

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
ADMINISTRATIVE PROCEDURES
VOLUME I, CHAPTER 6

SUBJECT: GENERAL
CHAPTER TITLE: SECURITY FOR MAINFRAME COMPUTER MAINTENANCE
TRANSACTIONS

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I. **INTRODUCTION**

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This procedure provides an explanation of the built-in safeguards, controls and system security for the DOT Remote Entry Management Informational System (REMIS). REMIS is a part of the mainframe computer system. The WV Department of Administration manages and operates the mainframe computer system.

A. **WEST VIRGINIA COMPUTER CRIME AND ABUSE ACT**

The Legislature of West Virginia amended Chapter Sixty-One of the State Code by adding an article "...relating to computer crimes; defining offenses generally; penalties; venue; civil cause of action established; and general provisions." This legislation, passed on April 8, 1989, is referred to as the "West Virginia Computer Crime and Abuse Act." (WV Code §61-3C-1)

The Legislature found that "... because of the pervasiveness of computers in today's society, opportunities are great for computer related crimes through introduction of false records into a computer or computer system, the unauthorized use of computers and computer facilities, the alteration and destruction of computers, computer programs and computer data, and the theft of computer resources, computer software and computer data....it is appropriate and desirable that a supplemental and additional statute be provided which specifically proscribes various forms of computer crime and abuse and provides criminal penalties and civil remedies...." (WV Code §61-3C-2)

The maximum criminal penalty assessed upon conviction under the West Virginia Computer Crime and Abuse Act is a fine of "...not more than ten thousand dollars or imprisoned in the penitentiary for not more than ten years, or both." (WV Code §61-3C-4) In addition, "any person whose property or person is injured by reason of a violation of any provision of this article may sue therefor in circuit court and may be entitled to recover for each violation:

1. Compensatory damages;
2. Punitive damages; and
3. Such other relief, including injunctive relief, as the court may deem appropriate."

"Without limiting the generality of the term, 'damages' shall include loss of profit." (WV Code §61-3C-16)

The Legislature, in enacting the Computer Crime and Abuse Act, recognized "...the need to protect the rights of owners and legitimate users of computers and computer systems, as well as the privacy interest of the general public, from those who abuse computers and computer systems." (WV Code §61-3C-2)

The West Virginia Department of Transportation policy regarding computer related crimes provides full support of enacted legislation and is aggressive in attempting to maintain in-house compliance not only with the West Virginia Computer Crime and Abuse Act, but also with all related federal statutes.

B. WEST VIRGINIA DEPARTMENT OF ADMINISTRATION

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The West Virginia Department of Administration and, more specifically, Information Services and Communications Division (IS & C), in order to comply with the Computer Crime and Abuse Act, requires that all users of the mainframe computer resources be identified by an individual Logon Identification. These Logon I.D.s are controlled and issued by IS & C through a mainframe application.

Employees of the Department of Transportation must make application to

Information Services Division for this Logon I.D. Information Services Division functions as the coordinating office for the Department of Transportation and all related correspondence must be directed to this Division.

C. ACCESS CONTROL

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In order to gain access to REMIS and its various transactions, including the Inquiry System (HWIQ), the Department of Transportation employee must first access the mainframe through the use of the IS & C-issued Logon I.D.

Once access to the mainframe has been accomplished and the individual is into REMIS, additional internal system security controls take over. These internal controls permit the employee to perform only those functions that have been designated and approved by the agency/organization manager (District Engineer, Division Director, etc.).

II. INTERNAL CONTROLS AND ACCESS TO MAINTENANCE TRANSACTIONS

Tables A and B, at the back of this Chapter list all of the REMIS functions and their respective narrative descriptions as well as any applicable restrictions. These REMIS access levels make up the Department of Transportation's internal control. They permit only those individuals with assigned duties and responsibilities access to the various functions and transactions commensurate with their job requirements.

The REMIS access levels are divided into two groups, called Specialized/Restricted Maintenance Transactions (Table A) and General Maintenance Transactions (Table B).

III. SPECIALIZED/RESTRICTED MAINTENANCE TRANSACTIONS

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The REMIS functions referred to as specialized or restricted are designed for the exclusive use of specific agencies/organizations or managers. These specialized functions permit the designated organizations to perform their responsibilities in maintaining specific computer systems.

For example, Finance Division is responsible for maintaining authorizations; therefore, the "Authorization Maintenance System" is open only to Finance Division to add, change and delete authorization masters for use by all agencies/organizations within the Department of Transportation.

Likewise, all other specialized systems permit the assigned agency/ organization the necessary facilities to exercise their computer system maintenance responsibilities.

- Requests for Employee Logon Number and System Access for Specialized/Restricted Maintenance Transactions

Requests for Specialized/Restricted Maintenance Transactions will be initiated

by the agency/organization manager on a completed Form DOT-357, System Security Request, submitted to Information Services. Table A of this chapter provides a listing and explanation of all of the various Specialized/Restricted Maintenance Transactions. Any request requiring DOT level management approval will be coordinated by Information Services Division on behalf of the requesting individual.

IV. GENERAL MAINTENANCE TRANSACTIONS

This group of REMIS functions/transactions can be described as being related to one of the following three categories:

- Daily Reporting - common functions which occur on a regular basis, i.e., entry of daily work reports, inventory transfers, usages and non-vendor receipts, accounts payable receipts, rolling stock equipment preventive maintenance and meter readings and journal entries;
- Master Maintenance - certain computer master adds and changes performed on an as needed basis, i.e., entry of accounts payable purchase masters, transfer or status change of rolling stock equipment, inventory masters and maintenance management.
- Inquiries - information review capabilities (no changes), i.e., general REMIS information, Dept. of Admin. vendor registration, payroll time sheets and personnel/ payroll inquiry.

A. **REQUESTS FOR EMPLOYEE LOGON NUMBER AND AUTHORIZATION LEVEL FOR GENERAL MAINTENANCE TRANSACTIONS**

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All requests for Employee Logon Numbers and authorization levels for General Maintenance Transactions must be directed to Information Services Division and are initiated by the agency/organization manager. These requests will be submitted on Form DOT-357, System Security Request. Refer to DOT Volume VII for an exhibit of this form and completion instructions.

A System Security Request, Form DOT-357 must be initiated when a new employee's responsibilities requires access to the General Maintenance Transactions, anytime the access level changes for a current employee; or anytime an employee transfers to another Department of Transportation organization.

B. **PROCESSING A "SYSTEM SECURITY REQUEST", FORM DOT-357**

1. Add

When a new employee is hired or when a current employee assumes new responsibilities which require access to REMIS as part of his/her work duties, the agency/organization manager must initiate a request to obtain an Employee Logon Number and establish an authorization level for that employee.

Form DOT-357, System Security Request, must be completed and directed to Information Services Division with an effective date no less than five working days after receipt by Information Services. The DOT-357 may be submitted by interdepartmental mail, fax, or as a file attached to an email. The fax number is 558-0674. All fax submissions must be followed by an interdepartmental mailing of the original, signed DOT-357 for authentication. The email address for these submissions is SecurityRequests@dot.state.wv.us. Email requests will only be accepted when sent by an approved authority: the organization manager (Commissioner, Director or District Engineer) or the organization's Information Security Coordinator. No telephone requests will be accepted. Refer to DOT Volume VII for an exhibit of this form and completion instructions.

- Upon completion, one copy of Form DOT-357 will be retained as a suspense copy by the requestor and the original and one copy will be submitted to Information Services Division for processing.
- Upon receipt by Information Services, the Form DOT-357 will be logged in and reviewed to ensure that proper approvals have been completed and that those transactions noted on the Form DOT-357 are not restricted to only certain employees within DOT. In the event that DOT level approval is required, Information Services will coordinate with the appropriate official.
- Upon receipt of the mainframe Logon Number from IS & C, Information Services Division will then indicate the Logon Number on the Form DOT-357 and enter all the approved maintenance transactions into the DOT internal control system, and return a copy of the Form DOT-357 to the requesting official with the assigned Logon Number. The Form DOT-357 will indicate the initials of the Information Services individual who entered it into the system along with the date entered. The DOT-357 is then logged out of Information Services, and the original of the Form DOT-357 remains on file in Information Services Division.

2. Delete

When an employee's responsibilities no longer require any level of access, the agency/organization manager must initiate a delete request, which is to be processed in the same manner as outlined for an add. This will remove the employee's established Logon and access level. Deletion of a terminated employee's Logon will be handled by Information Services Division and will not require the submission of a request.

- The request must be submitted in an original and one copy. The request must also note the employee's existing Logon. Processing of the Form DOT-357 will require a minimum of two working days from the time of receipt by Information

Services Division.

- Information Services Division's processing for an employee deletion will be completed in the same manner as an addition. Information Services will return a copy of the processed request to the originator showing the deletion has been completed.

3. Change

In the event that a current employee, who has been assigned a mainframe Logon, assumes additional responsibilities or is relieved of certain responsibilities which affect the various access levels to REMIS, the agency/organization manager must submit a request to Information Services Division. When an employee transfers to another Department of Transportation agency/organization, the gaining (new) agency/organization manager must submit a request for change denoting the access level for the employee's new position. Failure to submit this request results in the transferred employee retaining the same access level as with the former organization except that access will now be to the new organization's data.

- General Maintenance Transaction changes will be submitted on a Form DOT-357 in an original and one copy to Information Services Division for processing. The request must show the employee's existing Logon. Processing will require two working days from the time of receipt by Information Services.
- The request will list all of the maintenance transactions that are now to be assigned to the employee. Coordination by Information Services Division will not require submission to IS & C for processing. Changes will be handled within the Department of Transportation. Information Services will return a copy of the processed request to the originator indicating those transactions that the employee is now authorized to conduct.

V. REVIEW AND CONTROL OF EMPLOYEE ACCESS

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System-owning organizations are responsible for reviewing users with access to maintenance functions to ensure that only the appropriate personnel have access. For example, Human Resources Division must review the list of users with personnel maintenance access.

- Information Services Division will provide a weekly report (of users with access to system maintenance) to the organizations that *own* the systems.
- System-owning organization managers will review the report and investigate any questionable access assignments. A Form DOT-357 will be completed and submitted to Information Services Division for any employee with inappropriate access,

requesting that said access be deleted.

Organization managers are responsible for appropriately assigning system maintenance access to employees and will, at least once per month, review all of the assignments for appropriateness.

- Information Services Division will provide organization managers with a listing of system access assignments of their employees through RDS, View Direct on REMIS.
- Organization managers will submit Forms DOT-357 to Information Services Division to correct any inappropriate access assignments found.

TABLE A -- LISTING OF SPECIALIZED/RESTRICTED MAINTENANCE TRANSACTIONS

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<u>SYSTEM IDENTIFICATION</u>	<u>TRANSACTION DESCRIPTION</u>
HW01	Position/Organization Quota - This transaction is used to monitor the number of employees assigned to each organization and is controlled by the Executive Division.
HW02	Personnel Master - This transaction is used to add new employees or change information of existing employees based on approved documents submitted to Human Resources Division. These masters contain information such as: salary/hourly pay rates, tenure, classifications, education, skills, etc., and is limited to Human Resources Division.
HW04	Payroll Master - Allows the Payroll Section of Finance Division to add or change the various employee payroll deductions such as: number of exemptions, insurance codes, credit union, etc. Additionally, this transaction is used to correct employee leave balances. Limited to employees of Finance Division.
HW06	DOT Security System - Used by Systems Services Division to authorize employees to perform various routine REMIS functions.
HW20	Maintenance Management - This transaction provides the capability of changing annual planned accomplishments in addition to modifying basic expense standards. The transaction is limited to Maintenance Division.
HW40	Authorization System - This transaction involves two major processes: 1) Adding or changing authorization masters and, 2) entry of journal vouchers. Other areas of control involve billings and receipts of federal aid masters, as well as other agencies/vendors. This transaction is limited to Finance Division use only.
HW60	Inventory Catalog/Standards - This catalog file contains an entry for every valid P.M.S. and fixed asset classification and is used to validate all new items being added to inventory. Maintenance of this file is limited to Finance Division, Procurement Section.

HW62	Equipment System - A master record is established for each piece of equipment purchased by Transportation. These master records maintain summary information related to both revenue and expense for each E.D. This transaction allows for new master records to be added, as well as changes to existing masters and is limited to Equipment Division.
HW64	Fixed Asset System - Allows for the adding or changing of fixed asset master records (i.e., desks, furniture, file cabinets, etc.) based on documents submitted from all organizations. Since this information seldom changes, this function is limited to Finance Division, Procurement Section.
HW66	Purchase Tracking - Various types of purchase documents require the approval of both DOT and Department of Administration personnel. Therefore, this transaction is used by Finance Division's Procurement Section, since they are responsible for ensuring that all reviews are performed, to log the different steps of the purchasing approval process.
HW72	Accounts Payable - This transaction is used by the Accounts Payable Section of Finance Division to match DOT receipt information with vendor invoices to effect proper payments.
HW80	Bridge System - This transaction is used by bridge engineers to enter structure inventory and appraisal information for DOT bridges.

TABLE B -- LISTING OF GENERAL MAINTENANCE TRANSACTIONS

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<u>CATEGORY</u>	<u>FORM DOT-357 LINE NO.</u>	<u>TRANSACTION DESCRIPTION</u>
DAILY REPORTING		These transactions support the Department of Transportation's normal day-to-day business activities.
	01	Entry of Daily Work Report (Form DOT-12), REMIS Correction & Maintain Employee Phone Numbers - This function permits the daily reporting of labor (payroll distribution records), equipment utilization (equipment rental system records) and inventory usages. Also, the function permits same-day corrections to any errors made during the entry of Form DOT-12 information, as explained in DOT Volume III, Chapter 4. Furthermore, this function permits the user to maintain the office phone numbers of employees to ensure an accurate Phone No. Inquiry on HWIQ. All entries under these functions are limited to the organization only. Only the personnel, equipment and inventory assigned to the user's org. may be reported.
	02	Process Inventory Records & Fixed Assets - These functions allow the user to perform other PMS transactions such as; transfers, PMS and gas and lube inventory usages and non-vendor receipts. Fixed Asset inventory transactions permit the transferring or retagging of items such as; desks,

		chairs, engineering equipment, etc. These transactions are limited to inventory items assigned to the user's organization only.
	03	Enter Receipts for Goods and Services & Visa Reconciliation - Permits the user to enter receipts of all types of goods and services, thereby establishing a payment liability for Transportation. Subsequent processing of an invoice and proper accompanying documents results in the payment of vendors. Also, this function facilitates Visa Reconciliation (State Purchasing Card Program), as explained in DOT Volume VI, Chapter 5.
	04	Record Completed Equipment PM & Meter Readings - These functions permit the user to record the date that each preventive maintenance work order was performed on equipment (typically vehicles) assigned to the user's org. Also, the user is able to enter the weekly meter readings (hours or miles) for the equipment assigned to the org.
	05	Journal Entry - This function permits the user to perform transfers of costs in certain areas. These transfers are designed with fixed (computer programmed) accounting to be credited, allowing the user to identify the new accounting to be charged. Currently limited to distributing the costs of turnpike credit card usages.
MASTER MAINTENANCE		
		Computer Master Records/Files are utilized to collect and control the daily entry of various transactions such as those listed in the Daily Reporting category. Master maintenance is used to add new or change existing master files of the systems involved. Due to the critical nature of master maintenance, these functions should normally be limited to employees at the headquarters level of the agency or at the headquarters of an agency's divisions or districts with specifically assigned duties and responsibilities. Proper control of master files contributes greatly to the accuracy of daily reporting from all organizations.
	11	Purchase of Goods and Commodities - The following types are involved in purchasing which is a very controlled activity. Therefore, these masters are normally limited to the storekeeper's function within the organization. A. (105) - Small Purchase Authorization B. (SPB) - Small Purchase, Bids Attached C. (SCO) - State Contract Purchase Order D. (RPO) - Regular Purchase Order E. (DPO) - Direct Purchase Order F. (ECO) - Equipment Contract Order G. (EPO) - Emergency Purchase Order
	12	General Administrative - The following types are associated with purchasing, but involve transactions which are normally considered administrative in function. A. (EXP) - Employee Expense Account Masters B. (BLV) - Board and Lodging Vouchers C. (BSA) - Business Service Agreements D. (SPO) - Small Purchase Other (than DOT-105) E. (UTL) - Utility Payment Masters F. (IGT) - Intergovernmental Transfers

	13	<p>Right of Way - The following types are limited to district and headquarters Right of Way personnel who are involved in the various right of way payment functions.</p> <p>A. (RPR) - Real Property Rentals B. (ROW) - Right of Way Acquisitions C. (RUR) - Right of Way Relocations</p>
	14	<p>Contract Construction - The following types are limited to district and headquarters Construction and Design personnel who are involved in the various construction and consultant payment functions.</p> <p>A. (CON) - Contracts, Voucher Estimates and Finals B. (PAG) - Professional Service Agreements</p>
	15	<p>Equipment System, Transfer - Permits the user to transfer equipment assigned to the organization (if "O" level) or district (if "D" level) to any other organization. This option is normally limited to the district maintenance engineer's personnel for entry, but equipment personnel may solicit transfers for repair purposes.</p>
	16	<p>Equipment System, Status - Permits the user to change the status (active, repair, pool, etc.) of equipment assigned to the organization (if "O" level) or district (if "D" level). This option is normally limited to the district maintenance engineer's personnel for entry, but equipment personnel may solicit status changes for repair purposes.</p>
	17	<p>Inventory System - This function permits the user to add new PMS inventory master records or change specifics of these masters, such as minimums and maximums. The addition of PMS masters is significant in that it minimizes the misclassification of materials and permits the control of what items can be stocked by subordinate orgs. An organization (a County for example) cannot receive to inventory an item which they have not previously stocked until the appropriate inventory master record has been added for their org. Therefore, storekeepers who will normally exercise this function, can review new items to be stocked to ensure proper classification and establishment of the inventory master record.</p>
	18	<p>Maintenance Management - This function permits the user to change maintenance management accomplishments. This option is normally assigned to the district maintenance management analyst.</p>
INQUIRIES		<p>Various inquiries (information review) allows users to access data in a variety of ways. By using the inquiries, many questions can be answered or investigations may begin before needlessly expending the time and effort of making numerous phone calls. Inquiries permit the review of data only and cannot be used to change data.</p>
	31	<p>General - This type inquiry is designed to be used to access various administrative and financial records. It is recommended that all employees required to input data as well as those who would need access to this information regularly should be granted access. The systems and the kinds of information which is available includes: Project Tracking System</p>

		Authorization System Road File Inventory Equipment Weather Inventory Purchasing Gas and Lube Rates Fixed Asset Inventory Phone Directory Maintenance Management
	32	Payroll Time Sheet - This inquiry differs from others in that it is designed to allow for review of work time reported for all employees of an organization on a daily basis. This inquiry should be limited to employees responsible for verifying the entry of payroll time.
	33	Personnel Inquiry - These inquiries can be used to review personnel masters information such as tenure and classifications. The function also includes Employee Evaluations, as explained in DOT Volume III, Chapter 8. It is recommended that this inquiry be limited only to those organization managers who currently have access to personnel document files.
	34	Payroll Inquiry – These inquiries are used to review payroll masters information such as employee salaries/rates and payroll deductions.