

ROAD MAINTENANCE

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ROAD MAINTENANCE
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Supplements To 58 BIAM

<u>No.</u>	<u>Title</u>
1	Road Maintenance Program Reports (To be issued)
2	Memorandum of Agreement on Emergency Relief—Bureau of Indian Affairs and Federal Highway Administration

ROAD MAINTENANCE
General

1. GENERAL

1.1 Goal. The goal of the Bureau's Road Maintenance Program is to provide the repairs and service necessary to preserve the condition of the BIA Road Maintenance System and related elements so as to optimize mobility for the intended use, and to provide for the safety of the users of the BIA Road Maintenance System.

1.2 Objectives. The Bureau's objectives in the Road Maintenance Program are to:

A. Provide maintenance service to those roads on the BIA Road Maintenance System as funds will allow and as determined by the priorities of the tribal governing bodies.

B. Plan, schedule and provide maintenance repairs and service in accordance with the standards of the American Association of State Highway and Transportation Officials (AASHTO).

C. Provide for inter-agency cooperative agreements with local governments, counties, state and other Federal agencies for various phases of the Road Maintenance Program.

D. Perform maintenance repairs and service in such a manner as to protect the environment of the reservation, adjacent lands, and individual Indian lands.

1.3 Definitions.

A. Indian Reservation Roads and Bridges: "The term 'Indian reservation roads and bridges' means roads and bridges, including roads and bridges on the Federal-aid systems, that are located within or provide access to an Indian reservation or Indian trust land or restricted Indian land which is not subject to fee title alienation without the approval of the Federal Government, or Indian and Alaska Native villages, groups, or communities in which Indians and Alaskan Natives reside, whom the Secretary of the Interior has determined are eligible for services generally available to Indians under Federal laws specifically applicable to Indians." (P.L. 93-643, 102[b]).

B. BIA Road Maintenance System. The Bureau of Indian Affairs has maintenance responsibility for those roads and bridges on the BIA Federal-Aid Highway System and the BIA Reservation Development Road System as defined in 57 BIAM 1.3 B and C.

C. Road Maintenance: The preservation of a road or bridge and related elements in the condition that will optimize mobility for the intended use.

ROAD MAINTENANCE
General

D. Indian and Alaskan Native Villages, Groups or Communities (as used in Paragraph A): Villages, groups or communities, in which the majority of the residents are Indian or Alaskan Natives.

E. Tribal Governing Body: The governing body of the reservation or communities on which the Indian reservation roads and bridges are located.

F. Surface Types: For the purpose of maintenance the general basic surface types are defined as:

(1) Paved Surface. All types of bituminous paving, high penetration asphalt paving, and Portland cement concrete paving.

(2) Gravel Surface. All aggregate-surfaced roads, using crushed, screened or pit-run materials which have a minimum depth of 2" and which are also graded and adequately drained. This includes roads with aggregate base or sub-base which are under staged construction and which will remain at this stage for a period of one year or more.

(3) Earth Surface. All roads where the surface consists of the same type of material from which the roadway was formed. These include graded and drained roadways under staged construction which will remain at this stage for a period of more than one year. Also included are roads where the aggregate has been lost. These roads are single or double lane, varying from bulldozed trails to fully constructed roadways where no surface has been added. These roads are not considered to be all-weather roads.

(4) Paths and Walkways. Paved or unpaved surface which is limited to foot travel or 2-wheeled vehicles (e.g., bicycles). These paths or walkways are not included as mileage in the inventory of the BIA Road Maintenance System, but shall be maintained by the Bureau to protect the construction investment, and to provide service to users as requested by tribes.

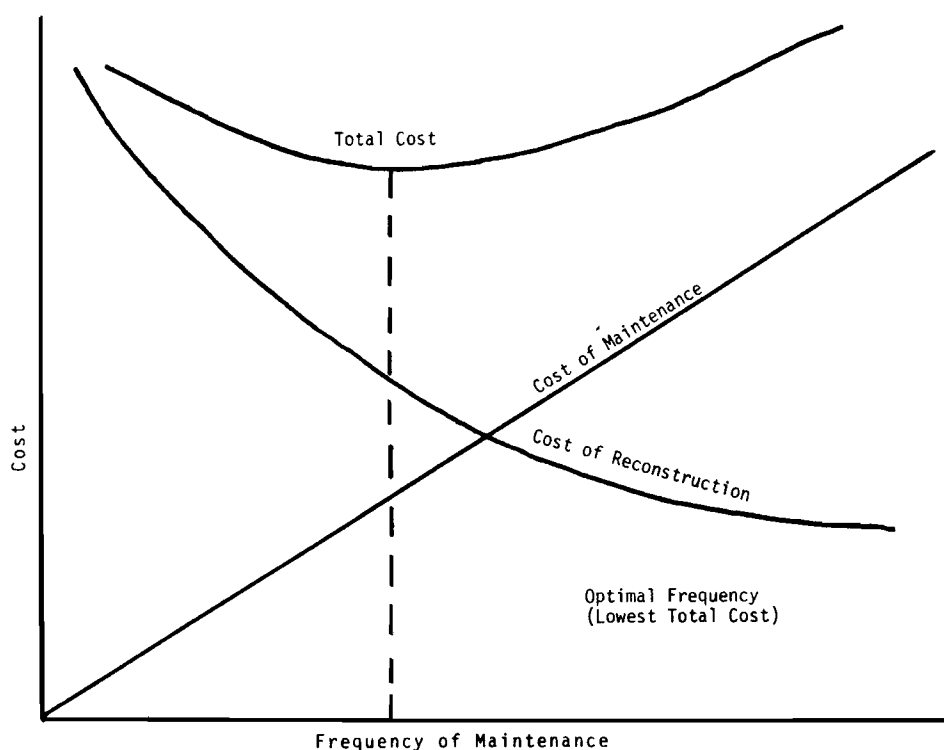
G. Levels of Maintenance:

(1) All roads age and through use deteriorate gradually. Maintenance can slow or impede deterioration. As maintenance frequency increases, deterioration decreases, but the relationship follows the law of diminishing returns. That is, it becomes increasingly expensive to preserve a road for each additional year. On the other hand, cutting back on maintenance reduces maintenance cost but hastens the time at which reconstruction expense must be incurred to restore the deteriorated road to satisfactory condition. Thus, in practicing the art of maintenance, the cost and frequency of reconstruction must be considered in the maintenance plan.

ROAD MAINTENANCE

General

(2) Optimal Level. The optimal level of maintenance is defined as that frequency of maintenance which keeps the road in the desired condition at minimum total cost. A higher frequency than optimal results in a needless increase in maintenance expense, and a lower frequency than optimal results in a preventable increase in reconstruction expense. This is demonstrated graphically in the illustration below. The increasing cost is the cost of maintenance. It is linear and directly proportional to the frequency of maintenance. The total cost of preserving the road in the desired condition is the sum of the maintenance and reconstruction costs, and it is evident in the figure that it has a minimum point which determines the optimal frequency of both maintenance and reconstruction.



(3) Definitions. For the purpose of describing and budgeting the maintenance program, levels of maintenance are defined below in terms of a percentage of the frequency of maintenance activities necessary to maintain each surface type of road at the optimal level:

- (a) Optimum - 90 to 100%
- (b) Limited - 50 to 89%
- (c) Occasional - 10 to 49%
- (d) Little or None - 0 to 9%

(The surface type is governed by the intended use at the time of construction or reconstruction.)

ROAD MAINTENANCE
Program Authority

2. PROGRAM AUTHORITY

2.1 Basic Authority. The basic authority for the road maintenance program is contained in 25 U.S.C. 13 and 25 U.S.C. 318(a). Annual appropriations are provided in the annual Interior and Related Agencies Appropriation Acts.

2.2 Determination of Level of Maintenance. The funds for maintenance, and consequently the level of maintenance, on roads serving each tribe or village are determined by the tribe or village, using the Tribal Priority System in conjunction with procedures issued annually by the Director of Administration.

ROAD MAINTENANCE
Organization and Responsibilities

3. ORGANIZATION AND RESPONSIBILITIES

3.1 General. The Bureau of Indian Affairs is directly responsible for maintenance of roads on the BIA Road Maintenance System.

3.2 Central Office. Central Office staff responsibilities for the management of the BIA Road Maintenance System are assigned to the Division of Transportation, which reports to the Office of Tribal Resources Development.

A. Washington Office. The Chief, Division of Transportation, is responsible for the following functions:

(1) Acts in a staff capacity to the Director, Office of Tribal Resources Development, furnishing advice and formulating policy on matters relating to the BIA Road Maintenance System. This includes the preparation of manuals and handbooks for guidelines and procedures for road maintenance.

(2) Assists in the preparation of budget estimates and budget justifications, and representing the BIA Road Maintenance System to offices in the Bureau, the Department, other agencies, and the public.

(3) Supports the BIA Road Maintenance System in legislative matters and special needs.

B. Division of Transportation--Albuquerque Staff. Located in Albuquerque, New Mexico, under the supervision of the Chief, Branch of Engineering in Washington, the Maintenance Section is responsible for the following:

(1) Assists in the preparation of budget estimates, budget justifications, and representing the BIA Road Maintenance System to offices in the Bureau, the Department, other agencies and the public.

(2) Provides the Area Roads Offices with technical assistance in the field of road maintenance.

(3) Maintains road needs reports by computerized methods as a part of the roads inventory for the BIA Road Maintenance System, and edits, processes and prepares final summary reports by Area, Agency, and tribe.

(4) Provides materials for training of engineers, foremen, leadmen, or potential leaders at the field level in new methods for accomplishing road maintenance.

(5) Develops and provides the data for a Maintenance Management System, with necessary reports for top level management, as well as reports and data for operational management.

ROAD MAINTENANCE
Organization and Responsibilities

(6) Assists in preparation of computerized financial management reports to Central, Area, and Agency or reservation offices for each level of operation or function.

(7) Furnishes reports regarding road maintenance accomplishments for Bureau managers and tribal governing bodies.

3.3 Area Office. The Area Road Engineer is responsible to the Area Director, who has line authority for all road activities within the jurisdiction of the Area Office. At those locations where Indian lands are under the jurisdiction of a Superintendent or Officer-in-Charge, the Area Road Engineer acts in a staff capacity and advises the Area Director. At these locations the functions of the Area Road Engineer are as follows:

A. Implements the policies as set forth in this manual; advising Agency personnel on general planning and programming.

B. Provides technical assistance to Agency personnel in implementing a Maintenance Management System.

(1) Assists Agency staff in developing long-range programs in conjunction with proposed construction planning; also assisting in making recommendations for future design of construction projects to prevent built-in maintenance problems.

(2) Consolidates Agency Road Maintenance reports and forwards them to the Central Office.

(3) Provides coordination among States, counties, tribes, other Federal agencies and other organizations that may be concerned with the Bureau's Road Maintenance System.

At locations where roads on Indian lands are under the direct supervision of the Area Director, the Area Road Engineer and/or maintenance engineer will perform the functions of the road maintenance program supervisor, described in the following section.

3.4 Agency Office. The Superintendent has line authority for road maintenance for an Agency and/or reservation. Functional responsibility is ordinarily delegated to an Agency Road Engineer or Road Maintenance Foreman, who at the discretion of the Superintendent, exercises full authority for the operation of the road maintenance program. Such duties encompass the following:

ROAD MAINTENANCE
Organization and Responsibilities

A. Assists the tribal governing body in preparing long-range plans for the maintenance of roads at Agency and reservation levels and, when requested, serves as technical advisor to the tribes regarding the road maintenance program. Where major maintenance repairs may be required, advising tribes whether to consider temporary repairs, or betterment projects, which must be placed on the construction priority listing.

B. Prepares reports, maintains records and files at local levels to substantiate reports on financial expenditures and work accomplishments. These involve labor, equipment, materials, supplies, and accomplishments.

C. Prepares requisitions and specifications for supplies and materials for use in road maintenance operations. Determines needs and recommends selection of personnel.

D. When directed, acts as local liaison to other Bureau branch offices, tribal governing body, county or State highway maintenance organizations.

E. Assists tribes who wish to take over the Bureau's Road Maintenance System on a partial or total basis to do so.

F. The Agency Road Engineer or Road Maintenance Foreman shall complete training in "Managing Highway Maintenance," as offered by the Central Office staff.

G. When funding for maintenance is available from other sources, i.e., State, county, township, or other Federal agencies, the Superintendent shall not provide road maintenance, unless prior written agreement is made with terms for reimbursement.

ROAD MAINTENANCE
Road System

4. BIA ROAD MAINTENANCE SYSTEM

4.1 Establishment of the BIA Road Maintenance System. The BIA Road Maintenance System is defined as those roads and bridges for which the Bureau has the maintenance responsibility.

4.2 Changes to System. Should the reservation officials, Bureau or tribal, determine that an addition or deletion be made to the BIA Road Maintenance System which changes the BIA responsibility for maintenance, the following procedure shall be used.

A. Prepare and code, according to instruction a Road Needs Data Sheet (Illustration 1). Tabulate inventory data west to east, or south to north; submit the Road Need Data Sheet to the Area Road Engineer, accompanied by a map indicating the location, origin and destination. The data will be transmitted from the Area Office to the Division of Transportation—Albuquerque Staff for adding or deleting from the computerized listing.

Roads eligible to be added to the computerized inventory includes all roads for which the Bureau has or intends to acquire an approved right-of-way. Roads on other systems may be included, if long term maintenance agreements have been approved.

B. Prior to making changes in the BIA Road Maintenance System, the tribes involved shall be consulted regarding the proposed change. All such requests for change shall be subject to the approval of the tribal governing body. It shall be the responsibility of the Bureau Superintendent and his staff to advise the tribes of the consequences involved in making a system change: the time involved for making such a change; construction priority changes; maintenance liability assumption; and other local effects that may occur due to the change.

ROAD MAINTENANCE
Scheduling of Road Maintenance

5. SCHEDULING OF ROAD MAINTENANCE

5.1 General. The major considerations in the BIA Road Maintenance System are long-range goals and short-range scheduling as constrained by budget allocations. The annual scheduling of road maintenance activities should be in accordance with the Road Maintenance Handbook.

5.2 Maintenance Operations. Prior to the start of each fiscal year the maintenance supervisor should physically inspect each road and bridge for maintenance needs during the coming year. He then determines labor, materials and equipment requirements and establishes priority of work, keeping in mind the Bureau's responsibility to provide safe conditions for the user and to protect the construction investment.

A. Major Repairs. The planning for this type of repair is similar to that for a construction project. Plans and specifications should be prepared to fully describe the work to be done.

B. Emergency Road and Bridge Repairs. This type of repair is usually a result of adverse acts of nature, e.g., wind, earthquake, floods, etc., and therefore, cannot be planned or scheduled in advance. The damage may range from minor washouts and slides up to extreme damage to roadbed or its related elements.

(1) Emergency Relief Funds. Should the Superintendent of the Agency or reservation determine that the damage may be in the category of a disaster, the Area Director should be contacted to request that the Federal Highway Administration Division Office's engineers inspect the damage to determine if emergency funding may be applicable. (See Supplement No. 2, Memorandum of Agreement between the Bureau of Indian Affairs and the Federal Highway Administration for the Administration of Emergency Relief available under 23 U.S.C. 124 for Federal Roads Off the Federal-Aid System.)

(2) Immediate Emergency Repairs. In order to prevent any inconvenience to the roadway users, emergency repairs should be undertaken immediately, using the regularly allotted funding. For recording the cost of such repairs, there are two alternatives in using the current "element-component" method in the finance system:

(a) Make the normal element-component entry for regular work: Paved, Gravel or Earth Surfacing code with Surface Structures code as applicable. In addition, a three-digit work order number can be assigned. A different work order number for each project of emergency repair is needed.

ROAD MAINTENANCE
Scheduling of Road Maintenance

(b) The alternate is to use the special recording account element-component 8865 Road Flood Damage Repair. In addition to this element-component, a three-digit work order number is needed for each different project of emergency repairs. NOTE: 8865 is not a funded account separate from 3300 - 35 ROAD MAINTENANCE. Any work charged to 8865 will be reflected as a cost to the regular maintenance allocations until FHWA approved Emergency Relief Funds are allocated to the Central Office and transfer of funds is made to the Agency or reservation.

(c) Snow removal is not considered a justification for emergency relief funding by the FHWA, and all requests for such funds will be denied. The resultant flooding caused by runoff is eligible for special assistance, if damage is severe enough.

(d) It is the responsibility of the Superintendent to close any roadway or structure that may be damaged by adverse acts of nature or overweight vehicles, or found to be in an unsafe condition for travel. Closure shall be total. To protect the Bureau from tort claims resulting from personal injuries or property damage, closed areas shall be signed in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways.

5.3 Bridge Repairs. It is the responsibility of the reservation maintenance staff to inspect each structure on a routine basis at six-month intervals in addition to inspections during and after floods. Repairs shall be made which will not reduce or modify the design loading of the individual structure. Should damage occur due to over-loading, collision, or other reasons, and the Agency staff be in doubt as to the overall condition of structure, such as the ability to carry posted loading, an in-depth inspection analysis similar to that conducted on a two-year basis may be needed. The Area Road Engineer shall be brought in for consultation, evaluation and inspection and shall be responsible for official documentation and inventory recording. It shall be the responsibility of the Area Road Engineer to notify the Division of Transportation Albuquerque Staff of changes in condition of an individual structure, major repairs to an existing structure, or damage which changes the condition as indicated on the last two-year inspection report.

5.4 Traffic Engineering. Under the direction of the Area Road Engineer, who has the responsibility of tabulating, compiling, and preparing traffic flow charts, the Agency or reservation maintenance forces shall place traffic counters and record the count of existing average daily traffic at designated locations.

5.5 Traffic Control. The Agency shall be responsible for maintaining a sufficient supply of signs for replacement of stop signs, warning signs, delineators, posts and other signs as required in accordance with standards set forth in the Manual on Uniform Traffic Control Devices. Installation and replacement of the necessary signing shall be the responsibility of the Agency maintenance forces as a routine of the work program.

ROAD MAINTENANCE
Development of Program

6. DEVELOPMENT OF PROGRAM

6.1 General. The Bureau of Indian Affairs is responsible for keeping the tribes informed of the BIA Road Maintenance System. Accordingly, tribes are encouraged to establish Reservation Road Committees to participate in the planning and evaluation of maintenance on the BIA Road Maintenance System. The estimated funding for the Agency's Road Maintenance System shall be the amount determined by tribal priority system procedures. Guidelines for advising tribes on desirable levels of maintenance are contained in Supplement No. 1.

6.2 Estimate of Future Funding Levels. Road maintenance funding levels shall be estimated for the budget year and the budget year +1. The tribal governing bodies must be informed by the Agency staff of all considerations for operation of the Bureau's Road Maintenance System.

6.3 Road Maintenance Priority. The Superintendent and tribal governing body shall establish road maintenance priorities so that the highest service levels can be provided with the staffing and funding available. Funds may not be sufficient for optimal maintenance on all routes listed and inventoried on the BIA Road Maintenance System; trade-offs must be considered.

6.4 Public and Government Housing Streets. If the streets within tribal developments were inventoried as a part of the BIA Road Maintenance System, it is then the Bureau's responsibility to maintain these streets. This work shall include repair of the street surface, repair of curbing, cleaning drop inlets, repair of drainage, sweeping streets—all repairs necessary to keep the streets in their intended use. All street repair work shall be confined to the area from curb to curb. It is not the responsibility of the road maintenance program to construct sidewalks or make alterations or additions omitted during construction.

6.5 Private Roads. Roads serving individual homes, commercial services, private sectarian schools, or any other similar non-public roads, are not eligible for maintenance under this program, except for emergencies that endanger life or property as determined by the Bureau officer-in-charge.

ROAD MAINTENANCE
Safety

7. SAFETY

7.1 General. It shall be the responsibility of the Superintendent and all personnel engaged in the BIA Road Maintenance System to take every precaution possible to protect the roadway user, and to provide safe working conditions for personnel engaged in road maintenance.

7.2 Highway Safety. As a function to be performed during the routine maintenance of reservation roads, all obstacles within the right-of-way that may be a hazard to the roadway users shall be removed. This includes such items as trees, posts, brush, trash, dead animals, unauthorized signing, guy wires, and other hazardous conditions.

A. Signing. In accordance with the Manual on Uniform Traffic Control Devices, signs shall be erected to provide information warning traffic of hazardous areas, e.g., slides, rock fall areas, dip sections, stock crossings, repairs and such situations.

B. Speed Limits. Routes shall be posted at no higher than design speed limits, with maximum in accordance with State or tribal laws.

7.3 Occupational Safety and Health Act. Federal departments and agencies are held responsible for the safety requirements of Executive Orders issued pursuant to the Occupational Safety and Health Act (OSHA). Federal activities are not subject to monetary penalties, but the supervisor and employee may be subject to suspension, or the operation may be shut down by Department of Labor's OSHA inspectors for noncompliance.

7.4 Route Markers. The use of Bureau Road Maintenance funds is authorized for the installation of standard route markers on the B.I.A. Road Maintenance System. The route markers shall be 18" x 24" in size and shall be of the design shown on Illustration 2. The marker shall comply with the general requirements of the Manual on Uniform Traffic Control Devices.

ROAD MAINTENANCE
Reporting

8. REPORTING

8.1 General. Each Agency/reservation, or Agency with multiple reservations, shall prepare a long-range road maintenance program. This program is prepared by direct consultation with tribal governing bodies and/or road committees in accordance with self-determination policy. In preparing a long-range Road Maintenance Program, consideration shall be given to:

- A. Budgeting limitations,
- B. Work scheduling to be done,
- C. Staffing, both permanent and temporary employees,
- D. Materials and supplies required, and
- E. The equipment necessary to accomplish the program.

8.2 Annual Program Report. After the Advice of Allotment for the Activity has been received, the Program Supervisor shall prepare for the BIA Road Maintenance System the Work Program Authorization, Form 5-5801 (Illustration 3) and Management Estimate, Form 5-5804 (Illustration 4), with the distribution by element-components, and object class for the fiscal year. A copy of each report shall be sent to the Area Road Engineer for summarization by Area. The distribution of reports is set forth in the instructions for individual forms. (See Supplement 1.)

8.3 Long-Range Program Reports. Each year, each Agency will submit a tentative program for the Budget Year +1 based upon the tribal priority system for Planning, Programming and Estimating (PPE). At the time of the PPE submittal, each Agency shall submit Reservation and Agency Work Program Authorization reports, Form 5-5801, and Management Estimate reports, Form 5-5804. Transmittals shall be made to the Area Road Engineer for summarization of all agency and reservation reports and further distribution.

8.4 Area Summary Report. The Area Road Engineer shall complete Area Summary Report 58-02 (Form 5-5802, Illustration 5), for long-range and current year programs, which will provide the Area summary of Form 5-5801 and Form 5-5804 as received from each Agency and reservation. The completed Form 5-5802, with copies of the Agency input forms shall be submitted to the Division of Transportation—Albuquerque Staff, which shall be responsible for preparing a national summary on Form 5-5802. The summary will be transmitted to the Chief, Division of Transportation.

ROAD MAINTENANCE
Reporting

8.5 Work Accomplishment Report. Each agency and/or reservation currently reports to PPE the fiscal year work accomplishments at the levels of maintenance described in 58 BIAM and PPE Data System Output Listing under Element 35. Each agency and/or reservation shall complete the Work Accomplishment Report, Form 5-5803 (Illustration 6). This report shall be completed by the Agency and/or reservation, with copies transmitted to Area Road Engineer. Through the use of this report a "level of maintenance" shall be established for Area and National levels. The table printed on back of Form 5-5802 may be used as a guide in determining the level of maintenance.

58 BIAM
Illustration 1

* DENOTES NOT APPLICABLE TO BRIDGE SECTIONS INVENTORIED BY

U.S. DEPARTMENT OF THE INTERIOR - BUREAU OF INDIAN AFFAIRS - DIVISION OF TRANSPORTATION - INDIAN ROAD REPOS DATA

IDENTIFICATION		TRAFFIC		SECTION		CONDITION		EST. COST FOR IMPROVEMENT		DATE	
1	2	3	4	5	6	7	8	9	10	11	12
AREA	AGENCY	RESERVATION	ROUTE OR BRIDGE NUMBER	SECTION NUMBER	CLASS	LENGTH OF ROAD (MILES)	LENGTH OF BRIDGE (L.F.)	COUNTY	CONGRESSIONAL DISTRICT	STATE	TERMINAL REASON
											ADT YEAR *
											ADT (EXISTING) *
											ADT (YR. 1990) *
											SHOULDER WIDTH *
											SHOULDER TYPE *
											SURFACE WIDTH *
											SURFACE TYPE *
											ROADWAY WIDTH *
											R/W WIDTH *
											MAXIMUM GRADE *
											P.S.D. ALLOWABLE *
											NO. CURVES > MAX. ALLOWABLE *
											NO. OF STOPPING RESTRICTIONS *
											SAFETY STUDY *
											FOUNDATION *
											WEARING SURFACE *
											DRAINAGE *
											SHOULDER *
											NO. R.R. X-INGS *
											TYPE R.R. X-INGS *
											FUTURE SURF. TYPE *
											RIGHT OF WAY *
											INCIDENTAL CONSTRUCTION *
											GRADE & DRAIN *
											GRAVEL SURFACING *
											BITUMINOUS SURFACING *
											BRIDGES *
											TERRAIN *
											ADEQUACY DESIGN STANDARD *
											Snow & Ice Control
											Maint. System
											Const. System

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- DISTRIBUTION:
- 1 - AGENCY ROADS
 - 1 - SUPERINTENDENT
 - 1 - AREA ROADS
 - 1 - C.C.—ALBUQUERQUE
 - 1 - AREA FINANCE
 - 1 - AREA BUDGET

BUREAU OF INDIAN AFFAIRS
TRIBAL RESOURCES DEVELOPMENT
DIVISION OF TRANSPORTATION
ROAD MAINTENANCE

WORK PROGRAM AUTHORIZATION

FISCAL YEAR 19__

AREA _____ AGENCY _____ RESERVATION _____

AREA-AGENCY-RESERVATION CODE _____ ACTIVITY 3300—ELEMENT 35 ROAD MAINTENANCE

3550 EARTH SURFACE _____ MILES

- 3551 Earth - Surface and Shoulders..... \$ _____
- 3552 Earth - Roadside..... \$ _____
- 3553 Earth - Drainage..... \$ _____
- 3554 Earth - Traffic Control..... \$ _____
- 3555 Earth - Structures..... \$ _____

EARTH SURFACE SUB-TOTAL \$ _____

3560 GRAVEL SURFACE _____ MILES

- 3561 Gravel - Surface and Shoulders..... \$ _____
- 3562 Gravel - Roadside..... \$ _____
- 3563 Gravel - Drainage..... \$ _____
- 3564 Gravel - Traffic Control..... \$ _____
- 3565 Gravel - Structures..... \$ _____

GRAVEL SURFACE SUB-TOTAL \$ _____

3570 PAVED SURFACE _____ MILES

- 3571 Paved - Surface and Shoulders..... \$ _____
- 3572 Paved - Roadside..... \$ _____
- 3573 Paved - Drainage..... \$ _____
- 3574 Paved - Traffic Control..... \$ _____
- 3575 Paved - Structures..... \$ _____

PAVED SURFACE SUB-TOTAL \$ _____

3580 PATHS AND WALKWAYS _____ MILES..... \$ _____

3582 SNOW AND ICE REMOVAL _____ MILES..... \$ _____

3590 GENERAL OPERATIONS..... \$ _____

3592 CONTRACT MONITORING..... \$ _____

3595 FORMAL STAFF TRAINING..... \$ _____

TOTAL PROGRAM AUTHORIZATION..... \$ _____

QUARTERLY APPROPRIATION

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
\$ _____	\$ _____	\$ _____	\$ _____

WORK PROGRAM AUTHORIZATION PREPARED BY: _____ DATE _____

PROGRAM APPROVAL:

TRIBAL REPRESENTATIVE Date SUPERINTENDENT Date APEA PCAC ENGINEER Date

PROGRAM ACKNOWLEDGED BY:

AREA FINANCE OFFICER Date APEA BUDGET OFFICER Date

INSTRUCTIONS FOR COMPLETING FORM 5-5801
ROAD MAINTENANCE

1. Form may be typewritten or completed in black ink. Black ink reproduces much better than other colors.
2. FISCAL YEAR 19____. Enter 2 digits to complete the fiscal year for which the program is being prepared.
3. AREA: Enter Area Name.
4. AGENCY: Enter Agency Name.
5. RESERVATION: At the option of the Area Roads Engineer, with approval of the Area Director, a work program may be requested for reservations when Agency has multiple reservations, or specific reservations as necessary for record purposes. Enter reservation name.
6. AREA-AGENCY-RESERVATION CODE: Enter single Alpha Area Code--2 digit numeric code for Agency, 3 digit numeric code for reservation when applicable as per instruction 4 above. The numeric 3 digit code for reservations are those used in the Road Inventory and Needs Study.
7. ELEMENT-COMPONENT: 3550 EARTH SURFACE _____ MILES
 3560 GRAVEL SURFACE _____ MILES
 3570 PAVED SURFACE _____ MILES
These are not programmable codes and therefore no entry is made except in sub-total program amount for convenience of totaling entire program. Enter the total system miles by surface type in the space provided--reservation road system mileage for which BIA has maintenance responsibility, not FAI necessarily.
8. Under 3550, 3560, and 3570 the components for each surface type:
 1 - Surface and Shoulders
 2 - Roadside
 3 - Drainage
 4 - Traffic Control
 5 - Structures
 -----an estimated amount shall be entered for each. Repairs and maintenance shall include all cost as described under each element and component in 47 BIAM.
9. 3580 PATHS AND WALKWAYS: Enter all mileage of this feature as used by pedestrian traffic or 2-wheeled vehicles by Agency and/or Reservation; enter estimated amount planned for expenditure. If zero miles, zero program enter same.
10. 3582 SNOW AND ICE REMOVAL _____ MILES: Enter miles of system regardless of surface type, for which there is known to be a normal demand for snow removal, ice control, sanding, etc. This would not necessarily be the total system miles of the reservation road system. Enter the estimated amount of cost for normal anticipated snow and ice control.
11. 3590 GENERAL OPERATIONS: Enter estimated cost in accordance to descriptive information in 42 BIAM.
12. 3592 CONTRACT MONITORING: Enter estimated amount for personal service, vehicle rental, travel, and other miscellaneous cost that would be incurred for monitoring maintenance contracts under Activity 3300--Element 35, such as supply contracts, rehabilitation contracts, betterment projects, County or State contracts, and Buy-Indian maintenance contracts.
13. 3595 FORMAL STAFF TRAINING: Enter estimated cost involved for training of maintenance personnel, especially including training in "Managing Highway Maintenance," the Bureau's program for Maintenance Supervisors.
14. QUARTERLY APPORTIONMENT: Enter in the appropriate space the estimated total expenditures for each quarter of the fiscal year. 1st Quarter--October, November and December; 2nd Quarter--January, February and March; 3th Quarter--April, May and June; 4th Quarter--July, August and September.
15. WORK PROGRAM AUTHORIZATION PREPARED BY: Enter signature of Area and/or Agency and/or Reservation staff member that actually computed amounts for work program. Enter date report completed.
16. PROGRAM APPROVAL: Signature of individual authorized to sign for tribal governing body, with date of signature. The Agency Superintendent shall sign and date as approving Bureau official. The Superintendent shall retain 2 copies, one for program managing personnel, one for Agency files; then transmit one copy to the Area Roads Engineer for approval and further distribution of copies to Area Finance, Area Budget, and Central Office--Albuquerque Staff, Road Maintenance Section.

This work program authorization shall be submitted to Area Roads Engineer by August 15th prior to the beginning of the fiscal year, with tentative program amounts as set forth by PPE and so state "PPE" in space provided before the _____ TOTAL PROGRAM AUTHORIZATION--\$. When the final appropriation is actually received by advice of allotment the Agency and/or Reservation shall submit a corrected copy to the Area Roads Engineer for further distribution with the word ALLOTTED in place of PPE.

Form 5-5804
 Rev. Oct. 1974

DIVISION OF TRANSPORTATION
 ROAD MAINTENANCE
 MANAGEMENT ESTIMATE

REPORT 58-04
 Sheet 1 of 2

AREA _____ AGENCY _____
 FISCAL YEAR 19 ____ ESTIMATE DATED _____

LABOR Permanent Position Titles	Hourly Pay	Annual Salary	Employee Benefit	100% Employee Salary Cost	Percent Paid fr. Maintenance	Program Sal. Cost
NUMBER OF POSITIONS _____				SUB-TOTAL SALARY (Permanent)..... \$ _____		
Temporary Position Titles	Hourly Pay	Annual Salary	Employee Benefit	100% Employee Salary Cost	Percent Paid fr. Maintenance	Program Sal. Cost
NUMBER OF POSITIONS _____				SUB-TOTAL SALARY (Temporary)..... \$ _____		
Percent of Total Program _____ %				TOTAL LABOR COST ESTIMATE FOR CURRENT PROGRAM.. \$ _____		
MATERIALS AND SUPPLIES						
Aggregates _____	C.Y. or _____	Tons.....	\$ _____			
Asphalts _____	Gal. or _____	Tons.....	\$ _____			
Culvert Pipe _____	Lin. Ft.....	\$ _____				
Concrete _____	C.Y.....	\$ _____				
Steel _____	Pounds.....	\$ _____				
Office Supplies.....	\$ _____					
Hand Tools and Shop and Misc. Shop and Power Tools.....	\$ _____					
Miscellaneous Other Supplies.....	\$ _____					
Percent of Total Program _____ %				TOTAL MATERIAL AND SUPPLY COST FOR PROGRAM....		\$ _____
EQUIPMENT OPERATIONS						
Fuel—Gasoline _____	Gal. - Diesel _____	Gal.....	\$ _____			
Oil and Lubricants.....	\$ _____					
Tires.....	\$ _____					
Miscellaneous Small Repair Parts.....	\$ _____					
Other.....	\$ _____					
Percent of Total Program _____ %				TOTAL EQUIPMENT OPERATIONS COST FOR PROGRAM....		\$ _____
SUB-TOTAL PROGRAM....						\$ _____

INSTRUCTIONS FOR COMPLETING FORM 5-5804

MANAGEMENT ESTIMATE -- ROAD MAINTENANCE

1. Form may be typed or completed in ink; black ink is preferred for copy purposes.
2. AREA _____ AGENCY _____. Enter Area name and Agency name.
3. FISCAL YEAR 19____ ESTIMATE DATED _____. Enter 2 digits for Fiscal Year estimate is made, and date that the estimate is completed.
4. LABOR:
 - a. Permanent Position Titles: Enter name of position and number of positions. Example: 1 - Foreman; 2 - Operator, General; 2 - Truck Drivers; all of which have the same hourly rate of pay by position. (See f. below.) List positions on separate sheet, if additional space is required, listing columns as instructed a. through g.
 - b. Hourly pay: Enter the salary per hour by position by step in WB, WL, or WS rating. Example: 1 - Truck Driver \$3.75; 1 - Truck Driver \$3.92.
 - c. Annual Salary: Obtained by multiplying hourly rate by 2080 (hours per year) times number of employees in each position.
 - d. Employee Benefits: For estimate purposes permanent employee benefits is about 10% of annual salary. Temporary employees benefits is about 8% of annual salary. This amount is the value to be entered in this column times the number of positions.
 - e. 100% Employee Salary Cost: Enter the sum of Annual Salary and Employee Benefits. This is the amount charged to Agency Program if the employee is working 100% on road maintenance.
 - f. Percent paid from Maintenance: Enter the percent anticipated that each position or positions will be paid from maintenance funds. If 2 identical positions are to be paid at a different rate, each position should be listed separately.
 - g. Program Salary Cost: Obtained by multiplying the 100% Employee Salary Cost by the percent (decimal) each type of position is paid from Maintenance.
 - h. SUB-TOTAL SALARY (Permanent): Shall be the sum of all position salary computations listed under Program Salary Cost column.
 - i. Temporary Position Titles: Enter all anticipated temporary employees, same as under instructions a. through g. above, with special notice to instruction d.

- j. SUB-TOTAL SALARY (Temporary): Is the sum of salary computations for all temporary positions listed under Program Salary Cost column. For ease in computing temporary positions, the percentage of the year by number of pay period that a temporary employee may be paid is as follows:

1 = 4%	5 = 19%	9 = 35%	13 = 50%	17 = 65%	21 = 81%	25 = 96%
2 = 7%	6 = 23%	10 = 38%	14 = 54%	18 = 69%	22 = 85%	26 = 100%
3 = 12%	7 = 27%	11 = 42%	15 = 58%	19 = 73%	23 = 88 %	
4 = 15%	8 = 31%	12 = 46%	16 = 62%	20 = 77%	24 = 92%	

5. TOTAL LABOR COST ESTIMATE FOR CURRENT PROGRAM: Enter the sum of Sub-total Salary (Permanent) plus Sub-total Salary (Temporary). Compute the percent of salaries out of total program by dividing TOTAL LABOR COST by TOTAL ROAD MAINTENANCE PROGRAM.

Example: $\frac{\$257,250}{\$525,000} = 0.49 = 49\%$

6. MATERIALS AND SUPPLIES: Enter in the appropriate blanks the quantity of material that is anticipated to be purchased by Road Maintenance Funding and the estimated cost. Aggregates shall include pit-run (royalty), crushed gravel or screened gravel (contract) or bituminous mix aggregates or chips that may be needed. Asphalts shall be that which would be purchased for storage or direct application. Culvert pipe shall be that which is for installation during the fiscal year or reserve that may be for emergency use. Concrete would only be that which may be purchased for direct placement from a ready-mix plant; dry cement and aggregates for mixing by force account would be listed under Aggregates or other Misc. Supplies. Steel shall include all steel, sheet steel, re-bar, angles, etc. Office Supplies, Hand Tools are self-explanatory and generally would be estimated from prior year purchases.
7. TOTAL MATERIAL AND SUPPLY COST FOR PROGRAM: Enter the sum of all cost estimated as described in 6 above. Percent of total program is this sum divided by total program amount; see example given in 5.
8. EQUIPMENT OPERATIONS: Quantities and amounts to be entered is self-explanatory. Quantities may be based on prior year amounts, but consideration must be given to possible price changes.
9. TOTAL EQUIPMENT COST FOR PROGRAM: Enter the sum of the cost for all items described in 8 above. The percent of the total program is this sum divided by total program amount; see example given in 5.
10. SUB-TOTAL PROGRAM: Enter the sum of the TOTAL LABOR COST ESTIMATE plus TOTAL MATERIAL AND SUPPLY COST plus TOTAL EQUIPMENT OPERATION COST.

Form 5-5802
 Jan. 1975

- PPE TENTATIVE PROGRAM
 ALLOTTED PROGRAM

BUREAU OF INDIAN AFFAIRS
 TRIBAL RESOURCES DEVELOPMENT
 DIVISION OF TRANSPORTATION

AREA SUMMARY

Road Maintenance

AREA _____ Fiscal Year 19 _____

MANAGEMENT ESTIMATE—AREA SUMMARY	WORK PROGRAM AUTHORIZATION—AREA SUMMARY
<p>LABOR: Salary (Permanent) - No.Pos. _____ Sub-Totals \$ _____ Salary (Temporary) - No.Pos. _____ Sub-Totals \$ _____ Total Number of Positions _____ % Program.... \$ _____ Average Annual Salary \$ _____ Incl. Empl. Benefits</p> <p>MATERIALS AND SUPPLIES: Total..... % Program.....\$ _____</p> <p>EQUIPMENT OPERATION: Total..... % Program.....\$ _____</p> <p>GSA VEHICLES RENTALS: Total..... % Program.....\$ _____</p> <p>TRAVEL: Total..... % Program.....\$ _____</p> <p>TRANSPORTATION OF THINGS: Total..... % Program.....\$ _____</p> <p>COMMUNICATIONS: Total..... % Program.....\$ _____</p> <p>CONTRACTS: Total..... % Program.....\$ _____</p> <p>AREA TOTALS 100% PROGRAM TOTAL.....\$ _____</p>	<p>3550 Earth Surface _____ Miles 51 Surface and Shoulders....\$ _____ 52 Roadside.....\$ _____ 53 Drainage.....\$ _____ 54 Traffic Control.....\$ _____ 55 Structures.....\$ _____ Sub-Total Earth Surface..... \$ _____ Cost/Mile Earth \$ _____</p> <p>3560 Gravel Surface _____ Miles 61 Surface and Shoulders....\$ _____ 62 Roadside.....\$ _____ 63 Drainage.....\$ _____ 64 Traffic Control.....\$ _____ 65 Structures.....\$ _____ Sub-Total Gravel Surface..... \$ _____ Cost/Mile Gravel \$ _____</p> <p>3570 Paved Surface _____ Miles 71 Surface and Shoulders....\$ _____ 72 Roadside.....\$ _____ 73 Drainage.....\$ _____ 74 Traffic Control.....\$ _____ 75 Structures.....\$ _____ Sub-Total Paved Surface..... \$ _____ Cost/Mile Paved \$ _____</p> <p>3580 Paths and Walkways _____ Miles \$ _____ Cost/Mile.....\$ _____</p> <p>3582 Snow and Ice Removal _____ Miles \$ _____ Cost/Mile.....\$ _____</p> <p>3590 General-Operations..... \$ _____ 3592 Contract Monitoring..... \$ _____ 3595 Formal Staff Training..... \$ _____</p> <p>AREA TOTAL PROGRAM AUTHORIZATION... \$ _____</p>
<p>AREA SUMMARY MANAGEMENT AND PROGRAM REPORT PREPARED BY: _____ Date _____</p>	

INSTRUCTIONS FOR PREPARING AREA SUMMARY REPORT
MANAGEMENT ESTIMATE AND WORK PROGRAM AUTHORIZATION

1. Report may be typed or completed with BLACK ink.
2. AREA _____ FISCAL YEAR 19 _____. Enter Area Name and 2 digits for year.
3. Indicate in appropriate block by check mark whether summary report is PPE tentative or Allotted program.
4. MANAGEMENT ESTIMATE: Enter in spaces provided the total of each item for all agencies as stated on each Agency report on Form 5-5712 that is submitted to the Area Roads Office from the agencies. Compute percent (%) of total Area program for each title - LABOR, MATERIALS AND SUPPLIES, EQUIPMENT OPERATION, etc., based on TOTAL PROGRAM FOR AREA which is sum of all Agency and Area program.
5. WORK PROGRAM AUTHORIZATION: Enter in spaces provided Total for all agencies as stated on each Form 5-5713 submitted to Area Office. Compute Average Cost/Mile by each surface type, summarizing all elements by surface type, then divided by miles as summarized from Agency reports.
6. The Area Roads Office staff member who prepares this summary report signs and dates the report in the space provided.
7. Submit one copy of report to Division of Transportation--Albuquerque Staff with one copy of each Agency report on Forms 5-5712 and 5-5713 attached.

ROADS MAINTENANCE
WORK ACCOMPLISHMENT AND LEVEL OF MAINTENANCE REPORT

AREA _____ AGENCY _____ RESERVATION _____
APRIL 30, 19 _____

	RESERVATION ROAD SYSTEM MILES	RESERVATION ROAD MILES ACTUALLY MAINTAINED	REPORT YEAR OBLIGATION ENDING APRIL 30	% OF TOTAL	OTHER COSTS TOTAL BELOW \$ _____	TOTAL OBLIGATION INCLUDING OTHER COSTS	COST PER MILE	LEVEL OF MAINT.
3570 PAVED								
3560 GRAVEL								
3550 EARTH								
TOTAL	MI.	MI.	\$	100%				

OTHER COSTS:

	REPORT YEAR OBL APRIL 30	Cost/Mile \$
3580 Paths & Walkways.....Miles _____ Maintained.....	\$ _____	\$ _____
3581 Undistributed Equipment Cost.....	\$ _____	
3582 Snow and Ice Removal.....Miles _____ Maintained.....	\$ _____	\$ _____
3589 Unclassified Work for Others.....	\$ _____	
3590 General Operations.....	\$ _____	
3591 Indian Policy Groups.....	\$ _____	
3592 Contract Monitoring.....	\$ _____	
3593 Safety Conversions.....	\$ _____	
3594 Tribal Enterprises.....	\$ _____	
3595 Formal Staff Training.....	\$ _____	
TOTAL.....	\$ _____	

INSTRUCTIONS FOR COMPLETING
 WORK ACCOMPLISHMENT AND LEVEL OF MAINTENANCE REPORT

1. RESERVATION ROAD SYSTEM MILES. Shall be the Miles by surface type as inventoried in the most recent inventory or update of same.
2. RESERVATION ROAD MILES ACTUALLY MAINTAINED. This shall be the total miles by surface type upon which work was actually done, but not necessarily the total miles indicated on the reservation road system inventory. All miles shall be the total by routes regardless of the frequency by which maintenance may have been done.
3. REPORTING YEAR ENDING APRIL 30,.... Shall be the expenditure totals by Paved, Gravel and Earth Surfacing totals and the amounts as listed below for 3580 through 3595 from the Finance Report "Status of Obligations" dated April 30. Enter the amounts for Paved, Gravel and Earth Surface components for each surface type, and total. Total the amounts for each component entered in the lower portion of the form, including miles for Paths and Walkways and computed cost per mile, and miles actually worked on for Snow and Ice Removal with computed cost per mile. The total for OTHER COSTS shall be entered at the head of the chart in the space provided--OTHER COSTS TOTAL BELOW \$_____.
4. % OF TOTAL. Compute the percentage of expenditures for each surface type based on the total of expenditures by surface type, entering percent, round up or down to obtain total of 100%.
5. OTHER COSTS TOTAL BELOW \$_____. This shall be the pro-rata amount of the total expended for Element 35 components 80 through 95 as listed and totaled in lower section as OTHER COSTS.
6. TOTAL OBLIGATION INCLUDING OTHER COSTS. This is the sum of REPORT'S YEAR OBL for April 30, plus pro-rata of OTHER COSTS by surface type.
7. COST PER MILE. This is the computation arrived at by dividing TOTAL OBLIGATIONS INCLUDING OTHER COSTS, divided by RESERVATION MILES ACTUALLY MAINTAINED.
8. LEVEL OF MAINTENANCE. This is obtained by comparing the COST PER MILE by surface type with the maximum and minimum range of expenditure with the proper heading as indicated in the following chart.

SURFACE TYPES	DOLLARS PER MILE	LEVEL OF MAINTENANCE				ROADS INVENTORY	
		OPTIMUM/ADEQUATE	LIMITED	OCCASIONAL	LITTLE OR NONE	Surface Description	Inventory Code
PAVED	Maximum	2400	1574	869	172	CONCRETE	8
	Average	1750	1225	525	88	BITUMINOUS MAT 2"+	6
	Minimum	1575	870	173	0	BITUMINOUS MAT 2"-	5
GRAVEL	Maximum	1800	1034	571	112	BIT. PENETRATION	4
	Average	1150	805	345	58	STABILIZED	7
	Minimum	1035	572	113	0	GRAVEL SURFACE	3
EARTH	Maximum	1200	584	322	63	GRADED & DRAINED	2
	Average	650	455	195	33	UNIMPROVED	1
	Minimum	585	323	64	0		
PATHWAYS & WALKWAYS	Maximum	100	44	24	4		
	Average	50	35	15	3		
	Minimum	45	25	5	0		