

# The Development of The Overseas Highway

By Alice Hopkins



As early as the 1850s, there was talk of a railroad to Key West. South Florida's first representative to Congress, Senator Stephen R. Mallory, tried to gain support for the project, stressing the strategic location of Key West as "America's Gibraltar."<sup>2</sup> This was an idea whose time did not come until Henry Morrison Flagler, patron millionaire of Florida arrived on the scene. By 1896, his Florida East Coast Railway had reached Miami. Flagler, more than anyone else, was responsible for the development of the east coast of Florida as a vacation paradise. He was not content, however, with quiet contemplation of his past achievements. In 1902, at the age of 72, he commissioned preliminary

surveys south of Miami with the ultimate objective of extending his railroad to the most southern point in the United States — Key West. One route under consideration went from Homestead across the Everglades to Cape Sable on the southwest tip of the Florida mainland, then across 33 miles of open water to Big Pine Key and on to Key West.<sup>3</sup> After careful consideration and following the advice of his engineers, Mr. Flagler decided to build the railroad to take advantage of the entire stretch of the 30 islands from Key

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Largo to Key West. He reportedly sought reassurance that the job could be done from his vice president, Joseph Parrott. Upon receiving an affirmative reply, Flagler gave the famous order, "Very well, then go ahead. Go to Key West."<sup>4</sup>

Why would anyone, even one with seemingly unlimited funds, desire to build a railroad across thirty islands and over seventy-five miles of open water? What motivated Flagler to sponsor such a gigantic undertaking? There are many reasons offered. Key West was a thriving metropolis. Until 1890, it was the most populated city in Florida. It had the deepest harbor south of Norfolk, Virginia.<sup>5</sup> The Spanish American War had intensified interest in Cuba and the Caribbean with attention focused on Key West and its strategic location as "America's Gibraltar." Perhaps the most practical reason from an economic point of view was the building of the Panama Canal in 1903. American interest in the Caribbean greatly increased and Key West would be a natural base for protecting the eastern side of the Canal.<sup>6</sup> Finally, credit must be given to Flagler's flair for "doing great things." Perhaps he saw the eventual completion of this unique railroad as a "grand climax to all his other developments."<sup>7</sup> Whatever the motivating force was behind Flagler's decision, he never wavered in his dedication to finish the railroad through to Key West.

Construction spanned a period of seven years (1905-1912). Material was shipped in from all over: cement from Germany, steel from Pittsburgh, lumber from northern Florida and Georgia, and gravel from Cuba.<sup>8</sup> Six thousand men came to work on the railroad from all parts of the world. According to E. H. Sheeran, general superintendent, a large percentage of them came from New York City's "Skid Row." The men were paid \$1 for a ten hour day.<sup>9</sup> Besides handling thousands of tons of steel and concrete, they also dug 20,000,000 cubic yards of rock, sand, and marl for embankments.<sup>10</sup> All of this grueling labor was mostly done without benefit of modern machines or horsepower of any kind.

"Except for the very early days, not a horse or a mule or a wagon or a motor car was employed in the construction between the mainland of Florida and Key West."<sup>11</sup>

At least, after suffering through three devastating hurricanes (1906, 1909, and 1910) and the loss of some 700 lives, the track was through to Key West. On January 22, 1912, 20 days after his 82nd birthday, Henry Flagler rode the first train into Key West. The city

went wild in its celebration of at last being connected to the mainland. Representatives from France, Italy, Brazil and Guatemala attended the ceremonies. The United States delegation included senators, congressmen, generals and admirals.<sup>12</sup> A contemporary account of the festive scene is furnished by the *Miami Herald*:

“The city is flooded with people; it is bedecked with bunting and colors. Its splendid harbor is floating war vessels of many nations, and its people are overjoyed and enthusiastic over the coming of the railroad, the realization of their dream of years. Their hearts are open to the world. They are going to do themselves proud.”<sup>13</sup>

The glow was soon replaced by cold, hard facts. After World War I, Key West began to lose the importance once given it as a strategic harbor and tourist attraction. Tourists just “passed through” on their way to Cuba. Hurricanes damaged the sugar industry and labor problems further contributed to the growing depression. The sponge and cigar-making industries moved away; the real estate boom of the twenties showed little interest in the Keys. By 1934, 80% of the residents of Key West were on relief!<sup>14</sup>

In the meantime, Flagler’s crowning achievement was turning into “Flagler’s Folly.” The Key West Extension of the Florida East Coast Railway never made a profit. During the 1920s, mortgage bonds were issued to raise money for expansion. By 1929, however, the F.E.C. freight income was not enough to meet the payments on these bonds. By 1931, the revenue from freight hauled was down 400% from 1926!<sup>15</sup> In August of 1931, the F.E.C. went into receivership.

Facts and figures could no longer be denied, according to a report on the feasibility of abandoning several branches of the Florida East Coast Railway to “reduce operating expenses without reducing revenue.”<sup>16</sup> All of the reasons for abandoning the Key West extension were good ones: There was scarcely any local traffic, in either freight or passengers. There was far less agricultural development than ten years previously. It was expensive to maintain and was constantly exposed to storms. Exports from Cuba were far less important than during World War I. The new “sea train” from New Orleans to Havana was hurting business, as was the luxury steamship service from New York to Havana. In 1930, the operating loss for the Key West Extension was \$344,000.00 and an even larger deficit was predicted for 1931!<sup>17</sup> It was sad but unfortunately true: “The Overseas Railroad

had been engaged for sometime with the chore of carrying nothing to nowhere for nobody.”<sup>18</sup>

The decision to abandon or not to abandon the Key West Extension was made not by the Board of Directors but by fate in the form of the hurricane of 1935. This was a killer storm which plunged barometers to 26.35°, the lowest reading ever recorded on land.

The exact toll of human lives would never be known. Almost half of those known dead were part of the group of disillusioned veterans of World War I known as the Bonus Army. In 1934, the federal government decided to send some 700 of these troublesome veterans to Ft. Jefferson in the Dry Tortugas, 63 miles west of Key West. They were to clean up the old fort which was to be an historic monument.<sup>19</sup> The government soon realized this was too small a job for so many workers. The vets were re-routed to three camps in the vicinity of Islamorada to work on the highway being built parallel to the Key West Extension. These luckless veterans were caught in the center of the approaching storm. When the decision was finally made to get them out, it was already past 2:00 p.m. on Labor Day. Holiday traffic and a series of unfortunate mishaps caused one delay after another as the rescue train slowly made its way down from Miami. At last, through pounding wind and rain, the train reached Islamorada at 8:20 p.m.<sup>20</sup> The terrified veterans made a mad dash for the cars. Five minutes later a 20 foot tidal wave slammed into the train. Only the engine, weighing 106 tons, remained upright. The devastation was almost total with heavy loss of life and property. Not a single stick remained of the railroad station and the buildings around it. Ten miles of Keys lay in utter destruction.

It was not until the next day that the first rescue boats got through to Matecumbe Key from Key West. Early eye-witness accounts listed the dead or missing at 119 civilians and 327 veterans.<sup>21</sup> The final toll would never be known.\*

The employees of the Florida East Coast Railway who manned the rescue train knew they were risking their lives in their efforts to reach the stranded veterans. They were saved, huddled inside the engine, but their railroad, Flagler's pride and joy, was gone forever. Over 40 miles of railroad track between Key Largo and Key Vaca were destroyed. Six miles of track had disappeared completely (two miles

*\*One of the first rescue workers to reach the ravaged area was Ernest Hemingway. He expressed the outrage many rescuers felt as he later wrote: ". . . the veterans had been sent there; they had no opportunity to leave . . . and they never had a chance for their lives."<sup>27</sup>*

of which later washed up at Cape Sable). Nineteen miles of track were washed completely off the roadbed. Embankments built over stretches of shallow water were gone, and the natural water openings were back as a result of the tidal wave.<sup>23</sup> The damage estimate was \$3,000,000.<sup>24</sup>

The country was in the middle of the Depression. Application for a \$3,000,000 loan to repair a losing railroad line was not regarded favorably by bankers or officials of the Reconstruction Finance Corporation.<sup>25</sup> The Key West connection was not really needed as freight traffic to Havana was being handled through Miami and Port Everglades. There was one glimmer of hope:

“There is vague talk that the state of Florida might take over the old right of way, use it to build a continuous automobile road down the Keys. Unless it does so, Key West, the last jewel inserted in the Flagler crown of empire, is liable to become a ghost city, reverting to sand and sea.”<sup>26</sup>

This “vague talk” concerning an overseas highway had started long before 1935. In 1917, a bond issue in Monroe County provided \$100,000 for the construction of “trails” on Key Largo and Big Pine Key, a bridge between Key West and Stock Island and a short road on Stock Island.<sup>27</sup> This early construction emphasized the need for more roads. No further action was taken, however, until 1922. Then, a \$400,000 bond issue was voted to build a highway from Key West to Sugarloaf Key, roughly 17 miles. There was no market for these bonds as the interests of Key West and Monroe County were at odds. In the eyes of Monroe County officials, a \$400,000 road through the lower Keys was seen as too expensive for such an undeveloped area. Instead, the two governing bodies agreed on another bond issue of \$300,000. This would extend the highway south from Key Largo to Lower Matecumbe and connect Key Largo to the mainland on the north.<sup>28</sup>

Work began in August, 1923, to connect Key Largo with the mainland through a series of six small bridges and one long bridge between Barnes and Card Sound.\* Construction continued slowly in spite of the adverse effects on the bond market of the real estate bust in the mid twenties. In 1927, the Florida legislature granted approval for Monroe County to finance the building and operating of three ferry boats between Lower Matecumbe and No Name Key—a forty mile

\*This wooden bridge over Card Sound was condemned in 1944, and construction began on a new one in 1968.<sup>29</sup>

stretch of mostly open water.<sup>30</sup> In January, 1930, a road was finished on Grassy Key which separated this stretch into two water gaps of approximately fourteen miles each.<sup>31</sup>

On January 25, 1928, the road from Key Largo to Key West was officially opened. Called a "magnificent gesture" and the "dream of the century,"<sup>32</sup> it still took eight hours to complete the trip, of which four hours were spent on the ferry boat. Monroe County was in debt for over \$4,000,000 and still had no bridges to span the long gaps of open water!

With the country heading into a deepening depression, there was no money left to bridge the water gaps between Lower Matecumbe Key and No Name Key. The state of Florida took over the job of maintenance of the highway except for the rickety wooden bridges in the lower keys. For these ramshackled affairs, the state refused to assume responsibility. In 1933, the state legislature created the Overseas Road and Toll Bridge District with power to sell bonds to finish the highway and "to build, operate, and maintain a toll road between Lower Matecumbe and Big Pine Key."<sup>33</sup> Actual progress was slow, and money remained extremely tight.

In 1935, the histories of the Overseas Highway and the Overseas Railway became one. The Labor Day hurricane had hit the weakest, most vulnerable spot of the railroad. Estimates to repair the destroyed embankments ran into millions of dollars.<sup>34</sup> Even if a loan could be secured, it would seem like throwing good money after bad. Passenger service to Cuba was being handled very smoothly out of Miami. Plus, Pan American Airlines now had a special plane service between Miami and Key West. The day of the Overseas Railway had passed; that of the Overseas Highway had barely begun. The Toll Bridge Commission saw its chance when the F.E.C. decided to abandon the shattered Key West Extension. The opportunity would have been lost if the federal government, specifically the Public Works Administration, had not supplied the money. The P.W.A. approved a loan of \$3,600,000 to finish the highway. In 1936, the Toll Bridge Commission purchased 122 miles of right-of-way "from Florida City to Key West for \$640,000 and cancellation of \$300,000 in state, city and county taxes."<sup>35</sup>

The history of the road to Key West had come full circle. Once again there was a determined effort to link the southernmost city to the mainland. Once again men labored through the Keys, this time on an Overseas Highway. But this time it was public money supporting the project instead of private, and this time the workers

could follow where someone else had led.

Henry M. Flagler had a life-long penchant for doing a job right. John D. Rockefeller recognized this trait very early in their partnership:

“He (Flagler) believed we should do the work as well as we knew how . . . that everything should be solid and substantial . . .”<sup>36</sup>

“Solid and substantial” would certainly describe Flagler’s railroad bridges over the Keys. No less than six hurricanes between 1905 and 1935 failed to damage any of the concrete viaducts of the 34 bridges.<sup>37</sup> All of the steel structures had been carefully maintained, cleaned and painted. The concrete piers were driven six to ten feet into solid rock. The plain concrete arches were in excellent condition.<sup>38</sup> Since railroad builders had used salt water to mix the plain concrete with such durable results, the chief engineer decided to follow the same formula in the new construction. The plans for construction and conversion of the bridges were prepared by B. M. Duncan, former consulting engineer of the state road department. In 1936, he became the Toll Bridge Commission’s chief engineer. According to Mr. Duncan, there were several ways of placing a roadway deck over the existing bridges. “The problem was to obtain an economical design that would suffer the least possible damage from a hurricane.”<sup>39</sup> The plan finally adopted called for a flat slab supported by either concrete or timber. The 18 foot railroad bed was widened to 20 feet to allow the passage of two lanes of traffic.

The longest bridge in the chain of highways and bridges was, and is, the famous Seven Mile Bridge, then known as Knight’s Key Bridge. The Seven Mile Bridge extended over several small islands including the picturesque Pigeon Key. This awesome span had 546 concrete foundation piers — far more than any other bridge in the world.<sup>40</sup>

The biggest engineering problem was not caused by the longest bridge, but by the Bahia Honda Bridge, a little less than one mile long. Again, the railroad was only 14 feet across. Spreading the trusses could be done, but the concrete piers would have to be widened. The Bahia Honda Channel, literally “Deep Bay”, was the deepest along the entire sweep of the Keys, twenty-four feet at low tide.<sup>41</sup> In building the original railroad bridge, the use of truss spans permitted the foundation piers to be spaced farther apart than were the concrete arches used in the other bridges. Duncan and his crew



considered several plans to support a roadway across this bridge. Finally, it was decided to go with two lanes over the top of the steel span. The spans had been designed to handle heavy-duty railroad equipment and were “strong enough to allow for this over the top adaptation.”<sup>42</sup> This part of the route provided the most panoramic view of the whole trip as motorists looked down from a highway rising more than 65 feet above the water.<sup>43</sup>

On March 29, 1938, the project was finished. Mr. Duncan took justified pride in the fact that over 1,000 men were at work on the highway for nearly 15 months without a single fatality. These men were paid somewhat better than the dollar-a-day railroad workers. Wages ranged from \$.80 per hour for heavy equipment operators (for example: crane operators, crusher and drag-line operators) down to \$.30 per hour for jobs such as cement handler, guard-rail builder, and cook’s helper.<sup>44</sup> Toll rates on the new highway were set at \$1.00 per car and driver and \$.25 per passenger. Trucks were charged between one and four dollars.<sup>45</sup> All tolls were removed in 1954.

On March 30, 1938, local headlines once again proclaimed the opening of a Miami-Key West Overseas Highway sans ferry boat ride. Crowds filled the old streets of Key West as residents celebrated yet another opening of a link to the mainland. But the story was not over — no, not yet, for there was work still to be done.

Up until 1941, Monroe County was still trying to get the Florida State Road Department to finish the Key West end of the highway along the old F.E.C. right-of-way. Altogether, there still were “more than one hundred miles of narrow, poorly aligned, winding roads on the Keys and many obsolete wooden bridges . . .”<sup>46</sup> With the outbreak of World War II, it became a matter of national security to have a complete highway from the mainland to Key West. On January 20, 1942, a conference was held in Tallahassee between representatives of the State Road Department and the national Public Roads Administration. At this time it was agreed to jointly finance the final completion of the Overseas Highway.<sup>47</sup> So began yet another road-building project through the Keys. This time 89 miles of completely new highway were built. At Florida City the new road followed the abandoned path of Flagler’s railroad and cut 17 miles from the alternate route over the Card Sound Bridge.<sup>48</sup> The old railroad right-of-way was also followed for new road construction between Big Pine Key and Key West.

The completion of this phase in the saga of the Overseas High-



way was celebrated in a two day ceremony on May 16 and 17, 1944. Governor Spessard L. Holland presided over the ribbon-cutting ritual first in Key West and then at Florida City.<sup>49</sup> This occasion also marked the “opening of the last line of U.S. 1 running from Kent, Maine to Key West.”<sup>50</sup>

Anyone who has ever been behind the wheel on a trip across the old Seven Mile Bridge remembers a feeling of sweaty-palm panic as he carefully maneuvered over that narrow roadway. It was as if one were walking a tightrope, with on-coming traffic on the left and the blue water so close on the right! It is no wonder that by the 1960s, the Seven Mile and the other bridges were considered very substandard in width.<sup>51</sup> In 1977, Congress appropriated \$109,000,000 for the purpose of replacing the reconverted railroad bridges with brand new, wider bridges. Plans for the new bridges called for a 36 foot wide roadway including two 12 foot driving lanes and a six foot recovery area on either side.<sup>52</sup> Under the direction of Mr. Jack Mueller, chief construction engineer for the State Department of Transportation, construction began on the north end in 1977. The new project called for the replacement of 37 bridges through the Keys. Congress would provide 70% of the total cost, the State of Florida, the remaining 30%.<sup>53</sup>

The new Seven Mile Bridge was built using the European process of segmentation. In other words, construction was done in pieces, which were brought to the site and then put together. It is the longest “segmental” bridge in the world.<sup>54</sup> The new Seven Mile Bridge was formally opened to traffic on May 23, 1982.\*

So the work goes on of building and maintaining the Overseas Highway. It really is a never ending project begun so long ago by Henry Flagler. Now the old railroad bridge — those “marvelous feats of engineering” have disappeared, except for the three most impressive spans. In 1980, Long Key, Bahia Honda, and Seven Mile Bridges were designated by the federal government as historic monuments.<sup>55</sup> Mr. Flagler would be proud.

Today as thousands of motorists per day<sup>56</sup> speed down the Overseas Highway, one can almost visualize those long-ago railroad workers at their back-breaking labor and hear the ghost of Henry Flagler ordering, “Go, go to Key West!”

\*The Marathon end of the old Seven Mile Bridge has been left open to traffic for access to the University of Miami's marine biology lab on Pigeon Key.

NOTES

1. Map from timetable, Florida East Coast Railway Company, 1 July 1917, Historical Association of Southern Florida.
2. Carlton Corliss, "Building the Overseas Railroad to Key West," *Tequesta*, V.13, 1953, p. 4.
3. *Ibid.*, p. 5.
4. *Ibid.*, p. 6.
5. *Ibid.*, p. 3.
6. Sidney Walter Martin, *Florida's Flagler*, (Athens: University of Georgia Press, 1949) p. 206.
7. *Ibid.*, p. 205.
8. Earl Adams, "Long Cherished Dream of Overseas Highway Rapidly Shaping into Reality," *Miami Herald*, 16 May 1937, p. 11A.
9. *Ibid.*, p. 12A.
10. Charles Laying, "The Railroad Over The Sea," *Trains*, V.8: No. 1, November 1948, p. 44.
11. *Ibid.*, p. 45.
12. "Henry M. Flagler will see the Culmination of his Crowning Ambition Today in the Opening of the Overseas Ry. to Key West," *The Miami Herald*, 22 January 1912, p. 18.
13. *Ibid.*
14. Joan and Wright Langley, *Key West - Images of the Past*, (Key West: Christopher C. Belland and Edwin O. Swift III, Publishers, 1982), p. 51.
15. Capt. V. Roger duPont, "The F.E.C.: Rise, Fall and Resumption," seminar paper, St. Leo College, Florida, November 1977, p. 19.
16. H.N. Roderbough, "Report to General Superintendent and General Freight Agent Re: Official Report to Board of Directors Re: Changes in Physical Plant of the F.E.C.," 21 October 1931, p. 11.
17. *Ibid.*, p. 12.
18. Christopher Cox, *A Key West Companion*, (New York: St. Martin's Press, 1983), p. 133.
19. Frank W. Lovering, *Hurricane Between*, (no publisher noted, 1946), p. 18.
20. Pat Parks, *The Railroad that Died at Sea*, (Brattleboro, Vt.: Stephen Greene Press, 1968), p. 27.
21. "Disaster: Heroism and Tragedy in Florida's 'Mild Hurricane'," *Newsweek*, 14 September 1935, p. 12.
22. Ernest Hemingway, "Who Murdered the Vets?," *New Masses*, 17 September 1935, p. 18.
23. "The Florida Hurricane," *Railway Age*, 7 March 1936, p. 382.
24. *Ibid.*, p. 383.
25. "Abandoned Keys," *Time*, 24 February 1936, p. 66.
26. *Ibid.*, p. 67.
27. U.S. Congress, House Joint Resolution #256, "Report of a Survey of Uncompleted Bridges of the Overseas Highway from Key West to the Mainland State of Florida," by Thomas H. MacDonald, 70th Congress, 1st sess., 16 May 1928.
28. R. Hodges Mardon, "Key West Touches Hands with Mainland in One Magnificent Gesture — The Overseas Highway," *The Key West Citizen*, 25 January 1928, p. 7B.
29. "Notes - Overseas Highway, Barnes-Card Sound Route," Florida Collection, Monroe County Public Library, Key West, Florida.
30. Mardon, "Key West Touches Hands . . .," p. 7B.

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31. B.M. Duncan, "Overseas Railroad Becomes a Highway; Revamping Thirteen Miles of Bridges to Handle Auto Traffic," *Civil Engineering*, V.8: No. 6, June 1938, p. 393.
32. Mardon, "Key West Touches Hands . . . ," p. 7B.
33. Duncan, "Overseas Railroad Becomes a Highway . . . ," p. 395.
34. "The Florida Hurricane," p. 381.
35. Baynard Kendrick, *Florida Trails to Turnpikes*, (Gainesville: University of Florida Press, 1964), p. 139.
36. Martin, *Florida's Flagler*, p. 48.
37. Duncan, "Overseas Railroad Becomes a Highway . . . ," p. 395.
38. *Ibid.*
39. Corliss, "Building the Overseas Railroad . . . ," p. 11.
40. *Ibid.*
41. Kendrick, *Florida Trails to Turnpikes*, p. 150.
42. Adams, "Long Cherished Dream of Overseas Highway . . . ," p. 11A.
43. U.S. Works Progress Administration, "Administrative Order No. 39," 25 February 1936.
44. Duncan, "Overseas Railroad Becomes a Highway . . . ," p. 397.
45. Kendrick, *Florida Trails to Turnpike*, p. 145.
46. *Ibid.*
47. *Ibid.*, p. 146.
48. Lovering, *Hurricane Between*, p. 22.
49. Kendrick, *Florida Trails to Turnpike*, p. 149.
50. *Ibid.*, p. 150.
51. Interview with Jack Mueller, Florida Department of Transportation, Ft. Lauderdale, Florida, 22 July 1985.
52. *Ibid.*
53. *Ibid.*
54. *Ibid.*
55. Interview with Robert Ogletree, Florida Department of Transportation, Miami, Florida, 24 July 1985.