

PORTRAIT OF A GENERAL: GENERAL ROY STONE

by
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In the corridor outside the Federal Highway Administrator's office on the fourth floor of the Department of Transportation Headquarters in Washington, D.C., the wall is lined with portraits of previous chief executives of the Federal highway agency. The portraits begin with General Roy Stone. On October 3, 1893, he established the Office of Road Inquiry (ORI) in the Department of Agriculture. In the black-and-white photograph, General Stone looks sternly to his left, a handsome man with short gray hair and a well-trimmed beard.

The narrative accompanying the portrait gives us only the sketchiest outline of his life and accomplishments. Who, then, was General Roy Stone?

EARLY YEARS

Roy Stone was born on October 17, 1836, in Plattsburg, New York, to Ithiel V. and Sarah Stone. His family had been among the early settlers of the region and his father owned a large estate.¹ Roy, who was Ithiel and Sarah's only son, graduated from Union College, Schenectady, New York, in 1856. By the start of the Civil War, Stone was 24 years old and had moved to Warren County, Pennsylvania, where he managed his father's lumber operation.

Edwin A. Glover, writing in *Bucktailed Wildcats: A Regiment of Civil War Volunteers*, provided a description of Stone as a young man at the start of the war:

Major Roy Stone, a little more than a year before [had been] busily engaged in directing lumbering operations in the cool mountains of northern Pennsylvania [His] full beard and hard-bitten demeanor belied his comparative youth Major Stone was only of medium height, but his erect carriage . . . and dark eagle eyes gave him a commanding appearance.²

According to a statement by Stone's wife many years later, he had a fair complexion, blue eyes, and brown hair when he enlisted. She did not list his height, but stated that his occupation was "engineer and lumberman."³

THE CIVIL WAR

Enter the Bucktails⁴

Fort Sumter in South Carolina was a symbol for all that had come before—the raging debate over slavery that had divided the Nation in fiery rhetoric and political stalemate; the secession of seven lower-South States from the Union in February 1861; their attempt to pull the rest of the southern

States into the Confederate States of America (C.S.A.); and the pledge of the new President of the United States, Abraham Lincoln, to hold the Union together. Sumter was a Union fort in a seceded State. With Union ships on the way to supply the fort and protect it from the hostile forces surrounding it, President Jefferson Davis of the C.S.A. ordered General Pierre G. T. Beauregard to capture or destroy the fort before the fleet arrived.

First, in keeping with form, General Beauregard asked the commander of Fort Sumter, Major Robert Anderson, to surrender. Anderson, as expected, rejected the request.

On April 12 at 4:30 a.m., Beauregard opened fire. Historian James M. McPherson described the end:

After thirty-three hours of bombardment by four thousand shot and shells which destroyed part of the fort and set the interior on fire, Anderson's exhausted garrison surrendered On April 14, the American flag came down and the Confederate stars and bars rose over Sumter.⁵

On April 15, President Lincoln called for 75,000 volunteers to serve in the Union army for 90 days. The war that was about to begin was not expected to last even that long.

Within 2 weeks of the President's proclamation, Roy Stone was recruiting lumbermen and mountaineers from western Pennsylvania to join the forces of the Union. O.R. Howard Thomson and William H. Rauch described the start of Stone's Civil War years in *History of the "Bucktails": Kane Rifle Regiment of the Pennsylvania Reserve Corps*:

The Raftsman Guards were organized at Warren, Pa., on April 28th, 1861, Roy Stone being one of the most energetic in collecting the men who enlisted. Its members came from the lumber districts and were . . . hardy mountaineers, trained to the use of rifles since their childhood. While waiting at Warren, endeavoring to get the State to accept them . . . Stone furnished lumber, out of which the men constructed twelve boats, each capable of carrying ten men with their equipment.⁶

Stone also drilled his men, who had acquired dark blue fatigue uniforms and adopted their name, the Raftsman Guards. Each man clung to his own hunting rifle.⁷

After receiving assurances from Governor Andrew G. Curtin in May, the 101 men of the Raftsman Guards rowed 125 miles down the Allegheny River to Pittsburgh, arriving on May 23, expecting to join a 3-month regiment. There, they learned that Pennsylvania had already filled its troop quota.⁸

The Guards traveled by rail to Harrisburg and marched to Camp Curtin, where the men elected Stone their leader with the rank of Captain. They were to join a volunteer regiment of "reserves" (troops above the number authorized by the Federal Government) raised by Thomas L. Kane in the "wildcat" lumbering counties of McKean and Elk. Kane had posted a call for volunteer marksmen:

I am authorized to accept at once for service, any man who will bring with him to my headquarters [at Smethport] a Rifle which he knows how to use.⁹

While the volunteers were waiting at Smethport, one of the recruits spotted a deer hanging outside a butcher's shop. Cutting off the tail, which was somewhat larger than usual, he placed it in his cap. Spotting the recruit with the big bucktail in his hat, Kane decided that Bucktail would be the perfect name for his volunteer regiment from the mountains of northern Pennsylvania.

The Bucktails and Raftsman Guards had expected their recruitment to last 3 months as part of President Lincoln's initial call for 75,000 men, but that total had already been met. With the war expected to be a short one, the men were concerned they would miss the action if they waited until the next call for volunteers. Thomson and Rauch explained their solution to the dilemma:

They therefore, without murmuring, consented to be mustered in as a regiment of the Reserve Corps, which was a body subject to military duty for three years.¹⁰

Major Stone and the Bucktails in Action

On June 12, the men elected regimental officers. Stone was elected Major of Company D of the Bucktails, formally known as the Kane Rifle Regiment of the Pennsylvania Reserve. The Wildcat recruits were forced to send their rifles home; they were issued Harper's Ferry muskets instead.¹¹ Later, following the Seven Days in 1862, they demanded, and received, rapid-fire Sharps rifles.¹²

The Bucktails saw their first action at Dranesville, Virginia, in December 1861. Upon receiving orders to advance, Lt. Colonel Kane gave the command: "Forward, Bucktails, there's fun ahead." The Bucktails drove the Confederates back with a vigorous, well-directed fire. The engagement at Dranesville, although not classified as a battle, was hailed at the time as a Union victory, welcome news in the North after defeats at First Bull Run and Ball's Bluff. Glover put the incident in perspective:

Although the record books could only list Dranesville as an "engagement," it was a Union victory, and [the Bucktails] had helped to gain it.¹³

In May 1862, the unit was split. One battalion under Lt. Colonel Kane was sent to the Shenandoah Valley in Virginia. Major Stone was ordered to take the second battalion, consisting of six companies, to join the Pennsylvania Reserves of the Army of the Potomac on the Peninsula in Virginia.¹⁴ The Peninsula was so named because it had been formed by the York River on the north and the James River on the south, with the Hampton Roads shipping channel surrounding the southern tip.

In June 1862, Major Stone played a prominent role when his Bucktails were engaged at Mechanicsville, Virginia, on the Chickahominy River. During the morning of June 26, at the start

of what became known as the Seven Days, Stone led three companies of Bucktails to Atlee's Station in support of the cavalry. The other three companies of Bucktails and the Fifth Regiment were assigned to watch the Meadow Bridge crossing of the Chickahominy River.

When the three companies and the Fifth Regiment were mistakenly withdrawn from the bridge, General A. P. Hill's Confederate division began crossing the Chickahominy. Stone's three companies were cut off and at risk of capture or defeat. Learning of the withdrawal at Meadow Bridge, Stone warned Company B in time for it to retreat to safety by a roundabout route. He then rushed ahead to warn Company D, the next in line. Assisted by a small guard of cavalry, Stone led Company D on a long detour to safety. Stone's order to Company K to retire was not received, but after recognizing the danger, the company hid in a nearby swamp until the danger had passed and worked its way to safety over the next 5 days.

By 2:30 p.m., Major Stone and the two companies he had helped extricate, B and D, had rejoined the three Bucktail companies that had been pulled back from Meadow Bridge. They were ordered into position, adjacent to two other companies, known as the U.S. Sharpshooters, to resist the main attack at Beaver Dam Creek. Stone directed last minute preparations for what would be his first as commander of the regiment. When the battle began at about 3 p.m., the Bucktails held their position, making every shot count. Glover described the battle:

Regiment after gray-clad regiment started across the creek only to be met with the accurate fire of two Union outfits that could handle firearms just as handily as the best of the Rebels All up and down the Beaver Dam Creek line the Pennsylvania Reserve Corps held firm in well-nigh impregnable entrenchments The First and Third Brigades with minor reinforcements had stood off seventeen brigades of the Southern divisions of A. P. Hill, D. H. Hill, and Longstreet. The Battle of Mechanicsville was over.¹⁵

Stone and the Bucktails remained in their rifle pits without cover during the night.

General G. A. McCall, in his battle report, singled out Stone for thanks. Stone noted in his own report the next day that the Confederates had "melted away."

On June 27, the Union leaders decided to shift position to Gaines' Mill, but ordered Stone to hold his position to deceive the enemy into thinking the entire line was still in place. After receiving his orders just before dawn, Stone deployed his men to the right and left, then opened fire. The Confederates, who had returned in force under cover of night, responded. Although outnumbered, Stone held the line until 6 a.m., when a courier arrived with news that the withdrawal had been completed and that Stone could disengage and rejoin the main force. It was a costly retreat, according to Thomson and Rauch:

His course, for a half mile after leaving the intrenchments, was one that was within range of the rebel batteries. The movement was necessarily hurried; as in addition to

the force in their front as they fell back, the Bucktails had been flanked. Major Stone ordered Captain Holland, with Company A, to take position 300 yards from the ford and obstruct the hostile advance. Captain Wister, with Company B, was to destroy the bridge at the Mill Hospital [on Ellerson's Mill Road].

Captain Niles, of Company E, was holding a detached position with portions of Companies E and D. In some way he did not receive the order to fall back until after the bridge had been destroyed and the other companies had retired. He therefore found himself left in the swamp at the border of the creek. Both Captain Holland and Captain Wister, the latter sustaining a wound in the ankle, performed the duties assigned to them in a manner worthy of the greatest praise and enabled Major Stone to bring his force within the lines. Yet the action had cost dear. It was necessary to abandon the dead and wounded; the heat was so intense that men fainted; and the movements were executed with such rapidity that many dropped from exhaustion and were captured.

Not half of the Bucktails in line on the morning reached the position at Gaines' Mill, Major Stone reporting at 12 o'clock that he had but 6 officers and 125 men.¹⁶

Captain Niles had been captured after evading the Confederates for several hours. During that time, he buried or concealed the regimental flag in the swamp "and thus saved the regiment the humiliation of having their flag become a rebel trophy."¹⁷

General J. F. Reynolds commended Stone in the official record of the battle:

I take great pleasure in bearing testimony to the gallantry and good conduct displayed by him while in command of the First Pennsylvania Rifles, at Mechanicsville and Gaines Mill, and particularly in covering the withdrawal of our troops from the former to the latter position on the morning of the 27th of June, which took place under my personal supervision. I know of no officer more worthy to be placed at the head of a brigade of light troops.¹⁸

General Truman Seymour also praised Stone:

I may say that much of the credit of this day belongs to him . . . [His] conduct of the right wing is worthy of all praise . . . Major Stone, with rare intelligence, prepared his position and fought it like a true soldier to the end.¹⁹

Later that same day, the Confederates made another powerful attack. Thomson and Rauch described how Stone and the Bucktails found themselves exposed when troops on their left and right pulled back to concentrate their forces:

Major Stone changed front and fired his last volley. He then attempted to take cover behind a ridge on the right; but, as the position was in the range of the Union batteries,

it was impossible to do so. Falling back with the other troops, the Bucktails were then formed in the rear of the hospital.²⁰

The historians summed up the day's events:

Thus the battle of Gaines' Mill passed into history. One corps of the Union army had borne the brunt of the attack of two-thirds of the Confederate forces.²¹

On June 30, at New Market, Stone was again prominent in the action when General Robert E. Lee attempted to smash the Union Army by converging all his forces. At one point, when Stone saw the Union forces retreat, he ordered his men to fall to the ground. As the retreating troops passed Stone, he tried to rally them, but was unsuccessful. The Bucktails began firing volley after volley, but Stone knew he could not hold against the strong Confederate attack. The Bucktails fell back about 400 yards before Stone succeeded in pulling together the fragments of the retreating regiments into fighting order, with the Bucktails as the nucleus. ("I moved the whole battalion," Stone wrote in his official report, "which seemed to put itself under my command.")²²

Glover explained that Stone moved his column up Long Bridge Road to join General McCall and the rest of the Union army:

It was now nearly dark. The artillery fire having stopped, no one knew where the enemy was or, in fact, if he was still there. McCall and Stone rode ahead up the road. Rounding a bend, they almost ran into a column of Confederates which filled the road ahead of them. Brigadier General George A. McCall ended this most bitter of all days by becoming a prisoner. Not so Major Roy Stone. At the command, "Halt-dismount," he wheeled his horse and galloped back down the road. A Rebel ball struck him in the hand as he turned. The major formed a company across the road and started looking for a cannon to sweep the front.²³

The Bucktails maintained their position for half an hour, but the night was too dark for a fight and the Confederates did not attack. Meanwhile, Stone had become so faint and dizzy while searching for the cannon that he was taken to the hospital.²⁴

The North had not won a victory, but had prevented General Lee's plan from succeeding. General Seymour, in his official report, praised Captain Wister and the Bucktails' Chaplain, H. W. Patton, but added that, "Maj. Roy Stone deserves the highest praise on all occasions." Stone's report of what is known as the Battle of New Market Cross Roads summarized his position:

The loss of my command in this action was much greater in proportion than in any of the preceding. I have this morning but 3 officers and 60 men of my own regiment, and 3 officers and 28 men of the U.S. Sharpshooters for duty.²⁵

At midnight, the Bucktails marched to Harrison's Landing on the James River and set up camp with

the rest of the Union army. During this period of rest, Major Stone and the Bucktails had only one special assignment, on July 7, but it was one they were uniquely qualified to perform, as described by Glover:

It had been over a year since any of the lumbermen had swung an axe, except to cut a little firewood. The Wildcats were to have an opportunity to do some axe-wielding for army pay. General Seymour . . . wanted a bridge built over a little tributary of the James and he wanted it done quickly. At the point to be bridged the water was ten feet deep in places and the distance to be spanned was several hundred feet. The engineers estimated the work would take several days to complete when they got the material. Stone told Seymour that his lumbermen could do the job in less time and with the material at hand. All night long the Virginia Tidewater rang with the sound of blades biting into trees as only northern Pennsylvania woodsmen could make them bite. Splashing about in the stream until daylight, the Bucktails had Seymour's bridge ready for him early the next morning.²⁶

Colonel Hugh McNeil, one of the original members of Stone's Raftsmen Guards, had been out of action with typhoid fever but rejoined the Bucktails at Harrison's Landing. McNeil, according to Glover, was shocked by what he found:

"My God! Where are my Bucktails?" Colonel McNeil, just out of the hospital, had hurried to Harrison's Landing to join his men. Now, as the remnant of what had once been six proud companies filed past, the colonel turned paler than his illness had left him. He gazed at the little, wearied, haggard column and cried unashamedly.²⁷

The New Bucktails

With the Bucktails so depleted, McNeil recommended that Stone and Wister return to Pennsylvania to recruit a new brigade of Bucktails. In recommending the idea to Governor Curtin, McNeil wrote on July 8:

During the severe engagement of the past few days my regiment was in the hottest of the fight, under command of Major Stone. The generals of the Reserve Corps speak in the highest terms of its efficiency, and of the distinguished gallantry of that accomplished officer. Where the Bucktails fought there was no giving way of our lines, and where the Major would bring up his Spartan Band their brigades would reform and hold their positions The name of "Bucktail" has become a terror to the enemy and an inspiration to our own men. I can speak impartially of the brave fellows as it was not my privilege to lead them, and as to the Major to him is immediately due the credit of the heroic conduct on the Peninsula I hope that you may authorize Major Stone to recruit a brigade to be attached to the Reserve Corps. He has won his title to such a command by brilliant achievements on the field that has elicited the commendation of his general officers, and has a reputation even with [General George] McClellan.²⁸

After Governor Curtin approved the project, General McClellan issued Special Orders No. 196 directing Stone to return to Pennsylvania to recruit a new brigade of Bucktails.²⁹ Captain Langhorne Wister, still bothered by the ankle injury he sustained at Gaines' Mill, requested permission to return to his native Philadelphia to help in the recruitment.

Stone and Wister returned to Pennsylvania in July 1862 to recruit new Regiments of the Pennsylvania Volunteers. While Wister recruited the 150th in the Philadelphia area, Stone returned to western Pennsylvania to organize the 149th. Richard E. Matthews, an historian of the 149th Regiment, explained how Stone's personality helped in the recruitment:

His courage in battle and skill in handling men were unchallenged. His daring and energetic personality, coupled with a strong personal ambition for fame, made him an effective leader. Twenty-six years old and already a celebrated personality, he had little difficulty in engaging others like himself to take the responsibility to raise companies for his brigade.³⁰

He first selected recruiters who would solicit volunteers in their counties. The recruiters placed advertisements in local newspapers seeking men to fill four new Bucktail regiments. The advertisements often ran alongside a form letter Stone sent to the newspapers in the form of an article. It began:

We need not remind our readers of the glory that crowns the original Bucktails; the name is synonymous with dash and daring. They have conquered the adulation not only of their friends but of their enemies.³¹

As an added incentive, the county would give the volunteers a \$50 bounty. Those who did not volunteer might be drafted in response to President Lincoln's call for 300,000 recruits—and receive no bonus.

Within 20 days, Stone had raised 20 companies of men. James J. Dougherty, another historian of the Bucktails, explained the motivation:

Indeed, this was an opportunity for able young Pennsylvanians to enlist in a proud regiment with experienced leaders while serving alongside their family and friends. While patriotism and pride may have played a role in inspiring enlistees, the promised bounty, no doubt, also contributed to their decision as well. Lumbermen, farmers, and miners from Potter, Tioga, Lycoming, Clearfield, Clarion, Lebanon, Allegheny, Luzerne, Mifflin, and Huntingdon counties hastened to join.³²

Stone, elected a Colonel, organized the 149th at Camp Curtin, where they spent 2 weeks in August amidst poor sanitation, foul smells, and swarms of flies. Ten companies were formally organized during the last week of August, receiving their uniforms, Enfield rifles, and some of their bonuses.

While Stone was at work in western Pennsylvania, Captain Wister was recruiting four new

companies of Bucktails in the Philadelphia area. His efforts were helped by a \$25 bounty for enlistment plus 1 month's pay upfront and \$75 at the end of the war. Dougherty described how, when recruitment slowed, Wister took to the streets to complete his regiment:

Wister hired a flatbed furniture car which was decorated with the national colors and placards reading, "Enlist in the Bucktail Brigade!" From poles attached to the vehicle hung a vast array of bucktails that were given to expected recruits. The car was then drawn through the city by horse followed by fife and drums to draw attention. Their efforts were successful and by nightfall they had drawn in enough men to fill out the remaining companies.³³

By early September, Wister's 150th Regiment was in Camp Curtin.

Colonel Stone planned to raise two additional Bucktail regiments—a step toward promotion to Brigadier General. However, as Matthews pointed out, "the politicking at regimental level with the camp was intense." And Stone lost out in the politicking:

Roy Stone's stature as a colorful and dynamic leader did little to enhance his political power in guaranteeing exclusive right to the companies being recruited under his authorization. Every potential colonel believed he held solid credentials to support his claim for a full regiment of 10 companies. Most were politically active in state politics and many had previous military service experience. Commendations, recommendations and letters of blessing from field commanders held little weight in the halls of the Pennsylvania Capitol.³⁴

Aside from politics, Stone's attempt to complete his four new Bucktail regiments was undone by the emergency in Washington. Beginning in early August, Union and Confederate forces had been engaged in a series of battles in the vicinity of the capital. Beginning with the August 9 retreat of Union forces at Cedar Mountain in Culpeper County, Virginia, the Union's ability to protect the capital was in question.

With the capital in jeopardy, 32,000 untrained recruits were rushed to the city from the north. In the emergency, they were transported on the B&O Railroad, many in converted cattle cars, to Baltimore, where they marched from Pennsylvania Station to Camden Station for the last leg of the trip to Washington. Stone's 149th received its orders on August 30 to report to Washington, where their journey ended on Meridian Hill. The 150th would follow on September 5, assigned initially to duties at Soldiers' Home, where President Lincoln spent his summers away from the oppressive heat of the city.³⁵

The danger to Washington would last until September 18, 1862, when Union forces under General McClellan defeated General Lee's troops near Sharpsburg, Maryland, along Antietam Creek. It was the single bloodiest day of any war in American history, with nearly 6,000 dead and 17,000 wounded. But it drove General Lee back into Virginia, with an overly cautious McClellan choosing not to pursue the Confederate troops. The bloody victory was a sign to President Lincoln. He felt he had made a covenant with God that if the Union army drove the Confederate troops out of

Maryland, he would issue the Emancipation Proclamation—and he did so on September 22. It declared that unless the seceded States returned to the Union, by January 1, 1863, their slaves “shall be then, thenceforward, and forever free.”³⁶

Colonel Stone’s men, despite their lack of training or experience, had expected to see front-line duty to protect the city. Instead, the men were assigned to guard duty, work crews, and other tasks far removed from the heroic actions they expected as members of a Bucktail unit. They would spend the winter in Washington on such assignments. The poor morale and lack of discipline led to drinking problems among the enlisted men who, unlike the officers, were prohibited to drink whiskey. In January 1863, Colonel Stone issued Regimental Order #2 cautioning the troops about “indulging in any of those excesses which so often follow pay-day in the army.” Anyone who disgraced his own honor and that of his regiment would receive the punishment he deserved.³⁷

Daugherty explained how, with morale slipping, Colonel Stone began to shape his unit:

Stone was keenly aware that they would soon see combat and he intended to make sure the boys were ready. Fifteen- or sixteen-hour days were not uncommon and intense drilling soon transformed the troops into a proud fighting force. Before long, however, the troops were assigned more fatigue duty around the city and the tedium resumed.³⁸

On October 21, 1862, the 149th and 150th received State colors. Lt. Colonel Thomas Chamberlin’s memoir of his experiences in the 150th recalled the ceremony:

Secretary Thomas made the presentation speech on behalf of Governor Curtin, which was chiefly remarkable for its length, while the replies of Colonels Stone and Wister were brief and appropriate. After the presentation of the flags, three vigorous cheers were given for Governor Curtin, and the troops returned to their quarters.³⁹

On November 11, they were joined by the newly recruited 143rd Pennsylvania Regiment under Colonel Edmund L. Dana, an engineer who had been practicing law. Although Stone, Wister, and Dana would cooperate fully, Daugherty said the men of the 149th and 150th Bucktails would never fully accept the newer unit of recruits from Luzerne, Lycoming, Susquehanna, and Wyoming Counties:

Having spent the winter together, the men of the 149th and 150th Pennsylvania had built a strong bond. While the officers of the three regiments were cordial to each other, the men had developed a fierce pride at having been recruited specifically into the bucktails. The 143rd Pennsylvania had been assigned merely to fill out the command. As a result they were seen as outsiders.⁴⁰

One of those outsiders, Private Avery Harris, particularly resented Stone’s preference for the two Bucktail units, especially Stone’s own 149th. Harris’ recollections would tarnish Stone’s reputation years later and would echo in the histories of the war.

While Stone and Wister were organizing their new Bucktail regiments at Camp Curtin and preparing to move them to Washington, the original Bucktails fought in the Second Battle of Bull Run on August 29-30. The battle, intended to protect Washington from the threat that brought the new Bucktails to the city, was a defeat for the Union forces under Major General John Pope. After suffering extensive losses, he conducted a well-ordered retreat across Bull Run Creek to the city, where he was relieved of his command. Glover explained that the original Bucktails were the last of the Federal troops to cross Bull Run as the army retreated to Washington:

Noting that the bridge [across Bull Run] was unguarded, the corps commander directed the eager Kane to collect some artillery and place it on the left bank. This was done, and the "brave little battalion" [in the words of General McDowell] of Bucktails remained at the bridge far into the night and until all the troops had crossed. They then destroyed the bridge and followed the rest of the Army.⁴¹

Although the 149th and 150th were to fight valiantly, the original Bucktails, who had earned their reputation on the field of battle, were not pleased that their name and symbol, the Bucktail, was officially bestowed on the new recruits. As Glover explained:

The Bucktails had started something of a reputation. It was only to be expected that there were those who resented any new outfits adopting what many of the First Rifles considered exclusively theirs. The name, so they argued, not only belonged to them by right of first appropriation, but by dint of hard fighting. On the other hand, no one could say that any member of the regiment had done more to make "Bucktail" a respected name and symbol than Major Roy Stone. The war would end in 1865, but the argument would not.⁴²

As a result, Stone's and Wister's regiments were known as the New Bucktails, the Second and Third Bucktails, and even as the Bogus Bucktails.

While on the recruiting assignment, Stone took time to marry Mary Elizabeth Marker at the First Presbyterian Church in Pittsburgh on August 14. They were to have two children, Richmond (who died in adulthood of typhoid fever) and a daughter, Margaret, born June 5, 1865. She would marry Lord Monson and live in London.

On to Gettysburg

On February 15, 1863, the 149th and 150th embarked on the steamship "Louisiana" for their first assignment in the Army of the Potomac. They landed at Belle Plain, Virginia, the next day. The 143rd left Washington for Belle Plain on February 17 and joined the 149th and the 150th under Colonel Stone to form the Second Brigade of the Third Division, First (I) Army Corps. The Division was commanded by Major General Abner Doubleday and the Corps by Major Generals John R. Reynolds and John Newton. Stone joined them on February 19 after he had been appointed commander of the 2nd Brigade 3 days earlier. Matthews summarized the brigade's leadership

structure:

Stone's brigade consisted of three untrained Pennsylvania Volunteer Regiments: the 149th, still Stone's command by commission but now led by Lieutenant Colonel Walton Dwight, the 150th commanded by Stone's comrade in the old Bucktails, Colonel Langhorne Wister, and the 143rd Pennsylvania Volunteer Infantry commanded by Colonel Edmund L. Dana.⁴³

Stone's assignment was, in Matthew's words, "to organize, train and provide for the 2500 men in his brigade," but the Colonel had one important distraction. Chamberlin's regimental history of the 150th explained:

The colonel had been married quite recently, and his wife came to share his quarters as soon as they were established. Between the issuing of orders to his brigade and his attentions to his estimable spouse, Colonel Stone was one of the busiest and happiest officers in the Army of the Potomac.⁴⁴

By February 23, a hut was being built for an office. Adjutant Richard L. Ashhurst noted that, "Colonel Stone has been pouring in orders faster and faster."⁴⁵

On March 21, 1863, Colonel Stone requested leave:

I just learned of the sudden and dangerous illness of my Father and if it is not inconsistent with the public service would respectfully ask leave of absence for seven days with permission to go to Cuba, Allegany County, New York.⁴⁶

General Doubleday and General Reynolds approved the leave, but Stone remained with the brigade.

On April 20, Doubleday's division left camp to march to Port Conway. Chamberlin described the movement:

Night presently came on, and with it a heavy and persistent rain, soaking the troops to the skin and turning the old Virginia highway into the semblance of a hog-wallow, through which they floundered with difficulty in the darkness. For a long distance the route lay in the woods, and, the road being overflowed by one or two swollen brooks which crossed it, the column splashed through water knee-deep, making humorous demands for "gun-boats" with which to continue the journey. Frequently a burst of laughter, accompanied by cries of "Brace up!" told of disaster to some unwary plodder whose foot had turned on a slippery stone, or who had been tripped by a submerged root, dooming him to an unwelcome bath.⁴⁷

This movement was primarily a diversion, intended to attract Confederate troops from General Lee's main force. The I Corps now began moving more purposefully, headed for Chancellorsville where the Army of the Potomac under General Joseph Hooker, known as "Fighting Joe," would

engage General Robert E. Lee in one of the Union's most frustrating defeats. On May 1, every detail of the troop and battlefield alignment argued for a smashing Northern victory, but Fighting Joe Hooker suffered a loss of nerve and could not give the order to attack. By the end, on May 4, General Lee had scored a triumph. Historian McPherson put the contrast this way:

Lee had grasped the initiative, gone over to the attack, and had repeatedly divided and maneuvered his forces in such a way as to give them superiority or equality of numbers at the point of attack. Like a rabbit mesmerized by the gray fox, Hooker was frozen into mobility and did not use half his power at any time in the battle.⁴⁸

In the wake of this failure, General Hooker would be replaced by General George G. Meade on June 28.

As Daugherty explained, the Bucktails would have little role in the battle:

Having yet to see combat, it was surely a sobering sight for the men of Stone's brigade when they approached the battlefield around midnight on May 2, 1863, and passed the horribly mangled bodies of their dead and wounded comrades still littering the ground from the day's action.⁴⁹

On May 3, Stone's Bucktails were assigned to a position on the far right of Hooker's command while the fighting took place to their left.

On May 4 at 6 p.m., General Reynolds dispatched his "trigger-happy" Colonel Stone and the Second Brigade on a reconnaissance south by a narrow forest road, arriving near the enemy's lines. The reconnaissance was to be conducted in secret, but according to General Doubleday, Reynold's dispatched the brigade "in the hope the enemy would attack it and thus bring on a fresh contest; for he intended to reinforce Stone with his whole corps."⁵⁰

As Private Harris of the 143rd recalled, "We were told not to break a twig."⁵¹ After gathering a few prisoners, Stone returned to camp, having been cautioned not to bring on an engagement and to return by dark. His official report stated that he had followed the Ridge road leading south. Along the densely wooded road, he came upon the enemy within a mile:

It was growing dark, and as my command moved with the most perfect quiet and caution, scouts were enabled to approach undiscovered until they could hear the enemy's voices, roll-calls, work upon the fortifications, and all indications of the presence of a heavy force, extending along a front of at least 400 yards. As my orders were peremptory to return before dark, and the object of the reconnaissance was fully accomplished, I did not attack, but retired, undiscovered by the enemy, having captured 4 prisoners, who confirmed my information regarding the enemy's force.

Major Chamberlin, referring to himself in the third person, recalled being summoned to corps

headquarters to let General Doubleday and General Reynolds know what had happened:

Questioned as to the incidents of the reconnoissance [sic], the major briefly recited the story of the movement, closing with the remark that it would have been the easiest thing in the world for Stone to have brought on an engagement. "I wish to God he had!" was the curt and only comment from the lips of General Reynolds.⁵²

Doubleday confirmed the frustration that Colonel Stone, by following his orders, had not brought on a fight:

Had he received the slightest intimation that such was Reynolds' wish, he would not have hesitated for a moment, for his reputation for dash and gallantry was inferior to none in the army.⁵³

On May 6, the Bucktails began the return march through White Oak Church and Belle Plain, arriving 2 days later at a camp about 2 miles from the Rappahannock River near Pollock's Mill. Colonel Stone could report that he had "more men for duty and more arms than when the campaign commenced, and in excellent spirits and condition."⁵⁴ Their spirits had been tested on the march, as Chamberlin's regimental history of the 150th noted:

Either [Stone] had omitted to obtain orders as to the destination of his command, or he must have misinterpreted them, for he continued to lead it through the pelting rain over roads that grew every moment more difficult, and once at least, by mistaking the way, necessitated perhaps a mile or two of useless marching, when every needless step was a punishment.⁵⁵

Stone referred to the "terrible storm" and the resulting "very difficult roads" in his official report.

Finally, he marched the brigade back to Belle Plain, where he received orders to camp at White Oak Church, not far from the Rappahannock River. The brigade arrived May 9.

On May 15, Stone's 149th presented a new flag to the 13th Reserves to replace the flag Captain Niles' unit had lost in the swamps along the Chickahominy River during the retreat to Gaines' Mill. The flag contained the names of the Bucktails' 12 battles along with the inscription "Presented to the First Rifle Regiment by the 149th Penna. Vol." in the blue canton.⁵⁶ Chamberlin considered this "an exceedingly graceful action" and it was, he reported, much appreciated.⁵⁷ The flag was used through the remainder of the war, until being taken during an engagement at Weldon Railroad in Virginia on August 19, 1864.⁵⁸

On June 12, the I Corps broke camp and began marching to Pennsylvania. With Stone finally taking the leave he had requested, Colonel Wister took command as the march began. Stone rejoined the Bucktails before they arrived in Gettysburg.

Gettysburg, July 1, 1863

After a long march, the I Corps was in the vicinity of Gettysburg on July 1. Fighting would begin that day before the Union forces, including the Bucktails, were in position. By 9:30 am, the Bucktails were coming up fast from their overnight quarters at the Samuel White farm. Daugherty summarized research on the route:

Evidence suggests that the brigade moved from the Samuel White farm, where they had spent the night, to the Bull Frog Road, and then east on the Millerstown Road (now Pumping Station Road), crossed Sachs covered bridge, and arrived at the Millerstown Road intersection with the Emmitsburg Road at the Peach Orchard.⁵⁹

As they neared Gettysburg, they were given instructions to leave the road and march, double-quick, 2 miles across fields to the Lutheran Theological Seminary.⁶⁰ Stone's brigade arrived in the seminary area soaked in sweat and panting with exhaustion. Many men had fallen out of the ranks but soon rejoined the brigade.⁶¹

General Reynolds had been killed that morning, struck at about 10:15 while directing movements on McPherson's Ridge. General Doubleday was, therefore, in command of the I Corps, when he came upon the men near the seminary. Chamberlin recalled Doubleday's comments after he learned they were from Pennsylvania:

[He] addressed a few words of encouragement to the several regiments, reminding them that they were upon their own soil, that the eye of the commonwealth was upon them, and that there was every reason to believe they would do their duty to the uttermost in defense of their State.⁶²

Doubleday ordered Stone to deploy his three regiments south of Chambersburg Pike, along McPherson Ridge between two other I Corps brigades, those of Brigadier General Solomon Meredith and Brigadier General Lysander Cutler. As Doubleday turned to leave, he told them, "Hold them boys when you get there." One of the men shouted back, "If we can't hold them, where can you get men that can?"⁶³ Then, shouting "We have come to stay," the line of Pennsylvanians went forward.⁶⁴

The ridge was on a farm owned by Edward McPherson, whose political career had taken him to Washington as a two-term Congressman. He had lost his reelection bid in 1862 and was. At the time of the battle, in Washington serving as Chief Clerk of the House of Representatives.⁶⁵ The primary goal at McPherson Ridge was delay--to give the Union forces time to reach Gettysburg for the battle--and to inflict as many casualties as possible. The location assigned Stone made their delaying mission even more difficult than it would have been under any circumstance. Historian Hartwig D. Scott explained the difficulties:

The McPherson's Ridge position was also fraught with difficulties in successfully

defending it. As long as the Confederates approached from the west, it was a strong position, although there was no strong terrain feature for the left flank to rest upon. However, the position was dreadfully exposed to Oak Hill, one mile north of the Chambersburg Pike, from which the Confederates could enfilade Doubleday's entire line [sweeping fire from a line of troops] and make it untenable.⁶⁶

Amidst bursting shells fired by Confederate artillerymen on Herr Ridge, Stone's brigade took its position between McPherson's house and the Chambersburg Road. Sending out skirmishers to cover the brigade's front, Stone ordered the remaining men to lie down behind the reverse slope of McPherson's Ridge and endure the pounding.⁶⁷ It was about 11:00 a.m.. Stone's official report of the battle set the scene:

As we came upon the field, the enemy opened fire upon us from two batteries on the opposite ridge, and continued it with some intermissions, during the action. Our low ridge afforded slight shelter from this fire, but no better was attainable, and our first disposition was unchanged until between 12 and 1 o'clock.⁶⁸

At about 1 p.m., a Confederate battery under Major General Robert E. Rodes on Oak Hill, to the brigade's extreme right, opened fire on Cutler's and Stone's brigades. With permission, Cutler's brigade pulled back to prevent a possible attack from the northwest, leaving Stone's brigade exposed. Hartwig explained the importance of Stone's men at this point to the gradually emerging battle:

"I relied greatly upon Stone's Brigade to hold the post assigned them . . ." reported Doubleday, for after the corps was forced to respond to Rodes' threat, Stone held the angle in the line and Doubleday considered it, "in truth the key-point of the first day's battle."⁶⁹

Stone's own report put the situation as follows:

[A] new battery upon a hill on the extreme right opened a most destructive enfilade of our line, and at the same time all the troops upon my right fell back nearly a half mile to the Seminary Ridge. This made my position hazardous and difficult in the extreme, but rendered its maintenance all the more important.⁷⁰

He moved the troops under his command into a right-angle deployment, with some men still on the ridge but with others facing to the north along Chambersburg Pike. However, the movement attracted Confederate notice. Shelling from Herr's Ridge became intense. Hartwig described Stone's response:

The situation threatened to grow intolerable. Stone improvised. Colonel [Walton] Dwight [of the 149th] was instructed to detach his color guard to a point north of the Chambersburg Pike, about fifty yards to the left front of the regiment. [Dwight's men]

found a small breastwork of rails . . . and hunkered down with only their colors exposed to weather the storm.

The ruse worked [as the Confederates] spied the colors and assumed the 149th had changed their position again and shifted their fire at them, sparing Dwight's main body further punishment.⁷¹

The color guard was under the direction of Sergeant Henry G. Brehm. His men were Corporals John Friddell, Frederick Hoffman, and Franklin W. Lehman, and Color Guards Henry H. Spayd and John H. Hammel.

The Confederates, part of General A. P. Hill's forces, were massing for an attack on the Union line north of the Chambersburg Pike, as Stone could see from his position. Stone's official report described the attack, which began about 1:30. He had been able to watch their formation for at least 2 miles:

It appeared to be a nearly continuous line of deployed battalions, with other battalions in mass or reserve. Their line being formed not parallel but obliquely to ours, their left first became engaged with the troops on the northern prolongation of Seminary Ridge. The battalions engaged soon took a direction parallel to those opposed to them, thus causing a break in their line and exposing the flank of those engaged to the first of my two regiments in the Chambersburg road.⁷²

The Confederate troops began to scale a fence along a steep railroad cut that had been built some years earlier for an intended extension of the Pennsylvania Railroad parallel to the pike.⁷³ The 149th opened fire, nearly destroying one North Carolina brigade. Stone stated, "Though at the longest range of our pieces, we poured a most destructive fire upon their flanks, and, together with the fire in their front, scattered them over the fields."

Anticipating a second attack under General Junius Daniel, Stone ordered Colonel Dwight and the 149th to occupy the railroad cut. While Daniel's men directed their fire to the repositioned colors, the 149th held its fire until the North Carolinians had reached the fence 22 paces beyond the cut. Stone explained that, "when they came to a fence within pistol-shot of his line [Dwight] gave them a staggering volley; reloading as they climbed the fence, and waiting till they came within 30 yards, gave them another volley, and charged, driving them back over the fence in utter confusion."⁷⁴

The 143rd had remained in its original position along Chambersburg Pike in support of the 149th. The volleys from the 143rd helped repulse Daniel's men. According to Colonel Dwight, "the enemy's dead and wounded [were] completely covering the ground in our front."⁷⁵

Although many observers and historians considered these actions as heroic, Private Harris of the 143rd viewed them from the perspective of his grudge against Stone and the 149th. Years later, when he recalled watching Dwight's men of the 149th moving toward the railroad cut, he

summarized his thoughts at the time:

There go the men of the 149th with their tails just a bobbing. What does that mean? Have they got this job by contract? Stone is after a big chunk of glory for his tails and does not intend that the 143rd shall have any of it.⁷⁶

At about this point, between 1:30 and 2 p.m., as Colonel Wister faced attack from the railroad cut to the west, Colonel Stone was struck in the hip and arm. Chamberlin described the circumstances:

Colonel Stone, who had ably directed the operations of his brigade, exposing himself fearlessly at all times, went forward a short distance to reconnoitre [sic], when he received severe wounds in the hip and arm, which entirely disabled him.⁷⁷

Stone turned over his command to Colonel Wister and was carried off the field to a makeshift hospital in the McPherson barn, where he was placed on straw in a horse stall..

With Stone out of action, his brigade held McPherson's Ridge until nearly 3:30. Soon, the barn was behind the Confederate line and Stone was among the prisoners of war.

In the confusion, no one had ordered the 149th color guard to retreat from its successful ruse. Colonel Stone was incapacitated. Colonel Dwight was reportedly drunk.⁷⁸ Captain John H. Basler, whose Company C of the 149th, included the color guard, was also injured and out of action. Still, the failure to recall the guard would be one of the points of controversy for historians describing the events of July 1, 1863.

Sergeant Brehm felt duty bound to remain at his post until relieved, but when it became clear the tide of battle was turning, he dispatched Corporal Hoffman to get revised orders. Finding that his comrades had retreated, Hoffman could not find an officer to issue new orders. Seeing that Sergeant Brehm's position was about to be overrun, Hoffman joined the retreat. The Confederates had been hesitant to approach the flags, which implied the presence of a regiment. Finally, a squad from the 42nd Mississippi moved forward cautiously to investigate. With a Rebel yell, they leaped into the hiding place. A frenzied fight over the colors took place, with the color guard desperately trying unsuccessfully to save the colors. In the end, Color Sergeant Brehm was killed trying to keep the colors from falling into enemy hands.

The color episode would be debated for many years, first for its employment and second for the failure to recall the color guard. As to the first, Matthews considered it "an unlikely maneuver, not found in any military textbook of the time." He wondered why only the colors of the 149th, but not the 143rd and the 150th, were moved to deceive the Confederate forces. Was this, he wonders, another example of Stone favoring the 149th he had recruited in 1862? Perhaps, after all, as Stone and Dwight later claimed, the episode was simply intended to deceive the Confederates:

We can therefore decide that while unconventional it was effective, though certainly not in

keeping with mid-nineteenth century military tactics where honor on the battlefield dictated a great deal. Whatever the reason, we can be relatively certain that the ruse saved lives during Daniel's second advance on the Railroad Cut.⁷⁹

Years later, Captain Basler attempted to clear up what had happened, particularly in response to the controversy about why the color guard had not been recalled. In addition to pulling together accounts from the survivors of the color guard and others, he contacted General Stone, who replied to his "Dear Comrade" from Washington on September 26, 1896. He explained his plan:

The colors of the 149th were a target for the 34 guns which practically enfiladed the Regiment from the ridge beyond the run and when they had got the range, there was no safety for the regiment from quick destruction, but in confusing and deceiving the enemy [as] to its location. My plan was to fire a volley or two from the edge of the R.R. cut and bring the regiment back under cover of the smoke, leaving the colors to draw the fire of the batteries. But the movement, as it was executed, had greater results than I had hoped. It deceived the enemy in our front also, with the idea that we had force enough to take the offensive, and they delayed their final attack on that account, and "every minute gained then and there was worth a regiment," as Col. Nicholson says.

He indicated that he would have ordered the color guard to return "if I had been spared." He added that the regiment "could not have lived to do the grand work it did later in the action" if he had not dispatched the color guard. Noting that General Doubleday referred to the Bucktails' position as the "key point" in the battle and that the enemy's official reports agreed, General Stone stated:

I have proposed to the [U.S. Battlefield] Commission to establish the "key point" and mark it with a special monument, and shall ask the survivors of the 149th at their next reunion to cooperate in this work of justice to the Brigade.⁸⁰

Overall, the new Bucktails had been severely weakened. The 149th had lost 335 men (killed, wounded, or missing in action) or 74.4 percent of the 450 men who began the day's battle. The 150th lost 263 out of 400 men (65.7 percent), while the 143rd lost 250 of 465 men (53.7 percent).⁸¹

As Hartwig explained, these losses, high though they were, had served their purpose:

The stand on McPherson's Ridge had purchased time, but the cost had been staggering. Every regiment, except for three, had lost more than sixty percent of their men. Four had lost over seventy percent What had such ghastly sacrifice gained? The job of the 1st Corps was to buy time and inflict losses. Doubleday had purchased perhaps one and one-half precious hours by defending McPherson's Ridge. His defenders had also inflicted crippling losses upon their attackers The Confederates had won a tactical victory on July 1, but the delaying action of the I and XI Corps, and Buford's cavalry, had given the Federal army the strategic advantage, which ultimately proved to be decisive in the outcome of the battle.⁸²

Stone, in his official report, gave all the credit to his men:

No language can do justice to the conduct of my officers and men on the bloody "first day" to the coolness with which they watched and awaited, under a fierce storm of shot and shell, the approach of the enemy's overwhelming masses; their ready obedience to orders, and the prompt and perfect execution, under fire, of all the tactics of the battle-field; to the fierceness of their repeated attacks, or to the desperate tenacity of their resistance. They fought as if each man felt that upon his own arm hung the fate of the day and the nation.⁸³

Doubleday also praised Stone and the Bucktails in his official report:

I relied greatly on Stone's brigade to hold the post assigned them, as I soon saw I would be obliged to change front with a portion of my line to face the northwest, and his brigade held the pivot of the movement. My confidence in this noble body of men was not misplaced They repulsed the repeated attacks of vastly superior numbers at close quarters, and maintained their position until the final retreat of the whole line. Stone himself was shot down, battling to the last.⁸⁴

The Battle of Gettysburg ended on July 3, the Union forces under General George G. Meade having defeated General Lee. The weakened Union forces allowed Lee to retreat to Virginia.

The Wilderness

Stone's military records indicate he was "Badly wounded" and that he had been "Captured at Gettysburg Pa. & Paroled July 4." Evidence suggests that Stone and his wounded men had received little, if any, medical attention in McPherson's barn after it fell behind Confederate lines. On August 1, Dr. John Dickson operated on Stone:

I operated on Col. Roy Stone for the removal of a minie ball from the Iliac Gassae. In conducting the operation it became necessary to separate [sic] the origin of the iliacus internus from the bone. From this he recovered sufficiently to resume his duties.⁸⁵

Stone was absent for medical treatment through October 1863. On October 31, he was assigned to Washington as President of Court Martial. He remained in this position until March 23, 1864, when he returned to command. Stone's Third Brigade, which included the 143rd, 149th and 150th regiments, was part of Major General James S. Wadsworth's 4th Division of the 5th Army Corps.

Colonel Stone joined his regiments near Culpeper, Virginia, on March 24. James Barnes of Company A described how the men felt about the return of the Colonel who had led them to glory on July 1, 1863:

The boys gave him three hearty cheers and threw their hats in the air. He undertook to speak to them but it was of no use for you could not hear yourself think for the cheers. We fairly worship him. When I saw him coming I felt as though I wanted to put my arms around his neck and kiss him. And that is the sentiment of the regiment.⁸⁶

The first action Stone participated in following his return to command was the Battle of the Wilderness, which began on May 5, 1864. The Wilderness, in Orange County west of Fredericksburg, was crossed by the Orange Turnpike, the Orange Plank Road, and other roads and trails. It also was an area of swamps and dense vegetation. The swamps would prove to be at the heart of Stone's only military failure and the single most controversial action of his career.

General Wadsworth's 4th Division began moving at 6 a.m. in the direction of Parker's Store Road. When a report was received that Confederate forces were coming to the scene along Orange Turnpike, the 4th Division halted around 8 a.m. to await further instructions. Orders were received around 10:30 a.m.: "Push forward a heavy line of skirmishers, followed by your line of battle, and attack the enemy at once and push him." Matthews described how this order was followed:

In Stone's brigade, the 150th set out as skirmishers through dense undergrowth and low-limbed, stunted trees; branches caught hold of accouterments and vines locked the legs. Company B, 149th, under command of Lieutenant William Holden, went out to support the skirmishers and the combined force reported moving one to one and one-half miles to the west. This movement was well-timed. It occurred when the forces of Griffin and Cutler on the Orange Turnpike and just south of it were driving the Confederate brigade of John M. Jones out of its defensive position and the Turnpike and pressing back Doles' brigade holding the woods south of it.⁸⁷

With the appearance of an easy victory over a retreating, outnumbered foe, General Wadsworth moved his men into position for the major thrust. His line of battle was anchored by General James Rice on the left, Colonel Stone in the center, and General Lysander Cutler on the right. As Stone's brigade moved toward their position, they crossed Higginson Farm. Company D of the 149th removed a picket fence and trampled through a garden. An account in *Blue and Gray Magazine* described the incident:

A woman, presumably Mrs. Permelia Higginson, came to the door of her house and to the Pennsylvanians expressed "her views on matters in strong language." The woman pronounced them "a pack of cowardly Yankees" and predicted that they would soon be retreating back.⁸⁸

Once in position, Rice, Stone, and Cutler moved their men toward Orange Turnpike, intending to keep their units in line. The terrain made that impossible. Stone's men had the toughest route, taking them into the Wilderness Run valley of dense undergrowth and swampy ground. They moved forward with axes and hatchets to cut through the underbrush. Soon, the regiments were intermixed and confused, while Stone had become separated from Rice and Cutler. Just as General

Daniel's men were beginning their attack, General John B. Gordon's Georgia brigade appeared unexpectedly, shouted the Rebel yell, and attacked Stone's men head on. His brigade, hopelessly bogged down in a swamp without support on either side, managed to pull themselves out and retreat. As one participant later wrote:

The engagement at this point was of short duration, but quite lively while it lasted, and not at all satisfactory to our men, who could not do much execution while floundering about in the mud and water up to their middle It was evident before long that this locality was altogether too unhealthy; and when the order to retire was given, the scrambling to get out of the mud hole was amusing as well as ridiculous.⁸⁹

All accounts describe Stone's men as unnerved, bewildered, and otherwise disorganized during the retreat. Private Harris recalled that the men "ran to the rear pell mell like a flock of scared sheep" and that the 149th had fired on the 143rd by mistake.⁹⁰ And as they crossing Heggerson Farm, Mrs. Higgerson was waiting for them with taunts and derision. *Blue and Gray Magazine* quotes a soldier in the 149th who acknowledged that "we were whipped for that time and she knew it."

Matthews, reviewing accounts of participants, summarized the common threads:

. . . the terrain was swampy in places and composed of knolls and swales; the undergrowth was difficult to penetrate and obscured the view of adjoining units; the musketry was brief but intense; the troops were confused and had no idea of the position of the battle line or where the enemy was located; a tremendous volley, described as a "sheet of flame," hit them as they were moving in swamp and vine entanglements and most units panicked and left the field in a rout while a few effected a more orderly retreat.⁹¹

The whole episode had taken about 20 minutes. But the retreat of Stone's men exposed the remainder of General Wadsworth's brigades and led to a disastrous general rout. The Confederates, equally confused by the terrain, did not pursue the retreating Union forces.

By 2 p.m., the Bucktails, minus those killed, wounded, captured, or missing in action, had regrouped, but their attitude had changed in just a few hours. Matthews described them as "the badly frightened, once proud Bucktails [who were] emotionally and physically spent, trembling from fatigue and fear."⁹² This assessment would be validated just a few hours later.

They had little time to regroup. General Wadsworth, although upset by the 4th Division's performance, wanted an opportunity for his battle-tested troops to prove themselves. At about 6 p.m., his brigades again moved out from their position on the Lacy farm, headed through the woods toward the extreme left of General A. P. Hill's battle line. Matthews quoted Private Harris of the 143rd recalling the moment when Colonel Stone reformed his troops: "Colonel Stone rode along our lines and in the most insulting, exasperating manner, laid the blame for the forenoon rout on the 143rd."⁹³

Stone's brigade was one of the two in the lead of the battle formation, the other being Brigadier General Henry Baxter's. As described by historian Edward Steere, they came upon the enemy's rear while the enemy was engaged from the front.

Destitute of reserves, [Confederate General] Hill could not withdraw a single formation from his extended front. The only available force for immediate use was a small detachment, 125 men in all, of the 5th Alabama Battalion, which had been detailed to guard prisoners. These Alabamians were hurriedly sent to develop [sic] the menacing Federal advance.

Wisely employing the most effective tactic of forest warfare, surprise, the small detachment deployed on a wide front and crept stealthily forward. At a given signal, the Alabamians let forth a demoniacal yell and opened fire. The shout and the volley were magnified tenfold in the weird, woodland twilight. Baxter's skirmishers returned the fire. Unnerved by the flashing burst of musketry in their front, Stone's men, who had been first to quit the line in the fight with Ewell's Corps, now broke and ran in disgraceful panic. The [Colonel's] horse reared in fright; Stone fell to the ground and was carried from the field, never to return to the Army of the Potomac.⁹⁴

The account of this moment by Matthews described the impact of Baxter's attack on Stone's men:

The effect on Stone's brigade was immediate. They were in another trap! It was a repeat of the morning horror. They reacted with shouts and curses, became terror-stricken, and began to fire wildly.

Matthews described Stone's actions when confronted with yet another rout of his Bucktails:

Pandemonium ensued. It was Stone who shouted for his men to fire. His bellowed orders only caused more confusion within the brigade and soon its wild fire was sent in on the rear of its own skirmishers. Other brigades, bewildered by the shouting and the roar of muskets, and uncertain of the situation, began to add their fire to an unseen enemy. The heretofore quiet advance became a "howling wilderness."

While the confusion spread, Wadsworth ordered his men to cease firing:

Stone apparently received the command but refused to obey. He and the men of his brigade continued to shout and fire. In response to Wadsworth's order for quiet he had his troops deliver a roaring cheer for Pennsylvania. The 4th Division commander sent off a direct order for Stone to report to him regarding the incident but Stone never complied. Perhaps he was incapable of reporting, for sometime during the bedlam, Stone was thrown from his horse and left the field never to return to active field command again.

Stone's leaderless brigade "panicked, broke, and ran for the rear."

Just what prompted Stone's "bizarre action," as Matthews put it, remains open to debate. Matthews offered the theory that Stone was influenced by the appearance of the small force from the 5th Alabama Battalion. In a footnote, the historian again quoted Private Harris of the 143rd about the incident:

As soon as the rebels fired on us, one would have thought that old Stone had gone crazy. Hat off, and his coat thrown back on his shoulders, he rode down behind his line of "tails," which a line of western troops had stopped. Cursing and swinging his sword he drove them back to our line again. No excuse this time for the 149th to run and Stone knew it.

Matthews also offered the alternative theory voiced by Private Harris, namely that Stone's actions, including his fall from his horse, resulted from an overdose of "bust head" or commissary whiskey. Harris, in his well-known dislike for Colonel Stone and the Bucktails, placed the blame on the officers for leaning on "our weak-kneed new men" of the Bucktails:

Stone had recruited the 149th Bucktails as a crack regiment from the lumber camps of Pennsylvania. This was his own model of a brave regiment and they had brains enough in this instance to run away so that they might fight another day. And if, in my opinion, they were not good fighters it was all from a lack of confidence in their leaders for they knew a drunken leader was worse than none.⁹⁵

Matthews agreed with this assessment. He asked, "how can one predict the course of events if Roy Stone had been sober when he led his brigade through the woods toward A. P. Hill's line on the evening of May 5 in the Wilderness."⁹⁶

General Wadsworth's second line of brigades stopped the panic-stricken retreat. The brigades slowly reformed, with Stone's remaining officers being credited for their efforts to restore order and inspire their men.⁹⁷ However, darkness prevented further attack that night.

According to Dr. Dickson, Stone's fall from his horse broke the union of the iliacus internus with the bone, which had healed following the injury at Gettysburg. Recovery took several months, during which, on July 7, 1864, Stone was breveted Brigadier General of volunteers, effective September 7, 1864, "for gallant services during the war and especially at Gettysburg."

Discharge for General Stone

The injury was sufficiently bothersome to prompt Stone to seek a discharge. On July 28, 1864, Stone submitted the following letter to Brigadier General Seth Williams:

I beg leave respectfully to tender my resignation of the commission of Colonel of the 149th Reg't Penna Volunteers on the ground of continued disability resulting from a wound received at the battle of Gettysburg and aggravated by subsequent injuries in the battle of the Wilderness.⁹⁸

Stone enclosed a medical statement indicating that he "will not be able to resume his duties and undergo the fatigue and exposure of a Campaign." The request was not approved although it was kept on file. Stone, having recovered sufficiently by August, was assigned to command Camp Curtin in Harrisburg.

In January 1865, he was appointed Commander of the Military Prison at Alton, Illinois. On January 21, 1865, while in Alton, he submitted the following letter, again requesting that his resignation be accepted:

I have been indebted to you for a great many acts of kindness, but I am going to ask you for one more.

Perhaps this will be the last. Certainly it is the most important to my interests and I will be grateful in proportion.

I am extremely anxious to have my Resignation accepted. My business affairs have been neglected now for four years at great sacrifice--and now an opportunity offers for making up the losses and more if I can give my personal attention to it.

My family have about 7000 acres of land on the Teonesta Creek in Penna, which has never been of much value--but which might now be brought into market as oil territory at immense profit if it were rightly managed--but my Father is old and feeble and I am the only son--so there is no one to attend to the business.

The duty I am doing here could be as well done by the Col. of the Regiment stationed here--144th Illinois--or by Genl Copeland whom I relieved and who is still here awaiting orders--

My terms of service will expire in August next. My Resignation with Surgeons Certificates is on file in the War Dept.

May I ask you General to explain these circumstances to the Secretary of War as soon as it is convenient--(if I wrote directly to him he might never see the letter)--Please give him my earnest thanks for his personal kindness to me--and the flattering opinion he has expressed of my services--and ask whether it is not possible now for me to be spared from the Service--I do not mean to be selfish, but if I am not doing any important service to the country I don't want to miss the golden opportunity of making some provision for my family that will place them above want and enable me to enter the service in the "next war" if my strength is restored without feeling that my death would leave them in poverty. My dear General I will not try to thank you by letter, but hope to see you soon.

Will you be good enough to telegraph me at Alton, Ill. the earliest news you have for

me--if the resignation cannot be accepted a long leave of absence would be valuable just at this time.

I remain, General, under many obligations. Faithfully Yours,⁹⁹

General Stone's resignation was accepted on January 25 and he was discharged 2 days later.

Summing Up

In discussing the role of Roy Stone, Matthews cited the observation of General William T. Sherman that an effective regiment is like a family, with the Colonel as the father. The Colonel should have a personal acquaintance with the men and instill in them a feeling of pride in and affection for himself. With this analogy, Matthews commented:

Roy Stone unquestionably fit the father image emphasized by General Sherman The six-month tour of duty in Washington, immediately following regimental organization, was certainly detrimental to the training and spirit of the new regiment. But in a large sense, due to his charisma, he was able to maintain a feeling of pride in the military family and the military father which held the unit together until it was ordered into the field. Serving under Colonel Roy Stone, the colorful, daring, heroic figure, engendered a sense of superiority and inner pride in the men which never waned until his eccentric performance in the Wilderness. And the belief that they were *his* Bucktails, the same as those that served so bravely with Stone in the Peninsula, elevated their self-esteem to a height of fancied superiority. This, of course, was a myth; a myth which stayed with the unit until the end of the war but diminished substantially after the May 5, 1864, debacle in the Wilderness.

By the Wilderness, Matthews noted, “the war had changed and the change required a different kind of commander.” Stone was one of “the early war commanders full of dash and heroics, men who were not suited to the needs of the grinding and grueling tactics of 1864-65. By contrast, Matthews cited Lt. Colonel John Irvin, who took over command of the 149th:

His temperament and outlook was different. War was a job to be done day by day--no quick victory at the expense of his men. His regiment was part of the military machine. He had no need for personal acclaim.

As for Stone’s actions on May 5, 1864, Matthews had this to say:

And regardless of the charge of drunkenness brought against Stone in that battle (it was probably true), he had suffered a most painful and disabling pelvic wound at Gettysburg. The history of that war has shown that officers who received grievous wounds and returned to command never recovered their elan. Many took to commissary whiskey to bolster their courage and dull the pain.

Whatever the truth about the Wilderness, the men who served under Major, Colonel, General Roy Stone looked back with pride. Colonel Irvin, who returned after the war to Curwensville, Pennsylvania, would maintain contact with his 149th comrades, periodically holding reunions in August, the month of the regiment's founding. "Roy Stone," Matthews commented, "was busy with other concerns and possibly uninterested in maintaining his role as first colonel of the regiment." He continued:

In 1893, 31 years after their enlistment date, they held their sixth reunion, this one at Curwensville, the hometown of John Irvin. More than 90 veterans attended. The average age—approximately 55.

They paraded through the town passing "magnificent and splendid decorations." On the bank building was a picture of a deer in its native wild with the words "Welcome, Bucktails, thrice Welcome." Following the parade they were escorted to John Irvin's private grove where they were feted and addressed by some of their comrades. Here Irvin's leadership was extolled and a silver smoking set presented to him as a tribute of their regard for his service. The minutes of the reunion noted that General Roy Stone sent his regrets¹⁰⁰

The veterans of Roy Stone's Bucktails would look back with pride at the battles they survived under Stone and, in his absence, under Irvin at Richmond and Petersburg as the Civil War came to an end. But one battle on one day always stood out. Matthews closed his book on this note:

But all of the original men who enlisted in Roy Stone's Bucktail Brigade remembered with pride that day when they marched onto the field at the Lutheran Seminary in Gettysburg and offered up their lives for their country.¹⁰¹

Recalling the Bucktails

Today, several reminders of General Stone's service can be found at Gettysburg National Military Park. A bronze statue of a Bucktail of the 149th Regiment identifies the spot where Stone and his brigade delayed the Confederates on July 1, 1863. The plaque highlights Colonel Stone, Colonel Wister, and Colonel Dana and summarizes the action over the 3 days of the battle. For July 1, the inscription reads:

July 1 Arrived and went into position at the McPherson Buildings between Reynolds's Woods and the Railroad Cut and was subjected to a heavy front and enfilading artillery fire from the right. Repulsed repeated attacks of Brig. Gen. Daniel's Brigade, Major Gen. Rodes's Division, from the right as well as front attacks until pressed on both flanks and in front by superior numbers it retired to Seminary Ridge and held temporary breastworks there until the Corps retired before overwhelming numbers to Cemetery Hill when the Brigade with the Division took position at the left of the Cemetery on and near the Taneytown Road.

The military park's Pennsylvania State Memorial on Hancock Avenue, dedicated in 1910, has four archways, each with a granite monolith containing a battle scene honoring one of the four branches of the service. Each monolith is 9 feet high and 18 feet long, consisting of granite weighing 25 tons. The scene honoring Pennsylvania's infantrymen depicts the fight of the Bucktail Brigade around McPherson's barn on the morning of July 1.¹⁰²

In addition, the road along McPherson's Ridge was named to honor the leader whose men held the key point during the first day of the Battle of Gettysburg. It is called Stone Avenue.

AFTER THE WAR

Following the war, Stone practiced the profession of civil and mechanical engineer.

He experimented with forms of mass transit, including a form of elevated railway that he invented. It was displayed in Philadelphia during the 1876 Centennial Exposition. His railway linked the Agricultural Hall and Horticultural Hall. A description of the railway appeared in J. S. Ingram's contemporary description of the exposition:

The question of rapid transit has become one of the problems of this driving age, and the projectors of this railway claim that the desired object is attained. The track of the Centennial grounds was built under the auspices of the West End Passenger Railway Company, who also controlled the narrow-gauge railway encompassing the entire enclosure. The road was the invention of General Roy Stone, of Elmira, N.Y. The track was supported by a single row of iron columns, resting on foundations of timber. The length of the road was 500 feet, and the greatest height above the bottom of ravine thirty feet. The car ran on three rails. One of these occupied the centre of the track, and was laid along the top of a triangular truss. At the base of this truss, and on either side of it, were laid two rails. The car thus moved on three rails—one in the centre and two on the sides. The bottom of the car was concave, and fitted over the central rail, while the sides extended several feet below the line of the centre of the car, and had wheels attached to them, which ran on the side tracks horizontally, instead of perpendicularly, as is the case on ordinary rails. Thus the wheels on the central rail were the bearing wheels, while those on the sides were the guiding wheels. The wheels had rubber tires, which caused them to run smoothly, and deep flanges, which prevented them from running off the track. The locomotive was also constructed in a curious manner. The engine was placed above the tender, and was fed with water and fuel from below. The arrangement of the tender was the same as that of the car, so far as the running gear was concerned.

The car seated sixty passengers, and contained a saloon and two compartments—one each side. The fare was three cents, and it made the trip across the valley and back in two minutes.¹⁰³

Stone's interest in mass transit led to work with prominent Long Island businessmen who planned to construct a tunnel from Ravenswood to Manhattan to link the Long Island Rail Road and the

New York Central and Hudson River Railroad.. On July 22, 1887, the New York and Long Island Railroad Company was incorporated. Stone was on the Board of Directors. Stone eventually became President of the corporation before stepping down in 1890. Because of numerous problems, the tunnel would not open until June 1915. The tunnels would eventually become part of the Queensboro Subway.

He also was connected with a number of large engineering enterprises, including the blowing up of the Hell Gate rocks and the removal of the bars from the harbor of New York. In a passage about the mid-1880's, *A Maritime History of New York* states:

The increasing use of steel made possible still bigger ships, thus necessitating further harbor improvements. The first contract for work on the Gedney Channel was awarded to Roy Stone of New York on February 7, 1885. He guaranteed to provide a channel two hundred feet wide and twenty-eight feet deep, extending from the sea to the Narrows. Before the initial dredging of Gedney Channel was completed recommendations had been made for a thirty-foot channel one thousand feet wide. The Rivers and Harbors Act of August 5, 1886, appropriated several hundred and fifty thousand dollars for this purpose. The revised project included the Gedney and Main Channels.¹⁰⁴

Among his inventions during the period was a suction dredge for harbor work.¹⁰⁵

By 1890, General Stone's interests had shifted from mass transit to roads. Years later, an article in Washington's *The Evening Star* suggested that his interest in good roads stemmed from his experiences in the Civil War:

General Stone, coming as he did from western New York, a country of good roads even in that early day, readily saw the evil of bad roads during the civil war, and by the close of the struggle he never lost an opportunity of doing all that lay in his power toward improving the highways of this country. This task was much harder than it may seem to the present generation. The ideal road of the American of the period from 1820 to 1890 was a mud canal, and his initial efforts along the line of improvement were not greeted with the enthusiasm they deserved.¹⁰⁶

GOOD ROADS ADVOCATE

The Bicycle Craze

Interest in roads, dormant since the spread of railroads in the 1830's and 1840's, was revived by the introduction of the bicycle in the late 1870's. The initial craze was based on a bicycle--called an "ordinary" in the United States or, in England where it was invented, a "penny farthing"--that had a large front wheel and a small rear wheel. The ordinary soon reached America, largely because of the efforts of a Civil War veteran, Colonel Albert A. Pope of Boston.

According to Pope biographer Stephen B. Goddard, the Colonel operated the Pope Manufacturing Company, which “began to develop and sell small patented articles, such as an air pistol and a cigarette-rolling machine.”¹⁰⁷ Inspired by a velocipede (nicknamed the “Boneshaker”) on view at the Centennial Exposition in Philadelphia in 1876, Colonel Pope visited England, where the ordinary had been invented, to learn about the manufacturing processes. He brought a bicycle home from England even before he was clear on how to ride it, then ordered eight more for study and sale through a bicycle importing house he established in Hartford, Connecticut. In 1878, he began manufacturing his own bicycle, calling his model the Columbia.¹⁰⁸

The national fascination that began after Colonel Pope introduced the ordinary began to accelerate in the 1880's with introduction of the "safety," a bicycle with wheels of equal size. The safety, also invented in England, was easier to ride than the ordinary and reduced the risk of "headers" (being thrown over the front of the bicycle). By 1889, the first American safety, called the Victor Bicycle, was being manufactured by A. H. Overman of Chicopee, Massachusetts. With the introduction of pneumatic tires designed by John B. Dunlop in 1889, the safety was ready for the mass market.

The resulting craze was complete with national, State and local clubs; special clothes for men and women; races, with the racers becoming as famous in their day as today's sports celebrities; bicycle magazines and guides; travel discount programs for railroad fares; velodromes where bicyclists could learn from skilled teachers and practice on banked wooden tracks; and a movement for good roads.

The bicyclist enjoyed freedom from the tyranny of railroad and urban transit schedules, as well as the pleasure of travel through the countryside. However, the roads, particularly outside cities, were in poor shape. Some of the main roads were turnpikes, like the Orange Turnpike, dating to the pre-railroad days, but traffic usually was so light that revenue from tolls was insufficient for maintenance. The Federal Government and the States had, for the most part, lost interest in the common roads, leaving them to the care of counties and townships. Counties and townships had virtually no funding for roads, and no skill in the science of road making. That left the task to the farmers, who often were required by statute labor laws to maintain roads adjacent to their property. They had little interest in road improvement that would encourage "idle-rich" city folks to ride their bicycles like so many peacocks strutting their pride.¹⁰⁹

On May 31, 1880, members of 31 bicycle clubs met at Newport, Rhode Island, to form the League of American Wheelmen (LAW) to "ascertain, defend and protect the rights of wheelmen [and] to encourage and facilitate touring"¹¹⁰ At first, the LAW and other bicycle organizations were interested less in good roads than in the right to use public roads. Horses were often frightened by bicycles, while many bicyclists made themselves nuisances by reckless driving ("scorching," as speeding was called, was a common offense). As a result, local ordinances often restricted bicyclists, for example by limiting them to little-used, poorly maintained streets or requiring them to dismount when a team of horses approached.¹¹¹ With the efforts of the bicycle clubs and the increasing popularity of bicycles, these restrictions began to disappear.

In the late 1880's, attention turned to improving the roads. The LAW formed a National Committee for Highway Improvement in June 1888, expecting it to have relatively rapid success in persuading States to adopt road improvement legislation. The committee's initial efforts to secure State legislation were unsuccessful, in part because of resentment toward bicyclists and a fear of the expense of providing good roads. In 1891, therefore, the committee adopted the approach of "education, then agitation, and finally legislation."¹¹² In addition, the LAW and its highway committee began cooperating with non-wheelmen who also saw the need for better roads.

Although most efforts were aimed at State and local legislation, some individuals saw the value of Federal assistance to improve roads. Colonel Pope was among the first, proposing a plan in October 1889 for a National Highway Commission in the Department of Agriculture to compile and disseminate information on the condition of roads and methods of road construction.¹¹³

The Reckless Decade

Historian H. W. Brands has called the 1890's "The Reckless Decade," a time of contrasts:

Cities attracted the powerful and proficient, but also the powerless and deficient At the top of the economic food chain of the 1890's were the captains of industry and finance, men such as John D. Rockefeller, Andrew Carnegie, and J. P. Morgan, who created vast empires of wealth and who by virtue of their wealth wielded enormous influence over the lives of millions of Americans. At the bottom were those who labored for dimes a day, when they labored at all. During much of the 1890s they didn't, for the nation's worst depression to date seared the slums and working-class neighborhoods, casting millions into despair

The industrializing of America in the 1890s was accompanied by the consolidation of industrial power in the hands of the titans; it was accompanied by violent protest on the part of those who would themselves at the mercy of the new conquistadors In the 1890s, the nation addressed the unfinished business of Reconstruction by mandating the separation of blacks from whites; the 1896 Plessy case stamped the Supreme Court's seal of approval on the Jim Crow System

[The] United States produced more than its normal quota of demagogues and dedicated reformers, scoundrels and paragons of goodwill, when the American people lived up to their better selves and down to their worse.¹¹⁴

With a new century approaching, the country's problems raised doubt about the future:

During the 1890s, Americans agonized over what the twentieth century about to begin held for their country. To many of them, America's finest hours were behind it. The continent was filling up and the vast open spaces that had characterized American life were quickly disappearing Whether what would follow would match what had come before was very doubtful; at the least it would be decidedly different.¹¹⁵

A Non-Wheelman Takes Up the Cause

As the final decade of the 19th century began, General Stone took up the cause of Federal legislation on roads. According to historian Philip P. Mason:

One of the most prominent non-wheelmen advocates of this view was General Roy Stone, a civil engineer from New York City, who as early as 1890 was corresponding with leaders of the wheelmen's organization on the subject of federal aid. Stone believed that the federal government should actively participate in road building, just as it had participated in the development of railroads, canals and harbors.¹¹⁶

Acting on the advice of LAW officials, Stone wrote a bill embodying his ideas in the spring of 1892. The bill called for a National Highway Commission that would include two senators, five members of the House of Representatives, the Secretaries of War and the Interior, the Postmaster General and five citizens appointed by the President. The commission would formulate plans for a national school of roads and bridges (modeled after the French school, *L'Ecole Nationale des Ponts et Chaussées*, established in 1747), and collect information on progressive State highway laws and the road practices of foreign countries, which were widely known to be superior to those of the United States. In addition to disseminating the information, the commission would prepare a comprehensive road exhibit for the Chicago World's Columbian Exposition, which was planned for 1892, the 400th anniversary of the arrival of Christopher Columbus in North America. After 2 years, the commission would submit a report to Congress containing recommendations for a permanent commission.¹¹⁷

Stone's bill was introduced by Representative Philip S. Post of Illinois (on June 29, 1892) and Senator Charles S. Manderson of Nebraska (July 5, 1892). On July 17 to 21, the LAW was in Washington for its annual meeting. Members from across the country participated in parades, watched championship bicycle races, and lobbied their representatives in Congress. The LAW also called for a letter writing campaign in support of Stone's measure and thousands of letters and telegrams poured into Washington.¹¹⁸

After the convention, Stone and the LAW's James Dunn stayed in Washington to lobby for the measure, with their expenses borne by the LAW. In the Senate, the Interstate Commerce Committee amended the bill because of constitutional concerns to reduce committee membership by eliminating Executive Branch members. The bill approved by the committee also reduced the committee's duties to making a general inquiry into highway conditions and the means for their improvement, investigating the possibility of a road exhibit at the Columbian Exposition, and reporting to Congress regarding such an exhibit. On July 27, 1892, the Senate approved Stone's amended bill.¹¹⁹

Despite this success, Stone knew that passage in the House was not assured. Some members of the House opposed the bill because they thought it would invade States' rights or would set a dangerous precedent that could lead to a large-scale and expensive road building program. Finding that the

bill would not get out of committee, supporters introduced it in the Select Committee on the Columbian Exposition. This was a positive step because Chairman Allan C. Durborow of Illinois was an enthusiastic supporter, as were other committee members.

Despite Representative Durborow's support, the bill faced a major hurdle. Under House rules, appropriations bills emerging from the Select Committee required unanimous House approval. General Stone and LAW officials worked with Representatives Post, Durborow, and other House supporters to gain the necessary votes. By the time the Select Committee approved the Senate version of the bill, supporters thought they had the needed votes. There was doubt about only one House Member, but that was the critical one. Speaker of the House Charles F. Crisp of Georgia was thought to be opposed to the bill. The fear was that he would not acknowledge anyone on the House floor who wished to discuss it.

That fear came true on August 4. Representative Durborow rose to ask for recognition to move for unanimous consideration of the highway bill. But Speaker Crisp refused to recognize the chairman or other supporters of the bill. The following day, Congress adjourned without House action.¹²⁰

The National League for Good Roads

The World's Columbian Exposition in Chicago was supposed to open in 1892 to celebrate the 400th anniversary of Christopher Columbus' arrival in the New World. When it became clear that preparations could not be completed in time, organizers decided to hold a dedication ceremony on October 21, 1892, during the recognized anniversary month. Estimates of participants ranged from 100,000 to 500,000 people.¹²¹

The night before, Stone and the LAW held a meeting in Chicago as part of their campaign to promote their good roads bill in the second session of the current Congress. The meeting took place in Chicago's Central Music Hall with the purpose of establishing a National League for Good Roads. Holding the meeting in conjunction with the dedication proved to be a good idea. Over 1,000 people attended, including many prominent people who would not have been able to attend if they had not been in Chicago for the ceremony. Mason described the mix of participants:

In addition to the large number of prominent national figures present, there were delegates from many boards of trade and agriculture, farmers' organizations, agricultural colleges and universities, and from practically all of the state road improvement associations.¹²²

Stone delivered the opening address. Discussing "this peaceful campaign of progress and reform," he said:

The time is ripe for it, and the opportunity should not be lost. There is work ready and waiting that needs the strong hand of a national organization The best thought of the whole Nation is required in developing or choosing a plan of action, and the solid support of the people is required when a plan is found.¹²³

He also outlined his funding plan, which could be accomplished without increasing the Federal debt if the Federal Government guaranteed local loans:

On condition, local governments could secure low-interest loans because of the Federal Government's high standing in money markets.

Let us suppose that the nation, state, county and township are equally concerned, and they agree to contribute each one-fourth, to pay the interest and sinking fund charges on an issue of county bonds for road improvement; that the work is to be done under their joint supervision; that the bonds are first guaranteed by the State, and then by the United States; the sinking fund placed under Government control; the amount of bonds limited to a fixed percentage of the value of real estate in the country, as determined by a national assessment; if necessary, the roads themselves mortgaged to the United States as security for its guaranty, with power to take tolls, in case of default.¹²⁴

Stone acknowledged that the national credit might suffer somewhat under this plan, but he believed the amount would be less than the increase in national wealth.

Conscious that some potential supporters of good roads were concerned by the thought of Federal-aid and the expense involved, Stone added a note of caution:

I am quite aware that even to many of the best friends of Road Improvement, so bold and radical a departure as this will bring a cold shiver, like a plunge into unknown waters, and I hasten to say that no one proposes to commit the National League to this plan or any other, nor even to solicit the adoption of any plan and it may even be found that direct national aid is not needed at all.

But, on the other hand, I hold that nothing is more absurd than to talk of the "danger" of suggesting such revolutionary ideas to the American Public. Our simple, harmless bill for a National Commission of Inquiry was pronounced a "dangerous measure," and side-tracked in the House of Representatives as an "invasion of State rights." The condition of the roads was maintained to be "a private concern of the States," into which the Federal Government had no right to inquire!!!

The Government of the United States is as much the servant and instrument of the whole people, as a State Government is of a part, and when they determine to use that servant and instrument in this business, for purposes of inquiry or of remedy, the only "danger" will be to those who "stop the way."¹²⁵

The new league resolved to organize on a State, county, and local basis, with the local school district as the primary unit, as a way of stimulating a "grass roots" movement. In addition, the league elected Senator Manderson as president and Stone as general vice-president and acting secretary. Finally, the members agreed to hold a convention in Washington the following January.

Offices for the league were established in New York City, home of General Stone.

Some dispute exists over who financed the Chicago meeting. Stone later claimed that in issuing the call for the meeting, he was "staking my reputation upon its success and risking, out of a slender purse, the entire cost of the venture."¹²⁶ Colonel Pope also claimed to have paid for the meeting and Stone confirmed it in correspondence cited by Mason.¹²⁷

The Grizzled Veteran

On November 12, 1892, *The New York Times* published an article on "Improving the Highways" by John Gilmer Speed. "There is no question before the American people of more importance than that of the improvements of the common roads." With so many issues yet to be resolved, Speed wrote, "The person to take the initiative in this movement was Gen. Roy Stone of New York." Speed described Stone:

Gen. Stone is a well-known inventor and engineer and is never happier than when working at large and difficult problems. He won his title on the "foughten field," where he was no holiday soldier. When the war broke out he was only a boy but he went into the conflict with all the zeal of youth and fervent patriotism. He started as major of that famous Pennsylvania regiment of sharpshooters known as the "Buck tails," and in this regiment he staid, subsequently as its colonel, until he was given the command of a brigade. After the war and when he had recovered from the wounds he received in battle—one of them was thought at first to be mortal—he became connected with various public works as an engineer

When I called on Gen. Stone to ask about his plan for a highway league or congress I met a handsome man of about 50—somewhat grizzled by his half century but as alert and energetic as a boy.

Stone was glad to talk with Speed "but he thought it better so that there would be no danger of a misunderstanding that he should dictate his replies to my questions to his stenographer." And so the interview consisted of Speed's questions followed by comments such as, "Turning to his stenographer he said"

Although the article appeared in November, the interview took place before the Chicago meeting. Turning to his stenographer, Stone explained the goal:

The importance of this movement cannot be overestimated. The public sentiment in favor of road reform is profound and universal, but as to exact methods and ways and means it is all at sea, and brings no practical influence to bear anyway. If it can once be massed, and crystallized upon definite measures, it will be irresistible. This can only be accomplished by organization, reaching every interest concerned, and especially the farmers.

He described the problem in stark terms that he would repeat, in one form or another, many times in

coming years:

In the current discussion of road matters some things may be taken as settled, and among them are these: We have the worst roads in the civilized world; their condition is a crushing tax on the whole people, a tax the more intolerable in that it yields no revenue, not even supports a tax gatherer; any adequate relief from this tax involves the rebuilding of 1,000,000 miles of road and an expenditure of some thousands of millions of money; a wise economy requires this rebuilding to be prompt, speedy and general; since this work is for all time, equity requires that a large share of its cost should fall upon its future beneficiaries; this can only be done by raising the money on very long loans, and these loans must, in common prudence and in justice to our successors, be made at the lowest possible rates of interest.

These settled points, he said, “point directly to another, which many good citizens are slow to accept, viz., that national financing for this vast undertaking is an absolute requisite.”

He recognized that objections had been raised to the proposals he and other good roads advocates had made. There were constitutional objections, as well as concerns that “the exercise of this power would be dangerous even if constitutional.” Noting that the country’s early leaders understood the need to provide roads and canals to bind the republic together, he added, “That duty has been sadly neglected of late, and is now denied in toto by statesmen who do not hesitate to warp the constitution itself in many other directions.”

Asked why the States and counties could not do the job, Stone described the fate of a good roads bill in New York:

The answer to this was found at Albany, last winter, when the friends of the Richardson bill for state roads abandoned that excellent measure in disgust because it could not pass with a nonpartisan commission, but be made wholly tributary to the machine of the party in power, and the proposed \$10,000 added to a political campaign fund.

The counties, he said, would also be subject to partisan concerns:

Fortunately it is still possible to maintain some national institutions that are free from politics, and a permanent bureau of roads could be maintained as easily as are the army and navy. Such a bureau, supervising all contracts and their execution, would insure the best work at the lowest cost, its own fidelity being assured by the constant watch of the local authorities and the people themselves.

Finally, Speed described Stone’s plan for a good roads exhibit at the World’s Columbian Exposition:

The present plan is to scatter these exhibits through the agricultural and transportation buildings. Gen. Stone suggested that 50 or 100 acres of the unimproved lands south of

Jackson park be used for a road annex, in which there should be during the continuance of the fair streets and roads of all kinds in process of construction, and in this work, the most improved road making machinery shown in operation.

He would revisit this idea in revised form in coming years.

An Idea Becomes Law

A followup *Times* article on December 18, 1892, described the “steady progress made by the National League.” Senator Manderson had been in town for meetings, including a meeting with the Chamber of Commerce at Stone’s home at Aldrich Court, 45 Broadway. The National League had received \$1,300 in subscriptions, with several members, including Pope and Stone, contributing \$100, the largest amount. Contributions would continue to arrive in the following months, including \$50 from the inventor Thomas A. Edison in February 1893.

Publicity surrounding the National League generated another dispute between Stone and Pope. On January 12, 1893, Pope wrote to Stone. The tone of the letter suggests an ongoing disagreement dating to the organizational meeting in Chicago. Stone, the letter noted, had offered to give Pope “a credit for the amount of money I expended in attending the convention at Chicago for the purpose of organizing the League for Good Roads.” Such a credit, Pope replied, was “hardly worth while . . . as I have given already many thousand dollars and a very large amount of time to the work”

Actually, he was upset about something else. Shortly after the National League was formed, Pope had begun circulating a petition around the country for transmission to Congress in support of an independent road department to promote and teach good road techniques, to display a permanent exhibit of road building methods, and prepare a road exhibit for the World’s Columbian Exposition. Stone agreed with these goals but understood, from first hand experience, the difficulty of getting any measure through Congress. He was hesitant to commit the National League to this goal when other steps might prove more promising. Pope, in his January 12 letter, reacted to Stone’s position:

I think it proper at this time to call your attention to articles which have appeared in one or more of the New York daily papers in which there have been attributed to you certain remarks derogatory of the great movement throughout the country for the purpose of founding at Washington a Road Department.

As the petition which it appears you have opposed has been signed by thousands of citizens and by Governors of many of the states it seems to me that whatever your individual opinion might have been concerning it, it was entirely wrong to publish that as an organization, the League was opposed to it. I understand that Col. Burdett, a member of the Executive Committee, states that the matter was never brought before a meeting of the League, and whatever has been published was simply the opinion of individual members, and so far as I am aware, was simply your individual opinion. It is a serious mistake for the League for Good Roads to oppose the wishes of the people who are most deeply interested in the great

work of highway betterment.

As Pope suggested, the petition had been more successful than he expected, but Pope agreed to delay sending the petition to Washington to ensure it would not jeopardize the efforts by Stone and the LAW to secure funding for a road initiative.¹²⁸

The second national convention took place on Tuesday, January 17, in Washington. The next day, *The Washington Post's* report on the meeting was headlined "Our System of Highways" and subheadlined: "It Is the Worst on Earth and Should Be Reformed." The article began:

While the county supervisor may scoff at the gentlemen who gather in a comfortable room at Chamberlin's to discuss scientific methods of road making, at the same time casting sarcastic aspersions upon the time honored system of scraping all the mud up into the center of the road and letting it wash down into the ditches again, there is no doubt that the convention of the National League for Good Roads, which met in this city yesterday morning, will be productive of great good in extending the agitation for good roads throughout the country.

After Senator Manderson called the convention to order, General Stone reported on the progress of the National League:

The general plans of the organization, said he, require the co-operation of the governors of the States and Territories [portions of the country that had not yet achieved statehood] The press of the country is thoroughly enlisted in the movement, while the work of the league has been indorsed by farmers and trade organizations in general, including the chamber of commerce of the State of New York.¹²⁹

Although many speakers presented their ideas, the most influential turned out to be President Benjamin Harrison's Secretary of Agriculture, Jeremiah M. Rusk. He had been nicknamed "Uncle Jerry" and, according to a biography of his successor, "much of the interest that had surrounded him was due to the suggestion of hayseed which attached to his name."¹³⁰

Secretary Rusk assured the delegates that he supported better roads, but not Federal-aid. He believed road improvement to be primarily a local matter. Nevertheless, at the request of Representative Allan Durburow of Illinois, the Department's appropriation bill had been amended to include \$10,000 for the collection and dissemination of information on road laws and the methods of road construction, both of which Rusk considered to be legitimate Federal activities. Historian Mason indicates that Representative Post "credited Albert Pope with the plan for the establishment of the Office of Road Inquiry within the Department of Agriculture."¹³¹ The idea was consistent with Pope's October 1889 proposal.

While the convention was underway, Representative William H. Hatch of Missouri invited the league to testify before the Committee on Agriculture on January 19 regarding the proposed general

inquiry. Stone was among those chosen and the first to testify. He explained that the National League endorsed creation of a National Highway Commission and a road exhibit at the Columbian Exposition. Asked about press reports that the National League favored a Federal road building program, he responded, "The convention voted unanimously against such a program. The only national aid we have suggested was purely educational." His answer reflected the sensitivity of good roads supporters, who did not want to alarm the Nation's farmers and others who might otherwise be their allies. In fact, the only witness to testify against the bill was W. C. Gifford of the National Grange's Committee on Transportation. He questioned the bill's constitutionality as well as the desirability of involving the Federal Government in road affairs.¹³²

On February 1, as part of the Department of Agriculture's annual appropriations act, House the Committee on Agriculture approved the provision to begin a road inquiry with a \$10,000 budget. The Committee did not approve the National Highway Commission or the proposed road exhibit at the World's Columbian Exposition. Although Stone and the National League hoped to revive their own bill, Stone was soon convinced by Representative Post that chances were poor. Stone tried for a bigger appropriation, but again without success. He was told by Charles Johnson, Chief Clerk of the Senate, "Not only is the Senate business great, but the pressure for economy and cutting down even greater."¹³³

On March 3, Stone and his colleagues abandoned hope of modifying the bill. Major Henry E. Alvord of the Association of American Agricultural Colleges and Experiment Stations advised Stone that his Senate allies, including Senator Manderson, "had a conference and decided that it was more discreet to save the app'r'n of \$10nd, as it stood, than to attract attention to it by an amendment, & run the risk of a debate & losing all—hence the inaction." On the House side, Hatch, Post, and others, said "no use to do anything more."¹³⁴

The Congress approved the appropriations act on March 3 and it was signed later that day by President Harrison in one of his last acts before leaving office. The stated purpose of the appropriation was:

To enable the Secretary of Agriculture to make inquiries in regard to the systems of road management throughout the United States, to make investigations in regard to the best method of road-making, to prepare publications on this subject suitable for distribution, and to enable him to assist the agricultural colleges and experiment stations in disseminating information on this subject, ten thousand dollars.

The Stormy Petrel

The following day, President Grover Cleveland began his second term, the only President to serve two non-consecutive terms. During President Cleveland's first term, the Department of Agriculture, which had been established in 1862, was elevated to Cabinet status. On February 15, 1889, therefore, he had appointed the first Secretary of Agriculture, Norman J. Colman, who had been the Commissioner of Agriculture since April 3, 1885. Colman served as Secretary only 3

weeks, his term ending when President Harrison took office.¹³⁵

Now, President Cleveland would appoint the third Secretary of Agriculture. He chose J. Sterling Morton to be the third Secretary of Agriculture. Morton, a New York native, held many important posts during his long career, including Acting Governor of the Nebraska Territory, 1858 to 1861. As part of his effort to improve agriculture in Nebraska, he strongly supported the planting of trees throughout the State and was the founder of Arbor Day. It began in Nebraska in 1870 as a campaign to relieve the State's treeless prairies. "Trees," he said, "are the monuments I would have." But his best explanation of the appeal of Arbor Day was simply: "Other holidays repose upon the past; Arbor Day proposes for the future."¹³⁶

President Cleveland's decision to appoint Morton was risky. Morton had opposed Cleveland and helped defeat his reelection bid 4 years earlier and continued to criticize him during the most recent election. Morton, hearing rumors of the appointment, could not believe it. He thought he would like the position "ever so much," he told a friend, but "I can not ask for it, seek it, beg for it. Honors should come, instead of being dragged to oneself by oneself." Cleveland, citing the country's continuing boom/bust economic problems, appointed his political enemy because, "We cannot afford, in this crisis, when, if ever, such men are needed, to let personal considerations enter into account."¹³⁷

Because of his argumentative nature, Morton became known as the "Stormy Petrel" of the Cabinet, but he and President Cleveland worked well together and gradually became close friends.¹³⁸

Morton, in line with the President's thinking, was a fiscally prudent conservative who opposed all forms of paternalism by the Federal Government. As the official history of the Department of Agriculture explained, Morton was the right man for his times:

When Morton became Secretary of Agriculture in 1893, the economic condition of agriculture and the Nation made it easy for the Secretary to follow his conservative convictions. Agriculture was in a difficult economic situation, while the general economy was heading into the Panic of 1893 and a subsequent depression especially adverse to farmers.¹³⁹

The stock market plunged on May 5, 1893, and nearly collapsed on June 27, pushing the country into a Panic. Brands described the result:

Consumers stopped purchasing, retailers canceled orders, factories shut down, workers drew pink slips, and commodity prices plunged. The iron and steel business was flattened overnight. Big, well-financed corporations retrenched and lived off reserves; smaller firms dissolved. Credit contracted with a suffocating sound. The best bonds went begging; unproven ventures . . . drew derisive laughs from investors fortunate enough to be still liquid.¹⁴⁰

For the new President and the new Secretary of Agriculture, their views on how the country could escape the Panic of 1893 were consistent with their views on the role of government. According to the official history:

Some of the public was demanding a decrease in Government expenditures and a reduction in taxes. These demands coincided with the views of President Cleveland and Secretary Morton, so every effort was made to cut expenditures within the Department.¹⁴¹

Biographer James C. Olson described Secretary Morton's initial steps upon taking office:

The new Secretary probed every division of the department in search of opportunities to economize. He wrote the heads of all the bureaus asking them to furnish a list of employees and functions which could be dispensed with without injury to the public service.¹⁴²

While reducing the number of clerks in the Department and worrying about excessive feeding of horses at agriculture experiment stations, Morton also ordered a blanket reduction in the salaries of women employees; with a few exceptions, women were restricted to a salary of \$1,200 a year or less.¹⁴³ He also prohibited Department employees from using government funds for travel to address organizations around the country; the organizations would have to pay for the speakers. Morton was also a firm opponent of what today would be called "pork barrel projects," such as the free distribution of seeds based on congressional districts. He once called such activities a "gratuity, paid for by money raised from all the people, and bestowed upon a few people."¹⁴⁴

These views on economy affected Secretary Morton's decisions in establishing the road inquiry approved by former President Harrison on his last day in office.

U.S. OFFICE OF ROAD INQUIRY

Rigid Economy, Strict Construction

At the suggestion of Abram W. Harris, Director of the Office of Experiment Stations, Secretary Morton agreed on March 11 to print the proceedings of the National League's Washington meeting and a transcript of its testimony to the House Committee on Agriculture. Harris justified the publication by noting that Secretary Rusk and Assistant Secretary Edwin Willitts' addresses to the National League were included.¹⁴⁵

In June, Stone asked the Secretary for 10,000 copies of the proceedings. On June 29, the Secretary replied that "after due consideration" he increased the order to the Public Printer. Secretary Morton also commented on the March 3 appropriation:

I shall at an early date formulate a plan for carrying on the work assigned to me by the appropriation of Congress "To enable the Secretary of Agriculture to make inquiries in regard

to the systems of road management throughout the United States,” etc. I regard the necessity for road improvement as so obvious as to require no argument; but, as Mr. Thayer of the Iowa State Road Improvement Association expressed it, “The two questions now before the American people, touching the building of good roads are, first, ‘How to build the best road for the least money,’ and second ‘Where is the money to build them to come from?’” The second question I regard as one to be solved by the inhabitants of the several States themselves. In the solution of the first, I trust that the appropriation assigned to this Department as above, will enable me to lend practical aid. So far and no further, in my judgment, can the National Government proceed in this matter.¹⁴⁶

Stone submitted suggestions on July 25 to Secretary Morton on how to proceed. Although that letter is not available, it was apparently part of the process leading to the selection of Stone to head the road inquiry. In a January 1887 speech, Stone would comment on his selection:

The Secretary of Agriculture, finding that this had been brought about by the work of the National League for Good Roads, decided to put the administration of this appropriation into the hands, as far as possible, of that league, and I was accordingly appointed to take charge of it, and that made me, very much to my astonishment, a Government official in the interest of good roads.¹⁴⁷

In a letter to General Stone on October 3, 1893, Secretary Morton established the charter for the U.S. Office of Road Inquiry. The letter reflected Morton's political philosophy of strict construction of the law, rigid economy, and opposition to all forms of government paternalism. After enunciating the ORI's four statutory goals, Morton added:

It will not be profitable to enter upon all these points at first. The work under the appropriation will need to be of gradual growth, conducted at all times economically. Therefore it is not expected that there will be any considerable force of clerical help, and, aside from your salary, no considerable expenditure for the present. It is understood that you have at your command the data for a compilation of the laws of several of the States upon which their road systems are based. It should be your first duty, therefore, to make such collection complete, and prepare a bulletin on that subject.

Morton also made clear what the ORI was to avoid:

There are certain restrictions I wish specifically to bring to your attention. It must be borne in mind that the actual expense in the construction of these highways is to be borne by the localities and States in which they lie. Moreover, it is not the province of this Department to seek to control or influence said action except in so far as advice and wise suggestions shall contribute towards it. This Department is to form no part of any plan, scheme, or organization, or to be a party to it in any way, which has for its object

the concerted effort to secure and furnish labor to unemployed persons, or to convicts. These are matters to be carried on by States, localities, or charities.

The phrase “expense in the” was added to the second sentence via a caret before Secretary Morton signed the letter.

Finally, to avoid any misunderstanding of the limits being placed on General Stone, the letter concluded:

The Department is to furnish information, not to direct and formulate any system of organization, however efficient or desirable it may be. Any such effort on its part, would soon make it subject to hostile criticism. You will publish this letter in the preface to your first bulletin.¹⁴⁸

What must have been clear to General Stone was that the “hostile criticism” might very well be coming from the Stormy Petrel himself.

Special Agent and Engineer for Road Inquiry

The ORI began life in two small attic rooms of the Agriculture Building, with a staff consisting of General Stone and stenographer Robert Grubbs, who later became a surgeon in the U.S. Navy. Maurice O. Eldridge became the third employee in May 1894, serving as an expert draftsman at a salary of \$60 a month. Stone would live at 1226 17th Street in Washington.

In accordance with Secretary Morton's instructions, one of Stone's first acts was to send letters to the Governors of the States and Territories, their Secretaries of State, the Members of Congress, railroad presidents, and State geologists, along with a notice to the general public asking for information on highway laws, the location of materials suitable for roadbuilding, and rail rates for hauling roadbuilding material. His letter to the Governors noted the importance of collecting information from all the States:

So many States and communities are attempting road improvement, and so many others are considering it, that a definite knowledge of what each has proposed or accomplished might be invaluable to many of the others. Such knowledge can be practically reached and disseminated only through a central agency, but that agency will need the assistance of all the State and local officials concerned in order to bring its work within the means allotted by Congress and within a proper limit of time.¹⁴⁹

These letters established the agency's longstanding concept of partnership to achieve its goals. In the early years, partnerships were necessary because of the ORI's limited budget, but in later years, the partnerships would be enhanced because of their effectiveness in achieving the agency's goals.

In a speech to the Virginia Good Roads Convention in Richmond on October 18, 1894, Stone summarized how he saw the ORI's role:

This country is so big that a great deal goes on that we don't all know about. What we are doing in Washington is simply to set up a watch, to keep an eye on the whole country, and report what is going on.¹⁵⁰

To carry out this mission, Stone published dozens of technical and promotional bulletins. The ORI's Bulletin No. 1, completed December 4, 1893, was entitled *State Laws Relating to the Management of Roads. Enacted from 1888-93*. It compiled information received from Stone's letters to the States, Congress, railroad executives, and the public. By the end of June 1894, the ORI had issued nine bulletins, many based on the information received in response to these letters. The titles of the first year's bulletins reveal the scope of the agency's early interests:

- No. 1 *State Laws Relating to the Management of Roads. Enacted from 1888-93. Compiled by Stone.*
- No. 2 *Proceedings of the Minnesota Good Roads Convention, held at St. Paul, Minn., January 25-26, 1894.*
- No. 3 *Improvement of the Road System of Georgia. By O. H. Sheffield, C.E., University of Georgia.*
- No. 4 *Report on Road-Making Materials in Arkansas. By John C. Branner, Arkansas State geologist.*
- No. 5 *Information Regarding Road Materials and Transportation Rates in Certain States West of the Mississippi River.*
- No. 6 *Information Regarding Roads, Road Materials, and Freight Rates in Certain States North of the Ohio River.*
- No. 7 *Information Regarding Roads and Road-Making Materials in Certain Eastern and Southern States.*
- No. 8 *Earth Roads: Hints on Their Construction and Repair. Compiled by Stone.*
- No. 9 *State Aid to Road Building in New Jersey. By Edward Burrough, State Commissioner of Public Roads.*

Stone's annual report for fiscal year (FY) 1894 (ending June 30, 1894) listed the bulletins and mentioned that, "These bulletins have been in such demand that the first editions have in many cases been exhausted, and the second of No. 1 is nearly so."

During the first 9 months of the ORI's existence, expenditures had totaled only \$2,986.78, according to the annual report. Most was for salaries (\$2,177.85) and the rest for "Traveling expenses and sundries." Stone added:

The work of the nine months of the fiscal year was necessarily tentative, but I was successful, by availing myself of voluntary aid, in gathering at small expense (as

prescribed in your letter of instructions) that information published in Bulletins Nos. 1 to 9, and much more that will be available in future.

He thought it would be “profitable” to increase the work of the office along the same lines and “to compile progress maps of all the improved roads in the United States.”¹⁵¹

In later years, Stone and the ORI issued bulletins and circulars on such subjects as wide tires, traction tests, the progress of road construction, traffic on country roads, systems of maintaining country roads, the value of good roads to farmers, brick paving for country roads, the cost of hauling farm products to market, forces that destroy roads, and repair of macadam roads (the highest type of surface for rural roads in the pre-automobile days). The ORI also printed many bulletins containing the proceedings of road conventions and several compilations of Governors' messages on good roads.

The ORI's budget remained small throughout its first decade (\$10,000 for each of its first 3 years and \$8,000 for each of the next 4 years, before returning to \$10,000),¹⁵² and the organization would remain necessarily small. By 1895, the ORI would have only five employees:

<u>Name/Title</u>	<u>Born</u>	<u>Compensation</u>
Roy Stone, Special Agent	New York	\$2,500
Samuel T. Neely, Assistant Engineer	Kentucky	\$1,200
Maurice O. Eldridge, Clerk	Tennessee	\$ 900
Miss Clara K. Bragdon, Clerk	Indiana	\$ 840
Eugene Willard, Assistant Messenger	Michigan	<u>\$ 480</u>
		\$5,920 ¹⁵³

Given the ORI's limited budget, Stone maintained close links with the LAW and the National League for Good Roads. Historian Bruce E. Seely summarized Stone's method of operation:

He relied heavily on the LAW, using his position as secretary of the NLGR to mask his direct political activities. In fact, Stone made little distinction between the work of the ORI and that of the NLGR. While the LAW prepared mailing lists and wrote bulletins for the ORI, paid the salary of an ORI engineer, and met the expenses of office personnel at LAW conventions, Stone extended his franking privilege to the Wheelmen, formed chapters of the NLGR, and frequently consulted LAW leaders Such cooperative promotion, however, offered more than a chance to build public support for good roads. Stone also found that the LAW could pursue activities off-limits to the ORI, especially the advocacy of state legislation.¹⁵⁴

The World's Columbian Exposition

The World's Columbian Exposition finally opened on May 1, 1893. Norman Bolotin and Christine Laing, in their recent history of the exposition, concluded that, compared with other expositions and

world's fairs, before and after, "when it comes to pure scope, grandeur and far-reaching legacies, the World's Columbian Exposition of 1893 outshines them all."

President Cleveland attended opening day on May 1, 1893. Nearly 28 million people followed him into the exposition before it closed at the end of October. The biggest attraction, intended to rival the Eiffel Tower that had been the hit of the 1889 Paris Exposition, was conceived by a man named George Ferris. Mr. Ferris' revolving wheel carried 36 cars, each capable of holding 40 passengers, as it circled to a height of 264 feet off the ground.¹⁵⁵

According to Bolotin and Laing, the Transportation Building was "one of the most interesting buildings of the fair." It included "every vehicle known to man, ranging from a baby carriage to a rail dining car." That included, of course, the bicycle:

Every type and size of this increasingly popular mode of transportation, from a forty-pound roadster to a seventeen-pound racer, embracing tandems, triplets, solid, cushion and pneumatic tires, forgings, bearing cases and balls, and so on, was shown here.¹⁵⁶

The exposition did not, however, contain a road exhibit. On May 12, 1893, Senator Manderson wrote to General Stone to say it was just as well:

I spent a few days at Chicago this week. I am convinced that any money expended there in an Exhibit of roads—bad or improved—would be money wasted. The Exposition is so immense [sic] and there is so much to be seen more interesting and more attractive, to the casual visitor from all over the country, that a good roads Exhibit would be lost and unseen. The Exposition grounds themselves are an object lesson in good roads. When it rains mud is shoe deep when the road builder has not put in his best work.¹⁵⁷

Reaching out to Farmers

Stone was a popular speaker at good roads conventions and other forums. His speeches provide a clear view of his ideas. He referred to the absence of good roads as the "last great stain upon our civilization," a "relic of barbarism," and variations of these phrases. He compared—unfavorably—the Nation's roads to those of other countries, particularly Europe as documented by the Department of State in an 1892 compilation of consular reports.

The European model supported his views on a direct Federal role in road building. In an 1892 article, he had said:

The remedy must be as radical as the disease is deep-seated. Our people have discovered that all over the world roads are among the prime concerns of national government, and they ask themselves what fatal disability has fallen on our own Government in the last half century that makes our statesmen shudder at the mention of national roads or national aid to road making.¹⁵⁸

Although Stone favored construction of a national system of roads, he recognized the steps that must occur before such a system could develop. One of those steps was to generate public support for good roads, especially among farmers.

As these suggestions imply, Stone understood the need to overcome the fear many people, especially farmers, about the cost of good roads. His support for bonds, backed by the Federal Government, to finance road improvements was one way of addressing this concern:

What, then, could the Government do, with such profit to itself, as to enter into a partnership with the states, counties and townships for the building of a complete system of roads? And as an inducement, why should it not help them all to do their share of the work by loaning them its own credit, on proper security, to lighten the burdens they must assume?¹⁵⁹

Realizing that such a plan, or even the plan for a government road inquiry, still faced strong opposition among farmers, he emphasized the cost that farmers paid for their bad roads:

In the State of Illinois the money loss by bad roads to farmers alone is estimated on good authority at \$16,000,000 per annum. This of course is not the whole [bad road] tax, since the people in town bear their full share in loss of trade and increased cost of living, but it will be a safe basis of calculation, and at this rate the total loss for the United States would approximate \$300,000,000 per annum.¹⁶⁰

He would return many times in later years to the theme of the "bad road tax." However, he eventually settled on a higher estimated cost:

The secretary of the National Farmers' Congress has gone at the same problem from another direction. He takes the records of the transportation of the country and analyzes them, and he finds that the total wagon transportation of the country is equivalent to about 500,000 tons annually; this he estimates at \$2 a ton, taking into account that the average haul throughout the country at large is about 8 miles The secretary says the estimate is that 60 per cent of this cost of hauling is due to the bad condition of the roads, and this amounts to \$600,000,000 a year.¹⁶¹

Stone also tried to counter the fears of farmers that the burden of paying for good roads would fall unequally on them. He explained the problem in a 1897 speech to a St. Louis good roads convention:

The \$600,000,000 loss every year, through bad roads, is a tax, not only on the farmer, but on everybody. I find, in my experience, that one of the most difficult things which the promoters of good roads have to do, and especially those who live in the cities, is to prove to the farmers that their interest in good roads in the country is real and a personal one. The farmer has paid the tax of bad roads, and has suffered from it so

long that he finds it difficult to believe that he is to receive aid from people whom he has formerly believed had very little real interest in them.¹⁶²

He addressed the problem in many other speeches, such as one before the Maryland State Grange in 1898:

It is a vicious system that requires localities to keep up the roads. It is a work that concerns the people of the whole State, and is not a local question. Roads are of vital interest to the cities. Blockade your country roads today, and tomorrow your city will begin to scatter. The benefits of roads are equally shared by the cities, but they must assist in the work of construction before they can reap the advantages.

About three-fourths of the property interests of the country are to be found in the cities, and held by the corporations. Now, the farmers, representing about one-fourth of the property interests, have been endeavoring to keep up the roads for the whole country. The result is obvious. The burden was too much, and bad roads are to be found everywhere.¹⁶³

Given the tough economic times of the Panic in the mid-1890's, Stone also emphasized the economic benefits of good roads. In his 1894 speech to the Virginia Good Roads Convention, he said:

In these United States there are plenty of farmers getting rich to-day because they have good roads--making money right in the midst of these hard times.¹⁶⁴

He pursued this theme throughout his tenure. For example, in an address before the State Board of Agriculture in Augusta, Maine, on January 21, 1897, he stated:

Good roads are the highways to wealth. If I could take you with me North, South, East, and West, to where the beginnings of road improvement have been made, I could show you small farming communities growing rich in these hard times, contented and happy, and troubling themselves not at all with the great problems of finance which agitate their brethren. They have no time to waste in talk. If their fields are too wet to work they go on the road.¹⁶⁵

Speaking before the LAW's Good Roads Banquet in Albany, New York, on February 11, 1897, Stone discussed the need for partnership with the farmers, as well as the benefits the farmers would receive if the bad road tax were lifted from them:

And when the wheelmen's league and all the farmers' associations pull together harmoniously in this direction, working only for justice and the public welfare, there is no limit to the power they may exercise and the good they may accomplish. Prosperity

for the whole country will date from the happy hour in which that beneficent combination is established.

That good roads will bring prosperity is no idle dream. Through all the panic and depression of the last three years the farmers in the few good roads districts of the country have gone on making money and improving their farms, and they have not troubled themselves much about politics or finance.¹⁶⁶

In 1898, this same theme was emphasized in ORI Circular No. 31, *Must the Farmer Pay for Good Roads?* It was written by Otto Dorner, Chairman of the LAW's National Highway Improvement Committee, and advocated that just as the burden of bad roads was shared by all, every citizen of the State and Nation should share in the cost of repairing them. Stone, in his annual report for FY 1899, endorsed the idea:

As the bad condition of the county roads affects the town to which the county is tributary as well as the country itself, it would seem that Mr. Dorner favors a happy solution of a most perplexing problem, as well as a measure of justice to all parties concerned.

The circular proved to be the ORI's most popular, in part because the ORI used a mailing list provided by the LAW to mail free copies to 300,000 farmers.

The Cost of Building Good Roads

Another approach was to emphasize that good roads would not be as costly as the farmers and other skeptics expected. Stone's credit partnership plan was one way of spreading the cost and keeping it minimal. Stone also recommended suiting the road to the need, a concept that would be the foundation of road building in all succeeding decades. In 1894, he told the Southern Immigration and Industrial Congress that wide roads were not needed in farming areas. He thought a single track of stone, next to an earth track, was preferable, adding:

One serious hindrance to the extended building of hard roads has been the expense of some of those built and the general overestimate of the cost necessary. An expense of \$5,000 per mile is beyond the possible means of most country districts, but our inquiries have developed many cases where good stone roads are being built for one-fourth of that sum. The stone roads of Canandaigua, N.Y., cost only \$900 per mile. They are not wide roads, but are heavily stoned, and they are so good that when I was there, in the midst of a January thaw, the farmers living on them were hauling 2 tons of hay on a 2-horse wagon, while the neighboring dirt roads were practically impassable.¹⁶⁷

He elaborated on this concept in an article on "Best Roads for Farms and Farming Districts" for the 1894 *Yearbook of the United States Department of Agriculture*. With so few good roads in

agricultural districts, he began, “experience avails but little toward determining what will best serve the needs and suit the means of the average farmer.” The road best suited to the farmers’ needs must not be too costly, but it must be “of the very best kind, for the farmer should be able to do his heavy hauling over it when his fields are too wet to work and his teams are free.” With these criteria, Stone wrote:

The road that would seem to fill the farmer’s needs, all things considered, is a solid, well-bedded stone road, so narrow as to be only a single track, but having an earth track alongside. A fine, dry, smooth dirt track is the perfection of roads; it is easy on the horses’ feet and legs, easy on vehicles, and free from noise and jar.

The dirt road would serve much of the year, but when weather reduced the dirt, the stone road would provide the needed traction.

The usual questions about this approach, he continued, were whether the earth and stone sections could be kept even and how a road of this type could handle the meeting and passing of loaded teams. He cited the experience of Canandaigua, New York, where the two roads remained even, “and those who use them say no difficulty is found in the passing of teams, since practically no two teams ever turn out at exactly the same spot.” He summed up:

The purposes of a wide, hard road are better served by a narrow one, and all the objections to it removed, while the cost is cut down one-half, and the charges for repair nearly three-fourths.

Another option, he suggested, was one used by Judge Caton of Chicago on his Illinois farm. This option would be useful on farms and lesser public roads:

The roadbed is made by plowing two furrows, 16 inches wide and about 12 inches deep, under what are to be the wheel tracks, turning the earth inward, and two more for ditches, also turned inward, which results in a slight raising of the bed; the inner furrows are then filled with field stones or coarse gravel and a light coating of fine gravel spread over the whole This plan gives a very solid bed of material under the wheels and a sufficiency elsewhere¹⁶⁸

Throughout his tenure, Stone provided practical advice on how to build such roads, including a recommendation that contractors be held accountable for their work. A typical summary, from a speech on August 8, 1894, to the Board of Chosen Freeholders of Morris County, New Jersey, explained Stone’s method of building two-track stone and earth roads:

I would plow up the whole surface of the road, and on the side where you want the earth road, remove all the stone and put most of the dirt on that side. Where you want the stone road, remove the dirt and roll it thoroughly and make it hard, laying tile drains if there are wet places. Then drop in 3 or 4 inches of broken stone and then 3 or

4 inches of finer stone, making it finer and finer, and place screenings on the top. The roads should be left in the contractors' hands for nine or ten months after building, so that they can stand the test of a winter and spring; and then he can fix up any bad places in the roads before turning them over to the county.¹⁶⁹

The two-track economical road would be a theme he returned to many times. While testifying in support of the Higbie State-Aid Road Bill before the Committees of Senate and Assembly in Albany, New York, on February 25, 1897, Stone elaborated on the same point:

I wish to disabuse your minds of any false impression regarding the necessary cost of road improvement in this State. You need not be thinking of \$5,000, or \$3,000, or even \$2,000 per mile for country roads. Some of the very best roads in the United States are now being built for \$1,000 per mile, and except in the neighborhood of very large towns or cities that price will be quite sufficient to calculate upon for the State of New York, and if proper State aid is given and wisely applied through your State highway commission the share of this cost to be paid by local property will not be a burden.¹⁷⁰

Another way of reducing costs was to use convict labor, which Stone favored. In the charter of October 3, 1893, Secretary Morton had expressly limited Stone's advocacy of convict labor. Nevertheless, Stone addressed the topic, even issuing an ORI Bulletin he had compiled on *Notes on the Employment of Convicts in Connection with Road Building* (No. 16, 1895). In sending the Bulletin to Secretary Morton for approval, Stone's message of April 1, 1895, explained that, "There is great inquiry for this information"

Stone often offered another method of paying for road improvements, namely the use of postal savings banks, a concept that foreshadowed Social Security in an era when many farmers did not trust banks but had access to post offices. After returning to civilian life, he described the plan in a speech, entitled "Good Roads and How to Get Them," to the National Good Roads Convention in St. Louis, April 27-29, 1903:

Every civilized nation but ours, and some of the half-civilized, give to their rural districts, even the most remote, the benefit of taking care of private savings through postal agencies. We refuse this to ours, ostensibly, because we have no permanent debt in which to invest the deposit; really, perhaps, because the banking interests mistakenly oppose it. Why not open the door of the National Treasury, take in the rural savings, invest the money in road improvement bonds, and get it into circulation and general business? There is money enough hidden away where the banks never get a smell of it to build more roads than we could pay for by taxes in a whole generation. Why not establish these agencies, develop thrift and economy, and add security to rural existence? . . . Can we imagine any truer poetic justice than letting the farmer build his own good roads with his own idle money and still have that money safely at interest for his own benefit?¹⁷¹

Rural Free Delivery

Stone had been an early advocate of Rural Free Delivery (RFD), which played a key role in converting skeptical farmers into good roads boosters.

Prior to RFD, farmers could get their mail only by traveling to the post office in the nearest town. If the roads were too rough for the trip to town, the mail would have to wait. Because this was a problem in many countries, the Universal Postal Union in Vienna, Austria, in 1891 adopted a resolution in support of universal delivery of mail. Postmaster General John Wanamaker thought the idea was impractical in the United States at that time, but asked Congress for an appropriation he could use for an experiment in the concept. With support from the National Grange, other farm groups, and the LAW and other bicycle interests, Congress appropriated \$10,000 in 1893 for an experimental rural mail service.

President Cleveland's Postmaster General, Wilson Bissell, opposed RFD and refused to use the appropriation, even though Congress appropriated \$20,000 for the experiment in 1894 and \$30,000 in 1895. Historian Mason explained that "Bissell remained adamant and refused to conduct the experiment."

His 1895 successor, William Wilson, shared Wanamaker's skepticism, but believed he had a duty to proceed with the experiment in accordance with the legislation. The first experimental routes opened on October 1, 1896, in West Virginia from Charles Town (Wilson's hometown), Halltown, and Uvilla. Within a year, another 44 routes had been established in 29 States.¹⁷²

With the experiment having proven the practicality of RFD, a process was established for designating new routes. Mason explained the process:

The first step in securing rural free delivery was for citizens living along a proposed route to direct a petition to their congressman requesting the establishment of a new route. The congressman would then forward the petition to the fourth assistant postmaster, who was in charge of the program, and a survey of the proposed route would be made. If the post office agent found that at least one hundred persons would be served and that the roads involved were in good condition, a route would be laid out. It was the duty of this agent, furthermore, to impress upon the citizens requesting the mail delivery that the roads and bridges on the route would have to be kept in good condition during every month of the year and that if any part of the route became impassable, the service was likely to be discontinued. In many cases, the agent received written agreements from county and township road boards that the roads would be properly maintained.

As Mason makes clear, the ORI was involved in the RFD program from the start:

The Office of Road Inquiry was deeply interested in the rural free delivery program, and from the inauguration of the service in 1896 the agency worked closely with the

Post Office Department on this phase of its work. Road experts of the federal road office, for example, gave technical assistance to postal officials in establishing criteria for the discontinuation of rural service because of bad roads. In 1897 officials of the road agency presented a plan to the Post Office Department which was designed to combine the rural mail delivery service with the daily care of roads. The plan called for mail carriers to act as road inspectors, and their duties were to include removing boulders from the road, draining water from low spots, and notifying local road officials when extensive road repair was needed. For this work, mail carriers were to receive a small stipend from the county, in addition to their regular salary.¹⁷³

This proposed plan reflected General Stone's continuing effort to explore all options for funding road improvement within a restricted budget as well as his concept of establishing partnerships with as many groups as possible. However, the Post Office Department declined to accept the plan in 1897. (A formal plan of cooperation between the two agencies was approved in 1906 "to promote the efficiency of the rural delivery service and at the same time render effective aid in the improvement of roads."¹⁷⁴)

Helping the States Get Started

General Stone and the ORI also provided information about and support for State road legislation. Eldridge's biographical sketch summarized Stone's role:

He helped to frame and to secure the passage of the New Jersey State Aid Law [and] to frame the Higbie Armstrong State Aid Law for New York, and was largely instrumental in securing the passage of that and other progressive road laws in the various States.

Stone's role can be illustrated by his experience in California. His annual report for FY 1895 summarized the work:

The suggestion made, with the Secretary's sanction, to the governors of various States that the subject be committed to a legislative and expert board, which might cooperate with this office in securing the information necessary to effective legislation, was well received and acted upon by many of the governors By request of [outgoing Governor Markham of California] and the State Road Improvement Association, I attended the meetings of this commission and also of the State Road Convention, and after consultation with the present executive, Governor Budd, a complete system of State aid and supervision was devised and very speedily adopted by the legislature.

On April 11, 1895, the newly formed California Bureau of Highways sent the following letter to Stone:

It is with exceeding great pleasure we inform you that we this day organized the first State Bureau of Highways in the Golden State of California, and our first official act is to send you greetings and thanks, for we feel assured it was through your visit and the interest you created while here that the enclosed bills were passed by our Legislature. We sincerely trust you will favor us with your presence in the near future, in an official capacity, that we may be able to profit by your experience and knowledge in this field of work, and socially, that we may welcome you to our State.¹⁷⁵

Tama Jim Changes the Rules

On March 4, 1897, William McKinley became President of the United States. His Secretary of Agriculture, James Wilson, took office on March 6 and would remain in office until March 5, 1913, serving under Presidents McKinley, Theodore Roosevelt, and William H. Taft. Known as “Tama Jim” from his origins in Tama, Iowa, he had been a Professor of Agriculture and director of the experiment station at Iowa Agriculture College. He also served three terms in the U.S. House of Representatives, where he introduced the first bill to establish a Cabinet-level Department of Agriculture (February 24, 1874). It did not pass.

In many ways, Secretary Wilson was the opposite of Secretary Morton. The Department’s official history summarized his tenure as being characterized by “expansion, the widening of the scope of its activities, and the strengthening of the relationship between the Department and the land-grant colleges.”¹⁷⁶ He also strengthened the scientific element of his Department, a characteristic that would help the ORI as it expanded its activities.

Secretary Wilson, according to the history, had his quirks:

Believing that motion pictures were “of the devil,” he opposed the use of them in the Department, but before he left office he had been converted and motion pictures had been made a part of the work of several bureaus. Another innovation that he frowned on was the automobile. But by 1912 he had approved the purchase of one for use at the Beltsville farm, though with the understanding that it was not to be a precedent for others.¹⁷⁷

General Stone’s successors would take full advantage of motion pictures as an educational tool and of the automobile.

Wilson wanted Stone to emphasize the practical, over the academic, side of the ORI's work. He formalized this request in a letter dated May 29, 1899, which superseded Morton's "strict construction" of the 1893 law:

In order that the provisions of the statutes relating to “Public-road inquiries” may be properly and efficiently executed, you are hereby authorized and directed to supervise, manage, and conduct investigations, inquiries, and experiments relating to the following subjects, viz:

- (1) To make inquiries in regard to the various systems of road management throughout the United States.
- (2) To make investigations, by experiment and otherwise, regarding the best methods of road making and the best kinds of road-making materials to be found in the several States.
- (3) To prepare didactic reports and statements upon the subjects of road making and road management suitable for publication and distribution as bulletins of this Department.
- (4) To assist the agricultural colleges and agricultural experiment stations in disseminating, by object-lesson methods or otherwise, information on the aforementioned subjects.

The necessary expenses attending the execution of these instructions will be provided for upon requisitions and specific letters of authorization.¹⁷⁸

General Stone had been acting on these concepts before Secretary Wilson put them in writing.

Object-Lesson Roads

The object-lesson road program was typical of this new approach—scientific and yet practical. The idea, which Stone borrowed after seeing it used in Massachusetts, was to build short stretches of good roads, partly to educate local engineers and partly to create support for good roads on the theory that "seeing is believing."

The ORI had built an early version of an object-lesson road on the grounds of the International Exposition in Atlanta, Georgia, in the fall of 1895 as part of the Department of Agriculture's exhibit. The exhibit included three parallel roadways, 200 feet long--a dirt road, a sand road, and a macadam road. The roads were used for traction experiments to show which was the best for pulling a load (macadam was eight times better) and to illustrate the advantages of wide tires on wagons over narrow tires.¹⁷⁹ The exhibit's success encouraged Stone to launch the object-lesson program.

The new program required changes in the ORI, as Stone explained in his FY 1897 annual report:

I have reduced the force in the office and made such arrangements as I could for the outside work of object-lesson road building I have been compelled to carry on road building by means of contributions from the various parties interested, viz., the agricultural colleges and experiment stations, the citizens concerned, and the manufacturers of road implements and machinery; the Road Inquiry contributing only a small installment of the expenses, through the payment of freight on machinery and part payment of wages of experts sent in charge of the machines, but keeping full control of the construction in order that the roads may be creditable to the Government when done.¹⁸⁰

Stone hired a practical road building expert, General E. G. Harrison of Asbury Park, New Jersey, for the object-lesson road program. Harrison built the ORI's first object-lesson road in June 1897 at the entrance to the New Jersey Agriculture College and Experiment Station in New Brunswick.

The Federal cost was \$321. Harrison, who led the agency's only object-lesson team until his death in February 1901, followed a pattern with each project. The Federal Highway Administration's Bicentennial history, *America's Highways: 1776-1976* described the pattern:

The team was shipped from place to place by rail on a prearranged schedule, building eight or nine roads per year, each ½ to 1½ miles long. After a sufficient amount of road had been built at each location, a "good roads day" would be arranged, and the farmers of that and the adjacent counties would be invited to attend. Special Agent Harrison would lead the crowd--often as many as 500 persons--along the new construction, lecturing on the fundamentals of drainage, stone surfacing and road maintenance. Harrison would arrange for the lecture to be printed in the local newspaper.¹⁸¹

Object-lesson road construction became one of the ORI's most popular programs, with demand far exceeding the agency's resources. In explaining why, Stone cited the poor condition of roads most of the year:

The lecturer on good roads, therefore, is listened to like one who tells fairy stories or travelers' tales of distant lands; but put down a piece of well-made macadam road as an illustration and let the people try it in all weathers and no lecturer is needed. The road speaks for itself, all doubts disappear, and the only question raised is how fast can it be extended and how soon can the improvement be general.¹⁸²

The Great Road of America

Stone's most visionary idea was an object-lesson road unlike any other--a forerunner in some ways to the Dwight D. Eisenhower System of Interstate and Defense Highways. In an 1895 address to the Tennessee Road Convention, he proposed The Great Road of America. His speech stirred discussion, some of it misrepresenting what he said. To clarify the idea, the *L.A.W. Bulletin and Good Roads* printed his comments on the subject in the issue of November 19, 1897:

A great national highway might be constructed, called perhaps "The Great Road of America," which should first join together the States along the Atlantic seaboard; then strike across the country on a central line, say from Washington to San Francisco, joining there another line which connects the States of the Pacific Coast; this road to be built, not by the general government alone, but by the States, under such arrangements as they may make within their own borders, and by the government through the territories and its own lands and reservations

He discussed the location of the Great Road:

The mere location of such a road would have great historic value and importance. The line along the Atlantic coast would be the old Post Road in the time of the Revolution. The route

across the Alleghanies might be the line that the early settlers of this region followed when Daniel Boone and his comrades came over the mountains to settle these beautiful plains. The line across the Rocky Mountains might be the line of Lewis and Clark and Fremont, and when we struck the Pacific coast we would strike the oldest road in all our history, the Camina [sic] Real, the great Spanish Royal Highway which joined together the Catholic Missions of the Pacific coast. The whole scheme would carry with it something that would inspire the entire Nation.

He took no credit for the idea:

It is not any new scheme; it is not any new idea. It was the idea of Jefferson and Madison and Gallatin and many other great men who helped to start the National Road which led through Pennsylvania, Ohio and Indiana, and reached as far as the Mississippi River.

The road would be self-financing, built not by taxes, but practically out of its own benefits:

I have seen so much of the benefits of good roads, and of the advance in the value of property along their lines, that I see the possibility of building even a great national thoroughfare, costing ten or twenty thousand dollars a mile, and building it ultimately out of its own benefits, by a temporary use of the government or State credit to tide over until those benefits can be realized.

There is no question but that such a road would benefit property to the extent of five miles on either side of it. Suppose that property were to be assessed with a long term of payment, in instalments [sic] running up to ten or fifteen or twenty years, and suppose the property actually adjoining the road were to be assessed two dollars an acre, for instance, and the next half mile back a little less, and the next a little less, and so on, but always giving the party owning the property the privilege of selling out his land at a valuation if he did not choose to pay the assessment, and of buying it back again by paying the interest, if he found he had made a mistake. The government could well afford to make that liberal proposition, and it would result in nearly all the present property owners getting the actual benefit of the increase of the value of their property, and paying the assessment entirely out of such increase of value.

The plan was not perfect, as he understood:

I have merely outlined this, not as a perfect scheme, but as something that has suggested itself to me out of my experience in road building which, I think, with proper study and care, might be applied on a grand scale. Such a scheme would arouse great interest among the whole people of the United States; it would be something worthy of the Nation; something worthy of the beginning of the twentieth century.¹⁸³

General Stone returned to this "worthy" object-lesson in later years, as in the following comments from 1902 after he left office:

It is often easier to do great things than small ones of the same kind, and what the Government undertakes in this regard should be something big enough to excite the imagination and stir the pride and patriotism of the country--something that will put us in respect of roads as far ahead of other nations as we have been behind them heretofore. Let it be a national highway. A continental boulevard--the greatest and best road in the world. The time is ripe for it. The old century went out with the triumphs of war and expansion. Let the new one bring in a triumph of peace and internal development. The country has wealth and credit abundant for the work. Moreover, a revolution is taking place in road locomotion through the automobile, which demands such accommodation in America that we may take our proper lead in its progress--the lead due to American enterprise, ingenuity and mechanical skill

The road should be worthy of its builders and of the age. Broad steel tracks for carriages, automobiles and bicycles, bridge and foot paths, plenty of shade and fountains, plenty of room on the borders for ornamental trees and plants, not set in stiff rows, but artistically grouped or scattered, the whole forming a continuous and practical lesson in forestry, floriculture and landscape as well as in roadbuilding¹⁸⁴

Stone's comments, in addition to proposing an early version of a national highway network, outlined a design that, when others early in the 20th century proposed similar ideas, became known as a "superhighway," the original definition being a roadway that encompassed all types of traffic in separate lanes.

Experimental Road Work

Under Secretary Wilson, the ORI also began experimental road work, which differed from the object-lesson roads in that the ORI paid the full expense. Because hard-surfaced or macadam roads were too expensive for most rural areas, the ORI began experimenting with alternatives.¹⁸⁵ Steel-track roadways were the first alternative considered. The annual report for FY 1898, written by Eldridge in Stone's absence, stated that Secretary Wilson had recommended the idea. Eldridge explained how the concept worked:

This road is composed of inverted channel bars placed in such a position that they become a tramway or trackway. A broken-stone surface has been prepared for the horses to walk upon, and to enable the teamsters to take their wagons on and off the road at will.

Martin Dodge, Ohio's State Highway Commissioner and Stone's successor, was an early advocate of the concept. Dodge supervised construction of the initial 500-foot installation on Brocksville

Road south of Cleveland. Stone, too, supported the concept enthusiastically. After leaving office, he would explain his reasons for supporting the idea in a 1903 speech:

Twenty centuries have seen no advance in the art of road building; we build no better than the ancient Romans or Peruvians. We have invented railroads and perfected them, but it has scarcely occurred to us that the same means of "smoothing the way" is open to use on common roads, and that there is no more reason for running a wagon over stones and dirt than a locomotive. Within the last few years European engineers have awakened to that fact, and successful experiments have been made in steel tracks for wagons in Germany and even in Spain. In this country, with our little appropriation for the government road inquiry, we have tried to experiment in steel, but always with some cheap make-shift of construction that gave no result.¹⁸⁶

One of these experiments had occurred in 1898 while Stone was on leave. Acting ORI Director Martin Dodge, appointed to the temporary post by his Ohio patron, the former Governor and now President McKinley, demonstrated steel track wagon roads on October 10, 1898, at the Trans-Mississippi Exposition in Omaha. On a specially built track, one horse hauled an 11-ton load that would require 20 horses on a normal road. The "load" consisted of exposition goers, including Dodge.¹⁸⁷

This was, however, one of the ORI's last experiments with steel track roads. The ORI's annual report for FY 1899, again prepared by Eldridge, explained why:

These experimental sections of steel road [in Omaha; Ames, Iowa; and St. Anthony Park, Minnesota] clearly demonstrated their usefulness for the Western States and for the other level States which are but sparingly supplied with good stone or gravel. The time was so limited and the means at our disposal so inadequate that we had to prepare a design for these steel roads, using rails of the regular shapes found in the market. Imperfections were naturally found which can be easily remedied if steel again becomes so cheap that the manufacturers can take the matter up and make rails of special shapes, or if sufficient means are appropriated by Congress to perfect the system.

One of the ORI's most expansive research activities was examination of potential road building materials from all parts of the country as a way of helping State and local officials improve the quality of their work. The ORI began collecting specimen road materials in FY 1894. Stone pointed out in his annual report that such a collection could be made "with slight expense" and was already too large for display in his present office. After Stone left the ORI, the program was expanded into a testing program under which anyone in the country could submit samples to be tested for resistance to wear, cementing value, hardness, toughness, and absorptiveness.¹⁸⁸

Education for the Cause

Throughout these years of advocacy, Stone supported education, whether in the form of object-lesson roads or school lessons. In his opening address to the first meeting of the National League for Good Roads in 1892, he had proposed a grass-roots effort, at the school district level, to promote his National Highway Commission bill and the cause of good roads in general:

Nothing is more powerful in this country than votes, except more votes. A million voters asking with one voice for anything that is reasonable, will not be denied by both parties, if by either; and a million in all is only four to a School District. For good roads we should be able to unite two million or three million or four million votes. What School District in the land could not muster its sixteen recruits¹⁸⁹

He continued, in his work with the ORI, to pursue related ideas. His annual report for FY 1896 stated that he had corresponded with the U.S. Commissioner of Education and all the State and county superintendents of schools to encourage them to devote "a sufficient amount of primary education in road construction . . . in the country schools [and to make] some practical application of that instruction . . . in the improvement of highways in the neighborhood of schoolhouses and in the daily care of roads throughout school districts." He had also addressed the National Teachers' Convention at Buffalo, New York, on the same topic in July 1896:

Not only can you preach Good Roads, but you can teach a little road-building in all your schools. No knowledge would be more valuable; it would be taken home from school and discussed in every family. It is a practical concern of everyday life, and will interest parents as well as children, women as well as men; attention will be called to every defect in the location, construction and care of the roads directly about you. You will need no text books, for no high-class technical knowledge is necessary to teach the rudiments of road construction and repair. We can furnish you from Washington with our printed circulars, giving all the information you will need to impart: and if any of your pupils desire to go beyond the stage of primary instruction in this matter it will not be long before the higher schools and especially the agricultural colleges, will be teaching road-building in all its higher departments

Collectively, if your powerful organization will interest itself in this subject, make it one of its active departments in connection with rural schools, put some of your best workers at the head of it, and, finally, co-operate heartily with all the State and local road improvement organizations, the League of American Wheelmen and the work of the general government, you may have the satisfaction of helping to raise country life in America to a level of comfort, happiness and prosperity with that of the old world where good roads prevail.¹⁹⁰

One result of this activity was that the Agricultural College at Kingston, Rhode Island, instituted a course of instruction in practical road-building. The *L.A.W. Bulletin and Good Roads* described the course in December 1897:

The course of instruction is to extend over two years, and has been laid out after consultation with General Stone During the first year, the course will include higher geometry, trigonometry, surveying and other English studies. In the second year, physics, electricity, physiography, geology, mineralogy and steam engineering will be taken. The practical work . . . will include actual work on the roads, handling the shovel, driving horses, running the stone crusher, traction engine and road roller, and all machinery operated by the department.¹⁹¹

An article in the *Providence Journal* described the type of graduate desired:

What is needed is the educated man, who not only knows how to build a costly, ideal road, but one who can economically construct an eight-foot country road--a man who knows both the theoretical and practical end of road construction.¹⁹²

ON DUTY IN THE SPANISH-AMERICAN WAR

Volunteer

In the mid-1890's, Spanish control of Cuba, the Philippines, and Puerto Rico was in jeopardy. A revolution in Cuba beginning in February 1895 concerned the United States because of Florida's proximity to the island. American newspapers, particularly those published by William Randolph Hearst and Joseph Pulitzer, were carrying sensational articles about Spanish atrocities in Cuba to stir up public demands for a war of liberation. (Because one of the most popular features in Pulitzer's *New York World* was a cartoon called "The Yellow Kid," the irresponsible use a sensationalism to sell newspapers during this period became known as "yellow journalism.").

When disorder broke out in Havana, President McKinley dispatched the U.S.S. *Maine* on a "friendly visit" to protect American interests. The *Maine* arrived in the Havana harbor on January 25, 1898, but was destroyed by an explosion on February 15, with 268 American lives lost. The cause of the explosion was unclear, but most people blamed the Spanish military. American newspapers picked up the story and "Remember the Maine!" became the battle cry for American retaliation.¹⁹³

At the end of March, a commission of inquiry established by President McKinley reported its conclusions. Although something external had caused the explosion, the commission had been unable to identify the responsible party. With this report providing circumstantial support for those who thought Spain had caused the explosion, the President asked Congress on April 11 for permission to use American forces to end Spanish rule in Cuba. By April 22, a state of war existed between Spain and the United States.¹⁹⁴

The President asked for 125,000 volunteers for the war. He also needed officers to staff the expanded force. Brands explained the resulting problem:

Partly because there hadn't been a war in so long, partly because the war against Spain promised to be an easy and relatively safe victory, and partly from principled patriotism, would-be Grants and Lees lined up at McKinley's doorstep seeking commissions. His own Civil War experience—he was the last Civil War veteran to hold the presidency—clued McKinley to the troubles political officers could cause. For the most part he deflected the applicants, and he succeeded in keeping the majority of the responsible positions in the hands of professional officers

General Stone requested a leave of absence to serve under General Nelson Miles during the Spanish-American War. On May 28, Senator Henry M. Teller of Colorado informed Stone of efforts on his behalf:

I saw the President a few moments only this morning. There was such a crowd in attendance that it was almost impossible to talk to him, but he suggested that I should make a written application I told the President that General Miles thought highly of you and that you intended to go to Cuba with General Miles with or without a commission. Now if the General will write a good strong letter to accompany my letter I think you will have a fair chance for appointment, provided you can get your Pennsylvania friends and Secretary Wilson to back you.

In a letter dated May 30, 1898, General Miles asked Secretary of War Russell A. Alger to commission Stone:

General Roy Stone . . . who, having volunteered his services, was, at your request, assigned by the Secretary of Agriculture to duty at these [Army] Headquarters, has, in addition to the work expected of him, rendered important and confidential services in the organization and equipment of the Army, and in obtaining information regarding the field of operations. He is untiring and resourceful and his services will continue to be valuable.

General Stone, while willing to serve in any capacity, would be greatly hampered in the field without a military commission entitling him to proper command. In the interests of the service I would recommend that his appointment be made without delay.¹⁹⁵

A short article in the *L.A.W. Bulletin and Good Roads*, June 3, 1898, suggests some of the services General Miles referred to in the letter:

In considering the matter, the *Chicago Record* says that Gen. Stone "reviewed with Gen. Miles the [conditions] to be anticipated in Cuba during the rainy season, when the rough roads there will be rendered impassable, and the ease with which good roads can be constructed by the use of improved machinery. He pointed out with effect the strategic advantages which would have been gained by the union armies during the war if facilities for constructing good roads had been available and if military operations

had not depended in so large measure upon the elements. He recalled several instances where decided progress would have been made had the armies constructed roads instead of waiting in camp for the sun and wind to dry the mud and make the rough country passable. Gen. Stone believes that the roads that he will construct will not only materially aid the movement of the armies, but that they will remain a permanent improvement to be enjoyed by the people of Cuba after peace is restored."¹⁹⁶

Stone was appointed Brigadier General of United States Volunteers on June 8 and accepted the appointment on June 14.

The primary American strategy for Cuba was launched on May 28 when the U.S. Navy blockaded the Spanish squadron in the harbor of Santiago de Cuba. The Fifth Army Corps arrived off the coast of Cuba on June 20. The Corps included the Rough Riders, a volunteer cavalry division (minus their horses) commanded by Colonel Theodore Roosevelt. The Rough Riders led the push toward Santiago de Cuba on July 1, with difficult battles resulting in Spanish defeats at El Caney and San Juan Hill, but also heavier than expected American casualties. On July 3, the Spanish fleet tried to escape the blockade, but all its ships were destroyed. The Spanish garrison at Santiago de Cuba surrendered on July 17.¹⁹⁷ Military operations in Cuba were over.

The battle for Cuba was over before General Stone left the United States.

On Duty in Puerto Rico

General Miles turned his attention to Puerto Rico (often spelled “Porto Rico” in contemporary accounts). The island had been the subject of debate during planning for the war. It was not viewed as being of great importance. Historian G. J. A. O’Toole explained why:

The three factors that made Cuba an object of contention—proximity to the United States, long and bitter resistance to Spanish rule, and large American capital investment—were not present.¹⁹⁸

Still, it had military value as a coaling station, naval base, and supply depot. It also could be a bargaining chip in negotiations with the Spanish. General Miles had argued for an invasion of Puerto Rico before American forces invaded Cuba. He considered Puerto Rico “the gateway to the Spanish possessions in the Western Hemisphere.” Further, he expected to encounter little resistance.¹⁹⁹ He was overruled by the President on June 6. The invasion of Puerto Rico would have to await victory over the Spanish in Cuba.

As an engineer officer on General Miles’ staff, General Stone had begun his assignment in Charleston, South Carolina. He was responsible for gathering a mules and materials for service in Puerto Rico.²⁰⁰

With the fight for Cuba completed on July 17, General Miles wanted to invade Puerto Rico before the rainy season began in August. Therefore, the invasion of Puerto Rico began on July 25 on the southern coast at Guánica, a port west of Ponce, the island's most populous city. After a brief skirmish with a small American advance force, the Spanish abandoned the harbor. A brigade under General George Garretson was landed. A history of the city of Adjuntas described the brigade:

This brigade was composed of the volunteer infantry regiments from the 6th of Massachusetts, 6th of Illinois, and the 19th [Infantry], a total of 2,172 soldiers. It also included 139 soldiers and 10 officials of the Corps of Engineers; 60 soldiers and 6 officials from the Signal Corps; 641 artillery [soldiers] with their cannons and 12 artillery officials; and a squadron of artillery with 100 soldiers. It also included 60 men from the Red Cross, munition carts, engineering equipment, food supplies, etc.²⁰¹

General Stone arrived in Puerto Rico with Garretson's brigade as a member of the Corps of Engineers.

The following day, the Americans under General Garretson defeated Spanish forces at Yauco, 6 miles north of Guánica. This success gave the Americans control of the railroad and highway to Ponce.

On July 27, American forces arrived in the harbor just south of Ponce. Spanish forces at the port immediately yielded authority, and the 500 or so Spanish troops in Ponce agreed to surrender the city the next day. They retreated along the road to San Juan, the Cuban capital on the north side of the island, but historian Ivan Musicant notes that before leaving, they "set fire to rolling stock, knocked down telegraph poles, destroyed the cable station, and planted land mines along the road" as they went.²⁰²

The Americans would quickly restore the rail service. At one point, General Stone gave Spanish sympathizers 2 hours to get a locomotive in working order, under threat of imprisonment. The engines were ready to go in less than 2 hours.²⁰³ While the surrender was being negotiated, General Stone and a small force of soldiers and telegraph specialists took the train from Ponce toward Yauco in search of an arms cache in Tallaboa. Arriving in Tallaboa by train at 9 p.m., they found that the Spanish troops had left for Ponce the day before with the arms. On the morning of July 29, the American flag flew over the Yauco city hall.

The Americans were determined to gain the support of the Puerto Ricans, and to distinguish themselves from the Spanish by proper behavior toward civilians. On July 28, General Miles published a proclamation on the purpose of the war. The war, he said, was being fought "in the cause of liberty, justice, and humanity." The American forces arrived in Puerto Rico "bearing the banner of freedom inspired by a noble purpose to seek the enemies of our country and yours, and to destroy or capture all who are in armed resistance." After the Spanish were defeated, General Miles "hoped a cheerful acceptance of the government of the United States" would occur.²⁰⁴

To encourage that “cheerful acceptance,” General Miles established a policy of making the best impression possible on inhabitants to gain their support. Musicant cites an example of this policy in practice:

When Brigadier General Roy Stone discovered that a soldier had defrauded a restaurant with Confederate money, he wrote, “It seems to me that nothing but a drum-head court martial and a little cold lead will serve, in a case of this kind if the guilty party can be found.” The offender, a member of the 6th Illinois, was subjected to a general court-martial and received a sentence of thirteen months in solitary confinement in a federal penitentiary.²⁰⁵

General Miles’ battle plan called for a four-pronged advance on San Juan. One force would travel the paved—but mined--highway from Ponce to the capital at San Juan. A second force would land 45 miles east of Ponce and move to Cayey to cut off the Spanish retreat and attack from the rear. The third would go from Ponce to Yauco by rail and then to San Germán and Mayagüez by road before turning toward Lares on the way to the town of Arecibo on the northern coast 35 miles west of San Juan. The fourth, including General Garretson’s brigade, was to strike north from Ponce via Adjuntas and Utuado to capture Aricebo.²⁰⁶ At Aricebo, the combined third and fourth prongs would advance to San Juan.

In advance of the fourth prong, General Stone and 75 soldiers of Company C, 2nd Wisconsin Volunteers Regiment, left Ponce for Adjuntas. The Washington newspaper, *The Evening Star*, carried an August 2 dispatch on page 1 under a series of headlines:

MET THE SPANIARDS
GEN. STONE’S FORCE ENCOUNTERED THE ENEMY
THEY REFUSED TO SURRENDER
A FEW REGULARS AND VOLUNTEERS AT UTUADO
NO REPORT OF ANY FIGHTING

The dispatch described General Stone’s “dashing reconnaissance north”:

He went into Adjuntas last night [August 1] with five men and four correspondents, and today he brought [the rest of] his command on along the Utuado road as far as Adjuntas. The road rises west of the Cayey [mountain] range, and is rough, but practicable for cavalry and infantry. If it is found passable at Utuado a light column of troops may be pushed across to the north coast and strike in on San Juan on the left flank.

Gen. Stone met with a most enthusiastic welcome from the natives in the villages and towns through which he passed. Women and children strewed the streets with flowers and as he passed houses and towns they flew home-made American flags.

General Stone began to move his small force north toward Utuado 15 miles beyond Adjuntas. They stopped at the town of Pellejas around 6 in the evening on August 2. A wealthy landowner and

liberal separatist, Don Bastolomé Mayol, offered his home and grounds to the Americans. This was a welcome invitation because many of General Stone's soldiers were fatigued after their experiences on the poor road that ran between cliffs and deep precipices.²⁰⁷

General Stone's men established a telegraph link from Pellejas to his superiors in Ponce. He also sent a communication to the Spanish forces in Utuado asking them to surrender. As knowledge of his location became known, residents of Lares, Utuado, and Adjuntas arrived at Pellejas to join General Stone.²⁰⁸

The August 2 dispatch continued:

Gen. Roy Stone, while reconnoitering northward along the road leading to Arecibo, on the north coast, with a company of the 2d Wisconsin Regiment, encountered opposition at Utuado, where a small force of Spanish regulars and volunteers had been instructed by Captain General Macias to resist to the bitter end.

The Spaniards refused to surrender, and Gen. Stone telephoned [sic] back to Adjuntas that he would push on, aided by a force of natives armed with machetes. Before the messengers left Adjuntas, where twelve men had been left, a Spanish force was reported to be between Gen. Stone and Adjuntas, picketed on the trail between Adjuntas and Utuado, in the heart of the mountain.

As the troops have to move in single file, ten men can stop a regiment. General Stone's messengers rode all night.²⁰⁹

On August 3, General Stone completed the journey to Utuado, where the Spanish defenses quickly fell before General Stone's small force.

In Utuado, the example set by Stone and his troops was vitally important. Although prominent citizens came to his support and formed an auxiliary cavalry to fight with him, the lower classes were fearful. Spanish sympathizers had been spreading rumors about atrocities supposedly committed by the Americans. The Yankees were reportedly massacring people in the south, bombing San Juan and destroying every house.

General Stone's experience with the ORI came into play. The history of Adjuntas explained:

The next day [August 4], General Stone ordered the construction of the road from Utuado to Ponce, for the purpose of facilitating the transportation of carts and weapons that General Guy V. Henry would bring. A French engineer residing in Utuado, Monsier Raul Marix, auxiliary cavalry headed by Salvador Pérez Gerena and Ramón Pérez Olivencia, and legions of local townspeople united with Stone's soldiers, succeeded in completing the provisional road in 8 days.²¹⁰

A detachment of Troop B, 2d Cavalry, consisting of Lieutenant Paine and 15 enlisted men, reported to General Stone as an escort and to help in construction of the wagon road from Adjuntas to Utuado.²¹¹

The road work, which provided jobs for laborers, helped overcome the fear of the Americans. However, the rainy season had begun, undermining the road project.

An August 4 dispatch from Ponce described the desire of Puerto Ricans for annexation by the United States. "Trade connections and political sympathies are mostly American." The dispatch cited another example:

The English and French settlers are strongly pro-American. Gen Roy Stone was entertained by a delighted English planter, who had not spoken his own tongue for twenty years.²¹²

While road construction was underway, General Stone turned his attention to the town of Lares to the west of Utuado. Lares was defended by a provisional company of volunteers, including 187 soldiers, four officers, and a chief. On August 4, General Stone began moving toward Lares to observe the situation and determine if its capture were possible. In *Comevacas y Tiznaos: Partidas Campesinas de 1898 en El Pepino*, Carlos A. López Dzur described the outcome of the effort:

Stone was followed by citizens of Utuado, and curiosity seekers who, in a masochistic gesture, wanted to watch the capture. These were known as the Turkey Party. They spent the 4th through the 7th in making preparations. The taking of Lares by the invaders did not materialize, for the moment, but General Stone advanced to Arecibo and arrived almost at the principal plaza on the 7th of August.²¹³

On the morning of August 6, General Miles ordered General Henry to move his forces from Ponce to Arecibo via Adjuntas and Utuado. General Garretson's brigade would accompany General Henry. The total American force consisted of 3,200 soldiers and officials.²¹⁴

Minor fighting continued on the road between Adjuntas and Utuado. An August 8 dispatch reported that the Puerto Ricans enlisted by General Stone had engaged in a skirmish the night before with a small Spanish force, leaving a Spanish officer dead.²¹⁵

General Henry left Ponce on August 8, traveling only 9 miles before camping at Hacienda Florida, with the 6th of Massachusetts an hour behind the 6th of Illinois ("The heat of the day and wearing new footwear were alleged causes of that late arrival," according to General Henry). Supplies were also delayed. General Henry explained:

The regiment's carts didn't arrive until the next day. The cargo had been reduced to a minimum. Because of the difficult terrain, the carts were pulled by four mules instead of the normal two, and only carried the munitions and food supplies.²¹⁶

On August 9, General Henry marched to Adjuntas with his staff, officially taking the town that General Stone had occupied on August 1 and 2. Henry ordered his troops to advance with the greatest speed possible, but “speed” was not possible now that the rainy season had begun:

The road constructed by Stone was not yet firm because of continuous rains, so Garretson’s men and the Puerto Rican volunteers did not arrive until the 10th, having been forced to leave their carts and carry the cargo on mules.²¹⁷

More ominously, General Henry reported 53 cases of dysentery and 60 of typhoid fever, forcing him to install three hospitals in Utuado. By August 16, disease had rendered half the 6th Massachusetts Volunteers disabled for combat. Two soldiers died from typhoid fever.

With his forces finally united at Adjuntas on August 11, General Henry spent August 12 reorganizing the troops, inspecting equipment, and making repairs. He and some of his forces moved to Utuado on August 13. There, the mission came to an abrupt end when they received the news that President McKinley had signed a peace protocol with Spain on August 12, ending the fighting.²¹⁸ General Miles sent a cable to San Juan to let General Macias know the protocol had been signed. Macias acknowledged receipt of the protocol. General Henry was ordered back to Adjuntas.

Compared with the campaigns in Cuba and the Philippines, the Puerto Rico invasion was a model of efficiency, with few difficulties. The four prongs of General Miles’ attack plan encountered little more than token opposition, coupled with widespread support from the Puerto Rican people. In six engagements, the Americans lost 7 killed and 36 wounded, compared with somewhat heavier Spanish losses.²¹⁹ In histories of the war, however, the Puerto Rican invasion is an afterthought, with the capture of the island accomplished by peace treaty rather than battle.

The remaining action in Puerto Rico was diplomatic. The Spanish lowered their flag in San Juan on October 18, 1898, replaced by the American flag. Under the Spanish-American treaty signed in Paris on December 10, 1898, and ratified on February 6, 1899, Spain ceded Puerto Rico to the United States. Cession was formalized on April 11, 1899.

Aftermath

Stone's military records show that an effort was made by his friends, including the estate of General Wadsworth, to secure a promotion to Major General while he was in service. The Survivors Association of the 150th Regiment of Pennsylvania Volunteers wrote to the President on October 17, 1898, in support:

The Survivors Association . . . have the honor to express the hope that you will find the services of Brigadier General Roy Stone in Porto Rico, in the Spanish War, will warrant his promotion to a major general, and that he may be commissioned as such before his muster-out of the present service Our association thoroughly believes

in the ability and skill of their general, and would much like to see him now advanced to the rank [that] he is worthy of.²²⁰

According to Brand, President McKinley preferred to give such promotions to professional officers, not volunteers—19 of 26 promotions to the rank of Major General went to professional officers.²²¹ As a result, the effort on Stone's behalf was unsuccessful.

During his remaining months in Puerto Rico, General Stone had an opportunity to examine its transportation network and its agricultural practices. He wrote about both in "Agriculture in Puerto Rico," published in the 1898 Yearbook of the U.S. Department of Agriculture. The population, he found, was supported almost entirely by agriculture "after paying a heavy tribute of taxation and another of remittances to absent landlords."

Despite the mountainous topography on many parts of the island, soil conditions were excellent. He reported that "the most wonderful thing in the island is the depth of soil on the faces of the steep mountains and its cultivation to their very peaks." Products included coffee, sugar, and tobacco, plus bananas, lemons, and limes. He quoted a gentleman of Puerto Rico who observed that, "Excellent oranges are found ripening at Utuado early in August." General Stone had undoubtedly seen this for himself while on duty.

The laborers were "mostly white natives in the interior," but many African ex-slaves were found on the south and southeast coasts where they had been employed on sugar plantations. Since the slaves had been freed in 1873, they had "entered on their new condition without any disturbance." Now, with America opening new prospects, he thought that even better things could be expected from the ex-slaves. Wages, he found, were half a peso a day (equal to 25 cents in American money).

Transportation facilities and irrigation were among the island's chief needs. Many land owners had stopped raising vegetables in the interior because "the prices obtained on the coast would not pay the cost of transporting them to the markets, which is greater than that of bringing them from Europe or some other distant country." With irrigation to open areas that did not receive sufficient rain and transportation to reduce the cost of getting produce to market, the island could prosper.

In the absence of "modern implements, methods, and appliances," export of the produce was limited:

It has so few roads that large portions of its products are brought to market on pack animals or on the heads of men and women. It has few railroads, and these consist entirely of some short pieces along the coast. Its harbors are without improvements, and the cost of shipping its products amounts to an export tax.

General Stone, as his experience in road building during the August rains suggested, concluded that electric railroads held greater promise for the island than roads:

It is useless to build roads in the island unless they are thoroughly drained and macadamized. Ordinary wagon roads, especially in hilly districts, where the rain will follow the wagon tracks in the soft soil, are soon washed out of all semblance to roads, and enormous expenses would be required to keep them barely passable for ox carts. Good macadam roads, on the other hand, will cost approximately as much as electric roads, while the latter, with properly paved gutters, will stand without washing for many years, there being no frost to loosen the soil.²²²

Elsewhere, Stone summarized his views on the situation in Puerto Rico:

I can only add to all that I have heretofore said in favor of the good roads movement, a warning and reproof drawn from a country where, except for a few military lines, no roads have ever been built; and where the bulk of the product of a marvelously rich soil is carried to market on the heads of men and women or the backs of diminutive animals. As a result of this neglect, together with other kindred causes, the agricultural population of the island, although industrious and frugal, is so poor as to be almost without shelter, furniture or clothing, and entirely without supplies of food, so that their trifling wages must be paid day by day to enable them to continue this hopeless existence.

General Stone would be discharged on December 31, 1898. His activities in Puerto Rico had two later effects on him. First, as reflected in his Yearbook article, he became interested in the future of Puerto Rico. Eldridge's biographical sketch noted that, "After leaving government service, General Stone was employed by a syndicate to promote trade between the States and a port on the southern coast of Porto Rico called Port America." An obituary also noted this link.

After the war General Stone spent much time in Porto Rico laying plans for the improvement of roads and conducting important engineering work in connection with the establishment of electric railways.²²³

Second, an illness Stone contracted during the Puerto Rico campaign afflicted him the rest of his life and may have caused his death. In an affidavit related to Mrs. Stone's pension, Eldridge summarized the situation:

I hereby certify that I was associated in the Office of Public Roads (then known as the Office of Road Inquiry) with Gen. Roy Stone (Director of that Office) from May 1894, to October 1899, having been his assistant during the greater portion of that time; That from October, 1899, to the time of his death I corresponded with him often and saw him frequently, in Washington and New York; That from the time I first knew him until the time he went to the Spanish-American War he was, to the best of my knowledge and belief, robust and healthy; That when he returned from the Porto Rican campaign he often complained of stomach trouble, from which he never fully recovered, although he was careful of his diet and regular in his habits; and That I am

convinced that he contracted a disease of the stomach in the tropics which ultimately caused his death.²²⁴

Harry N. Price, formerly of the ORI, also submitted an affidavit:

I certify that I was associated with Gen. Roy Stone in the Office of Road Inquiry, department of Agriculture, Washington, D.C., from the fall of 1894 to 1896, and that during that time he was in robust health, strong and active. I saw him frequently from that time until 1898, and he continued to be in good health.

In the summer of 1898, I accompanied him to Porto Rico and while on the way he was in good condition physically. I remained with him several weeks, and shortly after he had reached the tropics he complained frequently of feeling bad, although he continued to perform actively his duties.

Upon his return from the Porto Rican campaign, I saw him in Washington frequently and he was apparently ill. I know he was careful about his diet, for he often advised me regarding my stomach which has never been strong.

I believe General Stone contracted disease in the tropics during the campaign, which resulted in his death.²²⁵

FINAL YEARS

The Beginning Has Just Been Made

Stone returned to the ORI in January 1899. A newsclip reprinted in the *L.A.W. Bulletin and Good Roads* on May 5, 1899, noted his return:

The good roads movement promises to receive further impetus through the resumption of work at the Office of Road Inquiry, Department of Agriculture. Gen. Roy Stone, who is at the head of this bureau, served through the Cuban campaign [sic], and has therefore had ample opportunity to know something of bad roads and to appreciate the merit of good roads. He desires to place himself again in close touch with the great body of workers for road improvements in United States, and invites all such to communicate to him any suggestion bearing upon this subject in its various branches; among others, new road legislation, the use of convict labor in road building, methods of raising road funds, condition of new roads under wear, prospects of road construction the coming year and experiments in steel roads.

During FY 1899, the ORI became the Office of Public Road Inquiries (OPRI) and had six employees:

Name/Title	Born	Compensation
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Roy Stone, Director	New York	\$2,500
Maurice Eldridge, Assistant Director	Tennessee	\$1,400
Carl A. Rowe, Assistant Manager	District of Columbia	\$ 800
Edmund Harrison, Special Agent/Expert	Pennsylvania	\$1,800
Charles Harrison, Special Agent/Expert	Pennsylvania	\$1,800
Charles Johnson, Special Agent	Illinois	\$ 300
		<u>\$8,600</u> ²²⁶

This small force had been busy before and after Stone's return. The annual report, partly written by Eldridge, described the work:

This small force has been kept busy prosecuting inquiries, answering correspondence, and gathering and disseminating important information relating to the various phases on the road subject.

In addition to distributing literature and attending road conventions, the OPRI had been contacted by many State legislatures seeking help in framing new road legislation. Further, special agent Harrison built object-lesson roads in Indiana, Iowa, Kentucky, Maryland, Minnesota, Nebraska, and Wisconsin. The value of the object-lesson road program, the report concluded, had "become so clear that there is a general and very urgent demand for their continuance and extension." To meet the demand, "our force and means should have been at least ten times larger."

At Secretary Wilson's request, Eldridge had written Farmers Bulletin No. 95, *Good Roads for Farmers*. The annual report described the bulletin:

In preparing this bulletin the object sought was to present in the plainest possible manner the fundamental principles of road construction and maintenance and at the same time to make, if possible, an instructive compendium of road literature.

Other publications included a collection of messages from Governors to their State legislatures on the importance of good roads (Circular No. 33). For example, Governor Mount of Indiana had said that, "the farmer whose family is held in the thralldom of mud for a large part of the year is subjected to the ordeal that trammels progress, fetters social growth, and retards intellectual development."

Inquiries covered the spectrum of issues common to the good roads movement during this period:

New road legislation, and especially that for State aid; the use of convict labor in road building or in the preparation of road materials; experiments in steel roads and other new plans; methods of raising road funds; bond issues and rates of interest paid; condition of new roads under wear, especially of the sample roads supervised by this Office; the promoting of rural free delivery of mails by good roads; the progress of organization for road improvement; the prospects of road construction during the year, etc.

In response to General Stone's call for comments, the OPRI had received letters "from many of the best workers for road improvements, and the subject were most interestingly and intelligently treated." Many of them were being prepared for an upcoming circular or bulletin. They clearly favored State aid as the best method for road building. Another inclusion was clear:

So far as we are able to judge from these reports, there is not a community in the United States where good roads have been built that would return to the old "hog in the mud" method The prospects for new road work for the present year are brighter than ever before, and some of the road-machine companies have more orders for machines than they can fill for many months.

Although the annual report was intended to sum up the work of FY 1899, it was equally a summary of a decade of public road inquiries under General Stone:

As a result of these investigations we are firmly convinced that for local needs as well as for our material development and prosperity, a well-regulated system of public roads throughout the whole country is day by day becoming more necessary. While we have the most perfect railway system in the world, our public highways are and always have been inferior to those of any other country in the civilized world. As our public roads are the veins and arteries of our agricultural, commercial, and social life, they are not yet receiving the consideration that their great importance deserves. Much has been done in the United States toward road building during the last few years, but much more needs to be done; indeed the beginning has just been made.

On October 23, 1898, General Stone resigned his post. Martin Dodge assumed the permanent title of Director, which he would hold until 1905, when Congress gave the little office permanent status.

By the time State left office, the OPRI had become the recognized leader of the good roads movement. Historian Seely summarized Stone's accomplishments, as well as the stamp he left on the agency he founded:

In the end, he pioneered three enduring patterns of activity for the ORI: build a reputation for technical knowledge, promote the gospel of good roads, and utilize cooperation to reach those goals. The first fulfilled the office's mandate from Congress, and the second grew from the promotional goals of the Wheelmen, but the third was Stone's hallmark, even if it was necessitated by a small budget.²²⁷

His efforts resulted in one unique tribute. In 1900, Orater Fuller Cook, Jr., who was in charge of seed and plant introduction and of tropical investigation at the Department of Agriculture, renamed the *Oreodoxa*, a species of royal palm, in General Stone's honor: *Roystonea Regia*. A description of the species explained:

This majestic palm tree, one of the largest in the palm family is originally from Central America. Twelve species have been arachived between Southwestern Mexico and the Northern coast of South America. One of these, the Roystonea Regia, is native to Cuba. Its name evokes the memory of General Roy Stone (1835-1905) who exercised his function in this corner of the world. The trunk of this tree is smooth and ringed. It bulges in different areas of its trunk, often near the middle. Its prominent fronds are thick and composed of long, curved leaves.²²⁸

Another description says the smoothly sculpted trunk “looks almost artificial, like a denizen of an idealized Disney landscape.” Roystoneas “provide a sophisticated look throughout the Carribean. In addition, it was imported into Florida during the 1920's and 1930's and “is the species most often encountered.”²²⁹

Post-ORI Activities

While with the ORI, Stone had moved to Mendham, New Jersey, often handling his ORI work from his home there. He campaigned for good roads in that State (at least on one occasion, he was called the "patron saint" of the good roads movement in New Jersey²³⁰), as well as the Nation. From his home in New Jersey after leaving the ORI, Stone became president of the National League. However, with the bicycle craze collapsing, the organization disappeared within a year. His work in Puerto Rico has already been noted. He was also Chief Engineer of the Union Terminal Company in New York City.

Stone retained his interest in steel track roads, evident during his years with the ORI. In 1902, after he discussed the subject during a talk before the Automobile Club of America, the club appointed a committee to explore ways of fully testing the idea. The committee consisted of Stone and Jefferson Seligman of the Automobile Club's Good Roads Committee. After several steel companies declined to get involved, Stone and Seligman approached Charles M. Schwab, President of the United States Steel Corporation. Schwab donated 1 mile of rails to the Automobile Club for an experiment in New York City. The last rail was put in place on Murray Street between Broadway and Church Streets on December 11, 1902.²³¹

Stone considered the experiment a success:

[The tracks] have not varied a hair's breadth in line or level under a heavy traffic, and have so favorably impressed the engineers of the city that they have been ordered for use along the docks, and bids are asked for extensions in streets intended for heavy trucking. No patent is involved in this construction, and such improvements upon it as I have personally devised and patented will be free to the public.

The traction on the plates is found to be so much easier that the same power which will pull one ton on a good stone block pavement will pull nearly four tons on the steel tracks.²³²

He also proposed a steel track for a road across New Jersey. During a November 1902 meeting of the Automobile Club of America, Stone reported on the progress he was making in New York City and suggested providing similar rails across the Jersey Meadows. The Automobile Club again formed a committee, with General Stone one of the members, to secure subscriptions to help with the project. General Stone promptly wrote to Henry I. Budd, New Jersey's Commissioner of Public Roads, to propose the idea. Budd agreed that a good road across the Meadows was needed. He advised that if the Automobile Club would pay for the purchasing and laying of the rails, the State would help with the remaining cost under the standard formula (State: one-third; abutting property owners: one-tenth; and counties: the remainder). When the cost of the steel rails proved to be nearly \$4,000 per mile, the proposal was dropped.²³³

Ultimately, steel tracks were better suited to horse-drawn wagons than motor vehicles, and the idea faded away at the dawn of the automobile age.

Looking Back

In some of Stone's later speeches, he reflected on his years in the good roads movement. In a speech on "Good Roads and How to Get Them" delivered on April 28, 1903, to the National Good Roads Convention in St. Louis, Missouri, Stone looked back--and forward:

Ten years ago three great leaders were fighting their separate battles for good roads in the United States. Colonel Pope in the East, Judge Thayer, of Iowa, in the West, and Isaac B. Potter [of the LAW] all along the line. They had little faith, however, in a national movement; and they had seen too many State conventions fail to materialize. In fact, so forlorn a venture did it seem that, although a goodly number signed my call [for a national convention in October 1892], I dared not ask for a dollar toward the expense of calling or holding the convention, and had, therefore, the high privilege of financing it alone.

My success in assembling that convention was due to the press of the United States; its happy outcome was due to the newspapers of Chicago, which gave columns and pages to its proceedings, in the midst of all the news of the dedication of their great "White City" [as the Columbian Exposition was called because of its imitation marble architecture].

With this grand send-off our National League for Good Roads, organized there, was able to raise \$10,000 for a year's campaign, and that campaign, among other things, brought about the organization of the Office of Public Road Inquiries at Washington [ORI's name in 1903], and all the great work accomplished by it in ten years.

Comparing the conditions of today with those of ten years ago we see the progress of the country most strikingly displayed. But progress in road sentiment is perhaps more marked than in any other line. The convention of 1892 was called by a few private

enthusiasts, with fear and trembling for the result; this convention was called by a multitude of high officials in perfect confidence of the Nation's interest and participation. In 1892 our delegates were self-appointed; here they are appointed by municipalities, States, and public bodies. In that convention we dared not whisper "National aid to road building" save in secret; now we can shout it on all the highways and byways. At that time a majority of the people of the United States had never seen a good road; today, through National object-lessons and good roads trains [a Dodge-era innovation], it is a familiar sight to nearly every one. Then, even State aid was denounced as a dangerous experiment; now it is being generally adopted. In those days to borrow money for good roads was denounced as "robbery of future generations;" today it is accounted a blessing and especially to them.

Since 1892 an entirely new force has appeared in the good roads field and one whose influence can not now be measured or bounded. Already the automobile industry is one of the most active and powerful in the land, and its representatives fully realize that its ultimate success is bound up with that of road improvement, for in France, where the roads are good, it leads all other manufacturing industries in size and profit

How to lift the burden of bad roads without putting a burden of taxation in its place is the question for this body to discuss and determine, and on that question every delegate must carry such light as he can home to his neighbors. And here, I may be pardoned for saying, as regards the estimate of the annual loss by bad roads, which I announced officially some years ago and which has been derided by many wiseacres who are perhaps not to blame for what they don't know, it was the result of a thorough digestion of well-ascertained facts, the boiled down experience of 10,000 intelligent farmers in all parts of the country, honestly applied to the census returns and their official data, and I would not to-day discount it nor abate it one dollar from its enormous total of six hundred millions.

He endorsed Federal-aid, saying "The people are ready for a measure of this kind, and it will give us good fighting ground." He also summarized his reasons for supporting steel track roads, bonds guaranteed by the Federal Government, and the use of postal savings. "The youngest of you here will never see the work half done, and we veterans will scarce see a beginning," he said. Then he concluded:

But whatever may be the fate of my proposition, good roads are coming whether by easy ways or hard. Federal aid is in the air; our young statesmen are eager to promote it, and our oldest no longer have the cold shivers when it is mentioned. It has reached the very top. Within this month, a President of the United States [Theodore Roosevelt] has said what no President has dared to breathe in almost a hundred years--that the Federal Government can and should "cooperate" in the building of common roads. For these brave words every advocate of road improvement in the land, and they are

millions upon millions, will join me in saying, "God bless the fearless man who uttered them."²³⁴

The following day, President Roosevelt delivered a speech on "Good Roads as an Element in National Greatness" in which he cited historic examples "from Rome to Byzantium" of the importance of good roads. If, in the new century, America was to "rise to a place of leadership such as no other nation has yet attained," he said, then "merely from historical analogy, I say, we should have a right to demand that such a nation built good roads."²³⁵

The quest for a direct Federal role had been the great challenge of General Stone's career in the good roads movement. He had demonstrated the cost of bad roads and the value of good roads; he had identified ways of financing the construction of good roads without excessive taxation or burden on farmers; and he had tried to shame the country into committing to the cause by citing the better roads of France and other countries. But of one thing he was as certain in the end as at the beginning. Good roads were coming, and the Federal Government was going to help make them possible. In a 1902 speech, Stone closed by saying:

But whatever form National aid shall take, whether that of direct contribution, a guaranty of bonds, the postal savings plan, a National object-lesson road, or some other form yet to be devised, the day that sees the Government of the United States fully committed to the improvement of the common roads of the country will mark an era in the progress of the Nation and the prosperity and happiness of the whole people.²³⁶

Death of a General

General Roy Stone, 69 years old, died late Saturday night, August 6, 1905, at his home in Mendham, after a brief illness. *The New York Times* described the circumstances of his death:

With his wife and daughter, Lady Monson, at his side Gen. Roy Stone died at the Phoenix House, Mendham, at 1 o'clock this morning. Gen. Stone was taken ill just a week ago today. He had suffered from a complication of diseases. Gen. Stone's condition was not considered alarming until Wednesday, when he began failing rapidly. Yesterday he sank into unconsciousness, from which he never rallied.²³⁷

The Washington Times announced the news in an article dated August 7 and headed "Gen. Roy Stone Has Passed Away." An article that same day in *The Evening Star* was headed "Great Road Builder." The obituaries did not report the cause of death, but Mrs. Stone, in a declaration related to her widow's pension, stated that the cause of death was anemia due in part to "poisoning in Porto Rico."²³⁸

The obituaries emphasized General Stone's service in the Civil War and the Spanish-American War as well as his leadership of the ORI. *The Washington Times* said noted that "it was at Gettysburg that he performed the feat that made his name so conspicuous among the heroes of the war." His

ploy of diverting fire to the regimental flag received notice. “The action saved his regiment but the color guard were slaughtered. At the time Colonel Stone was criticized, but when the real wisdom of the action was realized he was commended.”

Of his good roads activities, the article said:

Gen. Roy Stone was well known in Washington, where he enjoyed the friendship of many persons in official and diplomatic circles. For a number of years he was the head of the Road Inquiry Office of the Department of Agriculture, and did much effective work in organizing that branch of the department and in conducting a vigorous campaign for good roads. He was a fluent and entertaining speaker and was in great demand all over the country.

The article summarized his service in Puerto Rico:

He joined General Miles at Ponce, and took the first train overland after the Spaniards had evacuated. In order to accomplish this, General Stone had to reconstruct an engine, as the Spaniards had destroyed the locomotives Shortly after this, General Stone made a detour through the western end of the island, and for several days was cut off from communication with the army, which led to sensational reports of the loss of his little detachment.

The New York Times described General Stone’s activities at Gettysburg on July 1, 1863, as “one of the most dashing attacks made in the whole war.” Of the Spanish-American War, the article stated that he “made a bloodless reconnaissance that extended nearly all over the island, and with no other force, he captured several cities.”

The article also briefly described his good roads activities.

Gen. Roy Stone was one of the pioneers in the movement for good roads, and it is largely due to his efforts that New Jersey possesses so many fine thoroughfares.

While living in Mendham “he started an agitation for good roads which resulted in the building of macadamized roads throughout [Morris] county.”

Final Resting Place

Stone's remains were shipped to Washington, accompanied by Mrs. Stone, Lord and Lady Monson, and representatives of the New Jersey Division of the Grand Army of the Republic. On August 10, the party arrived at Pennsylvania Station at 8:30 in the morning.²³⁹ A detail of troops escorted the body to the receiving vault at Arlington National Cemetery to await the funeral ceremony. *The Washington Times*, in an account that evening, stated:

Mrs. Stone, accompanied by her son-in-law and daughter, went immediately to the New Willard, where a number of telegrams and messages of condolence were received from the comrades of General Stone and from friends of the family.

They went to the site of General Stone's grave on the hill near the Custis-Lee Mansion (now called Arlington House):

A few minutes before 10 o'clock the firing party clattered down the road, turned into the cemetery and proceeded to the receiving vault. A detail of soldier body-bearers lifted the casket to a waiting caisson, and the little party filed through the cemetery to the family lot of General Stone. Brief services were conducted by the Rev. Dr. Fall, who read the Episcopal service.

When the first sad notes of "Taps" came from the bugle, the body was slowly lifted from the caisson and gently lowered into the waiting grave. The firing squad lined up and a volley was fired over the grave, the last earthly rite to be accorded one of America's bravest and best known soldiers

Among the many handsome floral offerings which were banked up on the grave was a beautiful wreath from President and Mrs. Roosevelt. The wreath was sent from the White House conservatory, and was placed on General Stone's casket. At the conclusion of the burial service the wreath was placed in the grave.²⁴⁰

Good Roads Magazine put it this way:

General Stone died at the Phoenix House, Mendham, N.J., August 6, after a short illness. Such is the brief statement of the transition from life to life of a man of exceptional vigor of mind and strength of character.²⁴¹

Mrs. Stone's Pension

In April 1877, Stone had applied to the Pension Office, Department of the Interior, for a pension based on disability related to injuries sustained during the Battle of Gettysburg. He was granted a pension of \$22.50 a month.

He forfeited the pension when he returned to service for the Spanish-American War. After again leaving the service, he applied for restoration of the pension. On the form, he explained that the original pension was "the result of a wound in the hip and abdomen received at the Gettysburg battle, the shock of which permanently weakened the stomach and bowell [sic]." The pension was reinstated, but following his death, the pension was again stopped.

In January 1906, Mrs. Stone, 59 years old, petitioned for a widow's pension. In an affidavit, she explained her financial situation:

Deponent . . . says that she is wholly without any annual income or regular and settled means of support and is now living with assistance given her by her only child, who is a married woman residing in England; and with the kindness and hospitality of more distant relatives and of friends not related to or connected with her by marriage; and that deponent is in immediate and pressing need of funds for her ordinary living expenses.

The previously mentioned affidavits, by Eldridge and Price, were in support of this request.

In a later statement, Mrs. Stone said:

I do not own any real estate or personal property of any kind whatsoever except my clothing and articles of personal and domestic use I have absolutely no source of income whatever but am dependent for my support upon such voluntary contributions as may be made to me from time to time by my friends and relatives.

The Pension Office approved the request later that year, increasing the pension to \$50 a month in accordance with a Special Act dated June 29, 1906.

Mrs. Stone survived until October 1925. She died, at the age of 80, while on a visit in England with her daughter and son-in-law. Mrs. Stone's remains were returned to the United States for burial at Arlington National Cemetery.

Stone Avenue

At Gettysburg National Military Park, the sign for Stone Avenue was lost years ago. In 1993, as part of the FHWA's Centennial celebration, Federal Highway Administrator Rodney E. Slater decided to do something about it. At the time, the FHWA's Federal Lands Highway Office was administering a series of contracts for the National Park Service to reconstruct the road network at the National Park. While this work was underway, Slater visited the park on the 130th anniversary of President Abraham Lincoln's Gettysburg Address to dedicate a new sign in honor of his predecessor on November 19, 1993. During the ceremony, Slater said:

General Stone was one of the many brave men President Lincoln spoke of in his Gettysburg Address when he said, "The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here."

With reconstruction underway, the sign dedicated that day was only temporary. Today, Stone Avenue has been permanently marked in honor of General Roy Stone, Civil War hero and good roads advocate.

1. Obituary, *The New York Times*, August 7, 1905.
2. Glover, Edwin A., *Bucktailed Wildcats: A Regiment of Civil War Volunteers*, Thomas Yseloff, 1960, p. 86-87, 104.
3. Pension records.
4. Writer's Note: I am not an expert on the Civil War. I have, however, tried to convey in this section a sense of Roy Stone's military experience—I hope accurately. I would appreciate receiving corrections that I can incorporate in a revised edition: Richard.weingroff@fhwa.dot.gov. RW.
5. McPherson, James M., *Battle Cry of Freedom: The Civil War Era*, Oxford University Press, 1988, p. 274-275.
6. Thomson, O.R. Howard, and Rauch, William H., *History of the "Bucktails": Kane Rifle Regiment of the Pennsylvania Reserve Corps*, Electric Printing Company, 1906, p. 21.
7. Glover, p. 24.
8. Dougherty, James J., *Stone's Brigade and the Fight for the McPherson Farm*, Combined Publishing, 2001, p. 11.
9. Glover, p. 18.
10. Thomson/Rauch, p. 31.
11. Thomson/Rauch, p. 42-43.
12. Glover, p. 112.
13. Glover, p. 65.
14. Dougherty, p. 11
15. Glover, p. 86-88.
16. Thomson/Rauch, p. 113-114.
17. Thomson/Rauch, p. 114.
18. Thomson/Rauch, p. 115.
19. Thomson/Rauch, p.115.
20. Thomson/Rauch, p. 118.

21. Thomson/Rauch, p. 120.
22. Thomson/Rauch, p. 130.
23. Glover, p. 105.
24. Thomson/Rauch, p. 131.
25. Thomson/Rauch, p. 132-133.
26. Glover, p. 109.
27. Glover, p. 107.
28. *Pennsylvania at Gettysburg*, Volume 1, 1904, p. 759.
29. Dougherty, p. 12.
30. Matthews, Richard E., *The 149th Pennsylvania Volunteer Infantry Unit in the Civil War*, McFarland and Company, 1994, p. 3.
31. Matthews, p. 3-4, and quoted in full on p. 14.
32. Dougherty, p. 13.
33. Dougherty, p. 15.
34. Matthews, p. 22.
35. Matthews, p. 24-25, Dougherty, p. 16.
36. McPherson, p. 557.
- 36.
37. Matthews, p. 34.
38. Dougherty, p. 14.
39. Chamberlin, Lt.-Colonel Thomas, *History of the One Hundred and Fiftieth Regiment Pennsylvania Volunteers, Second Regiment, Bucktail Brigade*, F. McManus, Jr. & Company, 1905, p. 46.
40. Dougherty, p. 17-19.
41. Glover, p. 136.
42. Glover, p. 110.

43. Matthews, p. 41.
44. Chamberlin, p. 64.
45. Chamberlin, p. 69.
46. Military records.
47. Chamberlin, p. 79.
48. McPherson, p. 645.
49. Dougherty, p. 21.
50. Doubleday, Abner, *Chancellorsville and Gettysburg*, Campaigns of the Civil War Series, Jack Brussel Publisher, p. 55.
51. Matthews, p. 59-60.
52. Chamberlin, p. 94-95.
53. Doubleday, p. 55-56.
54. Dougherty, p. 22.
55. Chamberlin, p. 98.
56. Sauers, Richard A., *Advance the Colors! Pennsylvania Civil War Battle Flags*, Capitol Preservation Committee, 1987, p. 113.
57. Chamberlin, p. 249.
58. Sauers, p. 114. In 1905, the War Department returned the flag to Pennsylvania and it is now preserved in the State Capitol along with other Bucktails banners.
59. Dougherty, p. 37. He cited research by Tim Smith, Licensed Battlefield Guide at Gettysburg National Military Park.
60. Chamberlin, p. 117-118.
61. Hartwig, D. Scott, "The Defense of McPherson's Ridge," *Gettysburg: Historical Articles of Lasting Interest*, July 1989, p. 16.
62. Chamberlin, p. 118.
63. Dougherty, p. 37.

64. Hartwig, p. 16.
65. Dougherty, p. 31.
66. Hartwig, p. 16.
67. Hartwig, p. 17.
68. Stone, Col. Roy, Undated Report to General Doubleday, *The War of the Rebellion: A Compilation of the Official Records*, Series I, Volume XXVII, Part I, Government Printing Office, 1889, p. 329.
69. Hartwig, p. 19.
70. Stone, p. 329.
71. Hartwig, p. 20.
72. Stone, p. 330.
73. Hartwig, p. 21.
74. Stone, p. 330.
75. Dougherty, p. 58.
76. Matthews, p. 87.
77. Chamberlin, p. 124.
78. Basler, J. H., "The Color Episode of the One Hundred and Forty-Ninth Regiment Pennsylvania Volunteers in the First Day's Fight at Gettysburg, July 1st, 1863," Paper Read Before the Lebanon County Historical Society, October 18th, 1907, p. 21.
79. Matthews, p. 147-148.
80. Basler, p. 20.
81. Dougherty, p. 119.
82. Hartwig, p. 24.
83. Stone, p. 330-331.
84. Chamberlin, p. 155.
85. Military records.

86. Matthews, p. 122.
87. Matthews, p. 134.
88. Mertz, Gregory A., "The General's Tour of the Battle of the Wilderness," *Blue and Gray Magazine*, April 1995, p. 60-61.
89. Scott, Robert Garth, *Into the Wilderness with the Army of the Potomac*, Indiana University Press, 1988, p. 61.
90. Matthews, p. 135.
91. Matthews, p. 137.
92. Matthews, p. 138.
93. Matthews, p. 141.
94. Steere, Edward, *The Wilderness Campaign*, The Stackpole Company, 1960, p. 241-242.
95. Matthews, p. 143-144, 172.
96. Matthews, p. 228.
97. Steere, p. 242.
98. Military records.
99. Military records.
100. Matthews, p. 223.
101. Matthews, "Epilogue," p. 223-229.
102. Hawthorne, Frederick W., *Gettysburg: Stories of Men and Monuments as Told by Battlefield Guides*, Association of Licensed Battlefield Guides, 1988, p. 82-83.
103. Ingram, J. S., *The Centennial Exposition, Described and Illustrated*, Hubbard Bros., 1876, p. 692-693.
104. Writers Program of the Work Projects Administration, *A Maritime History of New York*, Doubleday, Doran and Company, 1941, p. 215.
105. Eldridge, M. O., "General Roy Stone (Biographical Sketch)", p. 3 ("General Stone was the inventor of a cart for spreading rock, a stone boat for moving stone from quarry to crusher, a suction dredge for harbor work, an automobile buss [sic], and various other labor saving devices.")

106. "Great Road Builder," *The Evening Star*, August 7, 1905.
107. Goddard, Stephen B., *Colonel Albert Pope and His American Dream Machines: The Life and Times of a Bicycle Tycoon Turned Automotive Pioneer*, McFarland and Company, 2000, p. 63.
108. Goddard, p. 68-70.
109. For details of the craze, see especially Smith, Robert A., *A Social History of the Bicycle: Its Early Life and Times in America*, American Heritage Press, 1972; also Kelly, Fred C., "The Great Bicycle Craze," *American Heritage*, December 1956.
110. Mason, Philip P., *The League of American Wheelmen and the Good-Roads Movement, 1880-1905*, Ph.D. dissertation, University of Michigan, 1957, p. 36.
111. Mason, p. 51.
112. Mason, p. 90.
113. Mason, p. 125.
114. Brands, H. W., *The Reckless Decade: America in the 1890's*, St. Martin's Press, 1995, p. 2-5.
115. Brands, p. 1.
116. Mason, p. 126.
117. Mason, p. 127-128. On April 28, 1990, President Benjamin Harrison signed a Joint Resolution of Congress designating Chicago as the host city. See Bolotin, Norman, and Laing, Christine, *The World's Columbian Exposition*, The Preservation Press, National Trust for Historic Preservation, 1992, p. 3.
118. Mason, p. 128-129
119. Mason, p. 129-132.
120. Mason, p. 132-135.
121. Bolotin/Laing, p. 23-26.
122. Mason, p. 137.
123. *National League for Good Roads*, Vol. I, No. I, November 1892, p. 7.
124. *National League*, p. 12.
125. *National League*, p. 14-15.

126. Stone, Roy, "The Necessity of Congressional Action in Road Improvement," speech published in ORI Bulletin No. 25, 1902, p. 23.

127. Mason, P. 138.

128. Colonel Pope submitted the petition, which contained 150,000 signatures, in December 1893. By then, the petitions had been taped together and wound onto two large wooden spools with a rolling mechanism. The entire structure, which measured 67x40x39 inches, was one of the largest petitions ever submitted to the Federal Government. In February 1989, the National Archives included the petition in an exhibit called "American Voices: 200 Years of Speaking Out," which ran through February 1990.

129. *The Washington Post*, January 18, 1893, p. 6.

130. Olson, James C., *J. Sterling Morton*, University of Nebraska Press, 1942, p. 353.

131. Mason, p. 142-143.

132. Mason, p. 145-146.

133. Mason, p. 147.

134. Alvord, Henry E., message to Stone in Washington National Record Center, General Correspondence 1893-1916, Record Group 30, Box 31.

135. Agriculture, U.S. Department of, *Century of Service: The First 100 Years of the United States Department of Agriculture*, 1963, p. 27-30.

136. Olson, p. 165-166 ("Trees are the monuments . . .") and 424 ("Other holidays repose . . .").

137. Olson, p. 352.

138. Olson, p. 352.

139. *Century of Service*, p. 33-34.

140. Brands, p. 63.

141. *Century of Service*, p. 34.

142. Olson, p. 356.

143. *Century of Service*, p. 34.

144. Olson, p. 362.

145. *Proceedings of a Convention of the National League for Good Roads held at Washington, D.C., January 17 and 18, 1893 and Hearing by the Committee on Agriculture of the House of Representatives, January 19, 1893*, Office of Experiment Stations, U.S. Department of Agriculture, Bulletin No. 14.
146. Washington National Record Center, General Correspondence 1893-1916, Record Group 30, Box 66.
147. Stone, Roy, "Address Delivered Before the State Board of Agriculture, Augusta, Me., January 21, 1897," *Addresses on Road Improvement in Maine, New York, North Carolina, and Illinois*, ORI Circular No. 28., p. 2.
148. Stone, Roy, *Report of Special Agent and Engineer for Road Inquiry for 1893, Report of the Secretary of Agriculture*, p. 585-586.
149. Report, p. 586-587.
150. *Proceedings of the Virginia Good Roads Convention held in Richmond, Virginia, October 18, 1894*, ORI Bulletin No. 11, 1895, p. 16.
151. Stone, Roy, *Report of the Special Agent and Engineer for Road Inquiry*, Report of the Secretary of Agriculture, 1894, p. 217-218.
152. *America's Highways 1776-1976*, Federal Highway Administration, p. 200.
153. *Register of Civil Employees*, 1895, Department of Agriculture, p. S-16.
154. Seely, Bruce E., *Building the American Highway System: Engineers as Policy Makers*, Temple University Press, 1987, page 15.
155. Bolotin/Laing, p. 23.
156. Bolotin/Laing, p. 95-96.
157. Washington National Record Center, General Correspondence 1893-1916, Record Group 30, Box 31.
158. *Good Roads*, September 1892, p. 139.
159. Stone, Roy, "National Aid in Road Building: A Growing Public Opinion in its Favor," *Proceedings of the First Annual Meeting of the Missouri State Roads Improvement Association and Road Improvement Convention*, January 19-20, 1893, E. W. Stephens, Publisher and Binder, 1893, p. 23.
160. "National Aid in Road Building," p. 140.

161. Stone, Roy, *Proceedings of the National Road Conference held at the Westminster Church, Asbury Park, N. J., July 5 and 6, 1894*, ORI Bulletin No. 10, p. 8-9.
162. "Good Combination Roads," *L.A.W. Bulletin and Good Roads*, December 24, 1897, p. 725.
163. "Why State Aid is Necessary," *L.A.W. Bulletin and Good Roads*, January 28, 1898, p. 89.
164. ORI Bulletin No. 11, p. 15.
165. Stone, Roy, ORI Circular No. 28, p. 8.
166. ORI Circular No. 28, p. 17.
167. Stone, Roy, *Addresses on Road Improvement*, ORI Circular No. 14, 1894, p. 4.
168. Stone, Roy, "Best Roads for Farms and Farming Districts," *Yearbook of the United States Department of Agriculture*, 1894, p. 501-504.
169. ORI Circular No. 14, p. 8.
170. ORI Circular No. 28, p. 14.
171. Stone, Roy, "Good Roads and How to Get Them," *Proceedings of the National Good Roads Convention Held at St. Louis, MO., April 27 to 29, 1903*, ORI Bulletin No. 26, U.S. Department of Agriculture, p. 46.
172. Mason, p. 201-202.
173. Mason, p. 203-204.
174. Mason, p. 205.
175. Washington National Record Center, Record Group 30, 28 Legislation 1890-1906, Box No. 11.
176. *Century of Service*, p. 39.
177. *Century of Service*, p. 41.
178. Dodge, Martin, *Report of the Director of the Office of Public Road Inquiries, Report of the Secretary of Agriculture* for fiscal year ending June 30, 1900, p. 280.
179. Mason, p. 160.
180. Stone, Roy, *Report of Special Agent and Engineer for Road Inquiry for 1897, Report of the Secretary of Agriculture*.

181. *America's Highways*, p. 45. See also, Rose, Albert C., *Historic American Roads: From Frontier Trails to Superhighways*, Crown Publishers, Inc., 1976, p. 79.
182. Stone, Roy, "Object-Lesson Roads," *Yearbook of the United States Department of Agriculture*, 1897.
183. "The Great Road of America," *L.A.W. Bulletin and Good Roads*, November 19, 1897, p. 605.
184. Stone, Roy, "Work for the Twentieth Century," *Good Roads Magazine*, November 1902, p. 8.
185. Mason, p. 163.
186. Stone, Roy, "The Grand Problem and Its Solution," *Good Roads Magazine*, June 1903, p. 233.
187. *America's Highways*, p. 47 and 67.
188. Mason, p. 166. The initial testing was done by the Department of Agriculture's Bureau of Chemistry. In 1905, the bureau was combined with the Office of Public Road Inquiries, as the ORI had been renamed, and the new agency was called the Office of Public Roads. Samples were tested free of charge until 1924, when the practice was discontinued.
189. *National League*, p. 9.
190. Stone, Roy, "Road-Building to be Taught in the Common Country Schools," *L.A.W. Bulletin and Good Roads*, August 14, 1896, p. 242-243.
191. "A Course of Instruction in Road-Building," *L.A.W. Bulletin and Good Roads*, December 17, 1897, p. 701
192. Quoted in "A Course of Instruction in Road-Building."
193. A 1976 U.S. Navy study by Rear Admiral Hyman G. Rickover blamed the explosion of the *Maine* on spontaneous combustion in the ship's coal bunkers. O'Toole, G. J. A., *The Spanish War: An American Epic 1898*, W. W. Norton & Company, 1986, p. 400.
194. O'Toole, p. 11-12.
195. Military records.
196. "Military Roads for Cuba," *L.A.W. Bulletin and Good Roads*, June 3, 1898, p. 596.
197. O'Toole, p. 13, 353.
198. O'Toole, p. 353.

199. O'Toole, p. 353.
200. "Gen. Roy Stone Has Passed Away," *The Washington Times*, August 7, 1905.
201. *Historia de Adjuntas* online at <http://members.tripod.com/adjuntas1/guerra3.html>. The FHWA's Christopher Douwes and Carlos Gonzalez provided the English translation..
202. Musicant, Ivan, *The Spanish-American War and the Dawn of the American Century*, A Marian Wood Book, Henry Holt and Company, 1998, p. 532.
203. "Gen. Roy Stone Has Passed Away," *The Washington Times*, August 7, 1905.
204. Musicant, p. 532-533.
205. Musicant, p. 539.
206. O'Toole, p. 356.
207. *Historia de Adjuntas*.
208. *Historia de Adjuntas*.
209. *The Evening Star*, August 3 dispatch published August 4, 1898.
210. *Historia de Adjuntas*.
211. Official Report of Captain Hoppin, 2d Cavalry, *Journal of the Military Service Institution of the United States*, 34 (1904), p. 309-310.
212. "Desire Annexation," August 4 dispatch published in *The Evening Star*, August 6, 1898.
213. López Dzur, Carlos, *Comevacas y Tiznaos: Partidas Campesinas de 1898 en El Pepino*. (Translation by Christopher Douwes.)
214. *Historia de Adjuntas*.
215. "The Move on Arecibo," August 8 dispatch published in *The Evening Star*, August 9, 1898.
216. *Historia de Adjuntas*.
217. *Historia de Adjuntas*.
218. O'Toole, p. 371.
219. Musicant, p. 539.

220. Military records.
221. Brands, p. 318.
222. Stone, Roy, "Agriculture in Puerto Rico," *Yearbook of the U.S. Department of Agriculture*, 1898, p. 505-514.
223. *The Washington Times*, August 7, 1905.
224. Eldridge, M. O., affidavit, March 3, 1906, pension records.
225. Price, Harry N., affidavit, March 7, 1906, pension records.
226. *Register of Civil Employees*, 1899, Department of Agriculture, p. 1066.
227. Seely, p. 13.
228. Description found at <http://www.st-barths.com/flowers/treepalm.html>.
229. "Roystonea Regia," http://www.floridata.com/ref/r/roys_spp.cfm
230. "Roy Stone," *Good Roads Magazine*, September 1905, p. 622.
231. "Laying Experimental Steel Rails for Wagons," *Good Roads Magazine*, December 1902, p. 1-2.
232. Stone, Roy, "Good Roads and How to Get Them," OPRI Bulletin No. 26, p. 47-48.
233. "Plan to Unify Good Roads Systems," *Good Roads Magazine*, December 1902, p. 12.
234. OPRI Bulletin No. 26, p. 46-49.
235. Roosevelt, President Theodore, "Good Roads as an Element in National Greatness," OPRI Bulletin No. 26, p. 79-80.
236. Stone, Roy, "The Necessity of Congressional Action in Road Improvement," *Proceedings of the Jefferson Memorial and Interstate Good Roads Convention*," OPRI Bulletin No. 25, p. 27.
237. "Gen Roy Stone Dead After Brief Illness," *The New York Times*, August 7, 1905.
238. All information on General Stone's pension and Mrs. Stone's widow's pension is from their pension records.
239. Washington's Union Station, designed by Daniel H. Burnham, had not yet been built. It opened in 1907.

240. The grave is in Section 2, Lot 953, on the hill near Arlington House overlooking the cemetery.

241. "Roy Stone, Brigadier General, U.S.A.," *Good Roads Magazine* September 1905, p. 622.