCPV4 WADT4 WSR4 WDSS4 WBWR4
       WCPV5 WADT5 WSR5 WDSS5 WBWR5
       WCPV6 WADT6 WSR6 WDSS6 WBWR6
       WCPV7 WADT7 WSR7 WDSS7 WBWR7 4.2 ;
INPUT WCPV1 WADT1 WSR1 WDSS1 WBWR1
      WCPV2 WADT2 WSR2 WDSS2 WBWR2
      WCPV3 WADT3 WSR3 WDSS3 WBWR3
      WCPV4 WADT4 WSR4 WDSS4 WBWR4
      WCPV5 WADT5 WSR5 WDSS5 WBWR5
      WCPV6 WADT6 WSR6 WDSS6 WBWR6
      WCPV7 WADT7 WSR7 WDSS7 WBWR7;

CARDS;       /* INSERT POINT WEIGHTS (AJJ) */
;

   /*  PROC FSEDIT DATA=WEIGHT SCREEN=TEBS.WT;*/

DATA AUTOQ;
INPUT ANSW $ AQCPV AQADT AQSR AQDSS AQBWR;
CARDS;       /* INSERT POINT AUTO-QUAL (AJJ) */
;
```

```
  /* PROC FSEDIT DATA=AUTOQ SCREEN=TEBS.AQ;*/

  /* MACRO TO CHOOSE THE CORRECT DATA SET GENERATED BY THE FREQ MODULE */
 %MACRO CHOOS;
  %IF &SYS=ON %THEN TEBS.QDATON;
  %IF &SYS=OFF %THEN TEBS.QDATOF;
    %MEND CHOOS;

 DATA QDATA;
 KEEP DIST COUNTY CSS SCORE1 SCORE2 SCORE3 SCORE4 SCORE5 SCORE6
      SCORE7 AQ CPI;
  IF _N_=1 THEN SET WEIGHT;
  IF _N_=1 THEN SET AUTOQ ;
  IF _N_=1 THEN SET BUDGET;
 LENGTH AQ $ 2;
 SET %CHOOS;
 IF ANSW = 'NO' THEN  DO;AQ='1'; GO TO OK ; END;
 IF AQCPV NE . THEN DO;IF CPV<=AQCPV THEN AQ='AQ';END;
 IF AQADT NE . THEN DO;IF W_ADT>=AQADT THEN AQ='AQ';END;
 IF AQSR  NE . THEN DO;IF SR <=AQSR THEN AQ='AQ';END;
 IF AQDSS NE . THEN DO;IF DSS<=AQDSS THEN AQ='AQ';END;
 IF AQBWR NE . THEN DO;IF BWR<=AQBWR THEN AQ='AQ';END;
OK:SCORE1=0.0;
 SCORE1= SCORE1 + WCPV1*CPVPTL
              + WADT1*ADTPTL
              + WSR1 *SRPTL
              + WDSS1*DSSPTL
              + WBWR1*BWRPTL;

 SCORE2=0.0;
 SCORE2= SCORE2 + WCPV2*CPVPTL
              + WADT2*ADTPTL
              + WSR2 *SRPTL
              + WDSS2*DSSPTL
              + WBWR2*BWRPTL;

 SCORE3=0.0;
 SCORE3= SCORE3 + WCPV3*CPVPTL
              + WADT3*ADTPTL
              + WSR3 *SRPTL
              + WDSS3*DSSPTL
              + WBWR3*BWRPTL;

 SCORE4=0.0;
 SCORE4= SCORE4 + WCPV4*CPVPTL
              + WADT4*ADTPTL
              + WSR4 *SRPTL
              + WDSS4*DSSPTL
              + WBWR4*BWRPTL;

 SCORE5=0.0;
 SCORE5= SCORE5 + WCPV5*CPVPTL
              + WADT5*ADTPTL
              + WSR5 *SRPTL
              + WDSS5*DSSPTL
              + WBWR5*BWRPTL;
```

```
  SCORE6=0.0;
  SCORE6= SCORE6 + WCPV6*CPVPTL
                 + WADT6*ADTPTL
                 + WSR6 *SRPTL
                 + WDSS6*DSSPTL
                 + WBWR6*BWRPTL;

  SCORE7=0.0;
  SCORE7= SCORE7 + WCPV7*CPVPTL
                 + WADT7*ADTPTL
                 + WSR7 *SRPTL
                 + WDSS7*DSSPTL
                 + WBWR7*BWRPTL;
PROC SORT DATA=QDATA OUT=METH1;
    BY DESCENDING AQ DESCENDING SCORE1;
    /*BY DESCENDING SCORE1;*/
DATA METH1;
    IF _N_=1 THEN SET BUDGET;
    SET METH1;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH1;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM1 N=CPIC1 SUM=CPIS1;
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;

  PROC SUMMARY DATA=METH1;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ1 N=CPICAQ1 SUM=CPISAQ1;

DATA TAAQ1;
    KEEP DIST _TYPE_ CPICAQ1 CPISAQ1;
    SET TAAQ1;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH2;
    BY DESCENDING AQ DESCENDING SCORE2;
    /*BY DESCENDING SCORE2;*/
DATA METH2;
    IF _N_=1 THEN SET BUDGET;
    SET METH2;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH2;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM2 N=CPIC2 SUM=CPIS2;
DATA TABM2;SET TABM2;
IF _TYPE_=0 THEN TOT2=CPIS2;RETAIN TOT2;
CPIP2=(CPIS2/TOT2)*100;

  PROC SUMMARY DATA=METH2;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
```

```
OUTPUT OUT=TAAQ2 N=CPICAQ2 SUM=CPISAQ2;

DATA TAAQ2;
    KEEP DIST _TYPE_ CPICAQ2 CPISAQ2;
    SET TAAQ2;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH3;
    BY DESCENDING AQ DESCENDING SCORE3;
    /*BY DESCENDING SCORE3;*/
DATA METH3;
    IF _N_=1 THEN SET BUDGET;
    SET METH3;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH3;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM3 N=CPIC3 SUM=CPIS3;
DATA TABM3;SET TABM3;
IF _TYPE_=0 THEN TOT3=CPIS3;RETAIN TOT3;
CPIP3=(CPIS3/TOT3)*100;

  PROC SUMMARY DATA=METH3;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ3 N=CPICAQ3 SUM=CPISAQ3;

DATA TAAQ3;
    KEEP DIST _TYPE_ CPICAQ3 CPISAQ3;
    SET TAAQ3;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH4;
    BY DESCENDING AQ DESCENDING SCORE4;
   /* BY DESCENDING SCORE4;*/
DATA METH4;
    IF _N_=1 THEN SET BUDGET;
    SET METH4;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH4;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM4 N=CPIC4 SUM=CPIS4;
DATA TABM4;SET TABM4;
IF _TYPE_=0 THEN TOT4=CPIS4;RETAIN TOT4;
CPIP4=(CPIS4/TOT4)*100;

  PROC SUMMARY DATA=METH4;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ4 N=CPICAQ4 SUM=CPISAQ4;

DATA TAAQ4;
    KEEP DIST _TYPE_ CPICAQ4 CPISAQ4;
    SET TAAQ4;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH5;
```

```
    BY DESCENDING AQ DESCENDING SCORE5;
   /* BY DESCENDING SCORE5; */
DATA METH5;
    IF _N_=1 THEN SET BUDGET;
    SET METH5;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH5;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM5 N=CPIC5 SUM=CPIS5;
DATA TABM5;SET TABM5;
IF _TYPE_=0 THEN TOT5=CPIS5;RETAIN TOT5;
CPIP5=(CPIS5/TOT5)*100;

  PROC SUMMARY DATA=METH5;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ5 N=CPICAQ5 SUM=CPISAQ5;

DATA TAAQ5;
    KEEP DIST _TYPE_ CPICAQ5 CPISAQ5;
    SET TAAQ5;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH6;
    BY DESCENDING AQ DESCENDING SCORE6;
   /* BY DESCENDING SCORE6;*/
DATA METH6;
    IF _N_=1 THEN SET BUDGET;
    SET METH6;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH6;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM6 N=CPIC6 SUM=CPIS6;
DATA TABM6;SET TABM6;
IF _TYPE_=0 THEN TOT6=CPIS6;RETAIN TOT6;
CPIP6=(CPIS6/TOT6)*100;

  PROC SUMMARY DATA=METH6;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ6 N=CPICAQ6 SUM=CPISAQ6;

DATA TAAQ6;
    KEEP DIST _TYPE_ CPICAQ6 CPISAQ6;
    SET TAAQ6;IF AQ='AQ';


PROC SORT DATA=QDATA OUT=METH7;
    BY DESCENDING AQ DESCENDING SCORE7;
   /* BY DESCENDING SCORE7; */
DATA METH7;
    IF _N_=1 THEN SET BUDGET;
    SET METH7;
    ACOST+CPI;
```

```
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH7;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM7 N=CPIC7 SUM=CPIS7;
DATA TABM7;SET TABM7;
IF _TYPE_=0 THEN TOT7=CPIS7;RETAIN TOT7;
CPIP7=(CPIS7/TOT7)*100;

  PROC SUMMARY DATA=METH7;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ7 N=CPICAQ7 SUM=CPISAQ7;

DATA TAAQ7;
    KEEP DIST _TYPE_ CPICAQ7 CPISAQ7;
    SET TAAQ7;IF AQ='AQ';

DATA DISLIST;INPUT DIST;CARDS;
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
DATA FINAL;MERGE DISLIST TABM1 TABM2 TABM3 TABM4 TABM5 TABM6 TABM7
TAAQ1 TAAQ2 TAAQ3 TAAQ4 TAAQ5 TAAQ6 TAAQ7 ;
          BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;END;
IF CPIC2=. THEN DO; CPIC2=0; CPIS2=0;CPIP2=0;TOT2=0;_TYPE_=1;END;
IF CPIC3=. THEN DO; CPIC3=0; CPIS3=0;CPIP3=0;TOT3=0;_TYPE_=1;END;
IF CPIC4=. THEN DO; CPIC4=0; CPIS4=0;CPIP4=0;TOT4=0;_TYPE_=1;END;
IF CPIC5=. THEN DO; CPIC5=0; CPIS5=0;CPIP5=0;TOT5=0;_TYPE_=1;END;
IF CPIC6=. THEN DO; CPIC6=0; CPIS6=0;CPIP6=0;TOT6=0;_TYPE_=1;END;
IF CPIC7=. THEN DO; CPIC7=0; CPIS7=0;CPIP7=0;TOT7=0;_TYPE_=1;END;
AVRG=(CPIP1+CPIP2+CPIP3+CPIP4+CPIP5+CPIP6+CPIP7)/7;

IF CPICAQ1=. THEN DO; CPICAQ1=0; CPISAQ1=0;_TYPE_=1;END;
```

```
IF CPICAQ2=. THEN DO; CPICAQ2=0; CPISAQ2=0;_TYPE_=1;END;
IF CPICAQ3=. THEN DO; CPICAQ3=0; CPISAQ3=0;_TYPE_=1;END;
IF CPICAQ4=. THEN DO; CPICAQ4=0; CPISAQ4=0;_TYPE_=1;END;
IF CPICAQ5=. THEN DO; CPICAQ5=0; CPISAQ5=0;_TYPE_=1;END;
IF CPICAQ6=. THEN DO; CPICAQ6=0; CPISAQ6=0;_TYPE_=1;END;
IF CPICAQ7=. THEN DO; CPICAQ7=0; CPISAQ7=0;_TYPE_=1;END;
KEEP DIST _TYPE_ CPIC1 CPIS1 CPIP1 TOT1
                 CPIC2 CPIS2 CPIP2 TOT2
                 CPIC3 CPIS3 CPIP3 TOT3
                 CPIC4 CPIS4 CPIP4 TOT4
                 CPIC5 CPIS5 CPIP5 TOT5
                 CPIC6 CPIS6 CPIP6 TOT6
                 CPIC7 CPIS7 CPIP7 TOT7  AVRG
                 CPICAQ1 CPISAQ1 CPICAQ2 CPISAQ2
                 CPICAQ3 CPISAQ3 CPICAQ4 CPISAQ4
                 CPICAQ5 CPISAQ5 CPICAQ6 CPISAQ6
                 CPICAQ7 CPISAQ7 ;
  DATA FINAL2;SET FINAL;IF DIST= .  THEN DELETE;
OPTIONS PAGESIZE=60 CENTER ;
TITLE1 'BUDGET DISTRIBUTION FACTORS';
TITLE2 '  ';
  DATA _NULL_;FILE PRINT;SET WEIGHT ;
  PUT @44 44*'-' /
     @44 'I' @65 'WEIGHTS' @87 'I' /
     @44 44*'-' /  @44 'I'
     @45 'METHOD' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
     @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '1' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
     @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '2' @52 'I' @54 WCPV2 @59 'I' @61 WADT2 @66 'I'
     @68 WSR2 @73 'I' @75 WDSS2 @80 'I' @82 WBWR2 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '3' @52 'I' @54 WCPV3 @59 'I' @61 WADT3 @66 'I'
     @68 WSR3 @73 'I' @75 WDSS3 @80 'I' @82 WBWR3 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '4' @52 'I' @54 WCPV4 @59 'I' @61 WADT4 @66 'I'
     @68 WSR4 @73 'I' @75 WDSS4 @80 'I' @82 WBWR4 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '5' @52 'I' @54 WCPV5 @59 'I' @61 WADT5 @66 'I'
     @68 WSR5 @73 'I' @75 WDSS5 @80 'I' @82 WBWR5 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '6' @52 'I' @54 WCPV6 @59 'I' @61 WADT6 @66 'I'
     @68 WSR6 @73 'I' @75 WDSS6 @80 'I' @82 WBWR6 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '7' @52 'I' @54 WCPV7 @59 'I' @61 WADT7 @66 'I'
     @68 WSR7 @73 'I' @75 WDSS7 @80 'I' @82 WBWR7 @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
     @44 44*'-' /
```

```
    @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
    @44 44*'-' / / ;
    SET AUTOQ;
    IF ANSW='YES' THEN DO ;
  PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
    @44 44*'-' /
    @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
    @44 44*'-' / /
    @49 'M = MISSING' ;
    END;
  DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
  PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' / /
    @24 96*'-' /
    @24 'I' @27 'DISTRICT' @36 'I' @38 'M1' @44 'I' @46 'M2' @52 'I'
    @54 'M3' @60 'I' @62 'M4' @68 'I' @70 'M5' @76 'I' @78 'M6'
    @84 'I' @86 'M7' @92 'I' @94 'AVRG.' @100 'I' @102 'AVERAGE $'
@119 'I' /
    @24 96*'-';  END;
SET FINAL2;
FORMAT CPIP1 CPIP2 CPIP3 CPIP4 CPIP5 CPIP6 CPIP7 AVRG 5.2 SUM DOLLAR14.;
SUM=BUDGET*AVRG/100;
  PUT @24 'I' @27 DIST @36 'I' @38 CPIP1 @44 'I' @46 CPIP2 @52 'I'
@54 CPIP3 @60 'I' @62 CPIP4 @68 'I' @70 CPIP5 @76 'I' @78 CPIP6 @84 'I'
    @86 CPIP7 @92 'I' @94 AVRG @100 'I' @102 SUM @119 'I';
  PUT @24 96*'-'; RETURN;

  DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
  PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
            IF _N_=1 THEN SET AUTOQ ;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC TOTCAQ CPISAQ1 DOLLAR14.;
    IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;TOTCAQ=CPISAQ1;
    TOTNAQ=CPICAQ1;
    RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
    IF ANSW='YES' THEN DO;
      IF DIST=1 THEN PUT @27 72*'-' /
      @27 'I' @49 'METHOD 1'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
      @98 'I' /
      @27 72*'-' /
      @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
      @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
      @27 72*'-'   ;

   PUT @27 'I' @30 DIST @39 'I' @41 CPIC1 @47 'I' @49 CPIS1 @64 'I'
      @66 CPIP1 @72 'II' @75 CPICAQ1 @81 'I' @83 CPISAQ1 @98 'I' /
      @27 72*'-';
    IF DIST=25 THEN
   PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
       @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
        @27 72*'-'; END;
```

```
IF ANSW = 'NO' THEN DO ;
    IF DIST=1 THEN PUT @44 46*'-' /
       @44 'I' @66 'METHOD 1'  @89 'I' /
       @44 46*'-' /
    @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
    @83 '%' @89 'I' /
    @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
   @83 CPIP1 @89 'I' /
   @44 46*'-';
  IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
    @83 TOTP @89 'I' /
     @44 46*'-';END; RETURN;


DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '    ' ONOF '-SYSTEM' /    ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP2 5.2 TOTP 6.2 CPIS2 TOTC TOTCAQ CPISAQ2 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC2;TOTC=CPIS2;TOTP=CPIP2;TOTCAQ=CPISAQ2;
   TOTNAQ=CPICAQ2;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 2'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'    ;

PUT @27 'I' @30 DIST @39 'I' @41 CPIC2 @47 'I' @49 CPIS2 @64 'I'
   @66 CPIP2 @72 'II' @75 CPICAQ2 @81 'I' @83 CPISAQ2 @98 'I' /
   @27 72*'-';
  IF DIST=25 THEN
PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
    @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
     @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
    IF DIST=1 THEN PUT @44 46*'-' /
       @44 'I' @66 'METHOD 2'  @89 'I' /
       @44 46*'-' /
    @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
    @83 '%' @89 'I' /
    @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC2 @64 'I' @66 CPIS2 @81 'I'
   @83 CPIP2 @89 'I' /
   @44 46*'-';
  IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
    @83 TOTP @89 'I' /
     @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
```

```
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP3 5.2 TOTP 6.2 CPIS3 TOTC TOTCAQ CPISAQ3 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC3;TOTC=CPIS3;TOTP=CPIP3;TOTCAQ=CPISAQ3;
   TOTNAQ=CPICAQ3;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 3'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC3 @47 'I' @49 CPIS3 @64 'I'
    @66 CPIP3 @72 'II' @75 CPICAQ3 @81 'I' @83 CPISAQ3 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
 PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
 IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 3'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC3 @64 'I' @66 CPIS3 @81 'I'
    @83 CPIP3 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP4 5.2 TOTP 6.2 CPIS4 TOTC TOTCAQ CPISAQ4 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC4;TOTC=CPIS4;TOTP=CPIP4;TOTCAQ=CPISAQ4;
   TOTNAQ=CPICAQ4;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 4'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC4 @47 'I' @49 CPIS4 @64 'I'
    @66 CPIP4 @72 'II' @75 CPICAQ4 @81 'I' @83 CPISAQ4 @98 'I' /
    @27 72*'-';
```

```
   IF DIST=25 THEN
PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 4'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC4 @64 'I' @66 CPIS4 @81 'I'
    @83 CPIP4 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
           IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP5 5.2 TOTP 6.2 CPIS5 TOTC TOTCAQ CPISAQ5 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC5;TOTC=CPIS5;TOTP=CPIP5;TOTCAQ=CPISAQ5;
   TOTNAQ=CPICAQ5;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 5'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

PUT @27 'I' @30 DIST @39 'I' @41 CPIC5 @47 'I' @49 CPIS5 @64 'I'
    @66 CPIP5 @72 'II' @75 CPICAQ5 @81 'I' @83 CPISAQ5 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 5'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC5 @64 'I' @66 CPIS5 @81 'I'
    @83 CPIP5 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
```

```
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
           IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP6 5.2 TOTP 6.2 CPIS6 TOTC TOTCAQ CPISAQ6 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC6;TOTC=CPIS6;TOTP=CPIP6;TOTCAQ=CPISAQ6;
   TOTNAQ=CPICAQ6;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 6'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC6 @47 'I' @49 CPIS6 @64 'I'
    @66 CPIP6 @72 'II' @75 CPICAQ6 @81 'I' @83 CPISAQ6 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
 PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
 IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 6'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC6 @64 'I' @66 CPIS6 @81 'I'
    @83 CPIP6 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
           IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP7 5.2 TOTP 6.2 CPIS7 TOTC TOTCAQ CPISAQ7 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC7;TOTC=CPIS7;TOTP=CPIP7;TOTCAQ=CPISAQ7;
   TOTNAQ=CPICAQ7;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 7'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;
```

```
   PUT @27 'I' @30 DIST @39 'I' @41 CPIC7 @47 'I' @49 CPIS7 @64 'I'
       @66 CPIP7 @72 'II' @75 CPICAQ7 @81 'I' @83 CPISAQ7 @98 'I' /
       @27 72*'-';
      IF DIST=25 THEN
   PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
        @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
         @27 72*'-'; END;
   IF ANSW = 'NO' THEN DO ;
        IF DIST=1 THEN PUT @44 46*'-' /
           @44 'I' @66 'METHOD 7'  @89 'I' /
           @44 46*'-' /
        @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
        @83 '%' @89 'I' /
        @44 46*'-';

   PUT @44 'I' @47 DIST @56 'I' @58 CPIC7 @64 'I' @66 CPIS7 @81 'I'
       @83 CPIP7 @89 'I' /
       @44 46*'-';
      IF DIST=25 THEN
   PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
        @83 TOTP @89 'I' /
         @44 46*'-';END; RETURN;

   /* CMS FI FT14F001 DISK DDF MAP A;*/
  /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171            ;  */
DATA FINAL3;SET FINAL;IF _N_=1 THEN DELETE;KEEP DIST AVRG1 AVRG;
AVRG=ROUND(AVRG,0.01);LENGTH AVRG1 $ 5.2; AVRG1=AVRG;
DATA ANOT1;INPUT DIST X Y ; SET FINAL3    ;
LENGTH DIST2 $ 5 ;RETAIN Z 1; DIST1=DIST;
DIST2= (TRIM(LEFT('D')) || TRIM(LEFT(DIST1)));
LENGTH FUNCTION $ 8; LENGTH TEXT $ 24 ;LENGTH COLOR $ 6;
XSYS='2';YSYS='2';
TEXT=DIST2;FUNCTION='LABEL';POSITION='C';WHEN='A';OUTPUT;
POSITION='F';TEXT=PUT(AVRG,F5.2);FUNCTION='LABEL';WHEN='A'; COLOR='BLUE';
OUTPUT;
CARDS;
   1   0.057      0.040
  2   0.026      0.027
  3   0.016      0.046
  4  -0.028      0.079497
  5  -0.035      0.043758
  6  -0.050     -0.002
  7  -0.018255 -0.010
  8  -0.009      0.025641
  9   0.036      0.006
 10   0.063      0.020
 11   0.078739   0.007
 12   0.063     -0.022
 13   0.048     -0.030
 14   0.027     -0.010
 15   0.005     -0.036882
 16   0.031     -0.047
 17   0.053     -0.004
 18   0.046      0.028
 19   0.074      0.035
 20   0.080     -0.016
 21   0.019     -0.074
```

```
  23   0.009      0.006806
  24  -0.063738 -0.018030
  25  -0.0094    0.057126
DATA ANOT2; SET BUDGET;
X= 15   ;Y= 15  ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(BUDGET,DOLLAR12.);
TEXT=(TRIM(LEFT('FOR BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
OUTPUT;
DATA ANOT3;SET BUDGET ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('   ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15   ;Y= 15  ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
DATA ANOT1;SET ANOT1 ANOT2;
TITLE1 F=NONE 'BUDGET DISTRIBUTION FACTORS';
TITLE2 F=NONE C=BLUE '      (AVERAGES IN %)    ';
PATTERN1 C=WHITE V=ME;
  PROC GMAP MAP=TEBS.TEXAS DATA=ANOT1;
ID DIST;CHORO Z / NOLEGEND ANNOTATE=ANOT1 DISCRETE;RUN;

   /* CMS FI FT14F001 DISK DDF CHART A; */
  /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171;*/
DATA ANOT2; SET BUDGET;
X= 15   ;Y=  5  ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(BUDGET,DOLLAR12.);
TEXT=(TRIM(LEFT('FOR BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
OUTPUT;
DATA ANOT3;SET BUDGET ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('   ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15   ;Y=  5  ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
  PROC GPLOT DATA=FINAL2;
LABEL DIST='DISTRICTS';
LABEL CPIP1='%';
TITLE1 J=C  H=1 F=NONE 'BUDGET DISTRIBUTION FACTORS';
TITLE2 '  ';
  FOOTNOTE1 J=R H=1 F=NONE C=BLACK 'LEGEND:';
  FOOTNOTE2 J=R H=1 F=NONE C=RED 'METHOD1 = 1';
  FOOTNOTE3 J=R H=1 F=NONE C=GREEN 'METHOD7 = 7';
  FOOTNOTE4 J=R H=1 F=NONE C=BLUE 'AVERAGE = A';
  SYMBOL1 W=1 C=RED V=1 I=JOIN H=0.3 CM;
  /*SYMBOL2 W=1 C=BLACK I=JOIN V=2       ;
SYMBOL3 W=1 C=BLACK I=JOIN V=3       ;
SYMBOL4 W=1 C=BLACK I=JOIN V=4       ;
SYMBOL5 W=1 C=BLACK I=JOIN V=5       ;
SYMBOL6 W=1 C=BLACK I=JOIN V=6       ; */
  SYMBOL3 W=1 C=GREEN I=JOIN V=7 H=0.3 CM      ;
SYMBOL4 W=1 C=BLUE I=JOIN V=A L=4 H=0.3 CM;
AXIS1 MINOR=NONE
ORDER=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25;
```

```
PLOT (CPIP1 CPIP7 AVRG)*DIST / OVERLAY ANNOTATE= ANOT2
HAXIS=AXIS1;
RUN;
```

DDF2 RPF

```
<<DDF>>
:**********************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF,BUDGET
TAG % HUM ERRMSG
CURSOR ON
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$
@       THIS PROGRAM CALCULATES BUDGET DISTRIBUTION FACTORS USING
@              WEIGHTED AVERAGE SCORING TECHNIQUE.
$         (DDF2) PROGRAM (INCLUDES PREVIOUSLY SELECTED PROJECTS)
@
@                   PLACE 'X' TO SELECT AN OPTION.
@
@                       õ_@: ON SYSTEM
@                       ô_@: OFF SYSTEM
@
@
@                 õ_150000000@: BUDGET (NUMBERS ONLY)
@
@
@
@             %                                          @
$  PRESS ENTER TO CONTINUE                                 PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<OK>>
E 1 255
LET L1=LPAD(TRIM(LTRIM(P.BUDGET,'_'),'_'),'0')
IF CONFORM(L1,'N') NE 1
   LET P.ERRMSG = 'ERROR IN BUDGET AMOUNT, MUST BE NUMERIC ONLY..'
```

```
   PANEL RESEND CURSOR P.BUDGET
   GOTO <<BACK>>
ENDIF
IF L1 EQ 0
   LET P.ERRMSG = 'PLEASE ENTER BUDGET AMOUNT..'
   PANEL RESEND CURSOR P.BUDGET
   GOTO <<BACK>>
ENDIF
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
PANEL RESEND
GOTO <<BACK>>
:**********************************************************************
<<BEGIN>>
F  A4Y.DDFJCL2
R 1 1
TRAP ON
FIND  /INSERT POINT BUDGET (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
IF P.ON EQ 'X'
   +WRITE AWS +SEQ+ ''|L1|' ON'
ELSE
   +WRITE AWS +SEQ+ ''|L1|' OFF'
ENDIF
:**********************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM N11,N12,N13,N14,N15
TAG õ HUM N21,N22,N23,N24,N25
TAG õ HUM N31,N32,N33,N34,N35
TAG õ HUM N41,N42,N43,N44,N45
TAG õ HUM N51,N52,N53,N54,N55
TAG õ HUM N61,N62,N63,N64,N65
TAG õ HUM N71,N72,N73,N74,N75
TAG % HUM ERRMSG
CURSOR N11
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$
@       THIS PROGRAM CALCULATES BUDGET DISTRIBUTION FACTORS USING
@                 WEIGHTED AVERAGE SCORING TECHNIQUE.
$      (DDF2) PROGRAM (INCLUDES PREVIOUSLY SELECTED PROJECTS)
@
```

```
@                METH   WCPV   WADT   WSR    WDSS   WBWR
@                 1    õ0.20@ õ0.20@ õ0.20@ õ0.20@ õ0.20@
@                 2    õ0.30@ õ0.10@ õ0.20@ õ0.20@ õ0.20@
@                 3    õ0.20@ õ0.30@ õ0.10@ õ0.20@ õ0.20@
@                 4    õ0.20@ õ0.20@ õ0.30@ õ0.10@ õ0.20@
@                 5    õ0.20@ õ0.20@ õ0.20@ õ0.30@ õ0.10@
@                 6    õ0.10@ õ0.20@ õ0.20@ õ0.20@ õ0.30@
@                 7    õ0.15@ õ0.10@ õ0.25@ õ0.25@ õ0.25@
@
@
@             %                                          @
$ PRESS ENTER TO CONTINUE                                   PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
TRAP ON
FIND /INSERT POINT WEIGHTS (AJJ)/
TRAP OFF
IF TC NE 0
  RESPONSE 'ERROR IN FINDING WEIGHT CARD IN DDFJCL.'
  GOTO <<END>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
  GOTO <<END>>
ENDIF
:*****************************************************************
<<BEGIN1>>
LET P1=SEQ
LET L1='P.N'
LET L2=1  :DOWN
LOOP 7 TIMES
  LET L3=1  :ACROSS
  LET L6=0  :LINE ACROSS MUST ADD TO 1
  LOOP 5 TIMES
    LET L4=L1|L2|L3
    +LET L5=+L4+
    LET L5=TRIM(LTRIM(L5,'_'),'_')
    IF (INDEX(L5,'.') EQ 0)
      <<ERROR>>
       LET P.ERRMSG='FORMAT FOR WEIGHTS IS X.XX'
       +PANEL RESEND CURSOR +L4+
       GOTO <<BEGIN1>>
    ENDIF
    IF INDEX(L5,'.') NE 2
      GOTO <<ERROR>>
    ENDIF
    IF INDEX(L5,'.',INDEX(L5,'.')+1) GT 0
      GOTO <<ERROR>>
    ENDIF
   +LET +L4+=L5
   LET L6=L6+SUBSTR(L5,1,1)*100+SUBSTR(L5,3,2)*1
   LET L3=L3+1
  ENDLOOP
  IF L6 NE 100
     LET P.ERRMSG='THE WEIGHTS ACROSS MUST ADD TO 1.00'
     +PANEL RESEND CURSOR +L1|L2|'1'+
     GOTO <<BEGIN1>>
```

```
   ENDIF
   LET L2=L2+1
ENDLOOP
:**********************************************************************
LET L2=1  :DOWN
LOOP 7 TIMES
   LET L5=''
   LET L3=1  :ACROSS
   LOOP 5 TIMES
      LET L4=L1|L2|L3
      +LET L5=L5|' '|+L4+
     LET L3=L3+1
   ENDLOOP
   +WRITE AWS +P1+ L5
   LET P1=P1+1
   LET L2=L2+1
ENDLOOP
:**********************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ANSW,A1,A2,A3,A4,A5
TAG % HUM ERRMSG
CURSOR ANSW
@
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                              T E B S S
@
$
@          DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE õ___@ (YES/NO)
@
$           (DDF2) PROGRAM (INCLUDES PREVIOUSLY SELECTED PROJECTS)
@
@
@               PROJECTS LESS OR EQUAL THAN AQCPV:õ_____@
@               PROJECTS MORE OR EQUAL THAN AQADT:õ_____@
@               PROJECTS LESS OR EQUAL THAN AQSR :õ_____@
@               PROJECTS LESS OR EQUAL THAN AQDSS:õ_____@
@               PROJECTS LESS OR EQUAL THAN AQBWR:õ_____@
@
@
@
@
@              %                                    @
$  PRESS ENTER TO SUBMIT JOB                          PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
<<BACK2>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
```

```
  GOTO <<END>>
ENDIF
:*****************************************************************
LET P.ANSW=TRIM(LTRIM(P.ANSW,'_'),'_')
IF (P.ANSW EQ 'YES') OR (P.ANSW EQ 'NO')
  GOTO <<XXX>>
ENDIF
LET P.ERRMSG='ENTRY MUST YES OR NO.'
PANEL RESEND CURSOR P.ANSW
GOTO <<BACK2>>
:*****************************************************************
<<XXX>>
LET L1='P.A'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   LET L5=TRIM(LTRIM(L5,'0'),'0')
   LET L6=INDEX(L5,'.')
   IF L6 NE 0
      LET L5=MODIFY(L5,'0',L6)
   ENDIF
   IF (CONFORM(L5,'I') NE 1) AND (L5 NE '')
      LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
      +PANEL RESEND CURSOR +L4+
      GOTO <<BACK2>>
   ENDIF
   IF L6 NE 0
       LET L5=MODIFY(L5,'.',L6)
   ENDIF
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L1='P.A'
LET L2=1
LET L5=P.ANSW|' '
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
     +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*****************************************************************
TRAP ON
FIND /INSERT POINT AUTO-QUAL (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING WEIGHT CARD IN DDFJCL.'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ L5
JJSUB
:*****************************************************************
```

```
<<END>>
POP
RETURN
```

DDF2 JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW DDFJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*ROUTE PUNCH N9R82
//SASE  EXEC SASEXTR
//FT71F001 DD SYSOUT=B,HOLD=YES,DEST=N9R82
//FT06F001 DD DUMMY
/*JOBPARM CARDS=0,LINES=1,TIME=1
//TEBS DD DSN=D45.SAS.OUT2,DISP=SHR
GOPTIONS DEVICE=CAL1051 HSIZE=7.5 VSIZE=10  BORDER
      COLORS=(BLACK RED BLUE GREEN) NOTEXT82;
DATA _NULL_;
  /* SAS PROGRAM TO CALCULATE BUDGET DISTRIBUTION FACTORS. IT NEEDS A
DATA SET WITH THE PROJECT PERCENTILES NAMED QDAON2.OUT */

  /* CMS FI PROJ DISK TEXAS PROJ Z;
CMS FI OUP DISK QDATON OUP Z;
CMS FI OUT DISK QDATOF OUT J;  */
    OPTIONS MISSING= M REPLACE;
   /* DATA INITIAL;INPUT FALSE;CARDS;
.
PROC FSEDIT DATA=INITIAL SCREEN=TEBS.INI;*/
  DATA BUDGET;
FORMAT BUDGET DOLLAR14. ;INFORMAT BUDGET COMMA. ;
INPUT BUDGET ONOF $; LENGTH ONOF $ 3;
CARDS; /*INSERT POINT BUDGET (AJJ)*/
;
   /* PROC FSEDIT DATA=BUDGET SCREEN=TEBS.BUDG;*/
  DATA BUDGET; SET BUDGET; CALL SYMPUT('SYS',ONOF);RETURN;

DATA WEIGHT;
FORMAT WCPV1 WADT1 WSR1 WDSS1 WBWR1
      WCPV2 WADT2 WSR2 WDSS2 WBWR2
      WCPV3 WADT3 WSR3 WDSS3 WBWR3
      WCPV4 WADT4 WSR4 WDSS4 WBWR4
      WCPV5 WADT5 WSR5 WDSS5 WBWR5
      WCPV6 WADT6 WSR6 WDSS6 WBWR6
      WCPV7 WADT7 WSR7 WDSS7 WBWR7 4.2 ;
INPUT WCPV1 WADT1 WSR1 WDSS1 WBWR1
     WCPV2 WADT2 WSR2 WDSS2 WBWR2
     WCPV3 WADT3 WSR3 WDSS3 WBWR3
     WCPV4 WADT4 WSR4 WDSS4 WBWR4
     WCPV5 WADT5 WSR5 WDSS5 WBWR5
     WCPV6 WADT6 WSR6 WDSS6 WBWR6
     WCPV7 WADT7 WSR7 WDSS7 WBWR7;

CARDS;       /* INSERT POINT WEIGHTS (AJJ) */
;

   /*  PROC FSEDIT DATA=WEIGHT SCREEN=TEBS.WT;*/

DATA AUTOQ;
INPUT ANSW $ AQCPV AQADT AQSR AQDSS AQBWR;
CARDS;       /* INSERT POINT AUTO-QUAL (AJJ) */
;
```

```
  /* PROC FSEDIT DATA=AUTOQ SCREEN=TEBS.AQ;*/

  /* MACRO TO CHOOSE THE CORRECT DATA SET GENERATED BY THE FREQ MODULE */
 %MACRO CHOOS;
  %IF &SYS=ON %THEN TEBS.QDAON2;
  %IF &SYS=OFF %THEN TEBS.QDAOF2;
   %MEND CHOOS;

 DATA QDATA;
KEEP DIST          SCORE1 SCORE2 SCORE3 SCORE4 SCORE5 SCORE6
     SCORE7 AQ CPI;
 IF _N_=1 THEN SET WEIGHT;
 IF _N_=1 THEN SET AUTOQ ;
 IF _N_=1 THEN SET BUDGET;
 LENGTH AQ $ 2;
 SET %CHOOS;
 IF ANSW = 'NO' THEN  DO;AQ='1'; GO TO OK ; END;
 IF AQCPV NE . THEN DO;IF CPV<=AQCPV THEN AQ='AQ';END;
 IF AQADT NE . THEN DO;IF W_ADT>=AQADT THEN AQ='AQ';END;
 IF AQSR  NE . THEN DO;IF SR <=AQSR THEN AQ='AQ';END;
 IF AQDSS NE . THEN DO;IF DSS<=AQDSS THEN AQ='AQ';END;
 IF AQBWR NE . THEN DO;IF BWR<=AQBWR THEN AQ='AQ';END;
OK:SCORE1=0.0;
 SCORE1= SCORE1 + WCPV1*CPVPTL
             + WADT1*ADTPTL
             + WSR1 *SRPTL
             + WDSS1*DSSPTL
             + WBWR1*BWRPTL;

 SCORE2=0.0;
 SCORE2= SCORE2 + WCPV2*CPVPTL
             + WADT2*ADTPTL
             + WSR2 *SRPTL
             + WDSS2*DSSPTL
             + WBWR2*BWRPTL;

 SCORE3=0.0;
 SCORE3= SCORE3 + WCPV3*CPVPTL
             + WADT3*ADTPTL
             + WSR3 *SRPTL
             + WDSS3*DSSPTL
             + WBWR3*BWRPTL;

 SCORE4=0.0;
 SCORE4= SCORE4 + WCPV4*CPVPTL
             + WADT4*ADTPTL
             + WSR4 *SRPTL
             + WDSS4*DSSPTL
             + WBWR4*BWRPTL;

 SCORE5=0.0;
 SCORE5= SCORE5 + WCPV5*CPVPTL
             + WADT5*ADTPTL
             + WSR5 *SRPTL
             + WDSS5*DSSPTL
             + WBWR5*BWRPTL;
```

```
  SCORE6=0.0;
  SCORE6= SCORE6 + WCPV6*CPVPTL
                 + WADT6*ADTPTL
                 + WSR6 *SRPTL
                 + WDSS6*DSSPTL
                 + WBWR6*BWRPTL;

  SCORE7=0.0;
  SCORE7= SCORE7 + WCPV7*CPVPTL
                 + WADT7*ADTPTL
                 + WSR7 *SRPTL
                 + WDSS7*DSSPTL
                 + WBWR7*BWRPTL;
PROC SORT DATA=QDATA OUT=METH1;
    BY DESCENDING AQ DESCENDING SCORE1;
    /*BY DESCENDING SCORE1;*/
DATA METH1;
    IF _N_=1 THEN SET BUDGET;
    SET METH1;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH1;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM1 N=CPIC1 SUM=CPIS1;
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;

  PROC SUMMARY DATA=METH1;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ1 N=CPICAQ1 SUM=CPISAQ1;

DATA TAAQ1;
    KEEP DIST _TYPE_ CPICAQ1 CPISAQ1;
    SET TAAQ1;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH2;
    BY DESCENDING AQ DESCENDING SCORE2;
    /*BY DESCENDING SCORE2;*/
DATA METH2;
    IF _N_=1 THEN SET BUDGET;
    SET METH2;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH2;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM2 N=CPIC2 SUM=CPIS2;
DATA TABM2;SET TABM2;
IF _TYPE_=0 THEN TOT2=CPIS2;RETAIN TOT2;
CPIP2=(CPIS2/TOT2)*100;

  PROC SUMMARY DATA=METH2;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
```

```
OUTPUT OUT=TAAQ2 N=CPICAQ2 SUM=CPISAQ2;

DATA TAAQ2;
   KEEP DIST _TYPE_ CPICAQ2 CPISAQ2;
   SET TAAQ2;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH3;
   BY DESCENDING AQ DESCENDING SCORE3;
   /*BY DESCENDING SCORE3;*/
DATA METH3;
   IF _N_=1 THEN SET BUDGET;
   SET METH3;
   ACOST+CPI;
   RETAIN ACOST;
   IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH3;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM3 N=CPIC3 SUM=CPIS3;
DATA TABM3;SET TABM3;
IF _TYPE_=0 THEN TOT3=CPIS3;RETAIN TOT3;
CPIP3=(CPIS3/TOT3)*100;

  PROC SUMMARY DATA=METH3;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ3 N=CPICAQ3 SUM=CPISAQ3;

DATA TAAQ3;
   KEEP DIST _TYPE_ CPICAQ3 CPISAQ3;
   SET TAAQ3;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH4;
   BY DESCENDING AQ DESCENDING SCORE4;
  /* BY DESCENDING SCORE4;*/
DATA METH4;
   IF _N_=1 THEN SET BUDGET;
   SET METH4;
   ACOST+CPI;
   RETAIN ACOST;
   IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH4;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM4 N=CPIC4 SUM=CPIS4;
DATA TABM4;SET TABM4;
IF _TYPE_=0 THEN TOT4=CPIS4;RETAIN TOT4;
CPIP4=(CPIS4/TOT4)*100;

  PROC SUMMARY DATA=METH4;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ4 N=CPICAQ4 SUM=CPISAQ4;

DATA TAAQ4;
   KEEP DIST _TYPE_ CPICAQ4 CPISAQ4;
   SET TAAQ4;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH5;
```

```
    BY DESCENDING AQ DESCENDING SCORE5;
   /* BY DESCENDING SCORE5; */
DATA METH5;
    IF _N_=1 THEN SET BUDGET;
    SET METH5;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH5;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM5 N=CPIC5 SUM=CPIS5;
DATA TABM5;SET TABM5;
IF _TYPE_=0 THEN TOT5=CPIS5;RETAIN TOT5;
CPIP5=(CPIS5/TOT5)*100;

  PROC SUMMARY DATA=METH5;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ5 N=CPICAQ5 SUM=CPISAQ5;

DATA TAAQ5;
    KEEP DIST _TYPE_ CPICAQ5 CPISAQ5;
    SET TAAQ5;IF AQ='AQ';

PROC SORT DATA=QDATA OUT=METH6;
    BY DESCENDING AQ DESCENDING SCORE6;
   /* BY DESCENDING SCORE6;*/
DATA METH6;
    IF _N_=1 THEN SET BUDGET;
    SET METH6;
    ACOST+CPI;
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH6;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM6 N=CPIC6 SUM=CPIS6;
DATA TABM6;SET TABM6;
IF _TYPE_=0 THEN TOT6=CPIS6;RETAIN TOT6;
CPIP6=(CPIS6/TOT6)*100;

  PROC SUMMARY DATA=METH6;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ6 N=CPICAQ6 SUM=CPISAQ6;

DATA TAAQ6;
    KEEP DIST _TYPE_ CPICAQ6 CPISAQ6;
    SET TAAQ6;IF AQ='AQ';


PROC SORT DATA=QDATA OUT=METH7;
    BY DESCENDING AQ DESCENDING SCORE7;
   /* BY DESCENDING SCORE7; */
DATA METH7;
    IF _N_=1 THEN SET BUDGET;
    SET METH7;
    ACOST+CPI;
```

```
    RETAIN ACOST;
    IF ACOST>BUDGET    THEN DELETE;
RETURN;

  PROC SUMMARY DATA=METH7;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM7 N=CPIC7 SUM=CPIS7;
DATA TABM7;SET TABM7;
IF _TYPE_=0 THEN TOT7=CPIS7;RETAIN TOT7;
CPIP7=(CPIS7/TOT7)*100;

  PROC SUMMARY DATA=METH7;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ7 N=CPICAQ7 SUM=CPISAQ7;

DATA TAAQ7;
    KEEP DIST _TYPE_ CPICAQ7 CPISAQ7;
    SET TAAQ7;IF AQ='AQ';

DATA DISLIST;INPUT DIST;CARDS;
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
DATA FINAL;MERGE DISLIST TABM1 TABM2 TABM3 TABM4 TABM5 TABM6 TABM7
TAAQ1 TAAQ2 TAAQ3 TAAQ4 TAAQ5 TAAQ6 TAAQ7 ;
          BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;END;
IF CPIC2=. THEN DO; CPIC2=0; CPIS2=0;CPIP2=0;TOT2=0;_TYPE_=1;END;
IF CPIC3=. THEN DO; CPIC3=0; CPIS3=0;CPIP3=0;TOT3=0;_TYPE_=1;END;
IF CPIC4=. THEN DO; CPIC4=0; CPIS4=0;CPIP4=0;TOT4=0;_TYPE_=1;END;
IF CPIC5=. THEN DO; CPIC5=0; CPIS5=0;CPIP5=0;TOT5=0;_TYPE_=1;END;
IF CPIC6=. THEN DO; CPIC6=0; CPIS6=0;CPIP6=0;TOT6=0;_TYPE_=1;END;
IF CPIC7=. THEN DO; CPIC7=0; CPIS7=0;CPIP7=0;TOT7=0;_TYPE_=1;END;
AVRG=(CPIP1+CPIP2+CPIP3+CPIP4+CPIP5+CPIP6+CPIP7)/7;

IF CPICAQ1=. THEN DO; CPICAQ1=0; CPISAQ1=0;_TYPE_=1;END;
```

```
IF CPICAQ2=. THEN DO; CPICAQ2=0; CPISAQ2=0;_TYPE_=1;END;
IF CPICAQ3=. THEN DO; CPICAQ3=0; CPISAQ3=0;_TYPE_=1;END;
IF CPICAQ4=. THEN DO; CPICAQ4=0; CPISAQ4=0;_TYPE_=1;END;
IF CPICAQ5=. THEN DO; CPICAQ5=0; CPISAQ5=0;_TYPE_=1;END;
IF CPICAQ6=. THEN DO; CPICAQ6=0; CPISAQ6=0;_TYPE_=1;END;
IF CPICAQ7=. THEN DO; CPICAQ7=0; CPISAQ7=0;_TYPE_=1;END;
KEEP DIST _TYPE_ CPIC1 CPIS1 CPIP1 TOT1
                 CPIC2 CPIS2 CPIP2 TOT2
                 CPIC3 CPIS3 CPIP3 TOT3
                 CPIC4 CPIS4 CPIP4 TOT4
                 CPIC5 CPIS5 CPIP5 TOT5
                 CPIC6 CPIS6 CPIP6 TOT6
                 CPIC7 CPIS7 CPIP7 TOT7  AVRG
                 CPICAQ1 CPISAQ1 CPICAQ2 CPISAQ2
                 CPICAQ3 CPISAQ3 CPICAQ4 CPISAQ4
                 CPICAQ5 CPISAQ5 CPICAQ6 CPISAQ6
                 CPICAQ7 CPISAQ7 ;
  DATA FINAL2;SET FINAL;IF DIST= .  THEN DELETE;
OPTIONS PAGESIZE=60 CENTER ;
TITLE1 'BUDGET DISTRIBUTION FACTORS';
TITLE2 '(INCLUDES PREVIOUSLY SELECTED) ';
  DATA _NULL_;FILE PRINT;SET WEIGHT ;
  PUT @44 44*'-' /
     @44 'I' @65 'WEIGHTS' @87 'I' /
     @44 44*'-' /  @44 'I'
     @45 'METHOD' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
     @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '1' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
     @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '2' @52 'I' @54 WCPV2 @59 'I' @61 WADT2 @66 'I'
     @68 WSR2 @73 'I' @75 WDSS2 @80 'I' @82 WBWR2 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '3' @52 'I' @54 WCPV3 @59 'I' @61 WADT3 @66 'I'
     @68 WSR3 @73 'I' @75 WDSS3 @80 'I' @82 WBWR3 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '4' @52 'I' @54 WCPV4 @59 'I' @61 WADT4 @66 'I'
     @68 WSR4 @73 'I' @75 WDSS4 @80 'I' @82 WBWR4 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '5' @52 'I' @54 WCPV5 @59 'I' @61 WADT5 @66 'I'
     @68 WSR5 @73 'I' @75 WDSS5 @80 'I' @82 WBWR5 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '6' @52 'I' @54 WCPV6 @59 'I' @61 WADT6 @66 'I'
     @68 WSR6 @73 'I' @75 WDSS6 @80 'I' @82 WBWR6 @87 'I' /
     @44 44*'-' /
     @44 'I' @47 '7' @52 'I' @54 WCPV7 @59 'I' @61 WADT7 @66 'I'
     @68 WSR7 @73 'I' @75 WDSS7 @80 'I' @82 WBWR7 @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
     @44 44*'-' /
```

```
    @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
    @44 44*'-' / / ;
    SET AUTOQ;
    IF ANSW='YES' THEN DO ;
  PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
    @44 44*'-' /
    @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
    @44 44*'-' / /
    @49 'M = MISSING' ;
    END;
  DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
  PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' / /
    @24 96*'-' /
    @24 'I' @27 'DISTRICT' @36 'I' @38 'M1' @44 'I' @46 'M2' @52 'I'
    @54 'M3' @60 'I' @62 'M4' @68 'I' @70 'M5' @76 'I' @78 'M6'
    @84 'I' @86 'M7' @92 'I' @94 'AVRG.' @100 'I' @102 'AVERAGE $'
@119 'I' /
    @24 96*'-';  END;
SET FINAL2;
FORMAT CPIP1 CPIP2 CPIP3 CPIP4 CPIP5 CPIP6 CPIP7 AVRG 5.2 SUM DOLLAR14.;
SUM=BUDGET*AVRG/100;
  PUT @24 'I' @27 DIST @36 'I' @38 CPIP1 @44 'I' @46 CPIP2 @52 'I'
@54 CPIP3 @60 'I' @62 CPIP4 @68 'I' @70 CPIP5 @76 'I' @78 CPIP6 @84 'I'
    @86 CPIP7 @92 'I' @94 AVRG @100 'I' @102 SUM @119 'I';
  PUT @24 96*'-'; RETURN;

  DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
  PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC TOTCAQ CPISAQ1 DOLLAR14.;
    IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;TOTCAQ=CPISAQ1;
    TOTNAQ=CPICAQ1;
    RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
    IF ANSW='YES' THEN DO;
      IF DIST=1 THEN PUT @27 72*'-' /
      @27 'I' @49 'METHOD 1'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
      @98 'I' /
      @27 72*'-' /
      @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
      @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
      @27 72*'-'   ;

   PUT @27 'I' @30 DIST @39 'I' @41 CPIC1 @47 'I' @49 CPIS1 @64 'I'
     @66 CPIP1 @72 'II' @75 CPICAQ1 @81 'I' @83 CPISAQ1 @98 'I' /
     @27 72*'-';
    IF DIST=25 THEN
   PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
      @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
       @27 72*'-'; END;
```

```
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 1'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
    @83 CPIP1 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;


DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP2 5.2 TOTP 6.2 CPIS2 TOTC TOTCAQ CPISAQ2 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC2;TOTC=CPIS2;TOTP=CPIP2;TOTCAQ=CPISAQ2;
   TOTNAQ=CPICAQ2;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 2'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC2 @47 'I' @49 CPIS2 @64 'I'
    @66 CPIP2 @72 'II' @75 CPICAQ2 @81 'I' @83 CPISAQ2 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
 PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 2'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC2 @64 'I' @66 CPIS2 @81 'I'
    @83 CPIP2 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
```

```
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM'
                                  / ; END ;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP3 5.2 TOTP 6.2 CPIS3 TOTC TOTCAQ CPISAQ3 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC3;TOTC=CPIS3;TOTP=CPIP3;TOTCAQ=CPISAQ3;
   TOTNAQ=CPICAQ3;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 3'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC3 @47 'I' @49 CPIS3 @64 'I'
    @66 CPIP3 @72 'II' @75 CPICAQ3 @81 'I' @83 CPISAQ3 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
 PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
 IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 3'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC3 @64 'I' @66 CPIS3 @81 'I'
    @83 CPIP3 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP4 5.2 TOTP 6.2 CPIS4 TOTC TOTCAQ CPISAQ4 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC4;TOTC=CPIS4;TOTP=CPIP4;TOTCAQ=CPISAQ4;
   TOTNAQ=CPICAQ4;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 4'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC4 @47 'I' @49 CPIS4 @64 'I'
    @66 CPIP4 @72 'II' @75 CPICAQ4 @81 'I' @83 CPISAQ4 @98 'I' /
```

```
    @27 72*'-';
   IF DIST=25 THEN
PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
    @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
     @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 4'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC4 @64 'I' @66 CPIS4 @81 'I'
    @83 CPIP4 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '   ' ONOF '-SYSTEM' /   ; END;
          IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP5 5.2 TOTP 6.2 CPIS5 TOTC TOTCAQ CPISAQ5 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC5;TOTC=CPIS5;TOTP=CPIP5;TOTCAQ=CPISAQ5;
   TOTNAQ=CPICAQ5;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 5'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'   ;

PUT @27 'I' @30 DIST @39 'I' @41 CPIC5 @47 'I' @49 CPIS5 @64 'I'
    @66 CPIP5 @72 'II' @75 CPICAQ5 @81 'I' @83 CPISAQ5 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 5'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

PUT @44 'I' @47 DIST @56 'I' @58 CPIC5 @64 'I' @66 CPIS5 @81 'I'
    @83 CPIP5 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
```

```
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '    ' ONOF '-SYSTEM' /    ; END;
           IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP6 5.2 TOTP 6.2 CPIS6 TOTC TOTCAQ CPISAQ6 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC6;TOTC=CPIS6;TOTP=CPIP6;TOTCAQ=CPISAQ6;
   TOTNAQ=CPICAQ6;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 6'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'    ;

 PUT @27 'I' @30 DIST @39 'I' @41 CPIC6 @47 'I' @49 CPIS6 @64 'I'
    @66 CPIP6 @72 'II' @75 CPICAQ6 @81 'I' @83 CPISAQ6 @98 'I' /
    @27 72*'-';
   IF DIST=25 THEN
 PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
 IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'METHOD 6'  @89 'I' /
        @44 46*'-' /
     @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
     @83 '%' @89 'I' /
     @44 46*'-';

 PUT @44 'I' @47 DIST @56 'I' @58 CPIC6 @64 'I' @66 CPIS6 @81 'I'
    @83 CPIP6 @89 'I' /
    @44 46*'-';
   IF DIST=25 THEN
 PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
     @83 TOTP @89 'I' /
      @44 46*'-';END; RETURN;

DATA _NULL_;FILE PRINT; IF _N_=1 THEN DO;SET BUDGET;
PUT @50 'FOR BUDGET= ' BUDGET '    ' ONOF '-SYSTEM' /    ; END;
           IF _N_=1 THEN SET AUTOQ ;SET FINAL;
FORMAT CPIP7 5.2 TOTP 6.2 CPIS7 TOTC TOTCAQ CPISAQ7 DOLLAR14.;
   IF DIST= . THEN DO;TOTN=CPIC7;TOTC=CPIS7;TOTP=CPIP7;TOTCAQ=CPISAQ7;
   TOTNAQ=CPICAQ7;
   RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
   IF ANSW='YES' THEN DO;
     IF DIST=1 THEN PUT @27 72*'-' /
     @27 'I' @49 'METHOD 7'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
     @98 'I' /
     @27 72*'-' /
     @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
     @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
     @27 72*'-'    ;
```

```
  PUT @27 'I' @30 DIST @39 'I' @41 CPIC7 @47 'I' @49 CPIS7 @64 'I'
     @66 CPIP7 @72 'II' @75 CPICAQ7 @81 'I' @83 CPISAQ7 @98 'I' /
     @27 72*'-';
    IF DIST=25 THEN
  PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
      @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
       @27 72*'-'; END;
  IF ANSW = 'NO' THEN DO ;
      IF DIST=1 THEN PUT @44 46*'-' /
         @44 'I' @66 'METHOD 7'  @89 'I' /
         @44 46*'-' /
      @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
      @83 '%' @89 'I' /
      @44 46*'-';

  PUT @44 'I' @47 DIST @56 'I' @58 CPIC7 @64 'I' @66 CPIS7 @81 'I'
     @83 CPIP7 @89 'I' /
     @44 46*'-';
    IF DIST=25 THEN
  PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
      @83 TOTP @89 'I' /
       @44 46*'-';END; RETURN;

  /* CMS FI FT14F001 DISK DDF MAP A;*/
 /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171          ; */
DATA FINAL3;SET FINAL;IF _N_=1 THEN DELETE;KEEP DIST AVRG1 AVRG;
AVRG=ROUND(AVRG,0.01);LENGTH AVRG1 $ 5.2; AVRG1=AVRG;
DATA ANOT1;INPUT DIST X Y ; SET FINAL3   ;
LENGTH DIST2 $ 5 ;RETAIN Z 1; DIST1=DIST;
DIST2= (TRIM(LEFT('D')) || TRIM(LEFT(DIST1)));
LENGTH FUNCTION $ 8; LENGTH TEXT $ 24 ;LENGTH COLOR $ 6;
XSYS='2';YSYS='2';
TEXT=DIST2;FUNCTION='LABEL';POSITION='C';WHEN='A';OUTPUT;
POSITION='F';TEXT=PUT(AVRG,F5.2);FUNCTION='LABEL';WHEN='A'; COLOR='BLUE';
OUTPUT;
CARDS;
  1   0.057     0.040
 2   0.026     0.027
 3   0.016     0.046
 4  -0.028     0.079497
 5  -0.035     0.043758
 6  -0.050    -0.002
 7  -0.018255 -0.010
 8  -0.009     0.025641
 9   0.036     0.006
 10   0.063     0.020
 11   0.078739  0.007
 12   0.063    -0.022
 13   0.048    -0.030
 14   0.027    -0.010
 15   0.005    -0.036882
 16   0.031    -0.047
 17   0.053    -0.004
 18   0.046     0.028
 19   0.074     0.035
 20   0.080    -0.016
 21   0.019    -0.074
```

```
  23   0.009      0.006806
  24  -0.063738 -0.018030
  25  -0.0094    0.057126
DATA ANOT2; SET BUDGET;
X= 15   ;Y= 15   ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(BUDGET,DOLLAR12.);
TEXT=(TRIM(LEFT('FOR BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
OUTPUT;
DATA ANOT3;SET BUDGET ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('   ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15   ;Y= 15   ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
DATA ANOT1;SET ANOT1 ANOT2;
TITLE1 F=NONE 'BUDGET DISTRIBUTION FACTORS';
TITLE2 F=NONE C=BLUE '(AVERAGES IN %) (INCLUDES PREVIOUSLY SELECTED)';
PATTERN1 C=WHITE V=ME;
  PROC GMAP MAP=TEBS.TEXAS DATA=ANOT1;
ID DIST;CHORO Z / NOLEGEND ANNOTATE=ANOT1 DISCRETE;RUN;

    /* CMS FI FT14F001 DISK DDF CHART A; */
  /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171;*/
DATA ANOT2; SET BUDGET;
X= 15   ;Y=  5   ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(BUDGET,DOLLAR12.);
TEXT=(TRIM(LEFT('FOR BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
OUTPUT;
DATA ANOT3;SET BUDGET ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('   ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15   ;Y=  5   ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
  PROC GPLOT DATA=FINAL2;
LABEL DIST='DISTRICTS';
LABEL CPIP1='%';
TITLE1 J=C  H=1 F=NONE 'BUDGET DISTRIBUTION FACTORS';
TITLE2 C=RED '(INCLUDES PREVIOUSLY SELECTED PROJECTS)';
  FOOTNOTE1 J=R H=1 F=NONE C=BLACK 'LEGEND:';
  FOOTNOTE2 J=R H=1 F=NONE C=RED 'METHOD1 = 1';
  FOOTNOTE3 J=R H=1 F=NONE C=GREEN 'METHOD7 = 7';
  FOOTNOTE4 J=R H=1 F=NONE C=BLUE 'AVERAGE = A';
  SYMBOL1 W=1 C=RED V=1 I=JOIN H=0.3 CM;
  /*SYMBOL2 W=1 C=BLACK I=JOIN V=2       ;
SYMBOL3 W=1 C=BLACK I=JOIN V=3       ;
SYMBOL4 W=1 C=BLACK I=JOIN V=4       ;
SYMBOL5 W=1 C=BLACK I=JOIN V=5       ;
SYMBOL6 W=1 C=BLACK I=JOIN V=6       ; */
  SYMBOL3 W=1 C=GREEN I=JOIN V=7 H=0.3 CM      ;
SYMBOL4 W=1 C=BLUE I=JOIN V=A L=4 H=0.3 CM;
AXIS1 MINOR=NONE
ORDER=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25;
```

```
PLOT (CPIP1 CPIP7 AVRG)*DIST / OVERLAY ANNOTATE= ANOT2
HAXIS=AXIS1;
RUN;
```

INICO RPF

```
<<INICO>>
:**********************************************************************
PUSH
SET MODE BASIC
F A4Y.INICOJCL
R 1 1
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM DIST1 ,DIST2 ,DIST3
TAG õ HUM DIST4 ,DIST5 ,DIST6
TAG õ HUM DIST7 ,DIST8 ,DIST9
TAG õ HUM DIST10,DIST11,DIST12
TAG õ HUM DIST13,DIST14,DIST15
TAG õ HUM DIST16,DIST17,DIST18
TAG õ HUM DIST19,DIST20,DIST21
TAG õ HUM DIST23,DIST24,DIST25,TOT
TAG % HUM ERRMSG
CURSOR DIST1
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                           T E B S S
$
@        THIS PROGRAM GENERATES A LIST OF INITIALLY CONSIDERED
@          PROJECTS FOR THE DISTRICTS. INPUT THE BUDGET IN DOLLARS
$                          FOR EACH DISTRICT.
$                           (INICO) PROGRAM
@
@    DIST  1:õ_________@    DIST  2:õ_________@    DIST  3:õ_________@
@    DIST  4:õ_________@    DIST  5:õ_________@    DIST  6:õ_________@
@    DIST  7:õ_________@    DIST  8:õ_________@    DIST  9:õ_________@
@    DIST 10:õ_________@    DIST 11:õ_________@    DIST 12:õ_________@
@    DIST 13:õ_________@    DIST 14:õ_________@    DIST 15:õ_________@
@    DIST 16:õ_________@    DIST 17:õ_________@    DIST 18:õ_________@
@    DIST 19:õ_________@    DIST 20:õ_________@    DIST 21:õ_________@
@    DIST 23:õ_________@    DIST 24:õ_________@    DIST 25:õ_________@
@
@                  STATE TOTAL : õ_________________@
@              %                                    @
$  PRESS ENTER FOR STATE TOTAL        PF12: NEXT SCREEN        PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
TRAP ON
FIND /INSERT POINT DIST (AJJ)/
TRAP OFF
IF TC NE 0
  RESPONSE 'ERROR IN FINDING WEIGHT CARD IN INICOJCL.'
  GOTO <<END>>
ENDIF
<<BEGIN1>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
  GOTO <<END>>
```

```
ENDIF
IF AID EQ 'PF12'
   GOTO <<GOAHEAD>>
ENDIF
:*************************************************************************
LET P1=SEQ
LET L1='P.DIST'
LET L2=1
LET L16=0
LOOP 24 TIMES
      LET L4=L1|L2
      +LET L5=+L4+
      LET L5=TRIM(LTRIM(L5,'_'),'_')
      IF (CONFORM(L5,'N') NE 1) AND (L5 NE '')
           LET P.ERRMSG='ERROR IN DIST. AMOUNT, MUST BE NUMERIC ONLY'
           +PANEL RESEND CURSOR +L4+
           GOTO <<BEGIN1>>
      ENDIF
      IF (L5 EQ 0) OR (L5 EQ '')
          LET L5 = '0'
      ENDIF
      +LET +L4+=L5
      LET L16=L16+L5
      LET L2=L2+1
      IF L2 EQ 22
         LET L2=23
      ENDIF
ENDLOOP
LET P.TOT=L16
PANEL RESEND
GOTO <<BEGIN1>>
:*************************************************************************
<<GOAHEAD>>
LET L2=25
LET L5=''
LOOP 24 TIMES
    LET L4=L1|L2
    +LET L5=+L4+|' '|L5
    IF L2 EQ 1 OR L2 EQ 9  OR L2 EQ 17
       +WRITE AWS +P1+ L5
       LET L5=''
    ENDIF
    LET L2=L2-1
    IF L2 EQ 22
        LET L2=21
    ENDIF
ENDLOOP
:*************************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG ô HUM W1,W2,W3,W4,W5,OFFON,YEARS
TAG % HUM ERRMSG
CURSOR W1
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
```

```
$                          BRIDGE DIVISION
@
$              TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                           T E B S S
@
$                          (INICO) PROGRAM
@
@                     ATTRIBUTES                 WEIGHTS
@                   ============================   =======
@                   COST PER VEHICLE              :õ0.00@
@                   AVERAGE DAILY TRAFFIC          :õ0.00@
@                   SUFFICIENCY RATING            :õ0.00@
@                   MINIMUM OF CONDITION RATINGS    :õ0.00@
@                   BRIDGE WIDTH RATIO             :õ0.00@
$                                    TOTAL =1.00
@
@            DO YOU WANT TO RUN THE ON OR OFF SYSTEM õ___@ (OFF/ON)
@
@            WHAT PROGRAM IS THIS RUN SUPPOSE TO COVER ?:õ_________@
@
@              %                                              @
$  PRESS ENTER TO CONTINUE                                      PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
<<BEGIN2>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:**********************************************************************
LET L1='P.W'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   IF (INDEX(L5,'.') EQ 0)
   <<ERROR>>
         LET P.ERRMSG='FORMAT FOR WEIGHTS IS X.XX'
         +PANEL RESEND CURSOR +L4+
         GOTO <<BEGIN2>>
   ENDIF
   IF INDEX(L5,'.') NE 2
        GOTO <<ERROR>>
   ENDIF
   IF INDEX(L5,'.',INDEX(L5,'.')+1) GT 0
        GOTO <<ERROR>>
   ENDIF
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:**********************************************************************
LET L2=1
LET L3=0
```

```
LOOP 5 TIMES
   +LET L4=+L1|L2+
   LET L3=L3+SUBSTR(L4,1,1)*100+SUBSTR(L4,3,2)*1
   LET L2=L2+1
ENDLOOP
:*************************************************************************
IF L3 NE 100
       LET L3=LPAD(L3,3,'0')
       LET L3="|SUBSTR(L3,1,1)|'.'|SUBSTR(L3,2,2)|"
       LET P.ERRMSG='SUM OF WEIGHTS IS '|L3|',BUT MUST ADD TO 1.00'
       PANEL RESEND CURSOR P.W1
       GOTO <<BEGIN2>>
   ENDIF
LET P.OFFON=TRIM(LTRIM(P.OFFON,'_'),'_')
IF (P.OFFON EQ 'OFF') OR (P.OFFON EQ 'ON')
  GOTO <<OK3>>
ENDIF
:*************************************************************************
LET P.ERRMSG='ENTRY MUST OFF OR ON.'
PANEL RESEND CURSOR P.OFFON
GOTO <<BEGIN2>>
:*************************************************************************
<<OK3>>
LET P.YEARS=TRIM(LTRIM(P.YEARS,'_'),'_')
IF P.YEARS NE ''
  GOTO <<OK4>>
ENDIF
LET P.ERRMSG='ENTRY MUST BE IN FORMAT 19XX-19XX'
PANEL RESEND CURSOR P.YEARS
GOTO <<BEGIN2>>
:*************************************************************************
<<OK4>>
LET L2=1
LET L5=''
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
      +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*************************************************************************
LET L5=L5|' '|P.OFFON|' '|P.YEARS|"
TRAP ON
FIND /INSERT POINT WTS. (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING WEIGHT CARD IN INICOJCL.'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ L5
:*************************************************************************
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
```

```
TAG õ HUM ANSW,A1,A2,A3,A4,A5
TAG % HUM ERRMSG
CURSOR ANSW
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$
@         DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE õ___@ (YES/NO)
@
$                        (INICO) PROGRAM
@
@
@              PROJECTS LESS OR EQUAL THAN AQCPV:õ_________@
@              PROJECTS MORE OR EQUAL THAN AQADT:õ_________@
@              PROJECTS LESS OR EQUAL THAN AQSR :õ_________@
@              PROJECTS LESS OR EQUAL THAN AQDSS:õ_________@
@              PROJECTS LESS OR EQUAL THAN AQBWR:õ_________@
@
@
@
@
@             %                                    @
$  PRESS ENTER TO SUBMIT JOB                          PF1:TO QUIT
ENDDEF
PANEL SEND
:*************************************************************************
<<BACK3>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:*************************************************************************
LET P.ANSW=TRIM(LTRIM(P.ANSW,'_'),'_')
IF (P.ANSW EQ 'YES') OR (P.ANSW EQ 'NO')
  GOTO <<XXXX>>
ENDIF
LET P.ERRMSG='ENTRY MUST YES OR NO.'
PANEL RESEND CURSOR P.ANSW
GOTO <<BACK3>>
:*************************************************************************
<<XXXX>>
LET L1='P.A'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   LET L6=INDEX(L5,'.')
   IF L6 NE 0
      LET L5=MODIFY(L5,'0',L6)
   ENDIF
```

```
   IF (CONFORM(L5,'I') NE 1) AND (L5 NE '')
      LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
      +PANEL RESEND CURSOR +L4+
      GOTO <<BACK3>>
   ENDIF
   IF L6 NE 0
      LET L5=MODIFY(L5,'.',L6)
   ENDIF
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:*************************************************************************
LET L1='P.A'
LET L2=1
LET L5=P.ANSW|' '
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
      +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*************************************************************************
TRAP ON
+FIND /INSERT POINT AUTO-QUAL (AJJ)/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING AUTO-QUAL CARD IN INICOJCL.'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ L5
JJSUB
:*************************************************************************
<<END>>
POP
RETURN
```

INICO JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW INICOJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*JOBPARM LINES=50
/*ROUTE PRINT N9R82
/*ROUTE PUNCH N9R82
//SASE  EXEC SASEXTR
//FT71F001 DD SYSOUT=B,HOLD=YES,DEST=N9R82
//FT06F001 DD DUMMY
/*JOBPARM CARDS=0,LINES=1,TIME=1
//TEBS DD DSN=D45.SAS.OUT2,DISP=OLD
GOPTIONS DEVICE=CAL1051 HSIZE=7.5 VSIZE=10  BORDER
      COLORS=(BLACK RED BLUE GREEN) NOTEXT82;
DATA _NULL_;
  /* SAS PROGRAM TO PRINT A SAS DATA SET OF PROJECTS IN THE EXISTING
TEXAS SDHPT FORMAT. */
          /*
CMS FI OUP DISK QDATOF OUP A;
CMS FI OUT DISK QADTON OUT A;
CMS FI LIST1 DISK INICO1 LISTING A (LRECL 133 RECFM V ;
CMS FI LIST2 DISK INICO2 LISTING A (LRECL 133 RECFM V ;*/
OPTIONS CENTER REPLACE MISSING=M ;   %GLOBAL ANSW;
   /* DATA INITIAL;INPUT FALSE;CARDS;
.
PROC FSEDIT DATA=INITIAL SCREEN=TEBS.INICO;*/
  DATA BUDGET;
FORMAT BUDG1 BUDG2 BUDG3 BUDG4 BUDG5 BUDG6 BUDG7 BUDG8
      BUDG9 BUDG10 BUDG11 BUDG12 BUDG13 BUDG14 BUDG15 BUDG16
      BUDG17 BUDG18 BUDG19 BUDG20 BUDG21 BUDG23 BUDG24 BUDG25
                DOLLAR14. ;
INFORMAT BUDG1 BUDG2 BUDG3 BUDG4 BUDG5 BUDG6 BUDG7 BUDG8
        BUDG9 BUDG10 BUDG11 BUDG12 BUDG13 BUDG14 BUDG15 BUDG16
        BUDG17 BUDG18 BUDG19 BUDG20 BUDG21 BUDG23 BUDG24 BUDG25
                COMMA. ;
INPUT    BUDG1 BUDG2 BUDG3 BUDG4 BUDG5 BUDG6 BUDG7 BUDG8
        BUDG9 BUDG10 BUDG11 BUDG12 BUDG13 BUDG14 BUDG15 BUDG16
        BUDG17 BUDG18 BUDG19 BUDG20 BUDG21 BUDG23 BUDG24 BUDG25 ;
CARDS; /* INSERT POINT DIST (AJJ) */
;
   /* PROC FSEDIT DATA=BUDGET SCREEN=TEBS.INIBUDG;*/
DATA WEIGHT;
FORMAT WCPV1 WADT1 WSR1 WDSS1 WBWR1 4.2 ;
LENGTH ONOF $ 3 YEAR $ 10 ;
INPUT WCPV1 WADT1 WSR1 WDSS1 WBWR1 ONOF $ YEAR $ ;

CARDS; /* INSERT POINT WTS. (AJJ) */
;

  /* PROC FSEDIT DATA=WEIGHT SCREEN=TEBS.WTINI;*/

  DATA ANS;SET WEIGHT;CALL SYMPUT('ANSW',ONOF);RETURN;
    /* MACRO TO OUTPUT THE INITIALLY CONSIDERED PROJECTS TO A PERMANENT
        DATA SET  BY DISTRICT */
  %MACRO CHOOS;
    %IF &ANSW=ON %THEN %DO;
   DATA TEBS.INION1 TEBS.INION2 TEBS.INION3 TEBS.INION4 TEBS.INION5
```

```
        TEBS.INION6 TEBS.INION7 TEBS.INION8 TEBS.INION9 TEBS.INION10
        TEBS.INION11 TEBS.INION12 TEBS.INION13 TEBS.INION14
        TEBS.INION15 TEBS.INION16 TEBS.INION17 TEBS.INION18
        TEBS.INION19 TEBS.INION20 TEBS.INION21 TEBS.INION23
        TEBS.INION24 TEBS.INION25;
IF _N_=1 THEN SET AQWEIG; SET REPDATA;
   IF DIST=1 THEN OUTPUT TEBS.INION1;
   IF DIST=2 THEN OUTPUT TEBS.INION2;
   IF DIST=3 THEN OUTPUT TEBS.INION3;
   IF DIST=4 THEN OUTPUT TEBS.INION4;
   IF DIST=5 THEN OUTPUT TEBS.INION5;
   IF DIST=6 THEN OUTPUT TEBS.INION6;
   IF DIST=7 THEN OUTPUT TEBS.INION7;
   IF DIST=8 THEN OUTPUT TEBS.INION8;
   IF DIST=9 THEN OUTPUT TEBS.INION9;
   IF DIST=10 THEN OUTPUT TEBS.INION10;
   IF DIST=11 THEN OUTPUT TEBS.INION11;
   IF DIST=12 THEN OUTPUT TEBS.INION12;
   IF DIST=13 THEN OUTPUT TEBS.INION13;
   IF DIST=14 THEN OUTPUT TEBS.INION14;
   IF DIST=15 THEN OUTPUT TEBS.INION15;
   IF DIST=16 THEN OUTPUT TEBS.INION16;
   IF DIST=17 THEN OUTPUT TEBS.INION17;
   IF DIST=18 THEN OUTPUT TEBS.INION18;
   IF DIST=19 THEN OUTPUT TEBS.INION19;
   IF DIST=20 THEN OUTPUT TEBS.INION20;
   IF DIST=21 THEN OUTPUT TEBS.INION21;
   IF DIST=23 THEN OUTPUT TEBS.INION23;
   IF DIST=24 THEN OUTPUT TEBS.INION24;
   IF DIST=25 THEN OUTPUT TEBS.INION25;
   KEEP BRID INIC SCORE1 WCPV1 WADT1 WSR1 WDSS1 WBWR1 ANSW
AQCPV AQADT AQSR AQDSS AQBWR;
RETURN; %END;

    %IF &ANSW=OFF %THEN %DO;
   DATA TEBS.INIOF1 TEBS.INIOF2 TEBS.INIOF3 TEBS.INIOF4 TEBS.INIOF5
        TEBS.INIOF6 TEBS.INIOF7 TEBS.INIOF8 TEBS.INIOF9 TEBS.INIOF10
        TEBS.INIOF11 TEBS.INIOF12 TEBS.INIOF13 TEBS.INIOF14
        TEBS.INIOF15 TEBS.INIOF16 TEBS.INIOF17 TEBS.INIOF18
        TEBS.INIOF19 TEBS.INIOF20 TEBS.INIOF21 TEBS.INIOF23
        TEBS.INIOF24 TEBS.INIOF25;
IF _N_=1 THEN SET AQWEIG; SET REPDATA;
   IF DIST=1 THEN OUTPUT TEBS.INIOF1;
   IF DIST=2 THEN OUTPUT TEBS.INIOF2;
   IF DIST=3 THEN OUTPUT TEBS.INIOF3;
   IF DIST=4 THEN OUTPUT TEBS.INIOF4;
   IF DIST=5 THEN OUTPUT TEBS.INIOF5;
   IF DIST=6 THEN OUTPUT TEBS.INIOF6;
   IF DIST=7 THEN OUTPUT TEBS.INIOF7;
   IF DIST=8 THEN OUTPUT TEBS.INIOF8;
   IF DIST=9 THEN OUTPUT TEBS.INIOF9;
   IF DIST=10 THEN OUTPUT TEBS.INIOF10;
   IF DIST=11 THEN OUTPUT TEBS.INIOF11;
   IF DIST=12 THEN OUTPUT TEBS.INIOF12;
   IF DIST=13 THEN OUTPUT TEBS.INIOF13;
   IF DIST=14 THEN OUTPUT TEBS.INIOF14;
   IF DIST=15 THEN OUTPUT TEBS.INIOF15;
```

```
   IF DIST=16 THEN OUTPUT TEBS.INIOF16;
   IF DIST=17 THEN OUTPUT TEBS.INIOF17;
   IF DIST=18 THEN OUTPUT TEBS.INIOF18;
   IF DIST=19 THEN OUTPUT TEBS.INIOF19;
   IF DIST=20 THEN OUTPUT TEBS.INIOF20;
   IF DIST=21 THEN OUTPUT TEBS.INIOF21;
   IF DIST=23 THEN OUTPUT TEBS.INIOF23;
   IF DIST=24 THEN OUTPUT TEBS.INIOF24;
   IF DIST=25 THEN OUTPUT TEBS.INIOF25;

   KEEP BRID INIC SCORE1 WCPV1 WADT1 WSR1 WDSS1 WBWR1 ANSW
AQCPV AQADT AQSR AQDSS AQBWR;
RETURN; %END;

          %MEND CHOOS;

DATA AUTOQ;INPUT ANSW $ AQCPV AQADT AQSR AQDSS AQBWR;
CARDS; /* INSERT POINT AUTO-QUAL (AJJ) */
;
  /*  PROC FSEDIT DATA=AUTOQ SCREEN=TEBS.AQINI;*/
DATA AQWEIG;
IF _N_=1 THEN SET WEIGHT; SET AUTOQ;

   /* MACRO TO CHOOSE THE CORRECT DATA SET OUTPUT BY THE MODULE FREQ */
    %MACRO CHOOS2;
    %IF &ANSW=ON %THEN TEBS.QDATON;
    %IF &ANSW=OFF %THEN TEBS.QDATOF;
    %MEND CHOOS2;

PROC FORMAT;

 VALUE $WTPIC 'RP'='REPLACE BRIDGE & APPROACHES'
           'RH'='REHABILITATE BRIDGE & APPROACHES';


 VALUE $CNTY '001'='ANDERSON' '002'='ANDREWS' '003'='ANGELINA'
           '004'='ARANSAS' '005'='ARCHER' '006'='ARMSTRONG'
           '007'='ATASCOSA' '008'='AUSTIN' '009'='BAILEY'
           '010'='BANDERA' '011'='BASTROP' '012'='BAYLOR' '013'='BEE'
           '014'='BELL' '015'='BEXAR' '016'='BLANCO' '017'='BORDEN'
           '018'='BOSQUE' '019'='BOWIE' '020'='BRAZORIA'
           '021'='BRAZOS' '022'='BREWSTER' '023'='BRISCOE'
           '024'='BROOKS' '025'='BROWN' '026'='BURLESON'
           '027'='BURNET' '028'='CALDWELL' '029'='CALHOUN'
           '030'='CALLAHAN' '031'='CAMERON' '032'='CAMP'
           '033'='CARSON' '034'='CASS' '035'='CASTRO' '036'='CHAMBERS'
           '037'='CHEROKEE' '038'='CHILDRESS' '039'='CLAY'
           '040'='COCHRAN' '041'='COKE' '042'='COLEMAN' '043'='COLLIN'
           '044'='COLLINGSWORTH' '045'='COLORADO' '046'='COMAL'
           '047'='COMANCHE' '048'='CONCHO' '049'='COOKE'
           '050'='CORYELL' '051'='COTTLE' '052'='CRANE'
           '053'='CROCKETT' '054'='CROSBY' '055'='CULBERSON'
           '056'='DALLAM' '057'='DALLAS' '058'='DAWSON'
           '059'='DEAF SMITH' '060'='DELTA' '061'='DENTON'
           '062'='DEWITT' '063'='DICKENS' '064'='DIMMIT'
           '065'='DONLEY' '066'='KENEDY' '067'='DUVAL'
           '068'='EASTLAND' '069'='ECTOR' '070'='EDWARDS'
```

'071'='ELLIS' '072'='EL PASO' '073'='ERATH' '074'='FALLS'
'075'='FANNIN' '076'='FAYETTE' '077'='FISHER' '078'='FLOYD'
'079'='FOARD' '080'='FORT BEND' '081'='FRANKLIN'
'082'='FREESTONE' '083'='FRIO' '084'='GAINES'
'085'='GALVESTON' '086'='GARZA' '087'='GILLESPIE'
'088'='GLASSCOCK' '089'='GOLIAD' '090'='GONZALES'
'091'='GRAY' '092'='GRAYSON' '093'='GREGG' '094'='GRIMES'
'095'='GUADALUPE' '096'='HALE' '097'='HALL'
'098'='HAMILTON' '099'='HANSFORD' '100'='HARDEMAN'
'101'='HARDIN' '102'='HARRIS' '103'='HARRISON'
'104'='HARTLEY' '105'='HASKELL' '106'='HAYS'
'107'='HEMPHILL' '108'='HENDERSON' '109'='HIDALGO'
'110'='HILL' '111'='HOCKLEY' '112'='HOOD'
'113'='HOPKINS' '114'='HOUSTON' '115'='HOWARD'
'116'='HUDSPETH' '117'='HUNT' '118'='HUTCHINSON'
'119'='IRION' '120'='JACK' '121'='JACKSON' '122'='JASPER'
'123'='JEFF DAVIS' '124'='JEFFERSON' '125'='JIM HOGG'
'126'='JIM WELLS' '127'='JOHNSON' '128'='JONES'
'129'='KARNES' '130'='KAUFMAN' '131'='KENDALL' '132'='KENT'
'133'='KERR' '134'='KIMBLE' '135'='KING' '136'='KINNEY'
'137'='KLEBERG' '138'='KNOX' '139'='LAMAR' '140'='LAMB'
'141'='LAMPASAS' '142'='LA SALLE' '143'='LAVACA'
'144'='LEE' '145'='LEON' '146'='LIBERTY' '147'='LIMESTONE'
'148'='LIPSCOMB' '149'='LIVE OAK' '150'='LLANO'
'151'='LOVING' '152'='LUBBOCK' '153'='LYNN' '154'='MADISON'
'155'='MARION' '156'='MARTIN' '157'='MASON'
'158'='MATAGORDA' '159'='MAVERICK' '160'='MCCULLOCH'
'161'='MCLENNAN' '162'='MCMULLEN' '163'='MEDINA'
'164'='MENARD' '165'='MIDLAND' '166'='MILAM' '167'='MILLS'
'168'='MITCHELL' '169'='MONTAGUE' '170'='MONTGOMERY'
'171'='MOORE' '172'='MORRIS' '173'='MOTLEY'
'174'='NACOGDOCHES' '175'='NAVARRO' '176'='NEWTON'
'177'='NOLAN' '178'='NUECES' '179'='OCHILTREE'
'180'='OLDHAM' '181'='ORANGE' '182'='PALO PINTO'
'183'='PANOLA' '184'='PARKER' '185'='PARMER' '186'='PECOS'
'187'='POLK' '188'='POTTER' '189'='PRESIDIO' '190'='RAINS'
'191'='RANDALL' '192'='REAGAN' '193'='REAL'
'194'='RED RIVER' '195'='REEVES' '196'='REFUGIO'
'197'='ROBERTS' '198'='ROBERTSON' '199'='ROCKWALL'
'200'='RUNNELS' '201'='RUSK' '202'='SABINE'
'203'='SAN AUGUSTINE' '204'='SAN JACINTO'
'205'='SAN PATRICIO' '206'='SAN SABA' '207'='SCHLEICHER'
'208'='SCURRY' '209'='SHACKELFORD' '210'='SHELBY'
'211'='SHERMAN' '212'='SMITH' '213'='SOMERVELL'
'214'='STARR' '215'='STEPHENS' '216'='STERLING'
'217'='STONEWALL' '218'='SUTTON' '219'='SWISHER'
'220'='TARRANT' '221'='TAYLOR' '222'='TERRELL'
'223'='TERRY' '224'='THROCKMORTON' '225'='TITUS'
'226'='TOM GREEN' '227'='TRAVIS' '228'='TRINITY'
'229'='TYLER' '230'='UPSHUR' '231'='UPTON' '232'='UVALDE'
'233'='VAL VERDE' '234'='VAN ZANDT' '235'='VICTORIA'
'236'='WALKER' '237'='WALLER' '238'='WARD'
'239'='WASHINGTON' '240'='WEBB' '241'='WHARTON'
'242'='WHEELER' '243'='WICHITA' '244'='WILBARGER'
'245'='WILLACY' '246'='WILLIAMSON' '247'='WILSON'
'248'='WINKLER' '249'='WISE' '250'='WOOD' '251'='YOAKUM'
'252'='YOUNG' '253'='ZAPATA' '254'='ZAVALA';

```
 VALUE  HQ 1='1 PARIS' 2='2 FT WORTH' 3='3 WICHITA FALLS'
          4='4 AMARILLO' 5='5 LUBBOCK' 6='6 ODESSA' 7='7 SAN ANGELO'
          8='8 ABILENE' 9='9 WACO' 10='10 TYLER' 11='11 LUFKIN'
         12='12 HOUSTON' 13='13 YOAKUM' 14='14 AUSTIN'
         15='15 SAN ANTONIO' 16='16 CORPUS CHRISTI' 17='17 BRYAN'
         18='18 DALLAS' 19='19 ATLANTA' 20='20 BEAUMONT'
         21='21 PHARR' 23='23 BROWNWOOD' 24='24 EL PASO'
         25='25 CHILDRESS' 26='26 HOUSTON URBAN';

DATA REPDATA;
  IF _N_=1 THEN SET WEIGHT;
  IF _N_=1 THEN SET AUTOQ ;
  IF _N_=1 THEN SET BUDGET;
 LENGTH AQ $ 2;
 SET %CHOOS2;
 IF ANSW = 'NO' THEN  DO;AQ='1'; GO TO OK ; END;
 IF AQCPV NE . THEN DO;IF CPV<=AQCPV THEN AQ='AQ';END;
 IF AQADT NE . THEN DO;IF W_ADT>=AQADT THEN AQ='AQ';END;
 IF AQSR  NE . THEN DO;IF SR <=AQSR THEN AQ='AQ';END;
 IF AQDSS NE . THEN DO;IF DSS<=AQDSS THEN AQ='AQ';END;
 IF AQBWR NE . THEN DO;IF BWR<=AQBWR THEN AQ='AQ';END;
OK:SCORE1=0.0;
 SCORE1= SCORE1 + WCPV1*CPVPTL
              + WADT1*ADTPTL
              + WSR1 *SRPTL
              + WDSS1*DSSPTL
              + WBWR1*BWRPTL;
PROC SORT DATA=REPDATA ;
   BY DIST DESCENDING AQ DESCENDING SCORE1;
   DATA REPDATA;SET REPDATA;DISTT=LAG1(DIST);


DATA REPDATA;
   SET REPDATA;
   BY DIST DESCENDING AQ DESCENDING SCORE1;
        DROP DCOST DISTT;
   IF DIST NE DISTT THEN DCOST=0;
   DCOST=DCOST+CPI; RETAIN DCOST;
   IF DIST=1 AND DCOST>BUDG1 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=2 AND DCOST>BUDG2 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=3 AND DCOST>BUDG3 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=4 AND DCOST>BUDG4 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=5 AND DCOST>BUDG5 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=6 AND DCOST>BUDG6 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=7 AND DCOST>BUDG7 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=8 AND DCOST>BUDG8 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=9 AND DCOST>BUDG9 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=10 AND DCOST>BUDG10 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=11 AND DCOST>BUDG11 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=12 AND DCOST>BUDG12 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=13 AND DCOST>BUDG13 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=14 AND DCOST>BUDG14 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=15 AND DCOST>BUDG15 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=16 AND DCOST>BUDG16 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=17 AND DCOST>BUDG17 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=18 AND DCOST>BUDG18 THEN DO;DCOST=DCOST-CPI;DELETE;END;
   IF DIST=19 AND DCOST>BUDG19 THEN DO;DCOST=DCOST-CPI;DELETE;END;
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```
    IF DIST=20 AND DCOST>BUDG20 THEN DO;DCOST=DCOST-CPI;DELETE;END;
    IF DIST=21 AND DCOST>BUDG21 THEN DO;DCOST=DCOST-CPI;DELETE;END;
    IF DIST=23 AND DCOST>BUDG23 THEN DO;DCOST=DCOST-CPI;DELETE;END;
    IF DIST=24 AND DCOST>BUDG24 THEN DO;DCOST=DCOST-CPI;DELETE;END;
    IF DIST=25 AND DCOST>BUDG25 THEN DO;DCOST=DCOST-CPI;DELETE;END;

    IF DIST=1 AND BUDG1=0 THEN DO; DELETE;  END;
    IF DIST=2 AND BUDG2=0 THEN DO; DELETE;  END;
    IF DIST=3 AND BUDG3=0 THEN DO; DELETE;  END;
    IF DIST=4 AND BUDG4=0 THEN DO; DELETE;  END;
    IF DIST=5 AND BUDG5=0 THEN DO; DELETE;  END;
    IF DIST=6 AND BUDG6=0 THEN DO; DELETE;  END;
    IF DIST=7 AND BUDG7=0 THEN DO; DELETE;  END;
    IF DIST=8 AND BUDG8=0 THEN DO; DELETE;  END;
    IF DIST=9 AND BUDG9=0 THEN DO; DELETE;  END;
    IF DIST=10 AND BUDG10=0 THEN DO; DELETE;  END;
    IF DIST=11 AND BUDG11=0 THEN DO; DELETE;  END;
    IF DIST=12 AND BUDG12=0 THEN DO; DELETE;  END;
    IF DIST=13 AND BUDG13=0 THEN DO; DELETE;  END;
    IF DIST=14 AND BUDG14=0 THEN DO; DELETE;  END;
    IF DIST=15 AND BUDG15=0 THEN DO; DELETE;  END;
    IF DIST=16 AND BUDG16=0 THEN DO; DELETE;  END;
    IF DIST=17 AND BUDG17=0 THEN DO; DELETE;  END;
    IF DIST=18 AND BUDG18=0 THEN DO; DELETE;  END;
    IF DIST=19 AND BUDG19=0 THEN DO; DELETE;  END;
    IF DIST=20 AND BUDG20=0 THEN DO; DELETE;  END;
    IF DIST=21 AND BUDG21=0 THEN DO; DELETE;  END;
    IF DIST=23 AND BUDG23=0 THEN DO; DELETE;  END;
    IF DIST=24 AND BUDG24=0 THEN DO; DELETE;  END;
    IF DIST=25 AND BUDG25=0 THEN DO; DELETE;  END;
            INIC='INI';
RETURN;

  PROC SUMMARY DATA=REPDATA;
CLASS DIST; VAR CPI;OUTPUT OUT=TABM1 N=CPIC1 SUM=CPIS1;
DATA TABM1;SET TABM1;
IF _TYPE_=0 THEN TOT1=CPIS1;RETAIN TOT1;
CPIP1=(CPIS1/TOT1)*100;
  PROC SORT DATA=REPDATA; BY DESCENDING AQ ;
  PROC SUMMARY DATA=REPDATA;
CLASS DIST; VAR CPI;BY DESCENDING AQ ;
OUTPUT OUT=TAAQ1 N=CPICAQ1 SUM=CPISAQ1;

DATA TAAQ1;
    KEEP DIST _TYPE_ CPICAQ1 CPISAQ1;
    SET TAAQ1;IF AQ='AQ';


DATA DISLIST;INPUT DIST;CARDS;
1
2
3
4
5
6
7
8
```

```
9
10
11
12
13
14
15
16
17
18
19
20
21
23
24
25
DATA FINAL;MERGE DISLIST TABM1
TAAQ1  ;
         BY DIST;
DATA FINAL;SET FINAL;
IF CPIC1=. THEN DO; CPIC1=0; CPIS1=0;CPIP1=0;TOT1=0;_TYPE_=1;END;

IF CPICAQ1=. THEN DO; CPICAQ1=0; CPISAQ1=0;_TYPE_=1;END;
KEEP DIST _TYPE_ CPIC1 CPIS1 CPIP1 TOT1
              CPICAQ1 CPISAQ1 ;
  DATA FINAL2;SET FINAL;IF DIST= .  THEN DELETE;

OPTIONS PAGESIZE=60            ;

PROC SORT DATA=REPDATA;
  BY DIST DESCENDING SCORE1;

  DATA _NULL_;FILE /*  LIST1(INICO1) */  PRINT HEADER=A;
           IF _N_=1 THEN SET AUTOQ ; SET WEIGHT;
  PUT @44 44*'-' /
     @44 'I' @65 'WEIGHTS' @87 'I' /
     @44 44*'-' /  @44 'I'
     @45 '       ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
     @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
     @44 44*'-' /
     @44 'I' @47 ' ' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
     @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
     @44 44*'-' / /  ;
     IF ANSW='YES' THEN DO ;
  PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
     @44 44*'-' /
     @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
```

```
      @44 44*'-' /
      @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
      @44 44*'-' / /
      @49 'M = MISSING' ;
      END;    RETURN;
A: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
       @54 'AND REHABILITATION PROGRAM'/
       @52 'INITIALLY CONSIDERED PROJECTS'// ; RETURN;
    /* CMS FI LIST1 DISK INICO1 LISTING A (LRECL 133 RECFM V DISP MOD;*/
  DATA _NULL_;FILE   /*LIST1(INICO1) */ PRINT HEADER=B;
      IF _N_=1 THEN SET AUTOQ ;IF _N_=1 THEN SET WEIGHT;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC TOTCAQ CPISAQ1 DOLLAR14.;
      IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;TOTCAQ=CPISAQ1;
      TOTNAQ=CPICAQ1;
      RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
      IF ANSW='YES' THEN DO;
        IF DIST=1 THEN PUT @27 72*'-' /
@27 'I' @39 'BUDGET DISTRIBUTION'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
        @98 'I' /
        @27 72*'-' /
        @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
        @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
        @27 72*'-'   ;

    PUT @27 'I' @30 DIST @39 'I' @41 CPIC1 @47 'I' @49 CPIS1 @64 'I'
       @66 CPIP1 @72 'II' @75 CPICAQ1 @81 'I' @83 CPISAQ1 @98 'I' /
       @27 72*'-';
      IF DIST=25 THEN
    PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
        @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
         @27 72*'-'; END;
    IF ANSW = 'NO' THEN DO ;
        IF DIST=1 THEN PUT @44 46*'-' /
            @44 'I' @66 'BUDGET DISTRIBUTION'  @89 'I' /
            @44 46*'-' /
        @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
        @83 '%' @89 'I' /
        @44 46*'-';

    PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
       @83 CPIP1 @89 'I' /
       @44 46*'-';
      IF DIST=25 THEN
    PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
        @83 TOTP @89 'I' /
         @44 46*'-';END; RETURN;
B: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
       @54 'AND REHABILITATION PROGRAM'/
       @52 'INITIALLY CONSIDERED PROJECTS'/  ; RETURN;
DATA _NULL_;
  SET REPDATA END=EOF;
```

```
 BY DIST DESCENDING SCORE1;
 NPS+1;
 FILE   /*LIST1(INICO1)*/  PRINT HEADER=C;
 IF FIRST.DIST OR NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 DN+1;
 DCOST+CPI;
 PUT @5 DIST  HQ. @25 COUNTY $CNTY. @41 RNUM @54 CSS   /* CSSPIC. */ $12.
    @75 WT $WTPIC.
    @113 CPI DOLLAR14.  /
      @34 FCO   /
    @5 'BRIDGE LOCATION: 'FX $20./ /
    @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
    @55 ' PROPOSED FACILITY: ' /* PNL*/  ' LANE, ' PRW 'FT ROADWAY' /
    @5 126*'=';
 IF LAST.DIST THEN DO;
  PUT @60 'DISTRICT TOTAL OF ' DN 3. ' INITIALLY CONSIDERED PROJECTS:'
     @113  DCOST DOLLAR14.  //
@60 'NOTE: THIS SELECTION LIST IS PRELIMINARY AND MAY BE MODIFIED BY' /
@66 'THE DISTRICT ENGINEER BY THE ADDITION AND/OR SUBSTITUTION '/
@66   'OF OTHER PROJECTS THAT MEET THE PROGRAM ELIGIBILITY CRITERIA.' /
@66       'ALL LISTS ARE , HOWEVER, SUBJECTED TO FINAL REVIEW AND ' /
@66       'APPROVAL BY THE ENGINEER-DIRECTOR.' /;
  TCOST+DCOST;
  TN+DN;
  DCOST=0;
  DN=0;
  END;
 IF EOF THEN PUT @63 'STATE TOTAL OF ' TN 3.
 ' INITIALLY CONSIDERED PROJECTS:'
 @117 TCOST DOLLAR14.  ;
IF _N_=1 THEN SET WEIGHT ;
 RETURN;

C: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'//
      @5 'DISTRICT-HDQRTRS' @25 'COUNTY' @33 'HWY/FACILITY OVER'
      @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
      @5 126*'=' ;
 RETURN;


  /* TITLE1 '1987-1991 ON-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT';
TITLE2 'AND REHABILITATION PROGRAM';
TITLE3 'INITIALLY CONSIDERED PROJECTS';
TITLE4 ' ';
TITLE5 ' '; */

  DATA _NULL_;FILE /* LIST2(INICO2)*/  PRINT HEADER=D ;
            IF _N_=1 THEN SET AUTOQ ;SET WEIGHT;
  PUT @44 44*'-' /
     @44 'I' @65 'WEIGHTS' @87 'I' /
     @44 44*'-' /  @44 'I'
     @45 '       ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
     @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
     @44 44*'-' /
     @44 'I' @47 ' ' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
```

```
    @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
    @44 44*'-' / /  ;
    IF ANSW='YES' THEN DO ;
  PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
    @44 44*'-' /
    @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
    @44 44*'-' /
    @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
    @44 44*'-' / /
    @49 'M = MISSING' ;
    END;  RETURN ;
D: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
     @54 'AND REHABILITATION PROGRAM'/
     @52 'INITIALLY CONSIDERED PROJECTS'// ; RETURN;
   /* CMS FI LIST2 DISK INICO2 LISTING A (LRECL 133 RECFM V DISP MOD;*/
  DATA _NULL_;FILE /* LIST2(INICO2)*/  PRINT HEADER=E ;
  IF _N_=1 THEN SET AUTOQ ;IF _N_=1 THEN SET WEIGHT;SET FINAL;
  FORMAT CPIP1 5.2 TOTP 6.2 CPIS1 TOTC TOTCAQ CPISAQ1 DOLLAR14.;
    IF DIST= . THEN DO;TOTN=CPIC1;TOTC=CPIS1;TOTP=CPIP1;TOTCAQ=CPISAQ1;
    TOTNAQ=CPICAQ1;
    RETAIN TOTN TOTC TOTP TOTCAQ TOTNAQ;DELETE; PUT _PAGE_;END;
    IF ANSW='YES' THEN DO;
      IF DIST=1 THEN PUT @27 72*'-' /
@27 'I' @39 'BUDGET DISTRIBUTION'  @72 'II' @75 'AUTO-QUALIF. STATISTICS'
      @98 'I' /
      @27 72*'-' /
      @27 'I' @30 'DISTRICT' @39 'I' @41 'N' @47 'I' @49 'SUM' @64 'I'
      @66 '%' @72 'II' @75 'N AQ' @81 'I' @83 'SUM AQ' @98 'I' /
      @27 72*'-'   ;

   PUT @27 'I' @30 DIST @39 'I' @41 CPIC1 @47 'I' @49 CPIS1 @64 'I'
     @66 CPIP1 @72 'II' @75 CPICAQ1 @81 'I' @83 CPISAQ1 @98 'I' /
     @27 72*'-';
    IF DIST=25 THEN
  PUT  @27 'I' @30 'TOTALS' @39 'I' @41 TOTN @47 'I' @49 TOTC @64 'I'
     @66 TOTP @72 'II' @75 TOTNAQ @81 'I' @83 TOTCAQ @98 'I' /
      @27 72*'-'; END;
  IF ANSW = 'NO' THEN DO ;
     IF DIST=1 THEN PUT @44 46*'-' /
        @44 'I' @66 'BUDGET DISTRIBUTION'  @89 'I' /
        @44 46*'-' /
```

```
      @44 'I' @47 'DISTRICT' @56 'I' @58 'N' @64 'I' @66 'SUM' @81 'I'
      @83 '%' @89 'I' /
      @44 46*'-';

  PUT @44 'I' @47 DIST @56 'I' @58 CPIC1 @64 'I' @66 CPIS1 @81 'I'
     @83 CPIP1 @89 'I' /
     @44 46*'-';
    IF DIST=25 THEN
  PUT  @44 'I' @47 'TOTALS' @56 'I' @58 TOTN @64 'I' @66 TOTC @81 'I'
      @83 TOTP @89 'I' /
       @44 46*'-';END; RETURN;
E: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'/  ; RETURN;
DATA _NULL_;
 SET REPDATA END=EOF;
 BY DIST DESCENDING SCORE1;
 S='S';
 NPS+1;
 FILE /* LIST2(INICO2) */ PRINT HEADER=F;
 IF FIRST.DIST OR NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 IF (S='S') THEN DO; A_COST+CPI; AN+1; END;

   IF CUCO GE 0 THEN
 PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.

    @57 CPV DOLLAR8. @73 BWR 5.3
    @85 SCORE1 3. @95 W_BDL 2.
    @115 A_COST DOLLAR14. / @2 CSS   /* CSSPIC.*/ $12. / @13 'COMMENTS: '
    / /
    @12 119*'=' / ;
   ELSE DO;
 PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
    @48 SSCO 1. @53 SUBCO 1.
    @57 CPV DOLLAR8. @73 BWR 5.3
    @85 SCORE1 3. @95 W_BDL 2.
    @115 A_COST DOLLAR14. / @2 CSS   /* CSSPIC.*/ $12. / @13 'COMMENTS: '
    / /
    @12 119*'=' / ;END;

 IF LAST.DIST THEN DO;
   PUT @62 'DISTRICT TOTAL OF ' AN 3.
      ' INITIALLY CONSIDERED PROJECTS:'
      @115 A_COST DOLLAR14.  //
@60 'NOTE: THIS SELECTION LIST IS PRELIMINARY AND MAY BE MODIFIED BY' /
@66 'THE DISTRICT ENGINEER BY THE ADDITION AND/OR SUBSTITUTION ' /
@66  'OF OTHER PROJECTS THAT MEET THE PROGRAM ELIGIBILITY CRITERIA.' /
@66       'ALL LISTS ARE , HOWEVER, SUBJECTED TO FINAL REVIEW AND ' /
@66       'APPROVAL BY THE ENGINEER-DIRECTOR.' /;
   TA_COST+A_COST;
   TAN+AN;
   AN=0;
   A_COST=0;
   END;
 IF EOF THEN PUT @65 'STATE TOTAL OF ' TAN 3.
              ' INITIALLY CONSIDERED PROJECTS:'
              @115 TA_COST DOLLAR14.  ;
```

```
IF _N_=1 THEN SET WEIGHT ;
RETURN;

F: PUT @39 YEAR @49 ONOF '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'//
   @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
   @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
   @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
   @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
   @120 'ACCUM COST'/ @12 119*'=' /;
   RETURN;
    /* CMS FI FT14F001 DISK INICO MAP A; */
  /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171          ; */
DATA FINAL3;SET FINAL;IF _N_=1 THEN DO; TOTC=CPIS1/1000000;RETAIN TOTC;
DELETE;END; CPIS1=CPIS1/1000000;
KEEP DIST TOTC CPIS1;
CPIS1=ROUND(CPIS1,0.01);
DATA ANOT1;INPUT DIST X Y ; SET FINAL3   ;
LENGTH DIST2 $ 5 ;RETAIN Z 1; DIST1=DIST;
DIST2= (TRIM(LEFT('D')) || TRIM(LEFT(DIST1)));
LENGTH FUNCTION $ 8; LENGTH TEXT $ 27 ;LENGTH COLOR $ 6;
XSYS='2';YSYS='2';
TEXT=DIST2;FUNCTION='LABEL';POSITION='C';WHEN='A';OUTPUT;
POSITION='F';TEXT=PUT(CPIS1,DOLLAR6.2);FUNCTION='LABEL';
WHEN='A'; COLOR='BLUE';
OUTPUT;
CARDS;
  1   0.055     0.040
 2   0.026     0.027
 3   0.016     0.046
 4  -0.028     0.079497
 5  -0.035     0.043758
 6  -0.050    -0.002
 7  -0.018255 -0.010
 8  -0.009     0.025641
 9   0.036     0.006
 10   0.063     0.020
 11   0.078739  0.007
 12   0.061    -0.022
 13   0.042    -0.030
 14   0.024    -0.012
 15   0.005    -0.036882
 16   0.031    -0.047
 17   0.053    -0.004
 18   0.046     0.028
 19   0.075     0.035
 20   0.077    -0.016
 21   0.019    -0.074
 23   0.009     0.006806
 24  -0.063738 -0.018030
 25  -0.0094    0.050
DATA ANOT2; SET FINAL3; IF _N_=1;
X= 15   ;Y= 15  ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(TOTC,DOLLAR8.2);
TEXT=(TRIM(LEFT('FOR INITIAL BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
```

```
OUTPUT;
DATA ANOT3; SET WEIGHT ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('  ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15  ;Y= 15  ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
DATA ANOT1;SET ANOT1 ANOT2;
TITLE1 F=NONE 'BUDGET DISTRIBUTION FOR INITIAL LIST OF PROJECTS';
TITLE2 F=NONE C=BLUE '      (DOLLARS MILLIONS) ';
PATTERN1 C=WHITE V=ME;
  PROC GMAP MAP=TEBS.TEXAS DATA=ANOT1;
ID DIST;CHORO Z / NOLEGEND ANNOTATE=ANOT1 DISCRETE;RUN;

   /* CMS FI FT14F001 DISK INICO CHART A; */
  /*GOPTIONS DEVICE=TEK4105 GPROTOCOL=GSAS7171; */
DATA ANOT2; SET FINAL3;IF _N_=1;
X= 15  ;Y=  5  ; POSITION='3';XSYS='3';YSYS='3';
BUDG1=PUT(TOTC,DOLLAR8.2);
TEXT=(TRIM(LEFT('FOR INITIAL BUDGET= ')) || TRIM(LEFT(BUDG1)));
FUNCTION='LABEL';WHEN='A'; COLOR='BLACK';
OUTPUT;
DATA ANOT3;SET WEIGHT ;
DIA=PUT(DATE(),DATE7.);
TEXT=(TRIM(LEFT(ONOF)) || TRIM(LEFT('-SYSTEM')) || ('  ')
|| TRIM(LEFT(DIA)));
FUNCTION='LABEL';WHEN='A';COLOR='BLACK';POSITION='9';
X= 15  ;Y=  5  ;XSYS='3';YSYS='3';OUTPUT;
DATA ANOT2;SET ANOT2 ANOT3;
  PROC GPLOT DATA=FINAL2;
LABEL DIST='DISTRICTS';
LABEL CPIP1='%';
TITLE1 F=NONE 'BUDGET DISTRIBUTION FOR INITIAL LIST OF PROJECTS';
TITLE2 F=NONE C=BLUE '   (BUDGET IN MILLIONS) ';
  FOOTNOTE1 J=R H=1 F=NONE C=BLACK 'LEGEND:';
  FOOTNOTE2 J=R H=1 F=NONE C=BLUE 'PERCENT OF BUDGET';
  FOOTNOTE3 J=R H=1 F=NONE C=GREEN '          ';
  FOOTNOTE4 J=R H=1 F=NONE C=BLUE '          ';
  SYMBOL1 W=1 C=BLUE V=PLUS I=JOIN H=0.3 CM;
AXIS1 MINOR=NONE
ORDER=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25;
PLOT (CPIP1)*DIST / OVERLAY ANNOTATE= ANOT2
HAXIS=AXIS1;
RUN;

   /* CREATE PERMANENT DATA SET OF THE INITIALLY CONSIDERED PROJECTS */

  %CHOOS;
```

DISTRICT RPF

```
<<RDIST>>
:**********************************************************************
PUSH
SET MODE BASIC
F A4Y.DISTRJCL
R 1 1
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM DIST ,SYS,OPT
TAG % HUM ERRMSG
CURSOR DIST
!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$              TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                        T E B S S
$
!            THIS IS THE DISTRICT LEVEL REPORTING MODULE
!
$
$                        (DISTR) PROGRAM
!
!                      DISTRICT      :õ__!
! (OFF INCLUDES 8000)       OFF/ON SYSTEM :õ___!
!                      OPTION        :õ_______!$(INICO,SCORE,ADDCO,
!                                          $FINAL,COST)
!
! INICO: PRINT THE INITIAL LIST OF PROJECTS CREATED BY D-5
! SCORE: SCORE AND RANK ALL THE ELIGIBLE PROJECTS FOR THE DISTRICT
! ADDCO: ADD COMMENTS TO SPECIFIC PROJECTS
! FINAL: SEND THE FINAL DISTRICT SELECTION TO D-5
! COST : MODIFY PROJECT ESTIMATED COST
!            %                                          !
$  PRESS ENTER TO CONTINUE                                  PF1:TO QUIT
ENDDEF
LET P.DIST=SUBSTR(S.KEY,2,2)
IF P.DIST EQ '45'
   LET P.DIST='__'
ENDIF
PANEL SEND
:**********************************************************************
<<BEGIN1>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
  GOTO <<END>>
ENDIF
TRAP ON
FIND /DISTRICT SYSTEM MENU OPTION HERE/
TRAP OFF
IF TC NE 0
  RESPONSE 'ERROR IN FINDING OPTION CARD IN DISTRJCL.'
  GOTO <<END>>
ENDIF
LET L1=TRIM(LTRIM(P.DIST,'_'),'_')
IF CONFORM(L1,'N') NE 1
```

```
    LET P.ERRMSG='ERROR IN DISTRICT, MUST BE NUMERIC ONLY'
    PANEL RESEND CURSOR P.DIST
    GOTO <<BEGIN1>>
ENDIF
LET L2=TRIM(LTRIM(P.SYS,'_'),'_')
IF (L2 EQ 'OFF') OR (L2 EQ 'ON')
   GOTO <<OPT>>
ELSE
    LET P.ERRMSG='ERROR IN SYSTEM, MUST BE (OFF/ON) ONLY'
    PANEL RESEND CURSOR P.SYS
    GOTO <<BEGIN1>>
ENDIF
<<OPT>>
LET L3=TRIM(LTRIM(P.OPT,'_'),'_')
IF L3 EQ 'INICO' OR L3 EQ 'SCORE' OR L3 EQ 'ADDCO' OR L3 EQ 'FINAL' OR L3 EQ 'COST'
    GOTO <<PAN1OK>>
ELSE
    LET P.ERRMSG='ERROR IN OPTION'
    PANEL RESEND CURSOR P.OPT
    GOTO <<BEGIN1>>
ENDIF
:*****************************************************************
<<PAN1OK>>
+WRITE AWS +SEQ+ L1|' '|L2|' '|L3
:*****************************************************************
:*****************************************************************
IF L3 EQ 'INICO'
  GOTO <<SUBMIT>>
ENDIF
IF L3 EQ 'SCORE'
  DO <<SCORE>>
  LET L15='            IN ANY ORDER, RESULTS WILL BE ORDERED BY SCORE'
  LET L16='                 INPUT AUTOMATICALLY INCLUDED PROJECTS.'
  DO <<FINAL>>
ENDIF
IF L3 EQ 'ADDCO'
  DO <<ADDCO>>
ENDIF
IF L3 EQ 'FINAL'
  LET L15='                   ORDERED BY DISTRICT PRIORITY'
  LET L16='                 INPUT FINAL DISTRICT SELECTED LIST'
  DO <<FINAL>>
ENDIF
IF L3 EQ 'COST'
  DO <<COST>>
ENDIF
<<SUBMIT>>
DO <<NODE>>
JSUB
<<END>>
:DEL
POP
RETURN
:*****************************************************************
:*****************************************************************
<<ADDCO>> PROC
:*****************************************************************
```

```
TRAP ON
FIND /****INSERT THE BRID AND THE COMMENTS CARDS HERE ****/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING CMNT CARD IN DISTRJCL.'
   GOTO <<END>>
ENDIF
:*********************************************************************
<<BEGINAD>>
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM CNTY,CONT,SECT,STR,COM1,COM2
TAG % HUM ERRMSG
CURSOR CNTY
!
$            STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                 TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                             T E B S S
!
$                          (DISTR) PROGRAM
!
!
!                          COUNTY CONT. SEC. STR.
!                    BRIDGE ID :õ___!õ____!õ__! õ___!
!
!COMMENTS :
õ_____________________________________________________________!
õ_____________________________________________________________!
!
!
!
!
!
!
!              %                                          !
$  PRESS ENTER TO CONTINUE        PF12: TO SUBMIT JOB          PF1:TO QUIT
ENDDEF
PANEL SEND
:*********************************************************************
<<BEGIN2>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:*********************************************************************
IF LENGTH(TRIM(P.CNTY,'_')|TRIM(P.CONT,'_')|TRIM(P.SECT,'_')|TRIM(P.STR,'_')) GT 0
     LET L4=LPAD(TRIM(LTRIM(P.CNTY,'_'),'_'),3,'0')
     IF L4 EQ '000'
          LET P.ERRMSG='ERROR IN JOB NUMBER'
          PANEL RESEND CURSOR P.CNTY
          GOTO <<BEGIN2>>
```

```
    ENDIF
    LET L1=TRIM(LTRIM(P.CONT,'_'),'_')
    IF LENGTH(L1) LT 4
        LET P.ERRMSG='ERROR IN CONTROL NUMBER, MUST BE IN FORMAT <XXXX>'
        PANEL RESEND CURSOR P.CONT
        GOTO <<BEGIN2>>
    ENDIF
    LET L2=LPAD(TRIM(LTRIM(P.SECT,'_'),'_'),2,'0')
    IF L2 EQ '00'
        LET P.ERRMSG='ERROR IN SECTION NUMBER, MUST BE NUMERIC.'
        PANEL RESEND CURSOR P.SECT
        GOTO <<BEGIN2>>
    ENDIF
    LET L3=LPAD(TRIM(LTRIM(P.STR,'_'),'_'),3,'0')
    IF L3 EQ '000'
        LET P.ERRMSG='ERROR IN STRUCTURE NUMBER, MUST BE NUMERIC.'
        PANEL RESEND CURSOR P.STR
        GOTO <<BEGIN2>>
    ENDIF
    LET L5=TRIM(LTRIM(P.COM1,'_'),'_')
    IF L5 EQ ''
       LET L5='.'
    ENDIF
    LET L6=TRIM(LTRIM(P.COM2,'_'),'_')
    IF L6 EQ ''
       LET L6='.'
       LET L6='.'
    ENDIF
    +WRITE AWS +SEQ+ L4|'-'|L1|'-'|L2|'-'|L3|' '|L5
    +WRITE AWS +SEQ+ L6
ENDIF
IF AID EQ 'PF12'
  GOTO <<ADDOUT>>
ELSE
  GOTO <<BEGINAD>>
ENDIF
<<ADDOUT>>
ENDPROC
.*****************************************************************
<<SCORE>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM ANSW,W1,W2,W3,W4,W5,A1,A2,A3,A4,A5
TAG % HUM ERRMSG
CURSOR ANSW
!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                           T E B S S
!
!         DO YOU WANT TO USE THE AUTO-QUALIFYING FEATURE õ___! (YES/NO)
!
$                          (DISTR) PROGRAM
```

```
!
! WEIGTH FOR THE COST PER VEHICLE              WCPV :õ_________!
! WEIGTH FOR THE AVERAGE DAILY TRAFFIC          WADT :õ_________!
! WEIGTH FOR THE SUFFICIENCY RATING             WSR  :õ_________!
! WEIGTH FOR THE MINIMUM DSS RATING             WDSS :õ_________!
! WEIGTH FOR THE BRIDGE WIDTH RATIO             WBWR :õ_________!
!
! AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQCPV:õ_________!
! AUTO-QUALIFY PROJECTS WITH MORE OR EQUAL THAN AQADT:õ_________!
! AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQSR :õ_________!
! AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQDSS:õ_________!
! AUTO-QUALIFY PROJECTS WITH LESS OR EQUAL THAN AQBWR:õ_________!
!              %                                                !
$  PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
ENDDEF
PANEL SEND
:*************************************************************************
<<BACK3>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:*************************************************************************
LET P.ANSW=TRIM(LTRIM(P.ANSW,'_'),'_')
IF (P.ANSW EQ 'YES') OR (P.ANSW EQ 'NO')
  GOTO <<XXXX>>
ENDIF
LET P.ERRMSG='ENTRY MUST YES OR NO.'
PANEL RESEND CURSOR P.ANSW
GOTO <<BACK3>>
<<XXXX>>
:*************************************************************************
LET L1='P.W'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:*************************************************************************
LET L1='P.A'
LET L2=1
LOOP 5 TIMES
   LET L4=L1|L2
   +LET L5=+L4+
   LET L5=TRIM(LTRIM(L5,'_'),'_')
   LET L6=INDEX(L5,'.')
   IF L6 NE 0
     LET L5=MODIFY(L5,'0',L6)
   ENDIF
   IF (CONFORM(L5,'N') NE 1) AND (L5 NE '')
      LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
      +PANEL RESEND CURSOR +L4+
```

```
      GOTO <<BACK3>>
   ENDIF
   IF L6 NE 0
     LET L5=MODIFY(L5,'.',L6)
   ENDIF
   +LET +L4+=L5
   LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L1='P.W'
LET L2=1
LET L5=''
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
      +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L1='P.A'
LET L2=1
LET L5=L5|' '|P.ANSW
LOOP 5 TIMES
   LET L4=L1|L2
   +IF (+L4+ EQ '') OR (+L4+ EQ 0)
      +LET +L4+ = '.'
    ENDIF
   +LET L5=L5|' '|+L4+
   LET L2=L2+1
ENDLOOP
:*****************************************************************
TRAP ON
FIND  /***INSERT THE CARD FOR THE WEIGHTS AND AUTO QUALIFYING**/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING WEIGHTS AND AUTO-QUAL CARD IN DISTRJCL.'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ L5
ENDPROC
:*****************************************************************
<<FINAL>> PROC
:*****************************************************************
IF INDEX(L16,'INPUT FINAL') EQ 0
  TRAP ON
  FIND /****INSERT THE AUTOMATICALLY INCLUDED PROJECTS HERE****/
  TRAP OFF
  IF TC NE 0
     RESPONSE 'ERROR IN FINDING AUTO PROJECTS IN DISTRJCL.'
     GOTO <<END>>
  ENDIF
ELSE
  TRAP ON
  FIND  /*****FINAL BRIDS  FOR THE PROJECTS TO BE FORWARDED***/
  TRAP OFF
```

```
  IF TC NE 0
     RESPONSE 'ERROR IN FINDING FINAL INPUT CARDS'
     GOTO <<END>>
  ENDIF
ENDIF
:*****************************************************************
<<START>>
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG ^ HM MSG,MSG1
TAG õ HUM CNTY0,CONT0,SECT0,STR0
TAG õ HUM CNTY1,CONT1,SECT1,STR1
TAG õ HUM CNTY2,CONT2,SECT2,STR2
TAG õ HUM CNTY3,CONT3,SECT3,STR3
TAG õ HUM CNTY4,CONT4,SECT4,STR4
TAG õ HUM CNTY5,CONT5,SECT5,STR5
TAG õ HUM CNTY6,CONT6,SECT6,STR6
TAG õ HUM CNTY7,CONT7,SECT7,STR7
TAG õ HUM CNTY8,CONT8,SECT8,STR8
TAG õ HUM CNTY9,CONT9,SECT9,STR9
TAG % HUM ERRMSG
CURSOR CNTY0

!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                             T E B S S
!
$                             (DISTR) PROGRAM
$^                                                              !
$^                                                              !
!
$                          COUNTY CONT. SEC. STR.
!                          1õ___!õ____!õ__! õ___!
!                          2õ___!õ____!õ__! õ___!
!                          3õ___!õ____!õ__! õ___!
!                          4õ___!õ____!õ__! õ___!
!                          5õ___!õ____!õ__! õ___!
!                          6õ___!õ____!õ__! õ___!
!                          7õ___!õ____!õ__! õ___!
!                          8õ___!õ____!õ__! õ___!
!                          9õ___!õ____!õ__! õ___!
!                         10õ___!õ____!õ__! õ___!
!              %                                        !
$  PRESS ENTER FOR NEXT PAGE       PF12: TO SUBMIT JOB          PF1:TO QUIT
ENDDEF
LET P.MSG=L16
LET P.MSG1=L15
PANEL SEND
:*****************************************************************
<<BEGIN3>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
```

```
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:*************************************************************************
LET P1='P.CONT'
LET P2='P.SECT'
LET P3='P.STR'
LET P4='P.CNTY'
LET P5=0
LOOP 10 TIMES
     +LET L1=+P1|P5+
     +LET L2=LPAD(TRIM(LTRIM(+P2|P5+,'_'),'_'),2,'0')
     +LET L3=LPAD(TRIM(LTRIM(+P3|P5+,'_'),'_'),3,'0')
     +LET L4=LPAD(TRIM(LTRIM(+P4|P5+,'_'),'_'),3,'0')
     IF L4|L2|L3 NE '00000000'
       IF L4 EQ 0
          LET P.ERRMSG = 'ERROR IN COUNTY NUMBER'
          +PANEL RESEND CURSOR +P4|P5+
          GOTO <<BEGIN3>>
       ENDIF
       IF INDEX(L1,'_') NE 0
          LET P.ERRMSG = 'ERROR IN CONTROL NUMBER'
          +PANEL RESEND CURSOR +P1|P5+
          GOTO <<BEGIN3>>
       ENDIF
       +WRITE AWS +SEQ+ L4|'-'|L1|'-'|L2|'-'|L3
     ENDIF
     LET P5=P5+1
ENDLOOP
IF AID EQ 'PF12'
  GOTO <<FINOUT>>
ELSE
  GOTO <<START>>
ENDIF
<<FINOUT>>
ENDPROC
:*************************************************************************
<<COST>> PROC
:*************************************************************************
FIND /***** INSERT CARDS FOR BRIDS PROJECT COST UPDATES   ***/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FINDING PROJECT COST IN DISTRJCL.'
   GOTO <<END>>
ENDIF
<<STARTCST>>
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM CNTY0,CONT0,SECT0,STR0,CST0
TAG õ HUM CNTY1,CONT1,SECT1,STR1,CST1
TAG õ HUM CNTY2,CONT2,SECT2,STR2,CST2
TAG õ HUM CNTY3,CONT3,SECT3,STR3,CST3
TAG õ HUM CNTY4,CONT4,SECT4,STR4,CST4
TAG õ HUM CNTY5,CONT5,SECT5,STR5,CST5
```

```
TAG ō HUM CNTY6,CONT6,SECT6,STR6,CST6
TAG ō HUM CNTY7,CONT7,SECT7,STR7,CST7
TAG ō HUM CNTY8,CONT8,SECT8,STR8,CST8
TAG ō HUM CNTY9,CONT9,SECT9,STR9,CST9
TAG % HUM ERRMSG
CURSOR CNTY0

!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                            T E B S S
!
$                          (DISTR) PROGRAM
$                        (COST UPDATE OPTION)                         !
$                                                                !
$                                    UPDATED
$                  COUNTY CONT. SEC. STR. PROJECT COST
!                  1ō___!ō____!ō__! ō___! ō_________!
!                  2ō___!ō____!ō__! ō___! ō_________!
!                  3ō___!ō____!ō__! ō___! ō_________!
!                  4ō___!ō____!ō__! ō___! ō_________!
!                  5ō___!ō____!ō__! ō___! ō_________!
!                  6ō___!ō____!ō__! ō___! ō_________!
!                  7ō___!ō____!ō__! ō___! ō_________!
!                  8ō___!ō____!ō__! ō___! ō_________!
!                  9ō___!ō____!ō__! ō___! ō_________!
!                 10ō___!ō____!ō__! ō___! ō_________!
!             %                                       !
$ PRESS ENTER FOR NEXT PAGE      PF12: TO SUBMIT JOB        PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
<<BEGINCST>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:**********************************************************************
LET P1='P.CONT'
LET P2='P.SECT'
LET P3='P.STR'
LET P4='P.CNTY'
LET P6='P.CST'
LET P5=0
LOOP 10 TIMES
     +LET L1=+P1|P5+
     +LET L2=LPAD(TRIM(LTRIM(+P2|P5+,'_'),'_'),2,'0')
     +LET L3=LPAD(TRIM(LTRIM(+P3|P5+,'_'),'_'),3,'0')
     +LET L4=LPAD(TRIM(LTRIM(+P4|P5+,'_'),'_'),3,'0')
     +LET L5=LPAD(TRIM(LTRIM(+P6|P5+,'_'),'_'),9,'0')
    +IF (L4|L2|L3 NE '00000000') AND (+P6|P5+ NE '_________')
      IF L4 EQ 0
          LET P.ERRMSG = 'ERROR IN COUNTY NUMBER'
```

```
         +PANEL RESEND CURSOR +P4|P5+
         GOTO <<BEGIN3>>
      ENDIF
      IF INDEX(L1,'_') NE 0
         LET P.ERRMSG = 'ERROR IN CONTROL NUMBER'
         +PANEL RESEND CURSOR +P1|P5+
         GOTO <<BEGIN3>>
      ENDIF
:**** CHECK FOR NUMERIC ONLY FOR COST ********
      LET L6=INDEX(L5,'.')
      IF L6 NE 0
        LET L5=MODIFY(L5,'0',L6)
      ENDIF
      IF (CONFORM(L5,'N') NE 1) AND (L5 NE '')
         LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
         +PANEL RESEND CURSOR +P6|P5+
         GOTO <<BEGINCST>>
      ENDIF
      IF L6 NE 0
        LET L5=MODIFY(L5,'.',L6)
      ENDIF
      +LET +P6|P5+=L5
:*********************************************
    ENDIF
    LET P5=P5+1
ENDLOOP
:********** WRITE TO AWS *********************************************
LET P5=0
LOOP 10 TIMES
    +LET L1=+P1|P5+
    +LET L2=LPAD(TRIM(LTRIM(+P2|P5+,'_'),'_'),2,'0')
    +LET L3=LPAD(TRIM(LTRIM(+P3|P5+,'_'),'_'),3,'0')
    +LET L4=LPAD(TRIM(LTRIM(+P4|P5+,'_'),'_'),3,'0')
    +LET L5=LPAD(TRIM(LTRIM(+P6|P5+,'_'),'_'),9,'0')
    +IF (L4|L2|L3 NE '00000000') AND (+P6|P5+ NE '_________')
       +WRITE AWS +SEQ+ L4|'-'|L1|'-'|L2|'-'|L3|' '|L5
    ENDIF
    LET P5=P5+1
ENDLOOP
:*********************************************************************
IF AID EQ 'PF12'
  GOTO <<CSTOUT>>
ELSE
  GOTO <<STARTCST>>
ENDIF
<<CSTOUT>>
ENDPROC
:*********************************************************************
<<NODE>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM PRINTER,MSG
TAG % HUM ERRMSG
CURSOR PRINTER
!
```

```
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$                TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                          T E B S S
!
$                        (DISTR) PROGRAM
$                                                          !
!
$                     PRINTER   õ_____!
$                     MSG CLASS õR$      R=REVIEW OUTPUT
$                                   A=SEND DIRECT TO PRINTER
!
!
!
$     *** TO CHANGE PRINTER DESTINATION JUST ENTER PRINTER ID ABOVE ***      !
!
!
!
!
!
!            %                                          !
$  PRESS ENTER TO CONTINUE
ENDDEF
LET L1=SUBSTR(S.KEY,2,2)
SELECT FIRST
   WHEN L1 EQ '45'
      LET L2='N9R82'
   WHEN L1 EQ '01'
      LET L2='N2R01'
   WHEN L1 EQ '02'
      LET L2='N3R02'
   WHEN L1 EQ '03'
      LET L2='N3R03'
   WHEN L1 EQ '04'
      LET L2='N3R04'
   WHEN L1 EQ '05'
      LET L2='N4R05'
   WHEN L1 EQ '06'
      LET L2='N4R06'
   WHEN L1 EQ '07'
      LET L2='N4R07'
   WHEN L1 EQ '08'
      LET L2='N4R08'
   WHEN L1 EQ '09'
      LET L2='N6R09'
   WHEN L1 EQ '10'
      LET L2='N2R10'
   WHEN L1 EQ '11'
      LET L2='N2R11'
   WHEN L1 EQ '12'
      LET L2='N1R12'
   WHEN L1 EQ '13'
      LET L2='N5R13'
   WHEN L1 EQ '14'
      LET L2='N6R14'
   WHEN L1 EQ '15'
```

```
        LET L2='N5R15'
    WHEN L1 EQ '16'
        LET L2='N5R16'
    WHEN L1 EQ '17'
        LET L2='N6R17'
    WHEN L1 EQ '18'
        LET L2='N2R18'
    WHEN L1 EQ '19'
        LET L2='N2R19'
    WHEN L1 EQ '20'
        LET L2='N1R20'
    WHEN L1 EQ '21'
        LET L2='N5R21'
    WHEN L1 EQ '23'
        LET L2='N3R23'
    WHEN L1 EQ '24'
        LET L2='N4R24'
    WHEN L1 EQ '25'
        LET L2='N3R25'
ENDSEL
LET P.PRINTER=L2
PANEL SEND
+E /C454100/+S.KEY+/
+E /D-XX * T.E.B.S.S./D-+L1+ * T.E.B.S.S./
IF P.MSG EQ 'A' OR P.MSG EQ 'R'
   GOTO <<OKMSG>>
ENDIF
LET P.MSG='R'
<<OKMSG>>
LET L2='MSGCLASS='|P.MSG|''
+E /MSGCLASS=R/+L2+/
LET L2=PAD(LTRIM(TRIM(P.PRINTER,'_'),'_'),5,' ')
LET L2='ROUTE PRINT '|L2|''
+E /ROUTE PRINT N9R00/+L2+/
ENDPROC
```

DISTRICT JCL

```
/*PRIORITY      8
//R575004  JOB (00226329,C454100),'D-XX * T.E.B.S.S. *',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(0,0),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R00
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=SAS
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
//*INP DD DSN=D45.SAS.IN2(MENU),DISP=SHR
OPTIONS NOSOURCE;
DATA _NULL_    ;
  /* THIS IS THE DISTRICT REPORTING PROGRAM, IT ALLOWS THE USER TO
  PERFORM SEVERAL MENU OPTIONS. FOR MORE DETAILS SEE REPORT 439-4 */
        /***********
CMS FI INP DISK MENU INP A ;
CMS FI LIST1 DISK DISTR1 LISTING A (LRECL 133 RECFM V ;
CMS FI LIST2 DISK DISTR2 LISTING A (LRECL 133 RECFM V ;****/
%GLOBAL MEN DISTR SYST ;OPTIONS MISSING='M' PAGESIZE=59 REPLACE MPRINT;
      /***THE MENU SELECTIONS FOR THE SEVERAL OPTIONS FOLLOW***/
DATA MENU ;
   /*  INFILE INP ;*/
     LENGTH SYS $ 3 CHOIC $ 5;INPUT DIST $ SYS $  CHOIC $ ;
CARDS;   /* INSERT THE CARD FOR THE DISTRICT SYSTEM MENU OPTION HERE */
;
DATA MENU;SET MENU;   CALL SYMPUT('MEN',CHOIC);
     CALL SYMPUT('DISTR',DIST);    CALL SYMPUT('SYST',SYS);   RETURN;
     /**** ADDCO OPTION ****/
DATA LIST2;
     /*** INFILE INP FIRSTOBS=2 ;****/
     LENGTH BRID $ 16 COMM1 $ 64 COMM2 $ 80;
     INPUT BRID $  COMM1 & $64.;
     INPUT COMM2 & $80.;
CARDS;   /****INSERT THE BRID AND THE COMMENTS CARDS HERE ****/
;
DATA WEIGHT;  /***** SCORE OPTION ******/
   /***  INFILE INP ;IF _N_=1 THEN DO; INPUT;  DELETE;  END;***/
     LENGTH ANSW $ 3;
     INPUT WCPV WADT WSR WDSS WBWR ANSW $
     AQCPV AQADT AQSR AQDSS AQBWR;
CARDS;     /***INSERT THE CARD FOR THE WEIGHTS AND AUTO QUALIFYING**/
;
DATA SELEC; /* READING THE DISTRICT'S SELECTION OF AUTO Q. PROJECTS */

      /***  INFILE INP;IF _N_=1 THEN DO; INPUT;  DELETE;  END;
              IF _N_=2 THEN DO; INPUT;  DELETE;  END;***/
     LENGTH BRID $ 16;
     SEL= 'DS';FLAG=69;
INPUT BRID $ ;
CARDS;  /****INSERT THE AUTOMATICALLY INCLUDED PROJECTS HERE****/
;
DATA LIST;   /***** FINAL OPTION *******/

  /* INFILE INP FIRSTOBS=2 ;*/
     LENGTH BRID $ 16 DISEL $ 5;
     INPUT BRID $ ; DISEL= 'DISEL';RANK=_N_;
CARDS;  /*****FINAL BRIDS  FOR THE PROJECTS TO BE FORWARDED***/
;
```

```
DATA COST;   /***** COST OPTION *******/

    LENGTH BRID $ 16 ;FLAG=69;
    INPUT BRID $  COST;
CARDS;  /***** INSERT CARDS FOR BRIDS PROJECT COST UPDATES   ***/
;
DATA _NULL_;
  /* MACRO TO CHOOSE THE CORRECT DATA SET FOR THE DISTRICT,ALREADY
     STORED BY THE PROGRAM FREQ  */

    %MACRO DISYS;
   %IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF1;
              %IF &SYST=ON %THEN TEBS.DISTON1;%END;
   %IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF2;
              %IF &SYST=ON %THEN TEBS.DISTON2;%END;
   %IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF3;
              %IF &SYST=ON %THEN TEBS.DISTON3;%END;
   %IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF4;
              %IF &SYST=ON %THEN TEBS.DISTON4;%END;
   %IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF5;
              %IF &SYST=ON %THEN TEBS.DISTON5;%END;
   %IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF6;
              %IF &SYST=ON %THEN TEBS.DISTON6;%END;
   %IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF7;
              %IF &SYST=ON %THEN TEBS.DISTON7;%END;
   %IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF8;
              %IF &SYST=ON %THEN TEBS.DISTON8;%END;
   %IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF9;
              %IF &SYST=ON %THEN TEBS.DISTON9;%END;
   %IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF10;
              %IF &SYST=ON %THEN TEBS.DISTON10;%END;
   %IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF11;
              %IF &SYST=ON %THEN TEBS.DISTON11;%END;
   %IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF12;
              %IF &SYST=ON %THEN TEBS.DISTON12;%END;
   %IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF13;
              %IF &SYST=ON %THEN TEBS.DISTON13;%END;
   %IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF14;
              %IF &SYST=ON %THEN TEBS.DISTON14;%END;
   %IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF15;
              %IF &SYST=ON %THEN TEBS.DISTON15;%END;
   %IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF16;
              %IF &SYST=ON %THEN TEBS.DISTON16;%END;
   %IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF17;
              %IF &SYST=ON %THEN TEBS.DISTON17;%END;
   %IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF18;
              %IF &SYST=ON %THEN TEBS.DISTON18;%END;
   %IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF19;
              %IF &SYST=ON %THEN TEBS.DISTON19;%END;
   %IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF20;
              %IF &SYST=ON %THEN TEBS.DISTON20;%END;
   %IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF21;
              %IF &SYST=ON %THEN TEBS.DISTON21;%END;
   %IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF23;
              %IF &SYST=ON %THEN TEBS.DISTON23;%END;
   %IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF24;
              %IF &SYST=ON %THEN TEBS.DISTON24;%END;
```

```
%IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF25;
        %IF &SYST=ON %THEN TEBS.DISTON25;%END;

 %MEND DISYS;

/*MACRO TO STORE THE FINAL LIST OF SELECTED PROJECTS TO BE FORWARDED
 TO THE STATE LEVEL OF THE SYSTEM */

 %MACRO FINLIST;
%IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF1;
        %IF &SYST=ON %THEN TEBS.FINON1;%END;
%IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF2;
        %IF &SYST=ON %THEN TEBS.FINON2;%END;
%IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF3;
        %IF &SYST=ON %THEN TEBS.FINON3;%END;
%IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF4;
        %IF &SYST=ON %THEN TEBS.FINON4;%END;
%IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF5;
        %IF &SYST=ON %THEN TEBS.FINON5;%END;
%IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF6;
        %IF &SYST=ON %THEN TEBS.FINON6;%END;
%IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF7;
        %IF &SYST=ON %THEN TEBS.FINON7;%END;
%IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF8;
        %IF &SYST=ON %THEN TEBS.FINON8;%END;
%IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF9;
        %IF &SYST=ON %THEN TEBS.FINON9;%END;
%IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF10;
        %IF &SYST=ON %THEN TEBS.FINON10;%END;
%IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF11;
        %IF &SYST=ON %THEN TEBS.FINON11;%END;
%IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF12;
        %IF &SYST=ON %THEN TEBS.FINON12;%END;
%IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF13;
        %IF &SYST=ON %THEN TEBS.FINON13;%END;
%IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF14;
        %IF &SYST=ON %THEN TEBS.FINON14;%END;
%IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF15;
        %IF &SYST=ON %THEN TEBS.FINON15;%END;
%IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF16;
        %IF &SYST=ON %THEN TEBS.FINON16;%END;
%IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF17;
        %IF &SYST=ON %THEN TEBS.FINON17;%END;
%IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF18;
        %IF &SYST=ON %THEN TEBS.FINON18;%END;
%IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF19;
        %IF &SYST=ON %THEN TEBS.FINON19;%END;
%IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF20;
        %IF &SYST=ON %THEN TEBS.FINON20;%END;
%IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF21;
        %IF &SYST=ON %THEN TEBS.FINON21;%END;
%IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF23;
        %IF &SYST=ON %THEN TEBS.FINON23;%END;
%IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF24;
        %IF &SYST=ON %THEN TEBS.FINON24;%END;
%IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF25;
        %IF &SYST=ON %THEN TEBS.FINON25;%END;
```

```
   %MEND FINLIST;

DATA _NULL_; SET MENU;RETURN;

  /*MACRO TO SELECT THE CORRECT INITIALLY CONSIDERED LIST */

    %MACRO INICO;
   %IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF1;
              %IF &SYST=ON %THEN SET TEBS.INION1;%END;
   %IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF2;
              %IF &SYST=ON %THEN SET TEBS.INION2;%END;
   %IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF3;
              %IF &SYST=ON %THEN SET TEBS.INION3;%END;
   %IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF4;
              %IF &SYST=ON %THEN SET TEBS.INION4;%END;
   %IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF5;
              %IF &SYST=ON %THEN SET TEBS.INION5;%END;
   %IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF6;
              %IF &SYST=ON %THEN SET TEBS.INION6;%END;
   %IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF7;
              %IF &SYST=ON %THEN SET TEBS.INION7;%END;
   %IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF8;
              %IF &SYST=ON %THEN SET TEBS.INION8;%END;
   %IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF9;
              %IF &SYST=ON %THEN SET TEBS.INION9;%END;
   %IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF10;
              %IF &SYST=ON %THEN SET TEBS.INION10;%END;
   %IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF11;
              %IF &SYST=ON %THEN SET TEBS.INION11;%END;
   %IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF12;
              %IF &SYST=ON %THEN SET TEBS.INION12;%END;
   %IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF13;
              %IF &SYST=ON %THEN SET TEBS.INION13;%END;
   %IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF14;
              %IF &SYST=ON %THEN SET TEBS.INION14;%END;
   %IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF15;
              %IF &SYST=ON %THEN SET TEBS.INION15;%END;
   %IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF16;
              %IF &SYST=ON %THEN SET TEBS.INION16;%END;
   %IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF17;
              %IF &SYST=ON %THEN SET TEBS.INION17;%END;
   %IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF18;
              %IF &SYST=ON %THEN SET TEBS.INION18;%END;
   %IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF19;
              %IF &SYST=ON %THEN SET TEBS.INION19;%END;
   %IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF20;
              %IF &SYST=ON %THEN SET TEBS.INION20;%END;
   %IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF21;
              %IF &SYST=ON %THEN SET TEBS.INION21;%END;
   %IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF23;
              %IF &SYST=ON %THEN SET TEBS.INION23;%END;
   %IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF24;
              %IF &SYST=ON %THEN SET TEBS.INION24;%END;
   %IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN SET TEBS.INIOF25;
              %IF &SYST=ON %THEN SET TEBS.INION25;%END;

    %MEND INICO;
```

```
DATA _NULL_; SET MENU;RETURN;

    %MACRO FINSEL;
  /*MACRO TO GENERATE THE FINAL LIST DATA SET AT THE STATE LEVEL */
    %IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF1;
                %IF &SYST=ON %THEN TEBS.STATON1;%END;
    %IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF2;
                %IF &SYST=ON %THEN TEBS.STATON2;%END;
    %IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF3;
                %IF &SYST=ON %THEN TEBS.STATON3;%END;
    %IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF4;
                %IF &SYST=ON %THEN TEBS.STATON4;%END;
    %IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF5;
                %IF &SYST=ON %THEN TEBS.STATON5;%END;
    %IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF6;
                %IF &SYST=ON %THEN TEBS.STATON6;%END;
    %IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF7;
                %IF &SYST=ON %THEN TEBS.STATON7;%END;
    %IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF8;
                %IF &SYST=ON %THEN TEBS.STATON8;%END;
    %IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF9;
                %IF &SYST=ON %THEN TEBS.STATON9;%END;
    %IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF10;
                %IF &SYST=ON %THEN TEBS.STATON10;%END;
    %IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF11;
                %IF &SYST=ON %THEN TEBS.STATON11;%END;
    %IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF12;
                %IF &SYST=ON %THEN TEBS.STATON12;%END;
    %IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF13;
                %IF &SYST=ON %THEN TEBS.STATON13;%END;
    %IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF14;
                %IF &SYST=ON %THEN TEBS.STATON14;%END;
    %IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF15;
                %IF &SYST=ON %THEN TEBS.STATON15;%END;
    %IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF16;
                %IF &SYST=ON %THEN TEBS.STATON16;%END;
    %IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF17;
                %IF &SYST=ON %THEN TEBS.STATON17;%END;
    %IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF18;
                %IF &SYST=ON %THEN TEBS.STATON18;%END;
    %IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF19;
                %IF &SYST=ON %THEN TEBS.STATON19;%END;
    %IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF20;
                %IF &SYST=ON %THEN TEBS.STATON20;%END;
    %IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF21;
                %IF &SYST=ON %THEN TEBS.STATON21;%END;
    %IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF23;
                %IF &SYST=ON %THEN TEBS.STATON23;%END;
    %IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF24;
                %IF &SYST=ON %THEN TEBS.STATON24;%END;
    %IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF25;
                %IF &SYST=ON %THEN TEBS.STATON25;%END;
    %MEND FINSEL;

DATA _NULL_; SET MENU;RETURN;

    %MACRO FORM;
```

```
 /*MACRO TO FORMAT THE COUNTY NAMES */

PROC FORMAT;

 VALUE $WTPIC 'RP'='REPLACE BRIDGE & APPROACHES'
              'RH'='REHABILITATE BRIDGE & APPROACHES';

 VALUE $CNTY '001'='ANDERSON' '002'='ANDREWS' '003'='ANGELINA'
             '004'='ARANSAS' '005'='ARCHER' '006'='ARMSTRONG'
             '007'='ATASCOSA' '008'='AUSTIN' '009'='BAILEY'
             '010'='BANDERA' '011'='BASTROP' '012'='BAYLOR' '013'='BEE'
             '014'='BELL' '015'='BEXAR' '016'='BLANCO' '017'='BORDEN'
             '018'='BOSQUE' '019'='BOWIE' '020'='BRAZORIA'
             '021'='BRAZOS' '022'='BREWSTER' '023'='BRISCOE'
             '024'='BROOKS' '025'='BROWN' '026'='BURLESON'
             '027'='BURNET' '028'='CALDWELL' '029'='CALHOUN'
             '030'='CALLAHAN' '031'='CAMERON' '032'='CAMP'
             '033'='CARSON' '034'='CASS' '035'='CASTRO' '036'='CHAMBERS'
             '037'='CHEROKEE' '038'='CHILDRESS' '039'='CLAY'
             '040'='COCHRAN' '041'='COKE' '042'='COLEMAN' '043'='COLLIN'
             '044'='COLLINGSWORTH' '045'='COLORADO' '046'='COMAL'
             '047'='COMANCHE' '048'='CONCHO' '049'='COOKE'
             '050'='CORYELL' '051'='COTTLE' '052'='CRANE'
             '053'='CROCKETT' '054'='CROSBY' '055'='CULBERSON'
             '056'='DALLAM' '057'='DALLAS' '058'='DAWSON'
             '059'='DEAF SMITH' '060'='DELTA' '061'='DENTON'
             '062'='DEWITT' '063'='DICKENS' '064'='DIMMIT'
             '065'='DONLEY' '066'='KENEDY' '067'='DUVAL'
             '068'='EASTLAND' '069'='ECTOR' '070'='EDWARDS'
             '071'='ELLIS' '072'='EL PASO' '073'='ERATH' '074'='FALLS'
             '075'='FANNIN' '076'='FAYETTE' '077'='FISHER' '078'='FLOYD'
             '079'='FOARD' '080'='FORT BEND' '081'='FRANKLIN'
             '082'='FREESTONE' '083'='FRIO' '084'='GAINES'
             '085'='GALVESTON' '086'='GARZA' '087'='GILLESPIE'
             '088'='GLASSCOCK' '089'='GOLIAD' '090'='GONZALES'
             '091'='GRAY' '092'='GRAYSON' '093'='GREGG' '094'='GRIMES'
             '095'='GUADALUPE' '096'='HALE' '097'='HALL'
             '098'='HAMILTON' '099'='HANSFORD' '100'='HARDEMAN'
             '101'='HARDIN' '102'='HARRIS' '103'='HARRISON'
             '104'='HARTLEY' '105'='HASKELL' '106'='HAYS'
             '107'='HEMPHILL' '108'='HENDERSON' '109'='HIDALGO'
             '110'='HILL' '111'='HOCKLEY' '112'='HOOD'
             '113'='HOPKINS' '114'='HOUSTON' '115'='HOWARD'
             '116'='HUDSPETH' '117'='HUNT' '118'='HUTCHINSON'
             '119'='IRION' '120'='JACK' '121'='JACKSON' '122'='JASPER'
             '123'='JEFF DAVIS' '124'='JEFFERSON' '125'='JIM HOGG'
             '126'='JIM WELLS' '127'='JOHNSON' '128'='JONES'
             '129'='KARNES' '130'='KAUFMAN' '131'='KENDALL' '132'='KENT'
             '133'='KERR' '134'='KIMBLE' '135'='KING' '136'='KINNEY'
             '137'='KLEBERG' '138'='KNOX' '139'='LAMAR' '140'='LAMB'
             '141'='LAMPASAS' '142'='LA SALLE' '143'='LAVACA'
             '144'='LEE' '145'='LEON' '146'='LIBERTY' '147'='LIMESTONE'
             '148'='LIPSCOMB' '149'='LIVE OAK' '150'='LLANO'
             '151'='LOVING' '152'='LUBBOCK' '153'='LYNN' '154'='MADISON'
             '155'='MARION' '156'='MARTIN' '157'='MASON'
             '158'='MATAGORDA' '159'='MAVERICK' '160'='MCCULLOCH'
             '161'='MCLENNAN' '162'='MCMULLEN' '163'='MEDINA'
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'164'='MENARD' '165'='MIDLAND' '166'='MILAM' '167'='MILLS'
'168'='MITCHELL' '169'='MONTAGUE' '170'='MONTGOMERY'
'171'='MOORE' '172'='MORRIS' '173'='MOTLEY'
'174'='NACOGDOCHES' '175'='NAVARRO' '176'='NEWTON'
'177'='NOLAN' '178'='NUECES' '179'='OCHILTREE'
'180'='OLDHAM' '181'='ORANGE' '182'='PALO PINTO'
'183'='PANOLA' '184'='PARKER' '185'='PARMER' '186'='PECOS'
'187'='POLK' '188'='POTTER' '189'='PRESIDIO' '190'='RAINS'
'191'='RANDALL' '192'='REAGAN' '193'='REAL'
'194'='RED RIVER' '195'='REEVES' '196'='REFUGIO'
'197'='ROBERTS' '198'='ROBERTSON' '199'='ROCKWALL'
'200'='RUNNELS' '201'='RUSK' '202'='SABINE'
'203'='SAN AUGUSTINE' '204'='SAN JACINTO'
'205'='SAN PATRICIO' '206'='SAN SABA' '207'='SCHLEICHER'
'208'='SCURRY' '209'='SHACKELFORD' '210'='SHELBY'
'211'='SHERMAN' '212'='SMITH' '213'='SOMERVELL'
'214'='STARR' '215'='STEPHENS' '216'='STERLING'
'217'='STONEWALL' '218'='SUTTON' '219'='SWISHER'
'220'='TARRANT' '221'='TAYLOR' '222'='TERRELL'
'223'='TERRY' '224'='THROCKMORTON' '225'='TITUS'
'226'='TOM GREEN' '227'='TRAVIS' '228'='TRINITY'
'229'='TYLER' '230'='UPSHUR' '231'='UPTON' '232'='UVALDE'
'233'='VAL VERDE' '234'='VAN ZANDT' '235'='VICTORIA'
'236'='WALKER' '237'='WALLER' '238'='WARD'
'239'='WASHINGTON' '240'='WEBB' '241'='WHARTON'
'242'='WHEELER' '243'='WICHITA' '244'='WILBARGER'
'245'='WILLACY' '246'='WILLIAMSON' '247'='WILSON'
'248'='WINKLER' '249'='WISE' '250'='WOOD' '251'='YOAKUM'
'252'='YOUNG' '253'='ZAPATA' '254'='ZAVALA';
%MEND FORM;

 /* MACRO TO SELECT FROM OPTIONS IN A MAIN MENU */

%MACRO MENU;

  /* PRINTING THE INITIALLY CONSIDERED LIST FOR THE DISTRICT */

   %IF &MEN=INICO %THEN %DO;

DATA INIC; %INICO;RETURN;
        PROC SORT DATA=INIC;BY BRID;
DATA REPDATA;SET %DISYS;RETURN;
        PROC SORT DATA=REPDATA;BY BRID;
DATA REPDATA;MERGE REPDATA INIC;BY BRID;IF INIC='INI';DROP INIC ;
        PROC SORT DATA=REPDATA; BY COUNTY DESCENDING SCORE1;
        %FORM;
DATA MENU2;SET MENU;DROP DIST;RETURN;
 DATA _NULL_;FILE PRINT HEADER=A;
          IF _N_=1 THEN SET MENU ; SET INIC;IF _N_=1 THEN DO;
 PUT @44 44*'-' /
    @44 'I' @65 'WEIGHTS' @87 'I' /
    @44 44*'-' /  @44 'I'
    @45 '      ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
    @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
    @44 44*'-' /
    @44 'I' @47 ' ' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
    @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
```

```
      @44 44*'-' /
      @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
      @44 44*'-' / /  ;
      IF ANSW='YES' THEN DO ;
   PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
      @44 44*'-' /
      @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
      @44 44*'-' / /
      @49 'M = MISSING' ;
      END;END; RETURN;
A: PUT @36 'DISTRICT-' DIST
       @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
       @54 'AND REHABILITATION PROGRAM'/
       @52 'INITIALLY CONSIDERED PROJECTS'/
@38 'WEIGHTS AND AUTO QUALIFYING FEATURES USED TO GENERATE THE LIST';
 RETURN;
DATA _NULL_;
  SET REPDATA END=FIM; IF _N_=1 THEN SET MENU2;
  NPS+1;
  FILE /* LIST1 */ PRINT HEADER=C;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  DN+1;
  DCOST+CPI;
  PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
      @75 WT $WTPIC.
      @113 CPI DOLLAR14.  /
     @34 FCO /
      @5 'BRIDGE LOCATION: 'FX $20./ /
      @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
      @55 ' PROPOSED FACILITY: ' /* PNL*/  ' LANE, ' PRW 'FT ROADWAY' /
      @5 126*'=';
  IF FIM=1 THEN DO;
   PUT @60 'DISTRICT TOTAL OF ' DN 3. ' INITIALLY CONSIDERED PROJECTS:'
       @113  DCOST DOLLAR14.  //
@60 'NOTE: THIS SELECTION LIST IS PRELIMINARY AND MAY BE MODIFIED BY' /
@66 'THE DISTRICT ENGINEER BY THE ADDITION AND/OR SUBSTITUTION '/
@66   'OF OTHER PROJECTS THAT MEET THE PROGRAM ELIGIBILITY CRITERIA.' /
@66       'ALL LISTS ARE , HOWEVER, SUBJECTED TO FINAL REVIEW AND ' /
@66       'APPROVAL BY THE ENGINEER-DIRECTOR.' /;
   END;
  RETURN;
```

```
C: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'//
      @5 'DISTRICT' @25 'COUNTY' @33 'HWY/FACILITY OVER'
      @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
      @5 126*'=' ;
 RETURN;

  DATA _NULL_;FILE PRINT HEADER=A;
            IF _N_=1 THEN SET MENU ; SET INIC;IF _N_=1 THEN DO;
  PUT @44 44*'-' /
     @44 'I' @65 'WEIGHTS' @87 'I' /
     @44 44*'-' /  @44 'I'
     @45 '       ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
     @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
     @44 44*'-' /
     @44 'I' @47 ' ' @52 'I' @54 WCPV1 @59 'I' @61 WADT1 @66 'I'
     @68 WSR1 @73 'I' @75 WDSS1 @80 'I' @82 WBWR1 @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
     @44 44*'-' /
     @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
     @44 44*'-' / /  ;
     IF ANSW='YES' THEN DO ;
  PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
     @44 44*'-' /
     @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
     @44 44*'-' /
     @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
     @44 44*'-' /
     @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
     @44 44*'-' /
     @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
     @44 44*'-' /
     @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
     @44 44*'-' / /
     @49 'M = MISSING' ;
     END;END; RETURN;
A: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'/
@38 'WEIGHTS AND AUTO QUALIFYING FEATURES USED TO GENERATE THE LIST';
 RETURN;
DATA _NULL_;
  SET REPDATA END=FIM; IF _N_=1 THEN SET MENU2;
  S='S';
  NPS+1;
  FILE /* LIST2 */  PRINT HEADER=F;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
```

```
  IF (S='S') THEN DO; A_COST+CPI; AN+1; END;

    IF CUCO GE 0 THEN
  PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.

     @57 CPV DOLLAR8. @73 BWR 5.3
     @85 SCORE1 3. @95 W_BDL 2.
     @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS                : '
     / /
     @12 119*'=' / ;
    ELSE DO;
  PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
     @48 SSCO 1. @53 SUBCO 1.
     @57 CPV DOLLAR8. @73 BWR 5.3
     @85 SCORE1 3.  @95 W_BDL 2.
     @115 A_COST DOLLAR14. / @2 CSS /* CSSPIC.*/ $12. / @13 'COMMENTS: '
     / /
     @12 119*'=' / ;END;
  IF FIM=1 THEN DO;
     PUT @62 'DISTRICT TOTAL OF ' AN 3.
        ' INITIALLY CONSIDERED PROJECTS:'
      @115  A_COST DOLLAR14.  //
@60 'NOTE: THIS SELECTION LIST IS PRELIMINARY AND MAY BE MODIFIED BY' /
@66 'THE DISTRICT ENGINEER BY THE ADDITION AND/OR SUBSTITUTION '/
@66   'OF OTHER PROJECTS THAT MEET THE PROGRAM ELIGIBILITY CRITERIA.' /
@66       'ALL LISTS ARE , HOWEVER, SUBJECTED TO FINAL REVIEW AND ' /
@66       'APPROVAL BY THE ENGINEER-DIRECTOR.' /;
    END;
RETURN;

F: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @52 'INITIALLY CONSIDERED PROJECTS'//
  @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
  @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
  @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
  @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
  @120 'ACCUM COST'/ @12 119*'=' /;
  RETURN;   %END;

  /* ADDING COMMENTS TO THE PROJECT LIST */

    %IF &MEN=ADDCO %THEN %DO;
  PROC SORT DATA = LIST2; BY BRID;
    DATA LIST2; SET LIST2;  /**DELETE DUPLICATES 2/11/91 ****/
   IF BRID = LAG(BRID) THEN DELETE;
    PROC SORT DATA= %DISYS; BY BRID;
  PROC SORT DATA=LIST2;BY BRID;
DATA %DISYS;MERGE %DISYS LIST2; BY BRID;IF DIST=. THEN DELETE;
   %IF &SYST=OFF %THEN %DO;
      PROC SORT DATA = TEBS.EIGHT; BY BRID;
         DATA TEBS.EIGHT; MERGE TEBS.EIGHT LIST2; BY BRID;
     IF DIST=. THEN DELETE;
        DATA TEMP; SET %DISYS TEBS.EIGHT;
     IF COMM1=' ' THEN DELETE; KEEP BRID COMM1 COMM2;
        %END;
```

```
        %IF &SYST=ON %THEN %DO;
   DATA TEMP;SET %DISYS;IF COMM1=' ' THEN DELETE;KEEP BRID COMM1 COMM2;
          %END;
TITLE
'THIS LIST INCLUDES ALL PROJECTS WITH COMMENTS UP TO THIS LAST RUN.';
      PROC PRINT DATA=TEMP LABEL;
          LABEL COMM1= 'FIRST LINE OF COMMENTS'
               COMM2= 'SECOND LINE OF COMMENTS'  ;
%END;

    /* SCORING THE ELIGIBLE PROJECTS IN THE DISTRICT  */

    %IF &MEN=SCORE %THEN %DO;
   PROC SORT DATA = SELEC ; BY BRID ;
    DATA SELEC; SET SELEC;  /**DELETE DUPLICATES 2/11/91 ****/
   IF BRID = LAG(BRID) THEN DELETE;
    PROC SORT DATA=SELEC;BY BRID;
DATA REPDATA;
   IF _N_=1 THEN SET WEIGHT;
  LENGTH AQ $ 2;
  SET %DISYS;
  IF ANSW = 'NO' THEN  DO;AQ=' '; GO TO OK ; END;
  IF AQCPV NE . THEN DO;IF CPV<=AQCPV THEN AQ='AQ';END;
  IF AQADT NE . THEN DO;IF W_ADT>=AQADT THEN AQ='AQ';END;
  IF AQSR  NE . THEN DO;IF SR <=AQSR THEN AQ='AQ';END;
  IF AQDSS NE . THEN DO;IF DSS<=AQDSS THEN AQ='AQ';END;
  IF AQBWR NE . THEN DO;IF BWR<=AQBWR THEN AQ='AQ';END;
OK:SCORE1=0.0;
  SCORE1= SCORE1 + WCPV*CPVPTL
                 + WADT*ADTPTL
                 + WSR *SRPTL
                 + WDSS*DSSPTL
                 + WBWR*BWRPTL;

  /* MERGING THE DISTRICT'S OWN AUTO QUALIF PROJECTS 'DS' */

PROC SORT DATA=REPDATA;BY BRID;
DATA REPDATA; MERGE REPDATA SELEC;BY BRID;
IF DIST = . THEN DELETE;
IF FLAG=69 THEN AQ=SEL;DROP SEL FLAG;RETURN;

PROC SORT DATA=REPDATA ;
    BY DESCENDING AQ DESCENDING SCORE1;
            %FORM;
  DATA _NULL_;FILE PRINT HEADER=A;
            IF _N_=1 THEN SET MENU;
            SET WEIGHT;
  PUT @44 44*'-' /
      @44 'I' @65 'WEIGHTS' @87 'I' /
      @44 44*'-' /  @44 'I'
      @45 '       ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
      @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
      @44 44*'-' /
      @44 'I' @47 ' ' @52 'I' @54 WCPV @59 'I' @61 WADT @66 'I'
      @68 WSR @73 'I' @75 WDSS @80 'I' @82 WBWR @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
```

```
      @44 44*'-' /
      @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
      @44 44*'-' /
      @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
      @44 44*'-' / /  ;
      IF ANSW='YES' THEN DO ;
   PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
      @44 44*'-' /
      @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
      @44 44*'-' / /
      @49 'M = MISSING' ;
      END;     RETURN;

A:  PUT @39 'LIST OF ELIGIBLE PROJECTS FOR DISTRICT-' DIST /
        @36 'BY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE'//
        @42 'WEIGHTS AND AUTO-QUALIFYING FEATURES USED:'  ;
  DATA _NULL_  ;
    SET REPDATA END=EOF;
    BY DESCENDING AQ DESCENDING SCORE1;
    SCORE1=ROUND(SCORE1);BWR =ROUND(BWR,.01);
    DCOST+CPIBU;
    FILE PRINT HEADER=B;
    PUT @2 130*'*' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II'  ;
    PUT @3 BRID @19 'II' @36 'II' @39 CPV DOLLAR8. @48 'II'
    @51 W_ADT COMMA7. @59 'II'
    @62 SR @65 'II' @69 DSS @72 'II'
    @75 BWR @80 'II' @87 'II' @92 AQ @97 'II' @115 'II' ;
    PUT @19 'II' @22 COUNTY $CNTY. @36 'II=========='
    @48 'II==========' @59 'II===='
    @65 'II=====' @72 'II======' @80 'II' @83 SCORE1 @87 'II========'
    @97 'II' @100 CPIBU DOLLAR14. @115 'II' @118 DCOST DOLLAR14.;
    PUT @2 FX $17. @19 'II' @36 'II' @42 CPVPTL
    @48 'II' @55 ADTPTL @59 'II'
    @62 SRPTL @65 'II' @68 DSSPTL @72 'II'
    @76 BWRPTL @80 'II' @87 'II' @92 WT @97 'II' @115 'II';
   IF CPI = CPIBU THEN
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II'  ;
   ELSE
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @100 '(REVISED COST)' @115 'II';
   PUT @3 RNUM @19 113*'=' @19 'II' @115 'II' ;
```

```
   PUT @2 FCO
      @19 'II' @21 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
      @63 ' PROPOSED FACILITY: ' /* PNL*/ ' LANE, ' PRW 'FT ROADWAY'
      @115 'II' ;
RETURN;
B:  PUT @39 'LIST OF ELIGIBLE PROJECTS FOR DISTRICT-' DIST /
      @36 'BY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE'//
      @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
   PUT @5 'BRIDGE ID.' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @90 'AUTO-Q.' @97 'II' @115 'II'  ;
   PUT @19 'II' @36 'II' @41 'CPV' @48 'II'
   @53 'ADT' @59 'II'
   @62 'SR' @65 'II' @69 'DSS' @72 'II'
   @75 'BWR' @80 'II' @87 'II' @91 'FLAG' @97 'II' @115 'II' ;
   PUT @3 'STRUCTURE LOC.' @19 'II' @26 'COUNTY' @36 'II==========='
   @48 'II==========' @59 'II===='
   @65 'II=====' @72 'II======' @80 'II' @82 'SCORE' @87 'II========'
   @97 'II' @100 'PROJECT COST' @115 'II'
   @118 'CUMUL. COST' ;
   PUT @19 'II' @36 'II' @41 'CPV%' @48 'II'
   @53 'ADT%' @59 'II'
   @62 'SR%' @65 'II' @68 'DSS%' @72 'II'
   @75 'BWR%' @80 'II' @87 'II' @89 'REHAB=RH' @97 'II' @115 'II';
   PUT @2 'HWY/FACILITY OVER'
   @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @89 'REPL.=RP' @97 'II' @115 'II'  ;
   PUT @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;


 DATA _NULL_;FILE PRINT HEADER=D;
           IF _N_=1 THEN SET MENU;
           SET WEIGHT;
 PUT @44 44*'-' /
    @44 'I' @65 'WEIGHTS' @87 'I' /
    @44 44*'-' /  @44 'I'
    @45 '      ' @52 'I' @54 'CPV' @59 'I' @61 'ADT' @66 'I' @68 'SR'
    @73 'I' @75 'DSS' @80 'I' @82 'BWR' @87 'I' /
    @44 44*'-' /
    @44 'I' @47 ' ' @52 'I' @54 WCPV @59 'I' @61 WADT @66 'I'
    @68 WSR @73 'I' @75 WDSS @80 'I' @82 WBWR @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'CPV = COST PER VEHICLE' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'ADT = AVERAGE DAILY TRAFFIC' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'SR = SUFFICIENCY RATING' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'DSS = MINIMUM OF CONDITION RATINGS' @87 'I' /
    @44 44*'-' /
    @44 'I' @51 'BWR = BRIDGE WIDTH RATIO' @87 'I' /
    @44 44*'-' / /  ;
    IF ANSW='YES' THEN DO ;
 PUT @49 'AUTO QUALIFYING FEATURES USED :' / /
    @44 44*'-' /
    @44 'I' @46 'CPV' @52 'I' @56 AQCPV @87 'I' /
```

```
      @44 44*'-' /
      @44 'I' @46 'ADT' @52 'I' @56 AQADT @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'SR' @52 'I' @56 AQSR @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'DSS' @52 'I' @56 AQDSS @87 'I' /
      @44 44*'-' /
      @44 'I' @46 'BWR' @52 'I' @56 AQBWR @87 'I' /
      @44 44*'-' / /
      @49 'M = MISSING' ;
      END;    RETURN;

D:  PUT @39 'LIST OF ELIGIBLE PROJECTS FOR DISTRICT-' DIST /
    @29 'BY COUNTY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE'//
        @42 'WEIGHTS AND AUTO-QUALIFYING FEATURES USED:' ;
PROC SORT DATA=REPDATA;BY COUNTY DESCENDING AQ DESCENDING SCORE1;
 DATA _NULL_ ;
    SET REPDATA END=EOF;
    BY COUNTY DESCENDING AQ DESCENDING SCORE1;
    SCORE1=ROUND(SCORE1);BWR =ROUND(BWR,.01);
IF FIRST.COUNTY THEN DO;
DCOST=0;
     END;
    DCOST+CPIBU;
    FILE PRINT HEADER=C;
    PUT @2 130*'*' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
    PUT @3 BRID @19 'II' @36 'II' @39 CPV DOLLAR8. @48 'II'
    @51 W_ADT COMMA7. @59 'II'
    @62 SR @65 'II' @69 DSS @72 'II'
    @75 BWR @80 'II' @87 'II' @92 AQ @97 'II' @115 'II' ;
    PUT @19 'II' @22 COUNTY $CNTY. @36 'II=========='
    @48 'II=========' @59 'II===='
    @65 'II=====' @72 'II======' @80 'II' @83 SCORE1 @87 'II========'
    @97 'II' @100 CPIBU DOLLAR14. @115 'II' @118 DCOST DOLLAR14.;
    PUT @2 FX $17. @19 'II' @36 'II' @42 CPVPTL
    @48 'II' @55 ADTPTL @59 'II'
    @62 SRPTL @65 'II' @68 DSSPTL @72 'II'
    @76 BWRPTL @80 'II' @87 'II' @92 WT @97 'II' @115 'II';
  IF CPI = CPIBU THEN
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
   ELSE
    PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @100 '(REVISED COST)' @115 'II';
  PUT @3 RNUM @19 113*'=' @19 'II' @115 'II' ;
    PUT @2 FCO
        @19 'II' @21 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
        @63 ' PROPOSED FACILITY: ' /* PNL*/ ' LANE, ' PRW 'FT ROADWAY'
        @115 'II' ;
RETURN;
C:  PUT @39 'LIST OF ELIGIBLE PROJECTS FOR DISTRICT-' DIST /
  @29 'BY COUNTY DESCENDING AUTO-QUALIFYING AND DESCENDING SCORE'//
        @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
    @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
```

```
   PUT @5 'BRIDGE ID.' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @90 'AUTO-Q.' @97 'II' @115 'II'  ;
   PUT @19 'II' @36 'II' @41 'CPV' @48 'II'
   @53 'ADT' @59 'II'
   @62 'SR' @65 'II' @69 'DSS' @72 'II'
   @75 'BWR' @80 'II' @87 'II' @91 'FLAG' @97 'II' @115 'II' ;
   PUT @3 'STRUCTURE LOC.' @19 'II' @26 'COUNTY' @36 'II=========='
   @48 'II=========' @59 'II===='
   @65 'II=====' @72 'II======' @80 'II' @82 'SCORE' @87 'II========'
   @97 'II' @100 'PROJECT COST' @115 'II'
   @118 'CUMUL. COST' ;
   PUT @19 'II' @36 'II' @41 'CPV%' @48 'II'
   @53 'ADT%' @59 'II'
   @62 'SR%' @65 'II' @68 'DSS%' @72 'II'
   @75 'BWR%' @80 'II' @87 'II' @89 'REHAB=RH' @97 'II' @115 'II';
   PUT @2 'HWY/FACILITY OVER'
   @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @89 'REPL.=RP' @97 'II' @115 'II'
@119 'BY COUNTY';
   PUT @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
%IF &SYST = OFF %THEN %DO;/***REPORTING THE 8000 PROJECTS****/
  DATA REPDATA; SET TEBS.EIGHT;
    LENGTH FLAGD 8;
     FLAGD = SYMGET('DISTR');

  IF DIST = FLAGD;

PROC SORT DATA = REPDATA; BY COUNTY;
DATA _NULL_; FILE PRINT;
PUT #20 @5 100*'*' /
   @5 100*'*' //
   @30 'THESE ARE THE ELIGIBLE 8000 PROJECTS'//
   @5 100*'*' /
   @5 100*'*';
 DATA _NULL_  ;
   SET REPDATA END=EOF;

   FILE PRINT HEADER=B;
   PUT @2 130*'*' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
   PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II'  ;
   PUT @3 BRID @19 'II' @36 'II' @39 CPV DOLLAR8. @48 'II'
   @51 W_ADT COMMA7. @59 'II'
   @62 SR @65 'II' @69 DSS @72 'II'
   @75 BWR @80 'II' @87 'II' @92    @97 'II' @115 'II' ;
   PUT @19 'II' @22 COUNTY $CNTY. @36 'II=========='
   @48 'II=========' @59 'II===='
   @65 'II=====' @72 'II======' @80 'II' @83        @87 'II========'
   @97 'II' @100 CPIBU DOLLAR14. @115 'II' @118                ;
   PUT @2 FX $17. @19 'II' @36 'II' @42
   @48 'II' @55        @59 'II'
   @62       @65 'II' @68        @72 'II'
   @76        @80 'II' @87 'II' @92 WT @97 'II' @115 'II';
  IF CPI = CPIBU THEN
   PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
```

```
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II'  ;
  ELSE
   PUT @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @100 '(REVISED COST)' @115 'II';
 PUT @3 RNUM @19 113*'=' @19 'II' @115 'II' ;
   PUT @2 FCO
      @19 'II' @21 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
      @63 ' PROPOSED FACILITY: ' /* PNL*/ ' LANE, ' PRW 'FT ROADWAY'
      @115 'II' ;
RETURN;
B:  PUT @39 'LIST OF ELIGIBLE PROJECTS FOR DISTRICT-' DIST /
  @33 'THESE ARE THE 8000 SERIES OR ON/OFF PROJECTS BY COUNTY'//
      @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;
   PUT @5 'BRIDGE ID.' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @90 'AUTO-Q.' @97 'II' @115 'II'  ;
   PUT @19 'II' @36 'II' @41 'CPV' @48 'II'
   @53 'ADT' @59 'II'
   @62 'SR' @65 'II' @69 'DSS' @72 'II'
   @75 'BWR' @80 'II' @87 'II' @91 'FLAG' @97 'II' @115 'II' ;
   PUT @3 'STRUCTURE LOC.' @19 'II' @26 'COUNTY' @36 'II==========='
   @48 'II==========' @59 'II===='
   @65 'II=====' @72 'II======' @80 'II' @82 'SCORE' @87 'II========'
   @97 'II' @100 'PROJECT COST' @115 'II'
   @118 'CUMUL. COST' ;
   PUT @19 'II' @36 'II' @41 'CPV%' @48 'II'
   @53 'ADT%' @59 'II'
   @62 'SR%' @65 'II' @68 'DSS%' @72 'II'
   @75 'BWR%' @80 'II' @87 'II' @89 'REHAB=RH' @97 'II' @115 'II';
   PUT @2 'HWY/FACILITY OVER'
   @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @89 'REPL.=RP' @97 'II' @115 'II'  ;
   PUT @2 130*'=' @19 'II' @36 'II' @48 'II' @59 'II' @65 'II'
   @72 'II' @80 'II' @87 'II' @97 'II' @115 'II' ;

%END;
   %END;
 /* GENERATING THE FINAL SELECTED LIST OF PROJECTS  */

    %IF &MEN=FINAL %THEN %DO;
   PROC SORT DATA = LIST ; BY BRID ;
    DATA LIST ; SET LIST ;  /**DELETE DUPLICATES 2/11/91 ****/
   IF BRID = LAG(BRID) THEN DELETE;
PROC SORT DATA=LIST;BY BRID;
PROC SORT DATA=%DISYS;BY BRID;
DATA %DISYS;SET %DISYS ;DISEL=' ' ; DROP DISEL;
    %IF &SYST=OFF %THEN %DO;
  PROC SORT DATA = TEBS.EIGHT;BY BRID ;
DATA REPDATA;MERGE %DISYS TEBS.EIGHT LIST;BY BRID;
    IF DIST = . THEN DELETE ;
  IF DISEL = 'DISEL'; %END ;
   %IF &SYST=ON %THEN %DO;
DATA REPDATA; MERGE %DISYS LIST ; BY BRID;
    IF DIST = . THEN DELETE ;
  IF DISEL = 'DISEL'; %END ;
          PROC SORT DATA=REPDATA; BY RANK;
       DATA REPDATA; SET REPDATA;
```

```
   RANK = _N_;
DATA %FINLIST; SET REPDATA ; KEEP BRID RANK DISEL;
                              RETURN;
DATA %FINSEL ; SET REPDATA ; KEEP BRID RANK DISEL;
                              RETURN;
         %FORM;
DATA MENU2;SET MENU;DROP DIST;RETURN;
DATA _NULL_;
 SET REPDATA END=FIM; IF _N_=1 THEN SET MENU2;
 NPS+1;
 FILE /* LIST1 */  PRINT HEADER=C;
 IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 DN+1;
 DCOST+CPIBU;
 IF CPI=CPIBU THEN
 PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
    @75 WT $WTPIC.
    @113 CPIBU DOLLAR14.  /
   @34 FCO /
    @5 'BRIDGE LOCATION: 'FX $20./ /
    @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
    @55 ' PROPOSED FACILITY: ' /* PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
    @5 126*'=''; ELSE
 PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
    @75 WT $WTPIC.
    @113 CPIBU DOLLAR14.  /
   @34 FCO @116 '(REVISED COST)' /
    @5 'BRIDGE LOCATION: 'FX $20./ /
    @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
    @55 ' PROPOSED FACILITY: ' /* PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
    @5 126*'=';
 IF FIM=1 THEN DO;
  PUT @60 'DISTRICT TOTAL OF ' DN 3. ' SELECTED PROJECTS:'
     @113  DCOST DOLLAR14.  ;
  END;
 RETURN;

C: PUT @36 'DISTRICT-' DIST
     @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
     @54 'AND REHABILITATION PROGRAM'/
     @56 'DISTRICT SELECTION'//
     @5 'DISTRICT' @25 'COUNTY' @33 'HWY/FACILITY OVER'
     @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
     @5 126*'=' ;
 RETURN;

DATA _NULL_;
 SET REPDATA END=FIM; IF _N_=1 THEN SET MENU2;
 S='S';
 NPS+1;
 FILE /* LIST2 */  PRINT HEADER=F;
 IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 IF (S='S') THEN DO; A_COST+CPIBU; AN+1; END;

   IF CUCO GE 0 THEN
 PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.
```

```
    @57 CPV DOLLAR8. @73 BWR 5.3
 /****    @85 SCORE1 3. ****/   @95 W_BDL 2. @107 RANK
    @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
      / @23 COMM2
   /
    @12 119*'=' / ;
   ELSE DO;
 PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
    @48 SSCO 1. @53 SUBCO 1.
    @57 CPV DOLLAR8. @73 BWR 5.3
  /* @85 SCORE1 3. */  @95 W_BDL 2. @107 RANK
    @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
    / @23 COMM2
    /
    @12 119*'=' / ; END;
 IF FIM=1 THEN DO;
   PUT @62 'DISTRICT TOTAL OF ' AN 3.
      ' SELECTED PROJECTS:'
      @115 A_COST DOLLAR14.  ;
   END;
RETURN;

F: PUT @36 'DISTRICT-' DIST
     @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
     @54 'AND REHABILITATION PROGRAM'/
     @56 'DISTRICT SELECTION'//
  @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
  @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
  @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
  @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
  @120 'ACCUM COST'/ @12 119*'=' /;
  RETURN;   %END;

       /*****THIS IS THE OPTION FOR UPDATING PROJECT COST****/
    /*** IT ALSO UPDATES THE PERCENTILES AND VALUE FOR THE CPV****/
     /**** ADDED 2/1/91 ******/
    %IF &MEN=COST %THEN %DO;
PROC SORT DATA=COST;BY BRID;
    DATA COST; SET COST;  /**DELETE DUPLICATES 2/7/91 ****/
   IF BRID = LAG(BRID) THEN DELETE;
PROC SORT DATA=%DISYS;BY BRID;
DATA %DISYS;MERGE %DISYS COST;BY BRID;

IF FLAG=69 THEN DO ; CPIBU=COST;
CPV = ROUND(CPIBU/W_ADT); END;
  IF FLAG=69 AND DIST= . THEN DELETE;
DROP       COST      ;
%IF &SYST=OFF %THEN %DO;
  DATA TEMP; SET TEBS.QDATOF; /*** UPDATE PERCENTILES 2/7/91 ***/
    KEEP CPV;%END;
 %IF &SYST=ON %THEN %DO;
  DATA TEMP; SET TEBS.QDATON;
    KEEP CPV;%END;
    DATA TEMP2; SET %DISYS;
       IF FLAG = 69;
    KEEP CPV FLAG BRID  ;
DATA TEMP ; SET TEMP TEMP2;
```

```
        PROC FREQ DATA = TEMP ;
      TABLES CPV / OUT = TEMP3 NOPRINT;
  DATA TEMP3; SET TEMP3;
    PERCTOT + PERCENT;
    CPVPTL=ROUND(100-PERCTOT);
      IF CPV <= .Z THEN CPVPTL = 50;
            KEEP  CPV CPVPTL PERCTOT;
RETURN;

                  PROC SORT DATA = TEMP; BY CPV;
 PROC SORT DATA = TEMP3; BY CPV;
     DATA TEMP; MERGE TEMP TEMP3;BY CPV;
    IF FLAG = 69;  KEEP CPV CPVPTL BRID ;
PROC SORT DATA = %DISYS ; BY BRID;
      PROC SORT DATA = TEMP; BY BRID;
      DATA %DISYS; MERGE %DISYS TEMP ; BY BRID;
  IF FLAG = 69 AND DIST = . THEN DELETE;
          DROP FLAG; /***END PERCENTILE UPDATE*****/
%IF &SYST=OFF %THEN %DO;
  PROC SORT DATA=TEBS.EIGHT; BY BRID;
DATA TEBS.EIGHT;MERGE TEBS.EIGHT COST;BY BRID;

IF FLAG=69 THEN DO ; CPIBU=COST;
CPV = ROUND(CPIBU/W_ADT); END;
  IF FLAG=69 AND DIST= . THEN DELETE      ;
DROP       COST FLAG ;
 DATA DISTR; SET MENU ;
    DISTR= DIST; KEEP DISTR;
  DATA REPDATA; SET TEBS.EIGHT %DISYS;IF _N_=1 THEN SET DISTR;
    IF DIST=DISTR;
  IF CPI NE CPIBU;KEEP BRID CPI CPIBU CPV CPVPTL;
  PROC SORT DATA=REPDATA; BY BRID;
TITLE1 'THIS IS THE CURRENT STATUS OF THE CHANGES TO PROJECT COST';
TITLE2 '            (OFF-SYSTEM AND 8000 SERIES)';
 PROC PRINT DATA=REPDATA SPLIT='*';
  FORMAT CPI CPIBU DOLLAR14.  ;
        LABEL CPI= 'COST ESTIMATE*FROM BRINSAP'
             CPVPTL= 'REVISED CPV*PERCENTILE'
             CPV = 'REVISED* CPV'
             CPIBU= 'UPDATED COST*ESTIMATE'  ;RUN;%END;
%IF &SYST=ON %THEN %DO;
  DATA REPDATA; SET %DISYS;
  IF CPI NE CPIBU;KEEP BRID CPI CPIBU CPV CPVPTL;
TITLE1 'THIS IS THE CURRENT STATUS OF THE CHANGES TO PROJECT COST';
TITLE2 '              (ON-SYSTEM)' ;
 PROC PRINT DATA=REPDATA SPLIT='*';
  FORMAT CPI CPIBU DOLLAR14.  ;
        LABEL CPI= 'COST ESTIMATE*FROM BRINSAP'
             CPVPTL= 'REVISED CPV*PERCENTILE'
             CPV = 'REVISED* CPV'
             CPIBU= 'UPDATED COST*ESTIMATE'  ;RUN;%END;
  %END;
 %MEND MENU;
DATA MENU;SET MENU;RETURN;
    %MENU;
```

FINAL RPF

```
<<FINAL>>
:*********************************************************************
:*** A4Y.FINAL       TEBS FINAL PROGRAM CONVERTED FROM TSO          *****
:*** CREATED 3/1/91  (AJJ)                                          *****
:*** LAST MOD 3/7/91 (AJJ)                                          *****
:*** USES A4Y.FINALJCL    MODIFIES JCL AND SUBMITS JOB              *****
:*********************************************************************
PUSH
SET MODE BASIC
F A4Y.FINALJCL
R 1 1
:*********************************************************************
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM OPT,SYS
TAG % HUM ERRMSG
CURSOR OPT
!
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                   TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                              T E B S S
$                          (FINAL) PROGRAM
!
$                   1 - PRINT THE  DISTRICT SELECTIONS
$
$    OPTIONS :      2 - ADD OR DELETE TO DISTRICT SELECTIONS
$
$                   3 - ASSEMBLE THE FINAL STATEWIDE LIST
$
$                   4 - UPDATE PREVIOUSLY SELECTED DATABASE
!
!      OPTION (1,2,3,4):õ_!
!
!      SYSTEM (OFF/ON)õ___!
!
!
!
!              %                                          !
$  PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
ENDDEF
PANEL SEND
:*********************************************************************
<<BEGIN1>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
<<OPT>>
LET L3=P.OPT
IF L3 EQ '1' OR L3 EQ '2' OR L3 EQ '3' OR L3 EQ '4'
    GOTO <<PAN1OK>>
ENDIF
LET P.ERRMSG='ERROR IN OPTION NUMBER'
PANEL RESEND CURSOR P.OPT
```

```
GOTO <<BEGIN1>>
:*********************************************************************
<<PAN1OK>>
LET L16=TRIM(LTRIM(P.SYS,'_'),'_')
IF (L16 EQ 'OFF') OR (L16 EQ 'ON')
   GOTO <<XXX>>
ELSE
    LET P.ERRMSG='ERROR IN SYSTEM, MUST BE (OFF/ON) ONLY'
    PANEL RESEND CURSOR P.SYS
    GOTO <<BEGIN1>>
ENDIF
:*********************************************************************
<<XXX>>
IF L3 EQ '1'
  DO <<OPT1>>
ENDIF
IF L3 EQ '2'
  DO <<OPT2>>
ENDIF
IF L3 EQ '3'
  DO <<OPT3>>
ENDIF
IF L3 EQ '4'
  DO <<OPT4>>
ENDIF
<<SUBMIT>>
DO <<NODE>>
JSUB
<<END>>
:DEL
POP
RETURN
:*********************************************************************
:*********************************************************************
<<CSJ>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM CNTY0,CONT0,SECT0,STR0,AD0
TAG õ HUM CNTY1,CONT1,SECT1,STR1,AD1
TAG õ HUM CNTY2,CONT2,SECT2,STR2,AD2
TAG õ HUM CNTY3,CONT3,SECT3,STR3,AD3
TAG õ HUM CNTY4,CONT4,SECT4,STR4,AD4
TAG õ HUM CNTY5,CONT5,SECT5,STR5,AD5
TAG õ HUM CNTY6,CONT6,SECT6,STR6,AD6
TAG õ HUM CNTY7,CONT7,SECT7,STR7,AD7
TAG õ HUM CNTY8,CONT8,SECT8,STR8,AD8
TAG õ HUM CNTY9,CONT9,SECT9,STR9,AD9
TAG % HUM ERRMSG
CURSOR CNTY0

!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
```

```
$                              T E B S S
$                           (FINAL) PROGRAM
$          ENTER THE BRIDS FOR THE PROJECTS TO BE ADDED OR DELETED.          !
$          WHEN THE DATA GENERATED BY THE DISTRICT IS NOT AVAILABLE          !
$             ENTER THE PROJECTS TO BE CONSIDERED AS ADDITIONS.
!
$                    COUNTY CONT. SEC. STR.  (ADD/DEL)
!                    1õ___!õ____!õ__! õ___!    õ_!   (A=ADD D=DEL)
!                    2õ___!õ____!õ__! õ___!    õ_!
!                    3õ___!õ____!õ__! õ___!    õ_!
!                    4õ___!õ____!õ__! õ___!    õ_!
!                    5õ___!õ____!õ__! õ___!    õ_!
!                    6õ___!õ____!õ__! õ___!    õ_!
!                    7õ___!õ____!õ__! õ___!    õ_!
!                    8õ___!õ____!õ__! õ___!    õ_!
!                    9õ___!õ____!õ__! õ___!    õ_!
!                   10õ___!õ____!õ__! õ___!    õ_!
!              %                                      !
$  PRESS ENTER FOR NEXT PAGE       PF12: TO SUBMIT JOB          PF1:TO QUIT
ENDDEF
PANEL SEND
:**********************************************************************
<<BEGIN3>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:**********************************************************************
LET P1='P.CONT'
LET P2='P.SECT'
LET P3='P.STR'
LET P4='P.CNTY'
LET P5=0
LET P6='P.AD'
LOOP 10 TIMES
     +LET L1=+P1|P5+
     +LET L2=LPAD(TRIM(LTRIM(+P2|P5+,'_'),'_'),2,'0')
     +LET L3=LPAD(TRIM(LTRIM(+P3|P5+,'_'),'_'),3,'0')
     +LET L4=LPAD(TRIM(LTRIM(+P4|P5+,'_'),'_'),3,'0')
     +LET L5=+P6|P5+
     IF L4|L2|L3 NE '00000000'
       IF L4 EQ 0
          LET P.ERRMSG = 'ERROR IN COUNTY NUMBER'
          +PANEL RESEND CURSOR +P4|P5+
          GOTO <<BEGIN3>>
       ENDIF
       IF INDEX(L1,'_') NE 0
          LET P.ERRMSG = 'ERROR IN CONTROL NUMBER'
          +PANEL RESEND CURSOR +P1|P5+
          GOTO <<BEGIN3>>
       ENDIF
       IF L14 EQ 'NO'
          GOTO <<NOCHK>>
       ENDIF
       IF ((L5 EQ 'A') OR (L5 EQ 'D'))
```

```
         GOTO <<OKAD>>
      ENDIF
      LET P.ERRMSG = 'MUST BE A OR D FOR ADD/DEL'
      +PANEL RESEND CURSOR +P6|P5+
      GOTO <<BEGIN3>>
<<OKAD>>
      IF L5 EQ 'A'
         TRAP ON
         +FIND /INSERT PROJECTS TO BE ADDED**/ 1 +HIGHSEQ+
         TRAP OFF
         IF TC NE 0
            RESPONSE 'ERROR IN LOCATION OF PROJ ADDED CARD IN JCL SEE AJJ'
            GOTO <<END>>
         ENDIF
      ELSE
         TRAP ON
         +FIND /INSERT PROJECTS TO BE DELETED**/ 1 +HIGHSEQ+
         TRAP OFF
         IF TC NE 0
            RESPONSE 'ERROR IN LOCATION OF PROJ ADDED CARD IN JCL SEE AJJ'
            GOTO <<END>>
         ENDIF
      ENDIF
<<NOCHK>>
      +WRITE AWS +SEQ+ L4|'-'|L1|'-'|L2|'-'|L3
    ENDIF
    LET P5=P5+1
ENDLOOP
IF AID EQ 'PF12'
  GOTO <<FINOUT>>
ELSE
  GOTO <<CSJ>>
ENDIF
<<FINOUT>>
ENDPROC
:*********************************************************************
<<OPT1>> PROC
TRAP ON
+FIND  /**INSERT OPTION SYSTEM DISTRICT CARDS HERE****/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN LOCATION OF DIST-SYS CARD IN JCL SEE AJJ'
   GOTO <<END>>
ENDIF
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM DIST,ANSWER
TAG % HUM ERRMSG
CURSOR DIST
!
$                        TEBSS
$                   (FINAL MODULE)
!
$
$  PLEASE ENTER THE NUMBER OF THE DISTRICT AND ANSWER THE QUESTION IF
```

```
$  THE DISTRICT HAS GENERATED A LIST OF PROJECTS USING THE DISTRICT
$                  LEVEL REPORTING MODULE
$
$
$
$                          DISTRICT õ__!
$
$           AVAILABLE DATA (YES/NO)õ___!
!
!
!
!
!
!
!
!
!              %                                          !
$  PRESS ENTER TO CONTINUE                                      PF1:TO QUIT
ENDDEF
PANEL SEND
<<STRT1>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
LET L1=TRIM(LTRIM(P.DIST,'_'),'_')
IF CONFORM(L1,'N') NE 1
     LET P.ERRMSG='ERROR IN DISTRICT, MUST BE NUMERIC ONLY'
     PANEL RESEND CURSOR P.DIST
     GOTO <<STRT1>>
ENDIF
<<ANS>>
LET L4=P.ANSWER
LET L4=LTRIM(TRIM(P.ANSWER,'_'),'_')
IF (L4 EQ 'Y') OR (L4 EQ 'YES')
    IF L4 EQ 'Y'
         LET L4='YES'
    ENDIF
    GOTO <<OKOPT1>>
ENDIF
IF (L4 EQ 'N') OR (L4 EQ 'NO')
     GOTO <<ERRORX>>
ENDIF
LET P.ERRMSG='ERROR IN ANSWER, MUST BE (YES/NO) ONLY'
PANEL RESEND CURSOR P.ANSWER
GOTO <<STRT1>>
<<ERRORX>>
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM
TAG % HUM ERRMSG
!
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                   TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
```

```
$                         T E B S S
!
$                       (DISTR) PROGRAM
$                                                        !
$
         ________________________________________________
$        |   DATA IS NOT AVAILIBLE FOR THIS DISTRICT      |
$        |             ............                |
$        ________________________________________________
!
!
!
$                                                       !
!
!
!
!
!
!          %                                      !
$  PRESS ENTER TO CONTINUE
ENDDEF
PANEL SEND
GOTO <<END>>
:**********************************************************************
<<OKOPT1>>
DO <<SYSCARD>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ '1 '|P.DIST|' '|L16|' '|L4|"
<<OPT1OUT>>
ENDPROC
:**********************************************************************
<<OPT2>> PROC
DO <<ASKDIST>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
IF P.ANSWER EQ 'NO'
  DO <<SYSCARD>>
  IF AID EQ 'PF1' OR AID EQ 'PF13'
     GOTO <<END>>
  ENDIF
  +WRITE AWS +SEQ+ '2 '|P.DIST|' '|L16|' '|P.ANSWER|"
  TRAP ON
 +FIND /INSERT STATE LEVEL SELECTIONS FOR A NON-EXISTING DISTRICT/ 1 +HIGHSEQ+
  TRAP OFF
  IF TC NE 0
    RESPONSE 'ERROR IN LOCATION OF NON-EXIST CARD IN JCL SEE AJJ'
    GOTO <<END>>
  ENDIF
  DO <<CSJ>>
ENDIF
IF L14 EQ 'YES'
  DO <<SYSCARD>>
  IF AID EQ 'PF1' OR AID EQ 'PF13'
      GOTO <<END>>
   ENDIF
```

```
  +WRITE AWS +SEQ+ '2 '|P.DIST|' '|L16|' '|L14|"
  DO <<CSJ>>
ENDIF
<<OPT2OUT>>
ENDPROC
:*****************************************************************
<<OPT3>> PROC
TRAP ON
 +FIND /* INSERT CARDS FOR THE DISTRICTS THAT HAVE PROJECTS/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN LOCATION OF DIST YES/NO CARD IN JCL SEE AJJ'
   GOTO <<END>>
  ENDIF
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM DIST1,DIST8,DIST15,DIST22
TAG õ HUM DIST2,DIST9,DIST16,DIST23
TAG õ HUM DIST3,DIST10,DIST17,DIST24
TAG õ HUM DIST4,DIST11,DIST18
TAG õ HUM DIST5,DIST12,DIST19
TAG õ HUM DIST6,DIST13,DIST20
TAG õ HUM DIST7,DIST14,DIST21
TAG õ HUM YEAR
TAG % HUM ERRMSG
CURSOR DIST1

!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                             T E B S S
!| DIST  INCLUDE?  |  DIST  INCLUDE?  |  DIST  INCLUDE?  |  DIST  INCLUDE? |
!|================|==================|==================|=================|
!|  1    õYES!    |   8    õYES!     |   15   õYES!     |   23   õYES!    |
!|================|==================|==================|=================|
!|  2    õYES!    |   9    õYES!     |   16   õYES!     |   24   õYES!    |
!|================|==================|==================|=================|
!|  3    õYES!    |   10   õYES!     |   17   õYES!     |   25   õYES!    |
!|================|==================|==================|=================|
!|  4    õYES!    |   11   õYES!     |   18   õYES!     |
!|================|==================|==================|   THIS SELECTION
!|  5    õYES!    |   12   õYES!     |   19   õYES!     |
!|================|==================|==================|       IS FOR
!|  6    õYES!    |   13   õYES!     |   20   õYES!     |       THE
!|================|==================|==================|
!|  7    õYES!    |   14   õYES!     |   21   õYES!     |     õ1988-1992!
!|================|==================|==================|
!            %                              !      PROGRAM
$  PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<STRT3>>
```

```
IF AID EQ 'PF1' OR AID EQ 'PF13'
  GOTO <<END>>
ENDIF
:*********************************************************************
LET P1='P.DIST'
LET P5=1
LOOP 24 TIMES
     +LET L1=PAD(TRIM(LTRIM(+P1|P5+,'_'),'_'),3,' ')
     +LET +P1|P5+ = L1
     LET P5=P5+1
ENDLOOP
LET P5=1
LOOP 24 TIMES
     +LET L1=+P1|P5+
     IF L1 EQ 'YES' OR L1 EQ 'NO'
          GOTO <<OKDIST>>
      ENDIF
      LET P.ERRMSG = 'MUST BE YES OR NO.'
     +PANEL RESEND CURSOR +P1|P5+
      GOTO <<STRT3>>
      <<OKDIST>>
     LET P5=P5+1
ENDLOOP
<<OPT3OUT>>
LET P5=1
LET L2=1
LOOP 24 TIMES
     +LET L1=+P1|P5+
      IF P5 EQ 22
         +WRITE AWS +SEQ+ ''|L2|' NO'
          LET L2=L2+1
      ENDIF
     +WRITE AWS +SEQ+ ''|L2|' '|L1|''
     LET L2=L2+1
     LET P5=P5+1
ENDLOOP
TRAP ON
+FIND  /****INSERT CORRECT YEAR HERE***/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
    RESPONSE 'ERROR IN LOCATION OF YEAR CARD IN JCL SEE AJJ'
    GOTO <<END>>
  ENDIF
LET L1='YEAR='''
LET L1=L1|P.YEAR
LET L1=L1|''';'
+WRITE AWS +SEQ+ L1
DO <<SYSCARD>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ '3 99 '|L16|' YES'
ENDPROC
:*********************************************************************
<<OPT4>> PROC
<<STRT4>>
DO <<SYSCARD>>
```

```
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ '4 99 '|L16|' YES'
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM YESNO
TAG % HUM ERRMSG
CURSOR YESNO
!
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$                 TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                           T E B S S
!
$                        (DISTR) PROGRAM
$                                                              !
!
$            ARE YOU SURE YOU WANT DO UPDATE THE DATA? (Y/N)õ_!
$
$
!
!
!
$                                                             !
!
!
!
!
!
!             %                                        !
$  PRESS ENTER TO CONTINUE                                  PF1 TO QUIT
ENDDEF
PANEL SEND
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
LET L1=TRIM(LTRIM(P.YESNO,'_')'_')
IF L1 EQ 'Y'
   GOTO <<OPT4OUT>>
ELSE
   GOTO <<END>>
ENDIF
<<OPT4OUT>>
ENDPROC
:*****************************************************************
<<NODE>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM PRINTER,MSG
TAG % HUM ERRMSG
CURSOR PRINTER
```

```
!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$                TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                          T E B S S
!
$                        (DISTR) PROGRAM
$                                                          !
!
$                      PRINTER   õ_____!
$                      MSG CLASS õR$      R=REVIEW OUTPUT
$                                    A=SEND DIRECT TO PRINTER
!
!
!
$     *** TO CHANGE PRINTER DESTINATION JUST ENTER PRINTER ID ABOVE ***      !
!
!
!
!
!
!              %                                          !
$  PRESS ENTER TO CONTINUE
ENDDEF
LET L1=SUBSTR(S.KEY,2,2)
SELECT FIRST
    WHEN L1 EQ '45'
       LET L2='N9R82'
    WHEN L1 EQ '01'
       LET L2='N2R01'
    WHEN L1 EQ '02'
       LET L2='N3R02'
    WHEN L1 EQ '03'
       LET L2='N3R03'
    WHEN L1 EQ '04'
       LET L2='N3R04'
    WHEN L1 EQ '05'
       LET L2='N4R05'
    WHEN L1 EQ '06'
       LET L2='N4R06'
    WHEN L1 EQ '07'
       LET L2='N4R07'
    WHEN L1 EQ '08'
       LET L2='N4R08'
    WHEN L1 EQ '09'
       LET L2='N6R09'
    WHEN L1 EQ '10'
       LET L2='N2R10'
    WHEN L1 EQ '11'
       LET L2='N2R11'
    WHEN L1 EQ '12'
       LET L2='N1R12'
    WHEN L1 EQ '13'
       LET L2='N5R13'
    WHEN L1 EQ '14'
       LET L2='N6R14'
```

```
    WHEN L1 EQ '15'
       LET L2='N5R15'
    WHEN L1 EQ '16'
       LET L2='N5R16'
    WHEN L1 EQ '17'
       LET L2='N6R17'
    WHEN L1 EQ '18'
       LET L2='N2R18'
    WHEN L1 EQ '19'
       LET L2='N2R19'
    WHEN L1 EQ '20'
       LET L2='N1R20'
    WHEN L1 EQ '21'
       LET L2='N5R21'
    WHEN L1 EQ '23'
       LET L2='N3R23'
    WHEN L1 EQ '24'
       LET L2='N4R24'
    WHEN L1 EQ '25'
       LET L2='N3R25'
ENDSEL
LET P.PRINTER=L2
PANEL SEND
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
+E /C454300/+S.KEY+/
+E /D45 JW FINALJCL/D-+L1+ * FINAL JCL */
IF P.MSG EQ 'A' OR P.MSG EQ 'R'
    GOTO <<OKMSG>>
ENDIF
LET P.MSG='R'
<<OKMSG>>
LET L2='MSGCLASS='|P.MSG|''
+E /MSGCLASS=R/+L2+/
LET L2=PAD(LTRIM(TRIM(P.PRINTER,'_'),'_'),5,' ')
LET L2='ROUTE PRINT '|L2|''
+E /ROUTE PRINT N9R00/+L2+/
ENDPROC
:*************************************************************************
<<SYSCARD>> PROC
TRAP ON
+FIND /**INSERT OPTION SYSTEM DISTRICT CARDS HERE****/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
   RESPONSE 'CAN NOT FIND DIST INSERT CARD IN A4Y.FINAL, SEE AJJ.
   POP
   DEL
   RETURN
ENDIF
ENDPROC
:*************************************************************************
<<ASKDIST>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
```

```
TAG õ HUM DIST,ANSWER
TAG % HUM ERRMSG
CURSOR DIST
!
$                          TEBSS
$                      (FINAL MODULE)
!
$
$  PLEASE ENTER THE NUMBER OF THE DISTRICT AND ANSWER THE QUESTION IF
$  THE DISTRICT HAS GENERATED A LIST OF PROJECTS USING THE DISTRICT
$                  LEVEL REPORTING MODULE
$
$
$
$                          DISTRICT õ__!
$
$            AVAILABLE DATA (YES/NO)õ___!
!
!
!
!
!
!
!
!
!               %                                          !
$  PRESS ENTER TO CONTINUE                                      PF1:TO QUIT
ENDDEF
PANEL SEND
.*************************************************************************
<<STRT2>>
LET P.ANSWER=LTRIM(TRIM(P.ANSWER,'_'),'_')
LET P.DIST=LTRIM(TRIM(P.DIST,'_'),'_')
LET L15=P.DIST
LET L14=P.ANSWER
ENDPROC
```

FINAL JCL

```
/*PRIORITY      10
//R575004B JOB (00226329,C454300),'D45 JW FINALJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R00
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=SAS
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
//WORK DD UNIT=SYSDA,SPACE=(CYL,(10),,,ROUND)
DATA _NULL_;
   /**CMS FI LIST1 DISK FINAL1 LISTING A (LRECL 133 RECFM V ;
CMS FI LIST2 DISK FINAL2 LISTING A (LRECL 133 RECFM V ;***/
  OPTIONS MISSING= 'M' REPLACE LINESIZE=132 PS=60 MPRINT        ;
  %GLOBAL MEN DISTR SYST;

   /*MENU SELECTION FOR THE FINAL REPORTING PROGRAM */
  DATA MENU;LENGTH OPT $ 3 DISTRICT $ 3 SYS $ 3 AVAIL $ 3;
  INPUT OPT $ DISTRICT $ SYS $ AVAIL $;
CARDS;   /**INSERT OPTION SYSTEM DISTRICT CARDS HERE****/
;

  DATA MENU; SET MENU;  CALL SYMPUT('MEN',OPT);
  CALL SYMPUT('DISTR',DISTRICT); CALL SYMPUT('SYST',SYS);
  CALL SYMPUT('AVAI',AVAIL);
  DATA MENU;SET MENU;
  /* MACRO TO CREATE A DATA SET FOR A DISTRICT IN CASE IT IS MISSING*/
    %MACRO MISDIS;
  DATA LIST;LENGTH BRID $ 16 DISEL $ 5 ;
INPUT BRID $;  DISEL = 'DISEL';
CARDS; /***INSERT STATE LEVEL SELECTIONS FOR A NON-EXISTING DISTRICT**/
;
  PROC SORT DATA = LIST; BY BRID;
    DATA LIST; SET LIST;  /**DELETE DUPLICATES 2/11/91 ****/
   IF BRID = LAG(BRID) THEN DELETE;

PROC SORT DATA=LIST ;BY BRID;
PROC SORT DATA=%DISYS;BY BRID;
 %IF &SYST =OFF %THEN %DO;
   PROC SORT DATA =TEBS.EIGHT; BY BRID;
DATA REPDATA;MERGE %DISYS TEBS.EIGHT LIST;BY BRID;
   IF DIST = . THEN DELETE;
   IF DISEL = 'DISEL'  ;   RANK = .;
          FORMAT COUNTY $CNTY. WT $WTPIC. W_ADT COMMA7. CPV DOLLAR8.
          CPI DOLLAR14. CPIBU DOLLAR14.;%END;
  %IF &SYST=ON %THEN %DO;
   DATA REPDATA; MERGE %DISYS LIST ; BY BRID;
   IF DIST = . THEN DELETE;
   IF DISEL = 'DISEL'  ;   RANK = .;
          FORMAT COUNTY $CNTY. WT $WTPIC. W_ADT COMMA7. CPV DOLLAR8.
          CPI DOLLAR14. CPIBU DOLLAR14.;%END;
         PROC SORT DATA=REPDATA; BY BRID;


   DATA %FINSEL ; SET REPDATA; KEEP BRID DISEL RANK ;
DATA _NULL_;
 SET REPDATA END=FIM;IF _N_=1 THEN SET MENU;
 NPS+1;
```

```
 FILE /* LIST1 */  PRINT HEADER=C;
 IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 DN+1;
 DCOST+CPIBU;
 IF CPI=CPIBU THEN
 PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
    @75 WT $WTPIC.
    @113 CPIBU DOLLAR14.  /
    @34 FCO /
    @5 'BRIDGE LOCATION: 'FX $20./ /
    @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
    @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
    @5 126*'=';ELSE
 PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
    @75 WT $WTPIC.
    @113 CPIBU DOLLAR14.  /
    @34 FCO @116 '(REVISED COST)' /
    @5 'BRIDGE LOCATION: 'FX $20./ /
    @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
    @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
    @5 126*'=';
 IF FIM=1 THEN DO;
  PUT @60 'DISTRICT TOTAL OF ' DN 3. ' SELECTED PROJECTS:'
     @113  DCOST DOLLAR14.  ;
  END;
 RETURN;

C: PUT @36 'DISTRICT-' DIST
     @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
     @54 'AND REHABILITATION PROGRAM'/
     @42 'FINAL LIST OF PROJECTS GENERATED AT THE STATE LEVEL'//
     @5 'DISTRICT' @25 'COUNTY' @33 'HWY/FACILITY OVER'
     @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
     @5 126*'=' ;
 RETURN;

DATA _NULL_;
 SET REPDATA END=FIM; IF _N_=1 THEN SET MENU;
 S='S';
 NPS+1;
 FILE /* LIST2 */  PRINT HEADER=F;
 IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 IF (S='S') THEN DO; A_COST+CPIBU; AN+1; END;
   IF CUCO GE 0 THEN
 PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.

    @57 CPV DOLLAR8. @73 BWR 5.3
 /****    @85 SCORE1 3. ****/   @95 W_BDL 2.
    @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: '
  'STATE LEVEL SELECTION'      /
   /
    @12 119*'=' / ;
   ELSE DO;
 PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
    @48 SSCO 1. @53 SUBCO 1.
    @57 CPV DOLLAR8. @73 BWR 5.3
  /* @85 SCORE1 3. */  @95 W_BDL 2.
```

```
    @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: '
'STATE LEVEL SELECTION'     /
    /
    @12 119*'=' / ; END ;
 IF FIM=1 THEN DO;
   PUT @62 'DISTRICT TOTAL OF ' AN 3.
      ' SELECTED PROJECTS:'
      @115 A_COST DOLLAR14.  ;
   END;
RETURN;

F: PUT @36 'DISTRICT-' DIST
     @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
     @54 'AND REHABILITATION PROGRAM'/
     @56 'FINAL LIST OF PROJECTS'//
  @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
  @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
  @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
  @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
  @120 'ACCUM COST'/ @12 119*'=' /;
    RETURN; %MEND MISDIS;
  DATA MENU;SET MENU;
 /* MACRO TO RETRIEVE DATA FROM THE ELIGIBLE SET OF STRUCTURES */
    %MACRO DISYS;
   %IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF1;
              %IF &SYST=ON %THEN TEBS.DISTON1;%END;
   %IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF2;
              %IF &SYST=ON %THEN TEBS.DISTON2;%END;
   %IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF3;
              %IF &SYST=ON %THEN TEBS.DISTON3;%END;
   %IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF4;
              %IF &SYST=ON %THEN TEBS.DISTON4;%END;
   %IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF5;
              %IF &SYST=ON %THEN TEBS.DISTON5;%END;
   %IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF6;
              %IF &SYST=ON %THEN TEBS.DISTON6;%END;
   %IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF7;
              %IF &SYST=ON %THEN TEBS.DISTON7;%END;
   %IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF8;
              %IF &SYST=ON %THEN TEBS.DISTON8;%END;
   %IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF9;
              %IF &SYST=ON %THEN TEBS.DISTON9;%END;
   %IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF10;
              %IF &SYST=ON %THEN TEBS.DISTON10;%END;
   %IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF11;
              %IF &SYST=ON %THEN TEBS.DISTON11;%END;
   %IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF12;
              %IF &SYST=ON %THEN TEBS.DISTON12;%END;
   %IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF13;
              %IF &SYST=ON %THEN TEBS.DISTON13;%END;
   %IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF14;
              %IF &SYST=ON %THEN TEBS.DISTON14;%END;
   %IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF15;
              %IF &SYST=ON %THEN TEBS.DISTON15;%END;
   %IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF16;
              %IF &SYST=ON %THEN TEBS.DISTON16;%END;
   %IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF17;
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          %IF &SYST=ON %THEN TEBS.DISTON17;%END;
%IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF18;
          %IF &SYST=ON %THEN TEBS.DISTON18;%END;
%IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF19;
          %IF &SYST=ON %THEN TEBS.DISTON19;%END;
%IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF20;
          %IF &SYST=ON %THEN TEBS.DISTON20;%END;
%IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF21;
          %IF &SYST=ON %THEN TEBS.DISTON21;%END;
%IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF23;
          %IF &SYST=ON %THEN TEBS.DISTON23;%END;
%IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF24;
          %IF &SYST=ON %THEN TEBS.DISTON24;%END;
%IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF25;
          %IF &SYST=ON %THEN TEBS.DISTON25;%END;

  %MEND DISYS;
  DATA MENU; SET MENU;
/*MACRO TO RETRIEVE  THE FINAL LIST OF SELECTED PROJECTS FORWARDED
BY THE DISTRICT LEVEL OF THE SYSTEM */
  %MACRO FINLIST;
%IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF1;
          %IF &SYST=ON %THEN TEBS.FINON1;%END;
%IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF2;
          %IF &SYST=ON %THEN TEBS.FINON2;%END;
%IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF3;
          %IF &SYST=ON %THEN TEBS.FINON3;%END;
%IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF4;
          %IF &SYST=ON %THEN TEBS.FINON4;%END;
%IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF5;
          %IF &SYST=ON %THEN TEBS.FINON5;%END;
%IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF6;
          %IF &SYST=ON %THEN TEBS.FINON6;%END;
%IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF7;
          %IF &SYST=ON %THEN TEBS.FINON7;%END;
%IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF8;
          %IF &SYST=ON %THEN TEBS.FINON8;%END;
%IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF9;
          %IF &SYST=ON %THEN TEBS.FINON9;%END;
%IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF10;
          %IF &SYST=ON %THEN TEBS.FINON10;%END;
%IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF11;
          %IF &SYST=ON %THEN TEBS.FINON11;%END;
%IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF12;
          %IF &SYST=ON %THEN TEBS.FINON12;%END;
%IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF13;
          %IF &SYST=ON %THEN TEBS.FINON13;%END;
%IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF14;
          %IF &SYST=ON %THEN TEBS.FINON14;%END;
%IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF15;
          %IF &SYST=ON %THEN TEBS.FINON15;%END;
%IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF16;
          %IF &SYST=ON %THEN TEBS.FINON16;%END;
%IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF17;
          %IF &SYST=ON %THEN TEBS.FINON17;%END;
%IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF18;
          %IF &SYST=ON %THEN TEBS.FINON18;%END;
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  %IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF19;
            %IF &SYST=ON %THEN TEBS.FINON19;%END;
  %IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF20;
            %IF &SYST=ON %THEN TEBS.FINON20;%END;
  %IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF21;
            %IF &SYST=ON %THEN TEBS.FINON21;%END;
  %IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF23;
            %IF &SYST=ON %THEN TEBS.FINON23;%END;
  %IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF24;
            %IF &SYST=ON %THEN TEBS.FINON24;%END;
  %IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.FINOF25;
            %IF &SYST=ON %THEN TEBS.FINON25;%END;
  %MEND FINLIST;

DATA MENU; SET MENU;

   %MACRO FINSEL;
 /*MACRO TO GENERATE THE FINAL LIST DATA SET AT THE STATE LEVEL */
  %IF &DISTR=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF1;
            %IF &SYST=ON %THEN TEBS.STATON1;%END;
  %IF &DISTR=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF2;
            %IF &SYST=ON %THEN TEBS.STATON2;%END;
  %IF &DISTR=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF3;
            %IF &SYST=ON %THEN TEBS.STATON3;%END;
  %IF &DISTR=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF4;
            %IF &SYST=ON %THEN TEBS.STATON4;%END;
  %IF &DISTR=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF5;
            %IF &SYST=ON %THEN TEBS.STATON5;%END;
  %IF &DISTR=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF6;
            %IF &SYST=ON %THEN TEBS.STATON6;%END;
  %IF &DISTR=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF7;
            %IF &SYST=ON %THEN TEBS.STATON7;%END;
  %IF &DISTR=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF8;
            %IF &SYST=ON %THEN TEBS.STATON8;%END;
  %IF &DISTR=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF9;
            %IF &SYST=ON %THEN TEBS.STATON9;%END;
  %IF &DISTR=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF10;
            %IF &SYST=ON %THEN TEBS.STATON10;%END;
  %IF &DISTR=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF11;
            %IF &SYST=ON %THEN TEBS.STATON11;%END;
  %IF &DISTR=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF12;
            %IF &SYST=ON %THEN TEBS.STATON12;%END;
  %IF &DISTR=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF13;
            %IF &SYST=ON %THEN TEBS.STATON13;%END;
  %IF &DISTR=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF14;
            %IF &SYST=ON %THEN TEBS.STATON14;%END;
  %IF &DISTR=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF15;
            %IF &SYST=ON %THEN TEBS.STATON15;%END;
  %IF &DISTR=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF16;
            %IF &SYST=ON %THEN TEBS.STATON16;%END;
  %IF &DISTR=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF17;
            %IF &SYST=ON %THEN TEBS.STATON17;%END;
  %IF &DISTR=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF18;
            %IF &SYST=ON %THEN TEBS.STATON18;%END;
  %IF &DISTR=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF19;
            %IF &SYST=ON %THEN TEBS.STATON19;%END;
  %IF &DISTR=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF20;
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            %IF &SYST=ON %THEN TEBS.STATON20;%END;
  %IF &DISTR=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF21;
            %IF &SYST=ON %THEN TEBS.STATON21;%END;
  %IF &DISTR=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF23;
            %IF &SYST=ON %THEN TEBS.STATON23;%END;
  %IF &DISTR=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF24;
            %IF &SYST=ON %THEN TEBS.STATON24;%END;
  %IF &DISTR=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF25;
            %IF &SYST=ON %THEN TEBS.STATON25;%END;
  %MEND FINSEL;

DATA MENU; SET MENU;
    /* MACRO TO ASSEMBLE THE FINAL LIST OF PROJECTS USED IN OPTION 3.
    IN OPTION 3 THE USER HAS THE OPTION OF MAKING A PARTIAL LIST
    INCLUDING ONLY THE DISTRICTS OF HIS CHOICE */
   %MACRO FINSTAT;
  %IF &IN1=YES %THEN %DO;
  %IF &D1=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF1;
            %IF &SYST=ON %THEN TEBS.STATON1;%END;%END;
  %IF &IN2=YES %THEN %DO;
  %IF &D2=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF2;
            %IF &SYST=ON %THEN TEBS.STATON2;%END;%END;
  %IF &IN3=YES %THEN %DO;
  %IF &D3=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF3;
            %IF &SYST=ON %THEN TEBS.STATON3;%END;%END;
  %IF &IN4=YES %THEN %DO;
  %IF &D4=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF4;
            %IF &SYST=ON %THEN TEBS.STATON4;%END;%END;
  %IF &IN5=YES %THEN %DO;
  %IF &D5=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF5;
            %IF &SYST=ON %THEN TEBS.STATON5;%END;%END;
  %IF &IN6=YES %THEN %DO;
  %IF &D6=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF6;
            %IF &SYST=ON %THEN TEBS.STATON6;%END;%END;
  %IF &IN7=YES %THEN %DO;
  %IF &D7=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF7;
            %IF &SYST=ON %THEN TEBS.STATON7;%END;%END;
  %IF &IN8=YES %THEN %DO;
  %IF &D8=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF8;
            %IF &SYST=ON %THEN TEBS.STATON8;%END;%END;
  %IF &IN9=YES %THEN %DO;
  %IF &D9=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF9;
            %IF &SYST=ON %THEN TEBS.STATON9;%END;%END;
  %IF &IN10=YES %THEN %DO;
  %IF &D10=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF10;
            %IF &SYST=ON %THEN TEBS.STATON10;%END;%END;
  %IF &IN11=YES %THEN %DO;
  %IF &D11=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF11;
            %IF &SYST=ON %THEN TEBS.STATON11;%END;%END;
  %IF &IN12=YES %THEN %DO;
  %IF &D12=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF12;
            %IF &SYST=ON %THEN TEBS.STATON12;%END;%END;
  %IF &IN13=YES %THEN %DO;
  %IF &D13=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF13;
            %IF &SYST=ON %THEN TEBS.STATON13;%END;%END;
  %IF &IN14=YES %THEN %DO;
  %IF &D14=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF14;
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          %IF &SYST=ON %THEN TEBS.STATON14;%END;%END;
%IF &IN15=YES %THEN %DO;
%IF &D15=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF15;
          %IF &SYST=ON %THEN TEBS.STATON15;%END;%END;
%IF &IN16=YES %THEN %DO;
%IF &D16=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF16;
          %IF &SYST=ON %THEN TEBS.STATON16;%END;%END;
%IF &IN17=YES %THEN %DO;
%IF &D17=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF17;
          %IF &SYST=ON %THEN TEBS.STATON17;%END;%END;
%IF &IN18=YES %THEN %DO;
%IF &D18=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF18;
          %IF &SYST=ON %THEN TEBS.STATON18;%END;%END;
%IF &IN19=YES %THEN %DO;
%IF &D19=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF19;
          %IF &SYST=ON %THEN TEBS.STATON19;%END;%END;
%IF &IN20=YES %THEN %DO;
%IF &D20=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF20;
          %IF &SYST=ON %THEN TEBS.STATON20;%END;%END;
%IF &IN21=YES %THEN %DO;
%IF &D21=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF21;
          %IF &SYST=ON %THEN TEBS.STATON21;%END;%END;
%IF &IN23=YES %THEN %DO;
%IF &D23=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF23;
          %IF &SYST=ON %THEN TEBS.STATON23;%END;%END;
%IF &IN24=YES %THEN %DO;
%IF &D24=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF24;
          %IF &SYST=ON %THEN TEBS.STATON24;%END;%END;
%IF &IN25=YES %THEN %DO;
%IF &D25=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.STATOF25;
          %IF &SYST=ON %THEN TEBS.STATON25;%END;%END;
%MEND FINSTAT;
DATA MENU; SET MENU;
  /* MACRO TO ASSEMBLE THE FINAL LIST OF PROJECTS USED IN OPTION 3.
  IN OPTION 3 THE USER HAS THE OPTION OF MAKING A PARTIAL LIST
  INCLUDING ONLY THE DISTRICTS OF HIS CHOICE */
 %MACRO FIM    ;
%IF &IN1=YES %THEN %DO;
%IF &D1=1 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF1;
          %IF &SYST=ON %THEN TEBS.DISTON1;%END;%END;
%IF &IN2=YES %THEN %DO;
%IF &D2=2 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF2;
          %IF &SYST=ON %THEN TEBS.DISTON2;%END;%END;
%IF &IN3=YES %THEN %DO;
%IF &D3=3 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF3;
          %IF &SYST=ON %THEN TEBS.DISTON3;%END;%END;
%IF &IN4=YES %THEN %DO;
%IF &D4=4 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF4;
          %IF &SYST=ON %THEN TEBS.DISTON4;%END;%END;
%IF &IN5=YES %THEN %DO;
%IF &D5=5 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF5;
          %IF &SYST=ON %THEN TEBS.DISTON5;%END;%END;
%IF &IN6=YES %THEN %DO;
%IF &D6=6 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF6;
          %IF &SYST=ON %THEN TEBS.DISTON6;%END;%END;
%IF &IN7=YES %THEN %DO;
%IF &D7=7 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF7;
```

```
            %IF &SYST=ON %THEN TEBS.DISTON7;%END;%END;
 %IF &IN8=YES %THEN %DO;
 %IF &D8=8 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF8;
            %IF &SYST=ON %THEN TEBS.DISTON8;%END;%END;
 %IF &IN9=YES %THEN %DO;
 %IF &D9=9 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF9;
            %IF &SYST=ON %THEN TEBS.DISTON9;%END;%END;
 %IF &IN10=YES %THEN %DO;
 %IF &D10=10 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF10;
            %IF &SYST=ON %THEN TEBS.DISTON10;%END;%END;
 %IF &IN11=YES %THEN %DO;
 %IF &D11=11 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF11;
            %IF &SYST=ON %THEN TEBS.DISTON11;%END;%END;
 %IF &IN12=YES %THEN %DO;
 %IF &D12=12 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF12;
            %IF &SYST=ON %THEN TEBS.DISTON12;%END;%END;
 %IF &IN13=YES %THEN %DO;
 %IF &D13=13 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF13;
            %IF &SYST=ON %THEN TEBS.DISTON13;%END;%END;
 %IF &IN14=YES %THEN %DO;
 %IF &D14=14 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF14;
            %IF &SYST=ON %THEN TEBS.DISTON14;%END;%END;
 %IF &IN15=YES %THEN %DO;
 %IF &D15=15 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF15;
            %IF &SYST=ON %THEN TEBS.DISTON15;%END;%END;
 %IF &IN16=YES %THEN %DO;
 %IF &D16=16 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF16;
            %IF &SYST=ON %THEN TEBS.DISTON16;%END;%END;
 %IF &IN17=YES %THEN %DO;
 %IF &D17=17 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF17;
            %IF &SYST=ON %THEN TEBS.DISTON17;%END;%END;
 %IF &IN18=YES %THEN %DO;
 %IF &D18=18 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF18;
            %IF &SYST=ON %THEN TEBS.DISTON18;%END;%END;
 %IF &IN19=YES %THEN %DO;
 %IF &D19=19 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF19;
            %IF &SYST=ON %THEN TEBS.DISTON19;%END;%END;
 %IF &IN20=YES %THEN %DO;
 %IF &D20=20 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF20;
            %IF &SYST=ON %THEN TEBS.DISTON20;%END;%END;
 %IF &IN21=YES %THEN %DO;
 %IF &D21=21 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF21;
            %IF &SYST=ON %THEN TEBS.DISTON21;%END;%END;
 %IF &IN23=YES %THEN %DO;
 %IF &D23=23 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF23;
            %IF &SYST=ON %THEN TEBS.DISTON23;%END;%END;
 %IF &IN24=YES %THEN %DO;
 %IF &D24=24 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF24;
            %IF &SYST=ON %THEN TEBS.DISTON24;%END;%END;
 %IF &IN25=YES %THEN %DO;
 %IF &D25=25 %THEN %DO;%IF &SYST=OFF %THEN TEBS.DISTOF25;
            %IF &SYST=ON %THEN TEBS.DISTON25;%END;%END;
 %MEND FIM    ;
 DATA MENU; SET MENU;
/*MACRO TO FORMAT THE COUNTY NAMES */

  %MACRO FORM;
```

```
PROC FORMAT;

  VALUE $WTPIC 'RP'='REPLACE BRIDGE & APPROACHES'
               'RH'='REHABILITATE BRIDGE & APPROACHES';

  VALUE $CNTY '001'='ANDERSON' '002'='ANDREWS' '003'='ANGELINA'
              '004'='ARANSAS' '005'='ARCHER' '006'='ARMSTRONG'
              '007'='ATASCOSA' '008'='AUSTIN' '009'='BAILEY'
              '010'='BANDERA' '011'='BASTROP' '012'='BAYLOR' '013'='BEE'
              '014'='BELL' '015'='BEXAR' '016'='BLANCO' '017'='BORDEN'
              '018'='BOSQUE' '019'='BOWIE' '020'='BRAZORIA'
              '021'='BRAZOS' '022'='BREWSTER' '023'='BRISCOE'
              '024'='BROOKS' '025'='BROWN' '026'='BURLESON'
              '027'='BURNET' '028'='CALDWELL' '029'='CALHOUN'
              '030'='CALLAHAN' '031'='CAMERON' '032'='CAMP'
              '033'='CARSON' '034'='CASS' '035'='CASTRO' '036'='CHAMBERS'
              '037'='CHEROKEE' '038'='CHILDRESS' '039'='CLAY'
              '040'='COCHRAN' '041'='COKE' '042'='COLEMAN' '043'='COLLIN'
              '044'='COLLINGSWORTH' '045'='COLORADO' '046'='COMAL'
              '047'='COMANCHE' '048'='CONCHO' '049'='COOKE'
              '050'='CORYELL' '051'='COTTLE' '052'='CRANE'
              '053'='CROCKETT' '054'='CROSBY' '055'='CULBERSON'
              '056'='DALLAM' '057'='DALLAS' '058'='DAWSON'
              '059'='DEAF SMITH' '060'='DELTA' '061'='DENTON'
              '062'='DEWITT' '063'='DICKENS' '064'='DIMMIT'
              '065'='DONLEY' '066'='KENEDY' '067'='DUVAL'
              '068'='EASTLAND' '069'='ECTOR' '070'='EDWARDS'
              '071'='ELLIS' '072'='EL PASO' '073'='ERATH' '074'='FALLS'
              '075'='FANNIN' '076'='FAYETTE' '077'='FISHER' '078'='FLOYD'
              '079'='FOARD' '080'='FORT BEND' '081'='FRANKLIN'
              '082'='FREESTONE' '083'='FRIO' '084'='GAINES'
              '085'='GALVESTON' '086'='GARZA' '087'='GILLESPIE'
              '088'='GLASSCOCK' '089'='GOLIAD' '090'='GONZALES'
              '091'='GRAY' '092'='GRAYSON' '093'='GREGG' '094'='GRIMES'
              '095'='GUADALUPE' '096'='HALE' '097'='HALL'
              '098'='HAMILTON' '099'='HANSFORD' '100'='HARDEMAN'
              '101'='HARDIN' '102'='HARRIS' '103'='HARRISON'
              '104'='HARTLEY' '105'='HASKELL' '106'='HAYS'
              '107'='HEMPHILL' '108'='HENDERSON' '109'='HIDALGO'
              '110'='HILL' '111'='HOCKLEY' '112'='HOOD'
              '113'='HOPKINS' '114'='HOUSTON' '115'='HOWARD'
              '116'='HUDSPETH' '117'='HUNT' '118'='HUTCHINSON'
              '119'='IRION' '120'='JACK' '121'='JACKSON' '122'='JASPER'
              '123'='JEFF DAVIS' '124'='JEFFERSON' '125'='JIM HOGG'
              '126'='JIM WELLS' '127'='JOHNSON' '128'='JONES'
              '129'='KARNES' '130'='KAUFMAN' '131'='KENDALL' '132'='KENT'
              '133'='KERR' '134'='KIMBLE' '135'='KING' '136'='KINNEY'
              '137'='KLEBERG' '138'='KNOX' '139'='LAMAR' '140'='LAMB'
              '141'='LAMPASAS' '142'='LA SALLE' '143'='LAVACA'
              '144'='LEE' '145'='LEON' '146'='LIBERTY' '147'='LIMESTONE'
              '148'='LIPSCOMB' '149'='LIVE OAK' '150'='LLANO'
              '151'='LOVING' '152'='LUBBOCK' '153'='LYNN' '154'='MADISON'
              '155'='MARION' '156'='MARTIN' '157'='MASON'
              '158'='MATAGORDA' '159'='MAVERICK' '160'='MCCULLOCH'
              '161'='MCLENNAN' '162'='MCMULLEN' '163'='MEDINA'
              '164'='MENARD' '165'='MIDLAND' '166'='MILAM' '167'='MILLS'
              '168'='MITCHELL' '169'='MONTAGUE' '170'='MONTGOMERY'
```

```
          '171'='MOORE' '172'='MORRIS' '173'='MOTLEY'
          '174'='NACOGDOCHES' '175'='NAVARRO' '176'='NEWTON'
          '177'='NOLAN' '178'='NUECES' '179'='OCHILTREE'
          '180'='OLDHAM' '181'='ORANGE' '182'='PALO PINTO'
          '183'='PANOLA' '184'='PARKER' '185'='PARMER' '186'='PECOS'
          '187'='POLK' '188'='POTTER' '189'='PRESIDIO' '190'='RAINS'
          '191'='RANDALL' '192'='REAGAN' '193'='REAL'
          '194'='RED RIVER' '195'='REEVES' '196'='REFUGIO'
          '197'='ROBERTS' '198'='ROBERTSON' '199'='ROCKWALL'
          '200'='RUNNELS' '201'='RUSK' '202'='SABINE'
          '203'='SAN AUGUSTINE' '204'='SAN JACINTO'
          '205'='SAN PATRICIO' '206'='SAN SABA' '207'='SCHLEICHER'
          '208'='SCURRY' '209'='SHACKELFORD' '210'='SHELBY'
          '211'='SHERMAN' '212'='SMITH' '213'='SOMERVELL'
          '214'='STARR' '215'='STEPHENS' '216'='STERLING'
          '217'='STONEWALL' '218'='SUTTON' '219'='SWISHER'
          '220'='TARRANT' '221'='TAYLOR' '222'='TERRELL'
          '223'='TERRY' '224'='THROCKMORTON' '225'='TITUS'
          '226'='TOM GREEN' '227'='TRAVIS' '228'='TRINITY'
          '229'='TYLER' '230'='UPSHUR' '231'='UPTON' '232'='UVALDE'
          '233'='VAL VERDE' '234'='VAN ZANDT' '235'='VICTORIA'
          '236'='WALKER' '237'='WALLER' '238'='WARD'
          '239'='WASHINGTON' '240'='WEBB' '241'='WHARTON'
          '242'='WHEELER' '243'='WICHITA' '244'='WILBARGER'
          '245'='WILLACY' '246'='WILLIAMSON' '247'='WILSON'
          '248'='WINKLER' '249'='WISE' '250'='WOOD' '251'='YOAKUM'
          '252'='YOUNG' '253'='ZAPATA' '254'='ZAVALA';
 VALUE  HQ 1='1 PARIS' 2='2 FT WORTH' 3='3 WICHITA FALLS'
          4='4 AMARILLO' 5='5 LUBBOCK' 6='6 ODESSA' 7='7 SAN ANGELO'
          8='8 ABILENE' 9='9 WACO' 10='10 TYLER' 11='11 LUFKIN'
         12='12 HOUSTON' 13='13 YOAKUM' 14='14 AUSTIN'
         15='15 SAN ANTONIO' 16='16 CORPUS CHRISTI' 17='17 BRYAN'
         18='18 DALLAS' 19='19 ATLANTA' 20='20 BEAUMONT'
         21='21 PHARR' 23='23 BROWNWOOD' 24='24 EL PASO'
         25='25 CHILDRESS' 26='26 HOUSTON URBAN';
           %MEND FORM;
  DATA MENU;SET MENU;
  %FORM;
 /*MACRO TO SELECT THE CORRECT ACTION FROM THE MENU SELECTION */
      %MACRO MENU;
 /* BROWSING THROUGH THE DISTRICT SELECTION */
     %IF &MEN=1 %THEN %DO;
     %IF &AVAI=NO %THEN %DO;
  DATA _NULL_; FILE PRINT;
  PUT #20 @5 100*'*' /
     @5 100*'*' //
     @30 'PLEASE USE OPTION NUMBER 2 OF THE MAIN MENU' //
     @28 'TO GENERATE THE UNAVAILABLE DISTRICT SELECTIONS'
   // @5 100*'*' /
     @5 100*'*'  ;

                %GOTO XXX;%END;
PROC SORT DATA=%FINLIST;BY BRID;
PROC SORT DATA=%DISYS;BY BRID;
  %IF &SYST=OFF %THEN %DO;
  PROC SORT DATA=TEBS.EIGHT; BY BRID;
 DATA REPDATA; MERGE %DISYS TEBS.EIGHT %FINLIST; BY BRID;
```

```
  IF DIST = . THEN DELETE;
   IF DISEL= 'DISEL';
    %END ;
%IF &SYST=ON %THEN %DO;
DATA REPDATA;MERGE %DISYS %FINLIST;BY BRID;
           IF DIST= .  THEN DELETE;
IF DISEL = 'DISEL';
%END;
          PROC SORT DATA=REPDATA; BY RANK;


DATA _NULL_;
  SET REPDATA END=FIM;IF _N_=1 THEN SET MENU;
  NPS+1;
  FILE /* LIST1 */  PRINT HEADER=C;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  DN+1;
  DCOST+CPIBU;
  IF CPI=CPIBU THEN
  PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
     @75 WT $WTPIC.
     @113 CPIBU DOLLAR14.  /
    @34 FCO /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'=';ELSE
  PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
     @75 WT $WTPIC.
     @113 CPIBU DOLLAR14.  /
    @34 FCO @116 '(REVISED COST)' /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'=';
  IF FIM=1 THEN DO;
   PUT @60 'DISTRICT TOTAL OF ' DN 3. ' SELECTED PROJECTS:'
      @113  DCOST DOLLAR14.  ;
   END;
  RETURN;

C: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @56 'DISTRICT SELECTION'//
      @5 'DISTRICT' @25 'COUNTY' @40 'HWY/FACILITY OVER'
      @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
      @5 126*'=' ;
 RETURN;

DATA _NULL_;
  SET REPDATA END=FIM; IF _N_=1 THEN SET MENU;
  S='S';
  NPS+1;
  FILE /* LIST2 */ PRINT HEADER=F;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  IF (S='S') THEN DO; A_COST+CPIBU; AN+1; END;
```

```
   IF CUCO GE 0 THEN
    PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.
      @57 CPV DOLLAR8. @73 BWR 5.3
       @95 W_BDL 2. @107 RANK
      @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
     / @23 COMM2
   /
    @12 119*'=' / ; ELSE DO;
  PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
     @48 SSCO 1. @53 SUBCO 1.
     @57 CPV DOLLAR8. @73 BWR 5.3
    /* @85 SCORE1 3. */  @95 W_BDL 2. @107 RANK
     @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
     / @23 COMM2
     /
     @12 119*'=' / ; END;
  IF FIM=1 THEN DO;
     PUT @62 'DISTRICT TOTAL OF ' AN 3.
        ' SELECTED PROJECTS:'
        @115 A_COST DOLLAR14.  ;
     END;
RETURN;

F: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @56 'DISTRICT SELECTION'//
   @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
   @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
   @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
   @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
   @120 'ACCUM COST'/ @12 119*'=' /;
     RETURN; %END;%XXX: RUN;
   /* CREATING THE FINAL LIST OF SELECTED PROJECTS STARTING FROM THE LIST
     SUPLIED BY THE DISTRICT */
     %IF &MEN=2 %THEN %DO;
     %IF &AVAI=NO %THEN %DO;%MISDIS;              %GOTO YYY; %END;
     /*THE ABOVE MACRO IS USED WHEN THE DISTRICT
                          DATA IS MISSING FOR ANY REASON */
  DATA ADD;/**PROJECTS TO BE ADDED TO THE DISTRICT SELECTIONS***/
     LENGTH BRID $ 16 DISEL $ 5;
    INPUT BRID $; DISEL= 'DISEL'; RANK = . ;
CARDS; /**INSERT PROJECTS TO BE ADDED**/
;
DATA DELET; /**PROJECTS TO BE DELETED FROM THE DISTRICT SELECTIONS**/
     LENGTH BRID $ 16          ;
    INPUT BRID $;  FLAG = 69;
CARDS; /**INSERT PROJECTS TO BE DELETED**/
;
     PROC SORT DATA=ADD; BY BRID; /**DELETE DUPLICATES ADDED 2/15/91**/
  DATA ADD; SET ADD;
  IF BRID =LAG(BRID) THEN DELETE;
    PROC SORT DATA = DELET; BY BRID;
  DATA DELET; SET DELET;
IF BRID = LAG(BRID) THEN DELETE;
PROC SORT DATA = %DISYS; BY BRID;
PROC SORT DATA = %FINLIST; BY BRID;
```

```
    %IF &SYST=OFF %THEN %DO;
  PROC SORT DATA = TEBS.EIGHT;BY BRID ;
DATA REPDATA;MERGE %DISYS TEBS.EIGHT ADD DELET %FINLIST;BY BRID;
  IF FLAG=69 THEN DELETE;
     IF DIST = . THEN DELETE ; IF DISEL= 'DISEL'; %END;
    %IF &SYST=ON %THEN %DO;
DATA REPDATA; MERGE %DISYS ADD DELET %FINLIST; BY BRID;
  IF FLAG=69 THEN DELETE;
     IF DIST = . THEN DELETE; IF DISEL= 'DISEL'; %END;
          PROC SORT DATA=REPDATA; BY RANK;
DATA %FINSEL ; SET REPDATA ; KEEP BRID RANK DISEL;
                                RETURN;


PROC SORT DATA=%FINSEL;BY BRID;
PROC SORT DATA=%DISYS;BY BRID;
    %IF &SYST=OFF %THEN %DO;
  PROC SORT DATA = TEBS.EIGHT;BY BRID ;
DATA REPDATA;MERGE %DISYS TEBS.EIGHT %FINSEL;BY BRID;
IF DISEL = 'DISEL' ;   %END;
  %IF &SYST=ON %THEN %DO;
DATA REPDATA;MERGE %DISYS %FINSEL;BY BRID;IF DISEL='DISEL';
   %END;
          PROC SORT DATA=REPDATA; BY RANK;
DATA _NULL_;
  SET REPDATA END=FIM;IF _N_=1 THEN SET MENU;
  NPS+1;
  FILE /* LIST1 */ PRINT HEADER=C;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  DN+1;
  DCOST+CPIBU;
  IF CPI=CPIBU THEN
  PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
     @75 WT $WTPIC.
     @113 CPIBU DOLLAR14.  /
   @34 FCO /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'=';ELSE
  PUT @5 DIST @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
     @75 WT $WTPIC.
     @113 CPIBU DOLLAR14.  /
   @34 FCO @116 '(REVISED COST)' /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'=';
  IF FIM=1 THEN DO;
   PUT @60 'DISTRICT TOTAL OF ' DN 3. ' SELECTED PROJECTS:'
      @113  DCOST DOLLAR14.  ;
   END;
  RETURN;

C: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
```

```
      @48 'REVISED DISTRICT FINAL LIST OF PROJECTS'//
      @5 'DISTRICT' @25 'COUNTY' @33 'HWY/FACILITY OVER'
      @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
      @5 126*'=' ;
 RETURN;

DATA _NULL_;
  SET REPDATA END=FIM; IF _N_=1 THEN SET MENU;
  S='S';
  NPS+1;
  IF RANK=. THEN COMM1='STATE LEVEL SELECTION';
  FILE /* LIST2 */  PRINT HEADER=F;
  IF NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  IF (S='S') THEN DO; A_COST+CPIBU; AN+1; END;
   IF CUCO GE 0 THEN
    PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.
       @57 CPV DOLLAR8. @73 BWR 5.3
        @95 W_BDL 2. @107 RANK
       @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
     / @23 COMM2
   /
    @12 119*'=' / ; ELSE DO;
  PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
      @48 SSCO 1. @53 SUBCO 1.
      @57 CPV DOLLAR8. @73 BWR 5.3
    /* @85 SCORE1 3. */  @95 W_BDL 2. @107 RANK
      @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
      / @23 COMM2
      /
      @12 119*'=' / ;END;
  IF FIM=1 THEN DO;
     PUT @62 'DISTRICT TOTAL OF ' AN 3.
        ' SELECTED PROJECTS:'
        @115 A_COST DOLLAR14.  ;
     END;
RETURN;

F: PUT @36 'DISTRICT-' DIST
      @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @48 'REVISED DISTRICT FINAL LIST OF PROJECTS'//
   @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
   @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
   @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
   @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
   @120 'ACCUM COST'/ @12 119*'=' /;
   RETURN;
            %END;%YYY: RUN;
  /*MACRO TO PUT ALL THE FINAL STATE LEVEL SELECTIONS IN ONE DATA SET
    ,PRINT THE FINAL LIST OF SELECTED PROJECTS CREATE A DATA SET OF THE
    SELECTION TO BE ADDED TO THE PREVIOUSLY SELECTED PROJECT LIST USING
    MENU OPTION 4 OF THIS MODULE */
       %IF &MEN=3 %THEN %DO;
       DATA MENU3; RETAIN;
       %DO I=1 %TO 25 %BY 1;
       LENGTH DIST&I $ 3 INCL&I $ 3 ; %END;
                %DO I=1 %TO 25 %BY 1;
```

```
            INPUT DIST&I $ INCL&I $;
        %END;
            OUTPUT;
CARDS; /* INSERT CARDS FOR THE DISTRICTS THAT HAVE PROJECTS********/
;

DATA MENU3; SET MENU3; LENGTH YEAR $ 9;
   /****INSERT CORRECT YEAR HERE***/
  DATA MENU3; SET MENU3;
  CALL SYMPUT('D1',DIST1); CALL SYMPUT('IN1',INCL1);
  CALL SYMPUT('D2',DIST2); CALL SYMPUT('IN2',INCL2);
  CALL SYMPUT('D3',DIST3); CALL SYMPUT('IN3',INCL3);
  CALL SYMPUT('D4',DIST4); CALL SYMPUT('IN4',INCL4);
  CALL SYMPUT('D5',DIST5); CALL SYMPUT('IN5',INCL5);
  CALL SYMPUT('D6',DIST6); CALL SYMPUT('IN6',INCL6);
  CALL SYMPUT('D7',DIST7); CALL SYMPUT('IN7',INCL7);
  CALL SYMPUT('D8',DIST8); CALL SYMPUT('IN8',INCL8);
  CALL SYMPUT('D9',DIST9); CALL SYMPUT('IN9',INCL9);
  CALL SYMPUT('D10',DIST10); CALL SYMPUT('IN10',INCL10);
  CALL SYMPUT('D11',DIST11); CALL SYMPUT('IN11',INCL11);
  CALL SYMPUT('D12',DIST12); CALL SYMPUT('IN12',INCL12);
  CALL SYMPUT('D13',DIST13); CALL SYMPUT('IN13',INCL13);
  CALL SYMPUT('D14',DIST14); CALL SYMPUT('IN14',INCL14);
  CALL SYMPUT('D15',DIST15); CALL SYMPUT('IN15',INCL15);
  CALL SYMPUT('D16',DIST16); CALL SYMPUT('IN16',INCL16);
  CALL SYMPUT('D17',DIST17); CALL SYMPUT('IN17',INCL17);
  CALL SYMPUT('D18',DIST18); CALL SYMPUT('IN18',INCL18);
  CALL SYMPUT('D19',DIST19); CALL SYMPUT('IN19',INCL19);
  CALL SYMPUT('D20',DIST20); CALL SYMPUT('IN20',INCL20);
  CALL SYMPUT('D21',DIST21); CALL SYMPUT('IN21',INCL21);
  CALL SYMPUT('D22',DIST22); CALL SYMPUT('IN22',INCL22);
  CALL SYMPUT('D23',DIST23); CALL SYMPUT('IN23',INCL23);
  CALL SYMPUT('D24',DIST24); CALL SYMPUT('IN24',INCL24);
  CALL SYMPUT('D25',DIST25); CALL SYMPUT('IN25',INCL25);
      DATA REPDATA; SET %FINSTAT; FLAG3='LAS';

      PROC SORT DATA=REPDATA;BY BRID;
  DATA TEMP3;
  %IF &SYST=ON %THEN %DO;SET %FIM ;%END;
  %IF &SYST=OFF %THEN %DO;SET %FIM TEBS.EIGHT ;%END;
      PROC SORT DATA=TEMP3;BY BRID;
DATA REPDATA;MERGE REPDATA TEMP3;BY BRID;IF FLAG3='LAS';DROP FLAG3;
DATA REPDATA;SET REPDATA;IF _N_=1 THEN SET MENU;
                    IF _N_=1 THEN SET MENU3;
      PROC SORT DATA=REPDATA;BY DIST RANK;
  DATA _NULL_;
 SET REPDATA END=EOF;
 BY DIST RANK  ;
 NPS+1;
 FILE /* LIST1 */ PRINT HEADER=C;
 IF FIRST.DIST OR NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
 DN+1;
 DCOST+CPIBU;
IF CPI=CPIBU THEN
 PUT @5 DIST  HQ. @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
    @75 WT $WTPIC.
    @113 CPIBU DOLLAR14.  /
```

```
      @34 FCO /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'='; ELSE
  PUT @5 DIST  HQ. @25 COUNTY $CNTY. @41 RNUM @54 CSS $12.
     @75 WT $WTPIC.
     @113 CPIBU DOLLAR14.  /
      @34 FCO @116 '(REVISED COST)' /
     @5 'BRIDGE LOCATION: 'FX $20./ /
     @5 'EXISTING FACILITY: 'LOS ' LANE, ' ROWI 'FT ROADWAY'
     @55 ' PROPOSED FACILITY: ' /*PNL*/ ' LANE, ' PRW 'FT ROADWAY' /
     @5 126*'=';
  IF LAST.DIST THEN DO;
   PUT @60 'DISTRICT TOTAL OF ' DN 3. '          CONSIDERED PROJECTS:'
      @113  DCOST DOLLAR14.  ;
   TCOST+DCOST;
   TN+DN;
   DCOST=0;
   DN=0;
   END;
 IF EOF THEN PUT @63 'STATE TOTAL OF ' TN 3.
 ' SELECTED PROJECTS:'
 @117 TCOST DOLLAR14.  ;
  RETURN;

C: PUT @39  YEAR @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
      @54 'AND REHABILITATION PROGRAM'/
      @39 'FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING' //
      @5 'DISTRICT-HDQRTRS' @25 'COUNTY' @33 'HWY/FACILITY OVER'
      @53 'CONT-SECT-STR' @75 'TYPE OF WORK' @116 'ESTIMATED COST' /
      @5 126*'=' ;
 RETURN;
DATA _NULL_;
  SET REPDATA END=EOF;
  BY DIST RANK ;
  S='S';
  NPS+1;
  IF RANK=. THEN COMM1='STATE LEVEL SELECTION';
  FILE /* LIST2 */  PRINT HEADER=F;
  IF FIRST.DIST OR NPS=6  THEN DO; PUT _PAGE_@; NPS=0; END;
  IF (S='S') THEN DO; A_COST+CPIBU; AN+1; END;
   IF CUCO GE 0 THEN
    PUT @13 W_ADT COMMA7. @27 SR 3. @36 'CULVERT RATING = ' CUCO 1.
      @57 CPV DOLLAR8. @73 BWR 5.3
       @95 W_BDL 2. @107 RANK
     @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
    / @23 COMM2
   /
    @12 119*'=' / ; ELSE DO;
  PUT @13 W_ADT COMMA7. @27 SR 3. @43 DECO 1.
     @48 SSCO 1. @53 SUBCO 1.
     @57 CPV DOLLAR8. @73 BWR 5.3
     /*@85 SCORE1 3.*/ @95 W_BDL 2. @107 RANK
     @115 A_COST DOLLAR14. / @2 CSS $12. / @13 'COMMENTS: ' COMM1
     / @23 COMM2
     /
```

```
     @12 119*'=' / ;  END;
  IF LAST.DIST THEN DO;
     PUT @62 'DISTRICT TOTAL OF ' AN 3.
         ' SELECTED PROJECTS:'
         @115 A_COST DOLLAR14.  ;
     TA_COST+A_COST;
     TAN+AN;
     AN=0;
     A_COST=0;
     END;
  IF EOF THEN PUT @65 'STATE TOTAL OF ' TAN 3.
                 '          CONSIDERED PROJECTS:'
                @115 TA_COST DOLLAR14.  ;
RETURN;

F: PUT @39 YEAR @49 SYS '-STATE SYSTEM FEDERAL AID BRIDGE REPLACEMENT'/
       @54 'AND REHABILITATION PROGRAM'/
       @39 'FINAL LIST OF PROJECTS TO BE SUBMITTED FOR CONTRACTING' //
   @24 'SUFFICIENCY' @39 'CONDITION  RATINGS' @73 'BRIDGE'
   @85 'TEBS' @93 'DETOUR' @103 'DISTRICT' @121 'DISTRICT' /
   @16 'ADT' @26 'RATINGS' @41 'RDWY SUPR  SUB'
   @59 'COST/VEH' @70 'WIDTH  RATIO' @85 'SCORE   LENGTH    PRIORITY'
   @120 'ACCUM COST'/ @12 119*'=' /;
   RETURN;

   %IF &SYST=ON %THEN %DO;DATA TEBS.PRON;SET REPDATA;
   LENGTH FLAG $ 4;
      FLAG='PREV';KEEP BRID FLAG DIST YEAR;
   %END;
 %IF &SYST=OFF %THEN %DO;DATA TEBS.PROFF;SET REPDATA;
 LENGTH FLAG $ 4;
      FLAG='PREV';KEEP BRID FLAG DIST YEAR;
   %END;
   TITLE 'THIS IS THE LIST OF STATEWIDE SELECTED PROJECTS';
   %IF &SYST=ON %THEN %DO; PROC SORT DATA = TEBS.PRON;
    BY DIST;
    PROC PRINT DATA = TEBS.PRON SPLIT='*';
    LABEL DIST = 'DISTRICT'
          YEAR = 'FUNDING PROGRAM';
    VAR DIST BRID YEAR;   %END;

   %IF &SYST=OFF %THEN %DO; PROC SORT DATA = TEBS.PROFF;
    BY DIST;
    PROC PRINT DATA = TEBS.PROFF SPLIT='*';
    LABEL DIST = 'DISTRICT'
          YEAR = 'FUNDING PROGRAM';
    VAR DIST BRID YEAR;   %END;

       %END;

    /*THIS OPTION OF THE MENU ALLOWS THE USER TO UPDATE THE PREVIOUSLY
      SELECTED DATA SET OF STRUCTURES PREVION TEBS PREVIOFF TEBS IT ALSO
      CREATES A BACKUP OF THE LAST ONE TO AVOID PROBLEMS WITH INDECISION
      ABOUT THE FINAL SELECTION LIST */
      %IF &MEN=4 %THEN %DO;
   %IF &SYST=ON %THEN %DO;DATA TEBS.BUPRON;SET TEBS.PREVION;
      DATA TEBS.PREVION;SET TEBS.PREVION TEBS.PRON;
```

```
  PROC SORT DATA = TEBS.PREVION;BY DIST;
TITLE 'THIS IS THE CURRENT STATUS OF THE PREVIOUSLY SELECTED PROJECT LIST
 AS OF THIS LAST RUN';
      PROC PRINT DATA=TEBS.PREVION; RUN; %END;
  %IF &SYST=OFF %THEN %DO;DATA TEBS.BUPROFF;SET TEBS.PREVOFF;
      DATA TEBS.PREVOFF;SET TEBS.PREVOFF TEBS.PROFF;
   PROC SORT DATA = TEBS.PREVOFF; BY DIST;
TITLE 'THIS IS THE CURRENT STATUS OF THE PREVIOUSLY SELECTED PROJECT LIST
 AS OF THIS LAST RUN';
      PROC PRINT DATA=TEBS.PREVOFF; RUN; %END; %END;
       %MEND MENU;
  DATA MENU; SET MENU;

       %MENU;RUN;
```

PREVIOUS RPF

```
<<PREVIOUS>>
:*****************************************************************
:*** A4Y.PREVIOUS       TEBS PREVIOUS PROGRAM CONVERTED FROM TSO        *****
:*** CREATED 3/18/91  (AJJ)                                    *****
:*** LAST MOD X/X/XX (AJJ)                                     *****
:*** USES A4Y.PREVJCL    MODIFIES JCL AND SUBMITS JOB            **    ***
:*****************************************************************
PUSH
SET MODE BASIC
F A4Y.PREVJCL
R 1 1
:*****************************************************************
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM SYS
TAG % HUM ERRMSG
CURSOR SYS
!
$           STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$                TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                          T E B S S
$             PROGRAM TO MANAGE THE PREVIOUSLY SELECTED DATABASE
!
$
$
$
$
$
$
$           PLEASE ENTER THE SYSTEM TO BE PROCESSED
!
!
!
!                   SYSTEM (OFF/ON)õ___!
!
!
!
!              %                                          !
$  PRESS ENTER TO CONTINUE                                    PF1:TO QUIT
ENDDEF
PANEL SEND
:*****************************************************************
<<BEGIN1>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
:*****************************************************************
<<PAN1OK>>
LET L16=TRIM(LTRIM(P.SYS,'_'),'_')
IF (L16 EQ 'OFF') OR (L16 EQ 'ON')
    GOTO <<XXX>>
ELSE
    LET P.ERRMSG='ERROR IN SYSTEM, MUST BE (OFF/ON) ONLY'
```

```
    PANEL RESEND CURSOR P.SYS
    GOTO <<BEGIN1>>
ENDIF
:**********************************************************************
<<XXX>>
DO <<SYSCARD>>
DO <<CSJ>>
<<SUBMIT>>
DO <<NODE>>
JSUB
<<END>>
DEL
POP
RETURN
:**********************************************************************
:**********************************************************************
:**********************************************************************
<<SYSCARD>> PROC
TRAP ON
+FIND /**INSERT SYSTEM CARD**/ 1 +HIGHSEQ+
TRAP OFF
IF TC NE 0
   RESPONSE 'CAN NOT FIND DIST INSERT CARD IN A4Y.PREVIOUS, SEE AJJ.
   POP
   DEL
   RETURN
ENDIF
+WRITE AWS +SEQ+ L16
ENDPROC
:**********************************************************************
:**********************************************************************
<<CSJ>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM CNTY0,CONT0,SECT0,STR0,AD0
TAG õ HUM CNTY1,CONT1,SECT1,STR1,AD1
TAG õ HUM CNTY2,CONT2,SECT2,STR2,AD2
TAG õ HUM CNTY3,CONT3,SECT3,STR3,AD3
TAG õ HUM CNTY4,CONT4,SECT4,STR4,AD4
TAG õ HUM CNTY5,CONT5,SECT5,STR5,AD5
TAG õ HUM CNTY6,CONT6,SECT6,STR6,AD6
TAG õ HUM CNTY7,CONT7,SECT7,STR7,AD7
TAG õ HUM CNTY8,CONT8,SECT8,STR8,AD8
TAG õ HUM CNTY9,CONT9,SECT9,STR9,AD9
TAG % HUM ERRMSG
CURSOR CNTY0
!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                             T E B S S
$                          (PREVIOUS) PROGRAM
$                                                              !
$          ENTER THE BRIDS FOR THE PROJECTS TO BE ADDED OR DELETED.          !
```

```
$
!
$                    COUNTY CONT. SEC. STR.  (ADD/DEL)
!                    1õ___!õ____!õ__! õ___!     õ_!    (A=ADD D=DEL)
!                    2õ___!õ____!õ__! õ___!     õ_!
!                    3õ___!õ____!õ__! õ___!     õ_!
!                    4õ___!õ____!õ__! õ___!     õ_!
!                    5õ___!õ____!õ__! õ___!     õ_!
!                    6õ___!õ____!õ__! õ___!     õ_!
!                    7õ___!õ____!õ__! õ___!     õ_!
!                    8õ___!õ____!õ__! õ___!     õ_!
!                    9õ___!õ____!õ__! õ___!     õ_!
!                   10õ___!õ____!õ__! õ___!     õ_!
!              %                                          !
$  PRESS ENTER FOR NEXT PAGE       PF12: TO SUBMIT JOB          PF1:TO QUIT
ENDDEF
PANEL SEND
:**************************************************************************
<<BEGIN3>>
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
:**************************************************************************
LET P1='P.CONT'
LET P2='P.SECT'
LET P3='P.STR'
LET P4='P.CNTY'
LET P5=0
LET P6='P.AD'
LOOP 10 TIMES
     +LET L1=+P1|P5+
     +LET L2=LPAD(TRIM(LTRIM(+P2|P5+,'_'),'_'),2,'0')
     +LET L3=LPAD(TRIM(LTRIM(+P3|P5+,'_'),'_'),3,'0')
     +LET L4=LPAD(TRIM(LTRIM(+P4|P5+,'_'),'_'),3,'0')
     +LET L5=+P6|P5+
     IF L4|L2|L3 NE '00000000'
       IF L4 EQ 0
          LET P.ERRMSG = 'ERROR IN COUNTY NUMBER'
          +PANEL RESEND CURSOR +P4|P5+
          GOTO <<BEGIN3>>
       ENDIF
       IF INDEX(L1,'_') NE 0
          LET P.ERRMSG = 'ERROR IN CONTROL NUMBER'
          +PANEL RESEND CURSOR +P1|P5+
          GOTO <<BEGIN3>>
       ENDIF
       IF L14 EQ 'NO'
          GOTO <<NOCHK>>
       ENDIF
       IF ((L5 EQ 'A') OR (L5 EQ 'D'))
          GOTO <<OKAD>>
       ENDIF
       LET P.ERRMSG = 'MUST BE A OR D FOR ADD/DEL'
       +PANEL RESEND CURSOR +P6|P5+
```

```
      GOTO <<BEGIN3>>
<<OKAD>>
      IF L5 EQ 'A'
         TRAP ON
         +FIND /INSERT PROJECTS TO BE ADDED**/ 1 +HIGHSEQ+
         TRAP OFF
         IF TC NE 0
            RESPONSE 'ERROR IN LOCATION OF PROJ ADDED CARD IN JCL SEE AJJ'
            GOTO <<END>>
         ENDIF
      ELSE
         TRAP ON
         +FIND /INSERT PROJECTS TO BE DELETED**/ 1 +HIGHSEQ+
         TRAP OFF
         IF TC NE 0
            RESPONSE 'ERROR IN LOCATION OF PROJ ADDED CARD IN JCL SEE AJJ'
            GOTO <<END>>
         ENDIF
      ENDIF
<<NOCHK>>
      +WRITE AWS +SEQ+ L4|'-'|L1|'-'|L2|'-'|L3
    ENDIF
    LET P5=P5+1
ENDLOOP
IF AID EQ 'PF12'
  GOTO <<FINOUT>>
ELSE
  GOTO <<CSJ>>
ENDIF
<<FINOUT>>
ENDPROC
.*****************************************************************
<<NODE>> PROC
PANEL ACTIVATE *
STARTDEF
TAG ! S
TAG $ P
TAG õ HUM PRINTER,MSG
TAG % HUM ERRMSG
CURSOR PRINTER
!
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
!
$                  TEXAS ELIGIBLE BRIDGE SELECTION SYSTEM
$                           T E B S S
!
$                        (PREVIOUS) PROGRAM
$                                                          !
!
$                       PRINTER   õ_____!
$                       MSG CLASS õR$      R=REVIEW OUTPUT
$                                  A=SEND DIRECT TO PRINTER
!
!
!
$      *** TO CHANGE PRINTER DESTINATION JUST ENTER PRINTER ID ABOVE ***      !
```

```
!
!
!
!
!
!                %                                                    !
$  PRESS ENTER TO CONTINUE
ENDDEF
LET L1=SUBSTR(S.KEY,2,2)
SELECT FIRST
    WHEN L1 EQ '45'
        LET L2='N9R82'
    WHEN L1 EQ '01'
        LET L2='N2R01'
    WHEN L1 EQ '02'
        LET L2='N3R02'
    WHEN L1 EQ '03'
        LET L2='N3R03'
    WHEN L1 EQ '04'
        LET L2='N3R04'
    WHEN L1 EQ '05'
        LET L2='N4R05'
    WHEN L1 EQ '06'
        LET L2='N4R06'
    WHEN L1 EQ '07'
        LET L2='N4R07'
    WHEN L1 EQ '08'
        LET L2='N4R08'
    WHEN L1 EQ '09'
        LET L2='N6R09'
    WHEN L1 EQ '10'
        LET L2='N2R10'
    WHEN L1 EQ '11'
        LET L2='N2R11'
    WHEN L1 EQ '12'
        LET L2='N1R12'
    WHEN L1 EQ '13'
        LET L2='N5R13'
    WHEN L1 EQ '14'
        LET L2='N6R14'
    WHEN L1 EQ '15'
        LET L2='N5R15'
    WHEN L1 EQ '16'
        LET L2='N5R16'
    WHEN L1 EQ '17'
        LET L2='N6R17'
    WHEN L1 EQ '18'
        LET L2='N2R18'
    WHEN L1 EQ '19'
        LET L2='N2R19'
    WHEN L1 EQ '20'
        LET L2='N1R20'
    WHEN L1 EQ '21'
        LET L2='N5R21'
    WHEN L1 EQ '23'
        LET L2='N3R23'
    WHEN L1 EQ '24'
```

```
        LET L2='N4R24'
    WHEN L1 EQ '25'
        LET L2='N3R25'
ENDSEL
LET P.PRINTER=L2
PANEL SEND
IF AID EQ 'PF1' OR AID EQ 'PF13'
   GOTO <<END>>
ENDIF
+E /C454300/+S.KEY+/
+E /D45 JW PREVJCL/D-+L1+ * PREVJCL */
IF P.MSG EQ 'A' OR P.MSG EQ 'R'
    GOTO <<OKMSG>>
ENDIF
LET P.MSG='R'
<<OKMSG>>
LET L2='MSGCLASS='|P.MSG|''
+E /MSGCLASS=R/+L2+/
LET L2=PAD(LTRIM(TRIM(P.PRINTER,'_'),'_'),5,' ')
LET L2='ROUTE PRINT '|L2|''
+E /ROUTE PRINT N9R00/+L2+/
ENDPROC
```

PREVIOUS JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454300),'D45 JW PREVJCL',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R00
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=SAS
//TEBS DD DSN=D45.SAS.OUT2,DISP=OLD
DATA _NULL_;
   %GLOBAL SYS; OPTIONS REPLACE;
DATA INITIAL ; INPUT ONOF $; CARDS;/****INSERT SYSTEM CARD****/
;
DATA INITIAL; SET INITIAL; CALL SYMPUT('SYS',ONOF); RETURN;
  DATA ADD;/**PROJECTS TO BE ADDED TO THE DATABASE          ***/
     LENGTH BRID $ 16 FLAG $ 4;
   INPUT BRID $; FLAG = 'PREV';
CARDS; /**INSERT PROJECTS TO BE ADDED**/
;
DATA DELET; /**PROJECTS TO BE DELETED FROM THE DATA BASE  *****/
     LENGTH BRID $ 16          ;
   INPUT BRID $;  BANDI=69;
CARDS; /**INSERT PROJECTS TO BE DELETED**/
;
    PROC SORT DATA=ADD; BY BRID; /**DELETE DUPLICATES ADDED 2/15/91**/
  DATA ADD; SET ADD;
  IF BRID =LAG(BRID) THEN DELETE;
    PROC SORT DATA = DELET; BY BRID;
  DATA DELET; SET DELET;
IF BRID = LAG(BRID) THEN DELETE;
  PROC SORT DATA = ADD; BY BRID;
   PROC SORT DATA = DELET ; BY BRID;
 TITLE1 'THIS IS THE PRESENT STATUS OF THE LIST OF PROJECTS NOT TO BE';
 TITLE2 'CONSIDERED';
    %MACRO ADDEL;
%IF &SYS=ON %THEN %DO;
PROC SORT DATA = TEBS.PREVION; BY BRID;
DATA TEBS.PREVION; MERGE TEBS.PREVION ADD DELET; BY BRID;
IF BANDI=69 THEN DELETE;
DROP BANDI ;
DATA TEBS.PREVION; SET TEBS.PREVION;
IF BRID = LAG(BRID) THEN DELETE;
PROC PRINT DATA = TEBS.PREVION;
VAR BRID DIST YEAR;
     %END;

%IF &SYS=OFF %THEN %DO;
PROC SORT DATA = TEBS.PREVOFF; BY BRID;
DATA TEBS.PREVOFF; MERGE TEBS.PREVOFF ADD DELET; BY BRID;
IF BANDI=69 THEN DELETE;
DROP BANDI ;
DATA TEBS.PREVOFF; SET TEBS.PREVOFF;
IF BRID = LAG(BRID) THEN DELETE;
PROC PRINT DATA = TEBS.PREVOFF;
VAR BRID DIST YEAR;
     %END;
    %MEND ADDEL;
   DATA INITIAL; SET INITIAL;  %ADDEL;
```

AREA RPF

```
<<TEBS>>
.*********************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM ON,OFF
TAG % HUM ERRMSG
CURSOR ON
@
$          STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                        BRIDGE DIVISION
@
$             TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                          T E B S S
@
$                    (ON/OFF STATE SYSTEM BRIDGES)
@
@   PROGRAM TO RETRIEVE THE DISTRIBUTION OF DECK AREA CONSTRUCTED
@                   BY YEAR FROM BRINSAP
@
@                    PLEASE SELECT ON OR OFF SYSTEMS
@
@
@                      PLACE 'X' TO SELECT AN OPTION.
@
@                          õ_@: ON SYSTEM
@                          õ_@: OFF SYSTEM
@
@
@
@              %                                          @
$  PRESS ENTER TO SUBMIT JOB                                 PF1:TO QUIT
ENDDEF
PANEL SEND
.*********************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
.*********************************************************************
<<OK>>
IF P.ON EQ 'X' OR P.OFF EQ 'X'
   GOTO <<BEGIN>>
ENDIF
LET P.ERRMSG='ENTER A <X> IN OFF OR ON SYSTEMS'
```

```
PANEL RESEND
GOTO <<BACK>>
:*********************************************************************
<<BEGIN>>
F A4Y.AREAJCL
R 1 1
TRAP ON
FIND  /ACC   , BRG   , RRX   , RLF   , R12/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
IF P.OFF EQ 'X'
   LET P2=48
   LET P3=72
ELSE
   LET P2=72
   LET P3=48
ENDIF
LET L3=SEQ
+READ AWS +L3+ L4
+LET L4=MODIFY(L4,' ',+P2+)
+LET L4=MODIFY(L4,'X',+P3+)
+DELETE +L3+
+WRITE AWS +L3+ L4
TRAP ON
FIND /INSERT POINT FOR ON-OFF SYS/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER. CANNOT FIND CARDS LINE'
   DEL
   GOTO <<END>>
ENDIF
IF P.ON EQ 'X'
   +WRITE AWS +SEQ+ 'ON'
ELSE
   +WRITE AWS +SEQ+ 'OFF'
ENDIF
JJSUB
<<END>>
POP
RETURN
```

AREA JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW FUTURE',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(0,0),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*JOBPARM CARDS=0,LINES=1,TIME=1
// EXEC PROC=RISSAS
//DUMP.CARD DD *
  ACC   , BRG   , RRX   , RLF   , R12   , BGI  X, MPE   , PST   , BIO   ,
// EXEC PROC=SAS
//SAS.FILEIN DD DSN=&DMPA,DISP=(OLD,DELETE)
//TEBS DD DSN=D45.SAS.OUT2,DISP=(OLD)
DATA _NULL_;
DATA SYS;   LENGTH ONOF $ 3;
INPUT ONOF $;
CARDS;
  /* INSERT POINT FOR ON-OFF SYS */
;
%GLOBAL ANSW;
DATA ANS;SET SYS;CALL SYMPUT('ANSW',ONOF);RETURN;
%MACRO CHOOS;
   %IF &ANSW=OFF %THEN %DO; INFILE FILEIN;%END;
   %IF &ANSW=ON  %THEN %DO; INFILE FILEIN;%END;
%MEND CHOOS;
%MACRO CHOOS2;
%IF &ANSW=ON %THEN %DO;
OUTPUT OUT=TEBS.SQFDON N=COUNT SUM=ABUILT NMISS=MISSING;%END;

%IF &ANSW=OFF %THEN %DO;
OUTPUT OUT=TEBS.SQFDOF N=COUNT SUM=ABUILT NMISS=MISSING;%END;

%MEND CHOOS2;
OPTIONS REPLACE MPRINT;
DATA SQFT; %CHOOS;
INPUT AWIDTH 190-192 YB 173-176 STRLEN 262-267 DEWI 278-281 .1;
   IF DEWI=0 THEN DEWI= AWIDTH;
AREA=DEWI*STRLEN   ;
PROC SUMMARY DATA=SQFT;CLASS YB ;VAR AREA ;%CHOOS2 ;
PROC PRINT;RUN;
```

FUTURE RPF

```
<<FUT>>
.*****************************************************************
PUSH
SET MODE BASIC
PANEL ACTIVATE *
STARTDEF
TAG @ S
TAG $ HP
TAG õ HUM A1,A2,A3,A4,A5,A6,A7,SYS
TAG % HUM ERRMSG
CURSOR A1
@
$            STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
$                          BRIDGE DIVISION
@
$               TEXAS EVALUATION AND BRIDGE SELECTION SYSTEM
$                            T E B S S
@
$
@         THIS PROGRAM CALCULATES THE FUTURE BUDGET NEEDS BASED ON THE
@              DISTRIBUTION OF DECK AREA BUILT BY YEAR.
$                       (FUTURE PROGRAM)
@
@
@               PLANNING HORIZON :õ_____@
@               EXPANSION FACTOR :õ_____@
@   REHABILITATION COST PER SQFT :õ_____@
@     FIRST YEAR PLANNING HORIZON:õ_____@
@      REPLACEMENT COST PER SQFT :õ____@
@            BRIDGE AGE AT REHABH:õ_____@
@       BRIDGE AGE AT REPALCEMENT:õ_____@
@                       SYSTEM :õ___@
@
@                %                                          @
$  PRESS ENTER TO CONTINUE                                   PF1:TO QUIT
ENDDEF
PANEL SEND
.*****************************************************************
<<BACK>>
IF AID EQ 'ENTER'
  GOTO <<OK>>
ENDIF
IF AID EQ 'PF1' OR AID EQ 'PF13'
   TRAP ON
   DEL
   TRAP OFF
  GOTO <<END>>
ENDIF
LET P.ERRMSG='WRONG KEY'
PANEL RESEND
GOTO <<BACK>>
.*****************************************************************
<<OK>>
E 1 255
.*****************************************************************
LET L1='P.A'
LET L2='1'
```

```
LOOP 7 TIMES
  +LET L5=+L1|L2+
  LET L5=LPAD(TRIM(LTRIM(L5,'_'),'_'),1,'0')
  LET L6=INDEX(L5,'.')
  IF L6 NE 0
     LET L5=MODIFY(L5,'0',L6)
  ENDIF
  IF (CONFORM(L5,'I') NE 1) AND (L5 NE '')
     LET P.ERRMSG='ENTRY MUST BE NUMERIC.'
     +PANEL RESEND CURSOR +L1|L2+
     GOTO <<BACK>>
  ENDIF
  IF L6 NE 0
      LET L5=MODIFY(L5,'.',L6)
  ENDIF
  +LET +L1|L2+=L5
  LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L1='P.A'
LET L2=1
LOOP 7 TIMES
  +IF +L1|L2+ EQ 0
      +LET +L1|L2+ = '.'
  ENDIF
  LET L2=L2+1
ENDLOOP
:*****************************************************************
LET L3=TRIM(LTRIM(P.SYS,'_'),'_')
IF INDEX(L3,'ON') GE 1 OR INDEX(L3,'OFF') GE 1
    LET P.SYS=L3
    GOTO <<BEGIN>>
ENDIF
LET P.ERRMSG = 'ENTER ON OR OFF SYTEMS..'
PANEL RESEND CURSOR P.SYS
GOTO <<BACK>>
:*****************************************************************
<<BEGIN>>
:*****************************************************************
F  A4Y.FUTJCL
R 1 1
TRAP ON
FIND  /INSERT POINT FOR DATA (AJJ)/
TRAP OFF
IF TC NE 0
   RESPONSE 'ERROR IN FIND CMD SEE PROGRAMMER'
   DEL
   GOTO <<END>>
ENDIF
+WRITE AWS +SEQ+ P.A1|' '|P.A2|' '|P.A3|' '|P.A4|' '|P.A5|' '|P.A6|' '|P.A7|' '|P.SYS
:*****************************************************************
:*****************************************************************
JJSUB
<<END>>
POP
RETURN
:*****************************************************************
```

FUTURE JCL

```
/*PRIORITY      10
//R575004  JOB (00226329,C454100),'D45 JW FUTINT',
// CLASS=B,MSGCLASS=R,MSGLEVEL=(1,1),TIME=1
/*ROUTE XEQ CENTRAL
/*ROUTE PRINT N9R82
/*ROUTE PUNCH N9R82
//SASE  EXEC SASEXTR
//FT71F001 DD SYSOUT=B,HOLD=YES,DEST=N9R82
//FT06F001 DD DUMMY
/*JOBPARM CARDS=0,LINES=1,TIME=1
//TEBS DD DSN=D45.SAS.OUT2,DISP=SHR
GOPTIONS DEVICE=CAL1051 HSIZE=7.5 VSIZE=10  BORDER
      COLORS=(BLACK RED BLUE GREEN) NOTEXT82;
DATA _NULL_;
OPTIONS REPLACE;
DATA TEMP; INPUT HORIZ EXPAN CRH FIRST CRP AGERH AGERP  SYST $;
CARDS; /* INSERT POINT FOR DATA (AJJ) */
;
DATA TEMP; SET TEMP;
CALL SYMPUT('HOR',HORIZ);
CALL SYMPUT('EXP',EXPAN);
CALL SYMPUT('RH',CRH);
CALL SYMPUT('FIRS',FIRST);
CALL SYMPUT('RP',CRP);
CALL SYMPUT('AGRH',AGERH);
CALL SYMPUT('AGRP',AGERP);
CALL SYMPUT('SYS',SYST);
  %MACRO LOOP;
    %LET YMACR= %EVAL(&FIRS-1);
DATA SQF&YMACR;
  %IF &SYS=ON %THEN %DO ;SET TEBS.SQFDON; %END;
  %IF &SYS=OF %THEN %DO;SET TEBS.SQFDOF; %END;
                IF _TYPE_=0 THEN DELETE; /***YB=YB+1900;****/
    KEEP YB ABUILT ;
    %LET I=0;
    %LET TEMP=%EVAL(&FIRS+&HOR);
    %DO YMACR=&FIRS %TO &TEMP %BY 1;
     %LET I=%EVAL(&I+1);
     %LET YMAC1=%EVAL(&YMACR-1);

DATA BL&YMACR (KEEP= YBL BL) DEC&YMACR (KEEP=YB ABUILT)        ;
    SET SQF&YMAC1;
    YEAR=&YMACR;
    AGE =YEAR-YB;
    IF AGE=&AGRP THEN DO ; BL=&RP*&EXP*ABUILT ;
    RETAIN BL;ABUILT=&EXP*ABUILT;YB=&YMACR;
    OUTPUT DEC&YMACR; END;
    IF AGE=&AGRH THEN DO; BL=BL+(&RH*ABUILT); YBL=&YMACR;
    OUTPUT BL&YMACR;END;
    DATA SQF&YMACR;SET SQF&YMAC1 DEC&YMACR;/* IF _N_=1 THEN DELETE; */
    %IF &I>1 %THEN %DO;DATA BL&YMACR;SET BL&YMAC1 BL&YMACR ;%END;
    /* PROC PRINT DATA=BL&YMACR; */
       /*PROC PRINT DATA=SQF&YMACR;  */
    %LET ULT=&YMACR;
            %END;
 /****DATA TEBS.BL&ULT;SET BL&ULT;
 DATA TEBS.SQF&ULT;SET SQF&ULT;****/
```

```
  PROC PRINT DATA=BL&ULT;
  PROC PRINT DATA=SQF&ULT;

DATA TEMP; SET BL&ULT; BL=BL/1000000;
PATTERN1 V=R3 C=RED;
PROC GCHART DATA=TEMP          ;
LABEL BL='MIL. DOLLARS'  ;
LABEL YBL='YEAR';
TITLE1 F=NONE C=BLACK 'FUTURE BRIDGE REHAB & REPLACE FUNDING NEEDS';
VBAR YBL / TYPE=MEAN SUMVAR=BL DISCRETE CAXIS=GREEN
COUTLINE=BLUE;
RUN;
              %MEND LOOP;  DATA _NULL_ ;F=1;  %LOOP;
```