From the Desk of NRLCA President Jeanette P. Dwyer

The New Rural Route Evaluated Compensation System

We are pleased to share with you a description of the new Rural Route Evaluated Compensation System (RRECS) and the accompanying engineered and statistical standards. As you can see from the pages that follow, there remain additional tasks that must be completed before the new RRECS can be implemented in the field. This process will take time and will require additional meetings between NRLCA and Postal Service representatives. Additionally, all rural routes will need to be mapped before implementation. **Accordingly, deployment of the new system is not imminent.**

We understand there will be questions about the new RRECS and we will be providing these answers as they become available on the NRLCA website and in the *National Rural Letter Carrier* magazine.

The Rural Route Evaluated Compensation System

On June 23, 2018, Chairperson Louis Martin-Vega issued the final report on the new system for determining evaluations of rural routes. The report consists of an 85-page document containing the Chairperson's determinations of how the system will work, including capturing the data necessary to evaluate routes, determining the standard time for all carrier work activities, and specifying computer logic for calculating route evaluations. Dr. Martin-Vega's submission included an appendix consisting of hundreds of pages of documentation of work content, standard methods, and step-by-step work measurement and statistical procedures used in developing standard times. It also contained an appendix of 47 support documents that provide background on how he reached his final determinations.

The final product described in Dr. Martin-Vega's report is the Rural Route Evaluated Compensation System (RRECS). It represents the culmination of five and one-half years of joint efforts by the NRLCA and USPS, with oversight provided by Chairperson Martin-Vega and a panel of industrial engineering experts, to develop a new system for evaluating rural routes. The goal of these efforts was to create a system that was fair to both USPS and rural carriers. For USPS, this meant a system that resulted in efficient delivery on rural routes and was capable of responding flexibly to changing business conditions. For rural carriers, it meant a system that covered all work activities, set realistic standard times for completing each activity, resulted in time off incentives when carriers worked at an incentive pace, and provided equal incentive opportunity across rural routes, irrespective of specific route characteristics.

Origins of RRECS

The requirement to create RRECS is a part of the national contract award issued by Arbitrator Jack Clarke on July 3, 2012. Arbitrator Clarke had advised USPS and NRLCA that his award would require them to develop a new system for evaluating routes. The parties chose to enter a Memorandum of Understanding (MOU) on how to develop RRECS rather than have Arbitrator

Clarke dictate how it would be done. The resulting MOU lays out a two-step procedure under which USPS and NRLCA each selected a representative and then the two representatives selected a neutral chairperson. USPS appointed Dr. Don Ratliff, a retired professor from Georgia Tech, who is an industrial engineer and expert in delivery systems and information technology, and who appeared as an expert witness on standards issues for USPS in the 2012 arbitration. NRLCA appointed Dr. Ken Mericle, a retired professor from the University of Wisconsin-Extension, School for Workers. Dr. Mericle is an industrial engineer and expert in work measurement and incentive systems. Since 1999 Dr. Mericle has advised the NRLCA on standards issues and appeared in several national contract and grievance arbitrations on their behalf. Ratliff and Mericle chose Dr. Louis Martin-Vega as the neutral Chairperson. Dr. Martin-Vega is Dean of the College of Engineering at North Carolina State University. He is an industrial engineer and has a distinguished record of overseeing large-scale research and administrative projects. These three individuals constitute the Panel charged under the MOU with developing the new system.

The Panel began its work in January 2013. Its main role has been to determine the technical requirements of RRECS and to oversee the work of design teams to insure they are meeting the requirements. The Panel has also been heavily involved in testing and validating the various subsystems in RRECS. The Teams are composed of USPS employees and outside consultants. NRLCA has been represented on all development teams and had access to all of their work output.

Development of RRECS

From a bird's eye view, RRECS is a simple system. It has three components: standards, a data capture system, and business logic. In developing a system like RRECS, engineers start by identifying all the work activities rural carriers perform. Once each work activity has been defined, a standard is developed to determine the amount of time required for a single occurrence of the activity. Technically, a standard is defined as the time required by an experienced and motivated worker of normal skill and ability, working at a normal day-work pace, to perform a specific task under specific conditions with allowance time to meet personal needs, overcome the fatiguing aspects of work and compensate for unavoidable delays.

In RRECS, the standards were developed by IISE Solutions, a division of the Institute of Industrial and Systems Engineering (IISE), the professional association of industrial engineers. The Panel was heavily involved in the development and validation of the standards. In total RRECS includes 112 engineered standards. Each standard is fully documented, including a plain-English description of the standard method for performing the activity, a summary of the standard time and its major components, a detailed analysis of how each component of time is derived, and support documents used in developing the standard. In addition to the IISE engineered standards, RRECS contains some statistical standards for activities that could not be measured using industrial engineering work measurement techniques (driving and traffics stops) and a few instances where the variation in the work was so great that standards could not be developed, and actual time was allowed.

The second component of RRECS is the data capture system. To determine the total time allowed for a work activity requires both the standard, or time for a single occurrence of the activity, and a count of the number of times the activity occurred. The RRECS data capture system provides the count. In specifying how activities were to be counted, the Panel relied on four principles. First, ***all data capture systems should be digitized***. Since we live in the digital age, this principle may seem self-evident; however, the Panel soon discovered that some of the required data was only available in pencil and paper format, while some, such as physical details of a route, existed only in the minds of USPS employees. Second, whenever possible, ***obtain the data from existing USPS data systems*** rather than create new data systems for RRECS. The Panel discovered that many of the required data elements were already available somewhere within USPS, where they were being collected for purposes other than rural carrier compensation. In these situations, the task at hand was to identify, extract, transfer and reformat as necessary, so that the data element could be used in RRECS. Third, whenever possible, ***use automated rather than manual data collection***. In the end, some RRECS data capture procedures are fully automated, some are semi-automated with minimal carrier input, and a few required carrier input with minimal automation. Fourth, ***when manual input is necessary, the cost of counting should be low relative to the cost of performing the work activity being counted***. It makes no sense to have elaborate and costly systems to count activities that contribute relatively little to the overall route evaluation.

In total, the data capture system tracks and counts 69 data elements used by RRECS in calculating standard time. The data capture system consists of several important subcomponents. The Mobile Delivery Devices (MDD) or hand-held scanners are used in counting door delivery and pickup activities, bundled mail counts, and in capturing elapsed time for actual time activities. A total of 31 RRECS data elements are captured by scans in a semi-automated process. The carrier makes the scans, and the remainder of the process of capturing, identifying, transferring, ingesting and analyzing the scans is fully automated.

A second important subsystem, the Rural Street Database (RSD), was created for RRECS to map routes digitally and collect information about the physical characteristics of the route not available elsewhere. This subsystem consists of a computer mapping program somewhat like Google Maps that is used by carriers to determine the locations of mailstops, mailboxes, park points for door deliveries and door locations. The carrier also uses the software to verify the travel path on the route. Time and locational data collected by the mapping software flows to a database where it is used to calculate driving and walking distances on the route. It was also used to develop statistical standards for drive speed and stop times at traffic control points. Thousands of rural carriers have used the software to map their routes. Their input was invaluable to the design teams in debugging the software and introducing enhanced features to improve its performance.

Other subsystems of the data capture system include End-of-Run (EOR) reports, the Rural Work Hour Tracker (RWHT), and the Informed Visibility System. The EOR provides counts of automated mail and feeds the counts directly to RRECS in a fully automated process. RWHT is a relatively new USPS web application used to enter and track work hours for rural carriers. In RRECS, it is used primarily to capture office walking distances. Carriers and their supervisors measure walking distances in the office and enter the data in the user interface. Once baseline distances have been collected, remeasurement is necessary only if the layout of the office changes. Informed Visibility (IV) is a newly organized USPS real-time source for all mail and mail aggregate information. It is used in RRECS in developing counts of carrier route flats.

The final data capture subsystem is a much-reduced mail count that the Panel calls the mini mail count. After experimenting with various alternatives, the Panel concluded that manual counting could not be avoided for four data elements, including most importantly random letters and random flats. These data elements will be counted during a mini mail count period and the results will be used in standard time calculations until the next mini mail count.

The third component of RRECS is business logic, which includes the formulas, data sorting procedures and logic statements used in calculating standard time. The basic calculation is straightforward:

TOTAL STANDARD TIME = STANDARD (time for one occurrence) **X COUNT** (number of occurrences). RRECS contains 87 calculation sequences used to calculate total standard time for rural routes. Many of the 87 sequences follow the basic calculation above: total standard time for the activity equals the standard multiplied by the count. The computer program simply pulls the value of the standard from the standards file and the count from the data capture system and performs the calculation. Some of the sequences are complex because logic is required to perform a calculation in some situations but not others. For example, a sequence may apply only to routes with government vehicles or withdrawal options. Whether the sequence logic is simple or complex, once it has been tested and validated it will be performed continuously and accurately by fully automated computer code.

Rural Carrier Responsibilities under RRECS

RRECS relies heavily on input from rural letter carriers. Rural routes must be mapped with the RSD software before they can be covered by RRECS. Rural carriers are central to this process. After a couple of hours of training, the carrier, with the assistance of their supervisor and computer technicians, will sit at the computer and map the route. To date about 5,000 routes have been mapped using this process, and eventually all 75,000 rural routes will have to be mapped for RRECS to be fully functional. Carriers play a key role because only they have knowledge of park and delivery point locations and other route characteristics and details. Essentially, mapping is a process of extracting information that exists only in carriers' brains and converting it to digital information that can be entered into a computer database and analyzed. There is great variation among carriers in computer skills. Some carriers are comfortable mapping their routes with minimal input from technicians, while others focus on providing the key route information to the technician who does most of the mapping. Both methods get the job done. The Panel has recommended a simplified mapping process to NRLCA and USPS, which if implemented would make mapping easier for carriers.

The second major change in carrier responsibilities under RRECS involves an enhanced role for the hand-held scanners. The MDDs will have several additional scan and data entry options required to collect input data for RRECS. Rural carriers will be responsible for making the additional scans at the proper times and locations. This will be an on-going job responsibility for carriers. This function is very important in ensuring that all information is available to properly evaluate the route.

The third area of carrier responsibilities is the mini mail count. Under RRECS the scope of the mail count has been greatly reduced, but rural carriers and their supervisors will still be responsible for counting the few remaining items. The Panel hopes that the reduced role of the mini mail count will eliminate most of the inaccuracies associated with counting and representativeness of the 2- or 4-week period under current mail count procedures.

The fourth carrier responsibility is to measure, with their supervisor, the office walking segments used by RRECS to calculate office walking time.

The fifth area of carrier responsibilities under RRECS is to learn and follow changed work rules required by RRECS. For the most part, RRECS has no direct impact on how work activities are performed. RRECS is primarily designed to measure and fairly compensate carriers for work performed under current standard operating procedures (SOP). In a few instances, minor changes in SOPs were necessary to ensure that all carrier work activities are properly compensated, and that none are double counted. In the case of changed operating procedures, it is the USPS's responsibility to issue new SOPs and train carriers as necessary.

RRECS Impact on Evaluations

RRECS minimizes the use of one-size-fits-all standards, which are common under the current Evaluated Compensation System (ECS). RRECS will produce evaluations that more closely reflect the actual characteristics – mail volumes, walking distances, mail handling procedures, drive speeds, delivery systems (1-, 2- or 3-bundle), box types, etc. – of the individual rural routes. RRECS standards and business logic are designed to capture variation between routes on these and other inputs. The resulting evaluations will more accurately reflect the work being performed.

RRECS drive speed standards illustrate how this process works. Under the current ECS, drive time is based on the overall mileage on the basic route and a single drive speed standard of 30 miles per hour or 2 minutes per mile. Drive time equals route mileage times 2 minutes per mile. Under RRECS, the basic route is divided into intervals based on route mapping results. In general, an interval is defined as the distance from one full stop to the next. RRECS has 47 different drive time standards ranging from 4.57 miles per hour for intervals of less than 15 feet to 39.45 miles per hour for intervals greater than 5180 feet. The RRECS standards are applied on an interval-by-interval basis. For example, a rural route may have an initial interval of three miles with no stops from the post office to the first mailstop that would be credited at 39.45 miles per hour, followed by 100 intervals of 40 feet between mailboxes in a subdivision each credited at 6.77 miles per hour. The total drive time for the route is the sum of the interval times for all intervals on the route. The same drive standards are used to credit out-of-route driving for door deliveries based on distance driven.

A second feature of RRECS that will have an impact on evaluations relates to the way count data is used in calculating evaluations. Under the current ECS, the key input data on mail volumes and route characteristics comes from a two or four-week mail count. The manual procedures used in counting mail are subject to inaccuracies. They are also based on the questionable assumption that the mail count period accurately reflects average conditions on the route for the entire year. RRECS addresses both problems. First, most input data in RRECS is collected through automated or semi-automated procedures that minimize the potential for inaccuracy. Second, the RRECS volume counts used in evaluations will be based on averaging daily volumes over an entire 12-month period.

A new automated feature of RRECS, referred to as "coverage", determines which addresses on a route do not receive mail on any given day and adjusts the box time to reflect actual deliveries. As with other count data, each route will have a coverage factor based on data collected daily over 12 months. A basic principle of RRECS is that carriers should be paid for all work activities they perform, and conversely, they should not be paid for activities they do not perform. The coverage technology requires additional development, testing, and validation before it can be included in RRECS.

RRECS standards are the result of careful application of generally accepted industrial engineering principles. The 112 <u>engineered</u> standards in RRECS are based on a very detailed work measurement technique called Methods Time Measurement (MTM1), which is the most widely used predetermined motion-time system in the world. The standards were developed, validated and documented by skilled and experienced industrial engineers from IISE Solutions, and they have been thoroughly reviewed by the Panel. The <u>statistical</u> standards in RRECS are all based on very large numbers of observations obtained over a full year on a large sample of representative rural routes. All standards, engineered and statistical, include allowance time for personal needs, fatigue and delays. By contrast, the standards in ECS are the product of negotiations, arbitration awards and studies that do not qualify as accepted industrial engineering practice. Some of them have not changed in over 50 years.

It is difficult to predict exactly what will happen on individual routes as RRECS is rolled out. However, it is safe to say that RRECS is based on advanced data capture technology and generally accepted industrial engineering practices in work measurement. These practices should yield evaluations that fairly reflect the work being performed and time-off incentive potential that reflects the skill and efforts of rural carriers.

Next Steps

Delivery of the Panel Chairperson's *Final Determination* signals the end of the Panel's direct involvement with RRECS. Since the Chairperson was empowered to make decisions about RRECS that are final and binding on the Parties by the Memorandum of Understanding between USPS and NRLCA in Arbitrator

Clarke's 2012 Arbitration award, both sides are now obligated to implement his determinations regarding RRECS.

Dr. Martin-Vega's determinations can be divided into two broad categories: RRECS features that are completely developed, tested, validated and ready to be implemented; and features that are incomplete because they require additional development, testing or validation. All standards fall in the first category. The documentation and final values of standards are in place, and no additional work needs to be done on them to implement RRECS. Most of the data capture and business logic has also been completed and is ready for implementation.

Some aspects of the data capture and the business logic fall in the second category and require additional work. Some of the remaining work is a direct result of the process laid out in the MOU, which specifies a three-step procedure for completing the Panel's work. Step one required the Panel Chairperson to submit a report with his recommendations for the new system; the report was delivered on October 31, 2017. Step two gave the parties 30 days to evaluate and comment on the Chairperson's recommendations; the Panel received 62 comments from the parties at the end of February 2018. Step three allowed the Panel Chairperson 90 days to respond to the parties' comments, conduct further analysis, make changes and submit his final determinations; Dr. Martin-Vega submitted his determinations and all backup documentation on June 23, 2018.

The parties' comments and panel responses generated additional tasks that had to be completed after the delivery of the final determinations. There were also some remaining tasks from the October report that USPS did not complete between October 31, 2017 and June 23, 2018, presumably because they were waiting for the final determination from Chairperson Martin-Vega. At this point, there is a list of activities in the *Final Determination* and a companion document that must be completed before RRECS can be implemented. Dr. Martin-Vega's determinations specify in detail the requirements that must be met in completing each of the remaining tasks. It is now the responsibility of USPS and NRLCA to complete this work and roll out the new system.

Explanation of 4241-M Comparison

The chart on the following pages compares the current 4241-M worksheet, commonly called the Mail Count Calculator, and the corresponding new standards from the RRECS. The 4241-M is shown in green. The standards listed under either the Office Time or Route Time columns are currently applied to the weekly averages obtained through a mail count. The corresponding RRECS standards are shown in the middle section. In many cases, there is not a one-to-one comparison. Please note that MANY of the standards applied in RRECS depend upon the carrier's input of data. The phrase "Weekly Avg from Carrier MDD Input," which you will see repeatedly in the Comments column, means that standard depends entirely on the carrier making an entry or a scan into the hand-held scanner daily.

The RRECS time for route miles is determined from the mapping of the route through use of the Rural Street Database (RSD) and uses the Drive Speed Matrix and the Traffic Control Points allowances to calculate the total drive time on the route.

In RRECS, Regular and Central Boxes are further subdivided. Within each subdivision, there is a standard based on the bundling system of the route. Very simply, routes that do not receive DPS Letters or DPS Flats fall into the "one-bundle" category. Those routes receiving only DPS Letters are considered "two-bundle." And those receiving both DPS Letters and DPS Flats are considered "three-bundle."

Also included under Box Time is a new standard for verifying the address on each letter and flat delivered. These standards are applied to the total average weekly volume of flats and the total average weekly volume of letters. Please note that, for explanation, the standard is listed under both Regular and Central boxes, but it is only applied ONCE to the total weekly average volumes, regardless of where the mail is delivered.

Some volume-related data, such as average weekly Random Letters and Random Flats, will be captured and calculated during a periodic physical mail count, much like the current system. The parties have not yet negotiated the details on timing and frequency of these "mini" mail counts.

Loading Time and the time for all required End of Shift Duties will be captured under RRECS on a daily basis. The evaluation will include the weekly average time for these functions.

Parcels are credited in RRECS depending on the carrier input into the MDD Scanner as to the location of the delivery (Door, Mail Box or Parcel Locker). The location of the delivery triggers the appropriate standards to be applied.

All walking distances within the office will be input via the Office Walk Distance Database. The distances are defined and will be measured by local management and the carrier. Dismount walking distances on the street are input into the RSD.

As in the current system, the standards for Withdrawal Time and USPS Vehicle are only applied to the appropriate routes designated as performing withdrawal duties or having a government vehicle assigned.

The Reloading standards in RRECS are best illustrated by the included Lookup Tables which simplify the standard by number of trays (estimated from mail volumes) and bundling system.

4241-M Comparison

PS 4241-M				RRECS					
Ref. No.	Description	Office Time	Route Time	Std. No.	RRECS Standard Description	Standard Minutes	Per Unit	Location	Comments
	Route Length		Miles x 12.0	DSM	Drive Speed Matrix				See Explanation and Drive Speed Matrix
				S134	Stop sign (SS)	0.0499	SS	Street	All Traffic Control Points (SS, YS, TL , etc.) are credited per mapped occurrence mutiplied by the total number per week.
				S135	Yield sign (YS)	0.0159	YS	Street	
				S136	Traffic light (TL)	0.0251	TL	Street	
				S137	School cross walk (SCW)	0.0092	SCW	Street	
				S138	Railroad crossing (RRC)	0.0165	RRC	Street	
				S140	Access gate (AG)	0.1805	AG	Street	
				S143	Creep Time (CT)	0.0208	Space	Street	Each space between boxes mounted together
	Regular Boxes		Boxes x 2.0	S100	Box time CURB (one-bundle)	0.1483	Box	Street	No DPS (.8898 per week per box)
			Boxes x 1.82 (L)	S101	Box time CURB (two-bundle)	0.2027	Box	Street	DPS Letters Only (1.2162 per week per box)
				S102	Box time CURB (three-bundle)	0.2572	Box	Street	DPS Letters and Flats (1.5432 per week per box)
				S104	Box time SDWK (one-bundle)	0.1356	Box	Street	No DPS (.8136 per week per box)
				S105	Box time SDWK (two-bundle)	0.1900	Box	Street	DPS Letters Only (1.14 per week per box)
				S106	Box time SDWK (three-bundle)	0.2445	Box	Street	DPS Letters and Flats (1.467 per week per box)
				S108	Box time OTHER (one-bundle)	0.1346	Box	Street	No DPS (.8076 per week per box)
				S109	Box time OTHER (two-bundle)	0.1890	Box	Street	DPS Letters Only (1.134 per week per box)
				S110	Box time OTHER (three-bundle)	0.2434	Box	Street	DPS Letters and Flats (1.4604 per week per box)
				S144	Verify letter addresses	0.0116	Piece	Street	Weekly Avg: Random Letters+DPS Letters+WSS Letters+Second-Run DPS Letters
				S145	Verify flat addresses	0.0142	Piece	Street	Weekly Avg: Random Flats+CR Flats+DPS Flats+WSS Flats
	Centralized Boxes		Boxes x 1.0	S112	Unit time CBU	0.3311	Unit	Street	Each CBU Unit (1.9866 per week per unit)
				S113	Box time CBU (one-bundle)	0.0528	Box	Street	No DPS (.3168 per week per box)
				S114	Box time CBU (two-bundle)	0.1077	Box	Street	DPS Letters Only (.6462 per week per box)
				S115	Box time CBU (three-bundle)	0.1625	Box	Street	DPS Letters and Flats (0.975 per week per box)
				S118	Unit time CENT	0.3803	Unit	Street	Each Central Unit (2.2818 per unit per week)
				S119	Box time CENT (one-bundle)	0.0528	Box	Street	No DPS (.3168 per week per box)
				S120	Box time CENT (two-bundle)	0.1077	Box	Street	DPS Letters Only (.6462 per week per box)
				S121	Box time CENT (three-bundle)	0.1625	Box	Street	DPS Letters and Flats (0.975 per week per box)
				S124	Unit time NPU	0.0983	Unit	Street	Eack NP Unit (0.5898 per unit per week)
				S125	Box time NPU (one-bundle)	0.0528	Box	Street	No DPS (.3168 per week per box)
				S126	Box time NPU (two-bundle)	0.1077	Box	Street	DPS Letters Only (.6462 per week per box)
				S127	Box time NPU (three-bundle)	0.1625	Box	Street	DPS Letters and Flats (0.975 per week per box)
				S130	Unit time DET (VPO)	0.0983	Unit	Street	Each VPO Unit (0.5898 per unit per week)
				S131	Insert mail in customer boxes DET (VPO)	0.2084	Box	Street	Each VPO Box (1.2504 per box per week)
				S133	Presort mail for insertion in boxes DET	0.1256	Unit	Street	Each VPO Unit 0.7536 per unit per week)
				S144	Verify letter addresses	0.0116	Piece	Street	Weekly Avg: Random Letters+DPS Letters+WSS Letters+Second-Run DPS Letters
				S145	Verify flat addresses	0.0142	Piece	Street	Weekly Avg: Random Flats+CR Flats+DPS Flats+WSS Flats
	NDCBU Coll/Comp		Comp x 1.0	S116	Collection box CBU	0.0558	Coll box	Street	0.3348 per Collection box per wk - no sorting
				S122	Collection box CENT	0.0558	Coll box	Street	0.3348 per Collection box per wk - no sorting
				S128	Collection box NPU	0.0558	Coll box	Street	0.3348 per Collection box per wk - no sorting
				S132	Collection box DET	0.0558	Coll box	Street	0.3348 per Collection box per wk - no sorting
	Parcel Lockers		Lockers x 2.0		See S037 Under Parcels				Credited under parcels

4241-M Comparison

Ref. No.	Description	Office Time	Route Time	Std. No.	RRECS Standard Description	Standard Minutes	Per Unit	Location	Comments
1	**Random Letters**	0.0555		S004	Case random letters	0.0647	Piece	Office	Weekly Avg from Mail Count
				S011	Case WSS letters	0.0364	Piece	Office	Weekly Avg from Carrier MDD Input
2	**Sector Segment Letters**	0.0444			No corresponding Standard in RRECS				Sector Segment not used in RRECS
3a	**DPS Letters- W/O Gov Vehicle**		0.0333	S009	Case DPS letters	0.0294	Piece	Office	ONLY applies to Second-Run DPS and fewer than 400 pieces per day
3b	**DPS Letters-With GOV Vehicle**		0.0232	S009	Case DPS letters	0.0294	Piece	Office	ONLY applies to Second-Run DPS and fewer than 400 pieces per day
4	**Flats,Cat.,Mag.,Papers,Rolls**	0.1		S005	Case random flats	0.0862	Piece	Office	Weekly Avg from Mail Count
				S006	Case Carrier Route flats	0.0741	Piece	Office	Weekly Avg from Electronic Data
				S010	Case WSS flats	0.0741	Piece	Office	Weekly Avg from Carrier MDD Input
5a	**DPS Flats-Without GOV Vehicle**	0.0588		S016	Case DPS flats	0.0708	Piece	Office	Weekly Avg from EOR Reports
5b	**DPS Flats-With GOV Vehicle**		0.0232	S016	Case DPS flats	0.0708	Piece	Office	Wkly Avg from EOR Reports. LHD Gov vehicle only
6	**Parcels**	0.333	0.167	S018A	Gather parcels first cart	0.1774	1st Cart	Office	One cart = 62 parcels
				S018B	Gather parcels additional trip	0.4944	Addl Cart	Office	Additional trips credited for over 62 parcels/day
				S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S019	Organize large parcels	0.5157	Piece	Office	Weekly Avg parcels taken to door - MDD input
				S020	Organize small and medium parcels	0.2367	Piece	Office	Weekly Avg parcels delivered to mailbox or parcel locker - MDD input
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD
				S035	Deliver parcels to door	0.1954	Piece	Street	Weekly Avg from Carrier MDD input
				S036	Deliver parcels to mailbox	0.1671	Piece	Street	Weekly Avg from Carrier MDD input
				S037	Deliver parcels to parcel locker	0.3589	Piece	Street	Weekly Avg from Carrier MDD input
				S047	Prelim & concluding at vehicle for trip to door	0.852	Trip	Street	Weekly Avg from Carrier MDD input
				S048F	Gather accountable mail/large parcel -fixed	0.205	Trip	Street	Weekly Avg from Carrier MDD input
				S048V	Gather accountable mail/large parcel -variable	0.0812	Piece	Street	Weekly Avg from Carrier MDD input
				S069	Deliver Miscellaneous to door	0.0854	Trip	Street	Weekly Avg from Carrier MDD input
7	**Boxholders**	0.04		S012	Case Boxholder flats	0.0646	Piece	Office	Weekly Avg from Carrier MDD input
				S013	Case Boxholder letters	0.0303	Piece	Office	Weekly Avg from Carrier MDD input
8	**Accountable Mail**	1.0	3.466	S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S021	Process accountable mail, sig. items	1.4745	Piece	Office	Weekly Avg from Carrier MDD input
				S025	Perform fixed accountable cage activities	0.7418	Day	Office	Weekly Avg trips from Carrier MDD input
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD
				S038	Deliver accountable mail, sig. items	0.9615	Piece	Street	Weekly Avg from Carrier MDD input
				S047	Prelim & concluding at vehicle for trip to door	0.852	Trip	Street	Weekly Avg from Carrier MDD input
				S048F	Gather accountable mail/large parcel -fixed	0.205	Trip	Street	Weekly Avg from Carrier MDD input
				S048V	Gather accountable mail/large parcel -variable	0.0812	Piece	Street	Weekly Avg from Carrier MDD input

4241-M Comparison

Ref. No.	Description	Office Time	Route Time	Std. No.	RRECS Standard Description	Standard Minutes	Per Unit	Location	Comments
9	**Customs Due, C.O.D.**	1.5	4.466	S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S022	Process customs due	1.4745	Piece	Office	Weekly Avg from Carrier MDD input
				S023	Process COD	1.4745	Piece	Office	Weekly Avg from Carrier MDD input
				S025	Perform fixed accountable cage activities	0.7418	Day	Office	Weekly Avg trips from Carrier MDD input
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD
				S039	Deliver Customs Due	1.6618	Piece	Street	Weekly Avg from Carrier MDD input
				S040	Deliver COD	1.6131	Piece	Street	Weekly Avg from Carrier MDD input
				S047	Prelim & concluding at vehicle for trip to door	0.852	Trip	Street	Weekly Avg from Carrier MDD input
				S048F	Gather accountable mail/large parcel -fixed	0.205	Trip	Street	Weekly Avg from Carrier MDD input
				S048V	Gather accountable mail/large parcel -variable	0.0812	Piece	Street	Weekly Avg from Carrier MDD input
10	**Postage Due**	.2 roundup to whole number		S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S024	Process postage due	0.0345	Piece	Office	Weekly Avg from Carrier MDD input
				S025	Perform fixed accountable cage activities	0.7418	Day	Office	Weekly Avg from Carrier MDD input
				S041	Collect postage due	0.9127	Piece	Street	Weekly Avg from Carrier MDD input
11	**Change of Address**	2.0			No corresponding Standard in RRECS				Actual Time in End of Shift Activities.
12	**PS Form 3982 (PARS Label)**	0.25		S029	Process PARS label (Form 3982)	0.405	Piece	Office	Weekly Avg from Mail Count
13	**Markup**	0.25		S027	Process markups	0.4233	Bundle	Office	Based on Wkly Avg of addressed mail pieces
14	**PS Form 3821**	2.0		Actual	Included in End of Shift Actual Time Average				
15	**Non Signature "Scan" Items**		0.3		No corresponding Standard in RRECS				Scans included in standards for Ind pieces
16	**Load Vehicle**	Actual Total per week		Actual	Actual Average Daily Time				Weekly Avg from Carrier MDD input
17	**Other Suitable Allowance**	Actual Total per week		S049	Service (blue box) collection points	1.7928	Box	Street	Weekly Avg Serviced from RSD
				S065	Perform simple one-step RRECS input scans	0.0795	Scan	Offc/Strt	Weekly Avg from Carrier MDD input
				S066	Perform prompted two-step RRECS scans	0.0928	Scan	Offc/Strt	Weekly Avg from Carrier MDD input
				Actual	Safety/Service Talks			Office	Wkly Avg: supervisor input and OWD database
				Actual	Express Mail Deviations-Actual Time			Street	Weekly Avg from Carrier MDD input
				Actual	End of Shift Office Duties Actual Time			Office	Weekly Avg from Carrier MDD input
18	**Authorized Dismounts**		0.1	S107	Dismount and prep OTHER	0.8931	Stop	Street	Weekly Avg from RSD
				S107A	Additional trip OTHER	0.2076	Trip	Street	Weekly Avg from Carrier MDD input
				S103	Dismount and prep SDWK	0.6709	Stop	Street	Weekly Avg from RSD
				S103A	Additional trip SDWK	0.1544	Trip	Street	Weekly Avg from Carrier MDD input
				S111	Dismount and prep CBU	0.8816	Stop	Street	Weekly Avg from RSD
				S111A	Additional trip CBU	0.1544	Trip	Street	Weekly Avg from Carrier MDD input
				S117	Dismount and prep CENT	1.9112	Stop	Street	Weekly Avg from RSD
				S117A	Additional trip CENT	0.4409	Trip	Street	Weekly Avg from Carrier MDD input
				S123	Dismount and prep (NPU)	1.9112	Stop	Street	Weekly Avg from RSD
				S123A	Additional trip NPU	0.4409	Trip	Street	Weekly Avg from Carrier MDD input
				S129	Dismount and prep DET (VPO)	2.0761	Stop	Street	Weekly Avg from RSD
				S129A	Additional trip DET (VPO)	0.4958	Trip	Street	Weekly Avg from Carrier MDD input
19	**Auth. Dismount Dist. (Feet)**		0.00429	S142	Walking standard	0.00429	Foot	Street	Applied to Auth. Dismount Distances
20	**Letters, Flats Collected**	0.04			No corresponding Standard in RRECS				Part of Box Standards Above

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Ref. No.	Description	Office Time	Route Time	Std. No.	RRECS Standard Description	Standard Minutes	Per Unit	Location	Comments
21	**Carrier Pickup Request & Prepaid Parcel Event**	0.75	0.75	S026	Process carrier pick-up event forms	0.114	Form	Office	Weekly Avg from Carrier MDD input
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD
				S045	Carrier pickup & prepaid event	1.1817	Event	Street	Weekly Avg from Carrier MDD input
				S070	Full Scan (manifest if provided)	0.1011	Scan	Street	Weekly Avg from Carrier MDD input
				S047	Prelim & concluding at vehicle for trip to door	0.852	Trip	Street	Weekly Avg from Carrier MDD input
22	**Carrier PU Items & Prepaid Parcel over 2lbs**		0.15	S046	Carrier pickup & prepaid items	0.1592	Piece	Street	Weekly Avg from Carrier MDD input
				S070	Full Scan	0.1011	1st Piece	Street	Weekly Avg from Carrier MDD input
				S071	Partial Scan	0.0223	Addl Pcs	Street	Weekly Avg from Carrier MDD input
23	**Parcels Accepted, Ord., Ins., C.O.D.**	2.0	2.0	S044	Accept ord., COD, ins. Parcels	0.1034	Piece	Street	Avg per address X number of addresses
				S069	Deliver Miscellaneous to door	0.0854	Trip	Street	Wkly Avg frm Carr MDD input (IF trip to door)
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD (IF trip to door)
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD (IF trip to door)
24	**Registered, Certified Accepted**		2.0	S042	Collect registered/certified mail	0.0944	Piece	Street	Avg per address X number of addresses
				S069	Deliver Miscellaneous to door	0.0854	Trip	Street	Wkly Avg frm Carr MDD input (IF trip to door)
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD (IF trip to door)
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD (IF trip to door)
25	**Money Order Application Processed**	1.5	2.0	S043	Collect money order applications	2.1799	Piece	Street	Avg per address X number of addresses
				S069	Deliver Miscellaneous to door	0.0854	Trip	Street	Wkly Avg frm Carr MDD input (IF trip to door)
				S033	Driving Speed (mail stop to DDD stop)	DSM		Street	Distance from RSD (IF trip to door)
				S034	Walking speed (DDD stop to door)	0.00429	Foot	Street	Distance from RSD (IF trip to door)
26	**Return Receipts (L Route Only)**	0.25			No corresponding Standard in RRECS				Included in Accountable Mail Standard
	Stamp Stock	20		S067	Contact Rural Reach customers	5.2458	Contact	Street	Weekly Avg from Carrier MDD input
				S068	Sell stamp stock	0.7140	Sale	Street	Wkly Avg from Carrier MDD input - street only
	Scanner (Retrieval/Setup/Return)	6		S001	Scanner Setup Activities	0.1882	Day	Office	1.1292 per week
				S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
	Strapping Out	(1+2+4+5A-13) x 0.01428		S017A	Pull down-handle trays	0.2458	Tray	Office	Cased mail (220 pieces per tray)
				S017B1	Pull down handful	0.0291	Handful	Office	Cased mail (32 pieces per handful)
				S017B2	Pull down compartments	0.0326	Reach	Office	One Bundle: Total Addresses X Standard daily; 2 & 3 Bundle: Addresses/2 X Standard Daily
				S017C	Position and remove rubber bands	0.099	Rubber Bnd	Office	Cased mail (32 pieces per rubberband) *Cased Mail includes: Random Letters+Random Flats+CR Flats+WSS Flats+WSS Letters+Boxholders+Second-Run DPS
	Other Office & Personal	30		S030	Complete trip report (Form 4240)	0.491	Day	Office	2.946 per week
				S031	Move trays to storage	0.2643	Day	Office	1.5858 per week
	Lock Pouch Stops		# DAILY Stops x 30	S050	Service inter-unit mail (low volume)	1.4787	Unit	Street	Number of Units from RSD X weekly stops
				S051	Service inter-unit mail (high volume)	5.7659	Unit	Street	Number of Units from RSD X weekly stops
	Withdraw Mail Y=1 N=0	Yes=30 No=0		S003	Gather Random Mail	1.0517	Day	Office	6.3102 per week
				S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S007	Gather DPS Letters	0.25	Tray	Office	425 pieces/tray from EOR
				S008	Locate and access DPS Letter trays	0.7689	Day	Office	4.6134 per week
				S014	Gather DPS flats	0.205	Tray	Office	115 pieces/tray from EOR
				S015	Locate and access DPS flat trays	0.1653	Day	Office	0.9918 per week

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Ref. No.	Description	*Office Time*	*Route Time*	Std. No.	RRECS Standard Description	Standard Minutes	Per Unit	Location	Comments
	USPS Vehicle Y=1 N=0	Daily Rt. Mi x (6/100x4.5)+24		S032	Inspect Government Vehicle	1.8716	Day	Office	11.2296 per week
				S002	Office Walking Speed	0.00429	Foot	Office	From Office Walking Distance Database
				S052	Fuel Vehicle	3.1421	Refuel	Street	Weekly Avg based on 100 miles/Refuel
	Reload/Unload		18 min weekly	S053	Retrieve first mail tray behind bulkhead	0.7167	Tray	Street	Refer to Look-up Tables
				S054	Retrieve additional mail trays behind bulkhead	0.1785	Tray	Street	
				S055	Retrieve first mail tray under platform	1.4558	Tray	Street	
				S056	Retrieve additional mail trays under platform	0.1239	Tray	Street	
				S057	Retrieve first mail tray rear door	1.8073	Tray	Street	
				S058	Retrieve additional mail trays rear door	0.2221	Tray	Street	
				S059	Retrieve first med parcels tub behind bulkhead	0.7579	Tray	Street	
				S060	Retrieve addl med parcels tubs behind bulkhead	0.2006	Tray	Street	
				S061	Retrieve first med parcels tub rear door	1.2540	Tray	Street	
				S062	Retrieve addl med parcels tubs rear door	0.2221	Tray	Street	
				S063	Move large parcels from cargo area to rear door	0.1895	Piece	Street	Weekly Avg from Carrier MDD input

LOOKUP TABLE: DAILY STANDARD TIME FOR RELOADING
BASED ON NUMBER OF TRAYS AND 1, 2 OR 3 BUNDLES

Number of Trays	1-Bundle	2-Bundle	3-Bundle
1	0.6957	0.6957	0.6957
2	0.8689	0.8689	1.3914
3	2.2820	2.2820	2.8045
4	2.4023	3.6951	4.2176
5	4.1567	5.4495	5.9720
6	4.3723	5.6651	7.7264
7	4.5879	7.4195	9.4808
8	6.3423	7.6351	11.2352
9	6.5579	9.3895	12.9896
10	6.7735	9.6051	14.7440
11	8.5279	11.3595	16.4984
12	8.7435	11.5751	18.2528
13	8.9591	13.3295	20.0072
14	10.7135	13.5451	21.7616
15	10.9291	15.2995	23.5160

LOOKUP TABLE: DAILY STANDARD TIME
RELOADING MEDIUM PARCELS

Number of Trays	Standard
1	0.7357
2	0.9304
3	1.6661
4	1.8608
5	3.078
6	3.2936
7	4.5108
8	4.7264

Drive Speed Matrix

Distance Range (ft)	Standard Speed (mph)	Standard Speed (min/ft)
0 ft - 15 ft	4.57	0.00249
15 ft - 20 ft	6.44	0.00176
20 ft - 30 ft	6.43	0.00177
30 ft - 45 ft	6.77	0.00168
45 ft - 65 ft	7.42	0.00153
65 ft - 90 ft	8.05	0.00141
90 ft - 120 ft	8.86	0.00128
120 ft - 155 ft	9.79	0.00116
155 ft - 195 ft	10.77	0.00106
195 ft - 240 ft	11.79	0.00096
240 ft - 290 ft	12.87	0.00088
290 ft - 345 ft	13.91	0.00082
345 ft - 405 ft	14.89	0.00076
405 ft - 470 ft	15.93	0.00071
470 ft - 540 ft	17.00	0.00067
540 ft - 615 ft	18.01	0.00063
615 ft - 695 ft	18.97	0.00060
695 ft - 780 ft	19.93	0.00057
780 ft - 870 ft	20.89	0.00054
870 ft - 965 ft	21.78	0.00052
965 ft - 1065 ft	22.70	0.00050
1065 ft - 1170 ft	23.52	0.00048
1170 ft - 1280 ft	24.47	0.00046
1280 ft - 1395 ft	25.24	0.00045
1395 ft - 1515 ft	25.87	0.00044
1515 ft - 1640 ft	26.72	0.00043
1640 ft - 1770 ft	27.60	0.00041
1770 ft - 1905 ft	28.29	0.00040
1905 ft - 2045 ft	29.00	0.00039
2045 ft - 2190 ft	29.58	0.00038
2190 ft - 2340 ft	29.76	0.00038
2340 ft - 2495 ft	30.74	0.00037
2495 ft - 2665 ft	31.41	0.00036
2665 ft - 2820 ft	31.66	0.00036
2820 ft - 2990 ft	32.22	0.00035
2990 ft - 3165 ft	32.49	0.00035
3165 ft - 3345 ft	33.03	0.00034
3345 ft - 3530 ft	33.91	0.00034
3530 ft - 3720 ft	34.13	0.00033
3720 ft - 3915 ft	34.41	0.00033
3915 ft - 4115 ft	35.07	0.00032
4115 ft - 4320 ft	35.35	0.00032
4320 ft - 4530 ft	35.90	0.00032
4530 ft - 4745 ft	35.88	0.00032
4745 ft - 4965 ft	35.80	0.00032
4965 ft - 5190 ft	37.15	0.00031
> 5190 ft	39.45	0.00029

How Does the Drive Speed Matrix Work?

RRECS uses the table to the left to calculate drive time on the basic route. The process starts with carriers locating mailstops and traffic control points when they map their routes. The RRECS mapping program stores these GPS locations in the Rural Street Database (RSD). RRECS computer code calculates drive "intervals" distances based on the GPS data and a road grid, in a process that works much like plotting a route on Google Maps. In RRECS, an interval is defined as the distance from one mailstop, traffic control point, or segment end point (right or left turn, new road name, etc.) to the next mailstop, traffic control point or segment end point. The result of analyzing the mapping data is a listing of the route's intervals distances in consecutive order.

Drive time for an interval equals DISTANCE times SPEED. The RRECS computer logic selects the appropriate speed for each interval from the Drive Speed Matrix (DSM). For example, if an interval is bound by two mailstops 40 feet apart, the appropriate speed from the DSM is 0.00168 minutes per foot (6.77 miles per hour), and the standard time for driving the interval is (Distance = 40 feet times Speed = 0.00168) 0.0672 minutes or about 4 seconds. If an interval is a mile long, say the distance from the post office to the first mailstop with no traffic control or segment end point in between, standard drive time is (5280 feet times 0.00029 minutes per foot) 1.5312 minute or about 92 seconds.

The computer code repeats the basic calculation for each interval and adds all the interval drive times to arrive at the total Drive Time for the Basic Route. This procedure results in drive times that reflect the specific realities of each rural route.

The DSM is also used to calculate total time for out-of-route driving for door deliveries and pickups. Once again, RRECS calculates these distances and then calculates standard drive time from the distances and the appropriate DSM speeds.