

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name DIXIE HIGHWAY/Hastings, Espanola and Bunnell Road

other names/site number County Road 13; Old Brick Road; FMSF#FL155 & #SJ4843

2. Location

street & number roughly Espanola (Flagler County) to CR 204 (St. Johns County) N/A not for publication

city or town Espanola vicinity

state Florida code FL county Flagler code 035 zip code 32110

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Barbara C. Mattick, DSHPO for Survey & Registration 3/8/05
Signature of certifying official/Title Date

Division of Historical Resources, Bureau of Historic Preservation
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register
 - See continuation sheet
- determined eligible for the National Register
 - See continuation sheet.
- determined not eligible for the National Register
 - See continuation sheet.
- removed from the National Register.
- other, (explain) _____

Edson H. Beall 4/20/05
Signature of the Keeper Date of Action

Dixie Highway/Hastings, Espanola and Bunnell Rd.
Name of Property

Flagler/St. Johns Co., FL
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- buildings
- district
- site
- structure
- object

Number of Resources within Property

(Do not include any previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	total

Name of related multiple property listings

(Enter "N/A" if property is not part of a multiple property listing.)

"N/A"

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

TRANSPORTATION: highway

Current Functions

(Enter categories from instructions)

TRANSPORTATION: highway

7. Description

Architectural Classification

(Enter categories from instructions)

N/A

Materials

(Enter categories from instructions)

foundation BRICK/CONCRETE/SHELL
walls _____

roof _____
other _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
B Property is associated with the lives of persons significant in our past.
C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
B removed from its original location.
C a birthplace or grave.
D a cemetery.
E a reconstructed building, object, or structure.
F a commemorative property.
G less than 50 years of age or achieved significance within the past 50 years

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 36) has been requested
previously listed in the National Register
previously determined eligible by the National Register
designated a National Historic Landmark
recorded by Historic American Buildings Survey
recorded by Historic American Engineering Record

Areas of Significance

(Enter categories from instructions)

TRANSPORTATION
ENGINEERING

Period of Significance

1916-1927

Significant Dates

1916

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

Wilson, James Y. (builder)
McCrary Engineering Company (engineer)

Primary location of additional data:

- State Historic Preservation Office
Other State Agency
Federal agency
Local government
University
Other

Name of Repository

#

Dixie Highway/Hastings, Espanola and Bunnell Rd.
Name of Property

Flagler/St. Johns Co., FL
County and State

10. Geographical Data

Acreeage of Property approx. 72.7 acres

UTM References

(Place additional references on a continuation sheet.)

1	Zone	Easting	Northing
2	Zone	Easting	Northing

3	Zone	Easting	Northing
4	Zone	Easting	Northing

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Johnston, Sidney/Robert O. Jones, Historic Preservationist

organization Bureau of Historic Preservation date March 2005

street & number 500 South Brounough Street telephone 850-245-6333

city or town Tallahassee state FL zip code 32399-0250

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Flagler & St. Johns Boards of County Commission

street & number 1200 E. Moody Blve. & 4020 Lewis Speedway telephone 386-437-7480

city or town Bunnell & St. Augustine state FL zip code 32110

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and amend listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

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**National Register of Historic Places
Continuation Sheet**

**Dixie Highway/Hastings, Espanola & Bunnell Road
Flagler & St. Johns Counties, Florida**

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SUMMARY

This nominated portion of Dixie Highway/Hastings, Espanola and Bunnell Road, currently County Road 13, is a ten-mile stretch of rural brick road that extends between the north end of the unincorporated community of Espanola in Flagler County, and intersects with County Road 204/13 in St. Johns County. The highway was part of a sixty-six mile project completed in 1916 by the County of St. Johns. It was designated by the Dixie Highway Association as part of the eastern route of the Dixie Highway between Miami Beach, Florida, and Sault Sainte Marie, Michigan. The highway was a primary route in northeast Florida until 1927, when new highways farther east were built. Measuring nine feet wide, the brick roadbed and four-inch wide concrete curbs are flanked by three-foot wide shell shoulders, and has a designated right-of-way of fifteen feet. Extending through largely undeveloped property, and with no modern intersections interrupting the alignment, the historic setting of the 1916 highway is remarkably intact.

SETTING

The Dixie Highway extends through a rural area of north-central Flagler County and south-central St. Johns County. The ten mile stretch of road begins just north of Espanola (Photos #1&2), a rural late-nineteenth-century unincorporated village located approximately forty miles south of St. Augustine and five miles northwest of Bunnell, the seat of government in Flagler County. Approximately eight miles of the road is within Flagler County, and the northern two miles is within St. Johns County. The northern portion ends in a "T" intersection with County Road 13/204 that runs east/west (Photos #3&4). County Road 13 continues west, and County Road 204 runs east. County Road 204 intersects U. S. Highway 1 five miles to the east. The City of Palatka is approximately fifteen miles west of the intersection. To the west and near the south end of this road segment and the late nineteenth century village of Neoga, are five small, deep lakes with no known outlets: Black, Neoga, Speckled Perch, Tank, and Poplar Pond. The nineteenth-century Florida East Coast Railway connected Neoga, Bunnell, and Espanola with East Palatka and Daytona Beach. The tracks were removed in the mid-1920s. The oak trees in the southern portion of the road form a canopy. Farther north, the Big Cypress and Pringle Swamps flank the highway, forming the headwaters of Deep Creek, Pellicer Creek, Matanzas Swamp, and Sixteen Mile Creek. A primary barrier to travel, Big Cypress Swamp was recorded by the U. S. Bureau of Soils in the 1910s as Flagler County's largest swamp with a length of ten miles and a width that ranged between one and seven miles. Dixie Highway is located on a narrow ridge slightly higher in elevation than the adjacent wetlands. The wetlands have an average elevation of twenty-three feet above sea level, while the ridge varies in elevation from approximately forty to forty-seven feet above sea level. Most of the highway offers picturesque vistas of rural Florida's pine forests, palmettos, and oak hammocks that form canopies over the roadbed. U. S. Highway 1, the Florida East Coast Railway, and Interstate 95 are north/south routes located to the east.

Only one ca1915 building, near the south end of the highway, stands near the historic highway (Photo #5). Historically several additional buildings as well as The Live and Let Live Tourist Camp stood between the

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south boundary and the village of Espanola, but are now gone. One electrical power line (Photo #6) crosses the road a mile and one-half from the southern boundary. Dense stands of pine forests characterize the southern four miles (Photo #7), and several dirt roads known as "woods roads" intersect the alignment (Photo #8). These breaks in the forests indicate logging operations, reforestation projects, and private land access. Approximately four miles north of the south end stood four or five buildings and an arch that identified the 1920s boom time development of Flagler City (Photo #9). Long time residents remember Flagler City having a filling station, several buildings, street lamps, and a stuccoed arch spanning the highway, all of which are gone. A logging camp or naval stores operation of approximately fifteen buildings, stood on the west side of the highway approximately one mile south of the 13/204 intersection (Photo #10).

PHYSICAL DESCRIPTION

The south boundary of the National Register designation has exposed bricks and concrete curbs, while asphalt covers the original road fabric on portions to the south. The paving bricks are laid in a running bond pattern nine feet wide (Photo #11). The vitrified bricks comprising the highway surface have a standardized size of 3.5" x 4" x 9", but have a variety of distinctive colors and hues, including browns, burned oranges, reds, and yellows. Most bear the imprint of two manufacturing companies, Graves and Southern Clay Manufacturing, but some exhibit unmarked faces. The vitrified bricks weigh approximately nine pounds each, or forty-five pounds to the square foot. Each mile of roadbed contains approximately 237,600 vitrified bricks; consequently, the highway contains approximately 2,376,000 vitrified bricks manufactured in Alabama and Tennessee.

The brick roadbed is flanked by concrete curbs that were made on location (Photos #12&13). The concrete aggregate contains black and tan pebbles and chips. The curbs measure four inches in width, ten inches deep, and in lengths ranging between four and six feet long. An innovation developed by the Wilson Construction Company who built the highway, is that the curbs are grooved on the ends so each piece fits tightly against adjoining sections. This innovation protects the road from erosion, and it prevents the separation of the curbs.

The bricks, curbs, and shoulders lie on a foundation of packed shell. The bed was cleared of roots and spread with a bed of shell. In other regions the bed was usually of rock. In recent years a thin layer of sand has been placed on the highway to protect it from logging trucks, and in part, to forestall thieves from stealing bricks. The highway retains its early twentieth century character and physical integrity to a high degree.

Non-Historic Elements

Small modern corrugated steel culverts extend under the highway at approximately 4.5 miles (UTM 4), 5.2 miles (UTM 6), 5.9 miles (UTM 7), 6.4 miles (UTM 9), and 7.8 miles (UTM 10) north of the south boundary, respectively, and at Big Tree Creek (UTM 12) approximately 1.5 miles south of the north boundary. The modern culverts replaced original brick culverts that collapsed by the 1970s. At those locations, six feet of soil replaces the original brick highway.

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Modern metal road signs indicate the current Flagler and St. Johns County's boundaries. These signs replace historic stone markers. Identified by asphalt surfacing and a slight bend to the west, the north boundary of the historic highway (UTM 13) is located approximately fifty feet from its intersection with County Road 204.

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Dixie Highway/Hastings, Espanola & Bunnell Road
Flagler & St. Johns Counties, FL

Section Number 8 Page 1

SUMMARY

The Dixie Highway/Hastings, Espanola and Bunnell Road is nominated to the National Register for significance at the state level under criteria A and C in the areas of Transportation and Engineering. The road was completed in 1916 and made a large contribution to the development of Florida's modern highway system in north and central Florida, and as a part of the Dixie Highway system, connected Miami Beach, Florida, with Sault Sainte Marie, Michigan. The highway is an excellent example of standard construction techniques for brick highways in the early twentieth century. The J. B. McCrary Engineering Company of Atlanta, Georgia, designed the highway, which was built by the Wilson Construction Company of Jacksonville, Florida. The highway continues to serve as a road and its rural setting remains relatively untouched by development. The level of physical integrity of the brick road is high.

HISTORIC CONTEXT OF FLORIDA ROADS AND THE DIXIE HIGHWAY

Northeast Florida's history of road building extends into the Colonial Period. In the first Spanish Period (1513-1763) trails were cut to the west and north between St. Augustine and the St. Johns River, and south to Matanzas Inlet. The occupying British under General James Grant found only a "few narrow routes...often impassible in rainy weather and fit only for foot or horse traffic under optimal conditions." Directed by Grant and James Moultrie, the British completed the King's Road between New Smyrna and Colerain, Georgia, in 1775. One observer, the Reverend John Forbes, commented that the "road really may with propriety be called the King's Highway: it forms a wide beautiful avenue, not a stump or tree to be found." A team of Florida historians have characterized the road as "Florida's first highway." The "King's Highway" proved costly to maintain and by 1821 long stretches of it "had disappeared, submerged beneath swamps or overgrown by forests."¹

During Florida's Territorial and Statehood Periods, the Congress only grudgingly granted federal assistance for the improvements of canals, railroads, plank roads and turnpikes. Most supporters of internal improvements came from the Northeast and Midwest. In the South, counties controlled the creation, abolishment, improvement, and operation of public roads. The states regarded public roads largely as a local responsibility. Antebellum southerners typically opposed any federal assistance for internal improvements, in part, because they theorized increased federal spending would translate into higher tariffs and taxes. They also feared that the same reasoning that applied to federal funds associated with the control of a state's bridges, canals, and roads provided the national government with the necessary impetus to usurp states' rights, violate the Constitution, and even permit the Congress to set policies associated with slavery.²

¹William R. Adams, Daniel Schafer, Robert Steinbach, and Paul Weaver. "The King's Road: Florida's First Highway," unpub. mss., St. Augustine, 1997, p. 2, 23.

²Howard Preston, *Dirt Roads to Dixie: Accessibility and Modernization in the South, 1885-1935* (Knoxville: University of Tennessee Press, 1991), 19-20; Frederick Paxson, "The Highway Movement, 1916-1935," *American Historical Review* 51 (January 1946), 240.

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Flagler & St. Johns Counties, FL

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Consequently, few federal funds supported Florida's nascent road system. The federal government completed a military trail between Pensacola and St. Augustine in 1826, but maintenance costs limited its life, and sections soon became impassable. The Congress authorized funds to improve and reopen the King's Road in 1827, which also experienced little use. Most of Florida's antebellum road construction occurred as a result of petitions and effective lobbying by property owners and elected officials to the state and federal governments. The state apportioned small sums in the 1820s for the Bellamy Road between St. Augustine and Tallahassee. A 1824 state law stipulated the construction of roads from Cape Sable north along both coasts, daunting projects that never moved out of the planning stage. The Second Seminole War (1835-1842) provided an impetus for road building in the territory. An extensive network of roads, little more than trails, crisscrossed the region which in isolated regions returned to their primitive state within several years of the war's end. Albert Rose, a historian with the Bureau of Public Roads, identified the El Camino Real as one of the nation's first transcontinental road systems, stretching between St. Augustine, Florida; Sonoma, California; and Vera Cruz, Mexico in 1836.³

Wagon trails characterized Florida's road system throughout the late nineteenth century while railroad companies built hundreds of miles of tracks throughout the state. Federal and state government encouraged private railroad companies to construct tracks by offering large land grants, but they paid far less attention to public roads. Road construction largely fell to local farmers and land owners with property adjacent to existing or proposed roads, in association with county governments. In the decades following the Civil War, each former Confederate state enacted legislation that required all male citizens to conduct work on public roads, generally for a period of ten days, unless exempted by law. Counties typically established road districts and appointed committees who made recommendations for improvements or new roads predicated on petitions from residents. Some farmers would pay their taxes by spending a day or two improving the county's roads. The records of virtually every county in Florida during the late nineteenth century are replete with references to the abandonment, establishment, and improvement of roads, in addition to contending with prisoners and processing elections returns.⁴

Significant federal spending on the nation's road system and in Florida began during the Progressive Era, a period that roughly extends between 1896 and 1919. Historians associate the period with reform movements in business, education, government, and labor. The era brought a building boom that touched cities and towns throughout the state. Local proponents of road construction initially conceptualized paved highways as farm-to-market corridors that linked isolated farming communities with towns and urban centers. Eventually those

³Preston, *Dirt Roads to Dixie*, 3-4; Charlton Tebeau, *A History of Florida* (Coral Gables: University of Miami Press, 1971), 140-141; Mark F. Boyd, "The First American Road in Florida: Papers Relating to the Survey and Construction of the Pensacola-St. Augustine Highway," *Florida Historical Quarterly* 14 (October 1935), 72-106; Albert Rose, *Historic American Highways* (Washington, D.C.: American Association of State Highway Officials, 1953), 59-60.

⁴Preston, *Dirt Roads to Dixie*, 19-20.

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advocates recast highway construction as regional and even national tourist corridors.⁵ During the era, Florida's population increased nearly two-fold, from 464,639 in 1895 to 921,618 in 1915. In 1897, under the auspices of the Orlando Board of Trade, a Good Roads Congress convened in Orlando. Although the convention formed the Florida Good Roads Association, it had little impact initially. In 1909, the state claimed 17,579 miles of public roads, but the vast majority were either unimproved sand or finished with pine straw or other degradable surfaces. The most common improvements consisted of packed sand-clay composites (581 miles), marl rock or stone (278 miles), gravel (242 miles), and shell (110 miles). With the exception of several miles of concrete roads in Duval County, none was either brick or concrete. St. Johns County claimed 200 miles of public roads of which sixteen miles had been improved with either shell or sand-clay composites.⁶

Florida's local municipal governments were the first to employ more permanent materials--asphalt, brick, concrete, or macadam--for their streets. In 1893, the City of Jacksonville paved seven miles of its streets with vitrified bricks, one of the earliest examples of brick paved streets in the state. By 1905, many of the state's largest cities had initiated brick paving programs for their streets. Completed in 1912, Florida's first rural highway paved with brick extended from New York Avenue in Jacksonville to the Duval County line, and was later extended to Orange Park. Duval County turned to the Graves Brick Company of Birmingham, Alabama, for its brick pavers. Eventually, the Graves Company supplied millions of bricks for urban street and rural highway paving projects throughout Florida and the South. Most bricks used in Florida's highways came from manufacturers in Alabama, Georgia, and Tennessee, including Augusta Block; Coaldale Block; Copeland & Inglis; Graves; Reynolds Block; Robbins; Rockmart; and Southern Clay Manufacturing Company. Lobbying by automobile associations, road builders, local governments, chambers of commerce, and civic organizations resulted in the Florida Legislature establishing the State Road Department in 1915. Governor Park Trammell signed the legislation and appointed five board members to develop a state highway system. Despite the creation of the department, the construction of rural highways largely remained the responsibility of counties until the 1920s.⁷

In the interval, three important pieces of federal legislation provided the impetus for improved roads throughout the nation: 1) Bureau of Public Roads in 1893, 2) Rural Free Delivery in 1896, and the 3) Federal Aid Road Act of 1916. Established by the Congress in 1893, the Bureau of Public Roads was largely educational and investigatory. The agency scrutinized various commonly constructed road types, collected information on road

⁵Ibid.; Tebeau, *Florida*, 293-308, 327-343.

⁶T. Frederick Davis, *History of Jacksonville and Vicinity, 1513 to 1924* (St. Augustine: Record Press, 1925), 327; Tebeau, *Florida*, 293-308, 327-343; William Blackman, *History of Orange County, Florida* (DeLand: E. O. Painter Printing Company, 1927), 44.

⁷U. S. Department of Agriculture, *Mileage and Cost of Public Roads in the United States* (Washington, D.C.: GPO, 1912), 16, 52; T. Frederick Davis, *History of Jacksonville and Vicinity, 1513 to 1924* (St. Augustine: Record Press, 1925), 327; Preston, *Dirt Roads to Dixie*, 19-20; Tebeau, *Florida*, 293-308, 327-343; William Blackman, *History of Orange County, Florida* (DeLand: E. O. Painter Printing Company, 1927), 44; Walter Marder, "'Pleasing to the Eye': Brick Paving and the Dixie Highway in the Sunshine State," unpub. mss., Tallahassee, 2002, p. 4-5.

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Dixie Highway/Hastings, Espanola & Bunnell Road
Flagler & St. Johns Counties, FL

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materials from contractors and universities, and published the results in articles and bulletins. The bureau's information examined asphalt, brick, concrete, macadam, and other materials. Associated with the U. S. Post Office, Rural Free Delivery provided the first national impetus for a system of federal roads. Most farmers were delighted with mail service at their homes, and not having to pick up their mail at distant post offices. A post office policy that prevented the delivery of mail on any post road declared unfit for travel by a postman encouraged those same farmers to repair bridges, grade rutted roadbeds, and clear ditches for adequate drainage, or risk losing their post road service to another location. The Federal Aid Road Act of 1916 provided the first state-federal legislation and funding mechanisms for the construction of highways throughout the country.⁸

The legislation and formation of government agencies were responses to the appearance of automobiles and a new form of tourists who forged into the countryside on rutted trails. By 1915, Henry Ford had manufactured his millionth Model-T. The first automobile arrived in Florida around 1896, followed by hundreds and then thousands of them. Automobile dealers published advertisements in the *Jacksonville Florida Times Union* in 1903, the same year that automobile racing began on the hard-packed sands of Daytona Beach and Ormond Beach. Speed trials and racing on the beach encouraged others less daring to drive through northeast Florida, journeys fraught with danger on the roads which were little more than wagon trails finished with clay, shell, or pine straw. Three hundred persons registered automobiles in the state in 1906 and nearly double that number in 1908. By 1911, automobiles registered in Florida were required to display license tags. Nationally, automobile registration reached 1,258,062 in 1913. Shortly after that, Duval, Polk, St. Johns, and Volusia counties issued bonds for the construction of paved roads. One of the largest intrastate road-building projects of the era was the Scenic Highlands Highway. It began in 1914 with the sale of bonds, which enabled Polk County to build more miles of paved roads than any other county in Florida. By 1916, Polk County claimed 217 miles of asphalt roads. Its highway became part of the larger Scenic Highlands Highway, which extended along the Highlands Ridge through DeSoto, Hardee, Highlands, and Polk counties.⁹

Concomitant with the proliferation of automobiles, increased tourism, and early federal activities were several private associations that sought to encourage travel and lobbied for better roads in the South. Among the personalities behind these organizations were Seymour Cunningham, Carl G. Fisher, R. H. "Pathfinder" Johnston, and John Asa Rountree. Charles Glidden, a Boston millionaire and automobile promoter, conducted highly publicized tours throughout the nation for the American Automobile Association (AAA), including a 1911 trip that extended between New York City and Jacksonville, Florida. These people and organizations were part of the larger Good Roads Movement that swept the nation in the 1890s and early twentieth century. Ralph Owen of New York ran his Oldsmobile between the nation's financial capital and Daytona Beach, a famous run in 1907 that the *Jacksonville Florida Times Union* attributed to the beginning of the Good Roads

⁸Preston, *Dirt Roads to Dixie*, 19-20; Baynard Kendrick, *Florida Trails to Turnpikes, 1914-1964* (Gainesville: University of Florida Press, 1964), 14-15, 18.

⁹Paxson, "Highway Movement," 243, 248; Tebeau, *Florida*, 332, 343; Hetherington, *Polk County*, 174-77; Kendrick, *Florida Trails to Turnpikes*, 57; Cutler, *Florida*, 1: 454-456; T. Frederick Davis, *History of Jacksonville and Vicinity, 1513 to 1924* (DeLand: Florida Historical Society, 1925), 379-380.

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Movement in Florida. Representing commercial interests and tourist markets, good roads advocates generally were businessmen and developers in urban centers rather than farmers and rural agrarian reformers. Largely a southern and Midwestern phenomenon, the Good Roads Movement spawned the creation of highway associations, which designated routes after revered heroes or geographical locations, including the Andrew Jackson Highway, Atlantic Coastal Highway, Bankhead National Highway, Capital Highway, Dixie Highway, Jefferson Davis Highway, Robert E. Lee Highway, Lincoln Highway, and Old Spanish Trail. The road movement improved accessibility into the South, but addressed few issues associated with the region's persistent rural poverty and agrarian economy.¹⁰

In the opening decade of the twentieth century, Carl G. Fisher experienced exceptional success with the two-and-one-half-mile Indianapolis Motor Speedway, nicknamed the "brickyard." It was an oval track surfaced with 3,200,000 bricks. Envisioning the purpose of the automobile for more than local travel or even racing and time trials, he began promoting the concept of a transcontinental highway, the name for which he suggested as the Lincoln Highway. In 1912, he helped organize the Lincoln Highway Association in Indianapolis, and eventually the \$10,000,000 project connected New York City with San Francisco. In 1913, adding to his new-found wealth, he sold his Prest-O-Lite Company, which manufactured headlamps for automobiles, to Union Carbide Corporation for \$9,000,000.

In 1910, Fisher had met John S. Collins of Miami Beach, from whom he purchased real estate for investments, established a business relationship, and then made plans to promote the area as a tourist haven. As part of that plan, he conceived the idea for the Dixie Highway, intended to extend from Sault Sainte Marie, Michigan, to Miami Beach, Florida. A consummate promoter, Fisher never spent his own money to build the Dixie Highway; instead, he promoted the regional, hard-surface, all-weather highway concept in the Midwest, South, and Florida. Then he persuaded local and state politicians, automobile manufacturers, and automobile associations of the profits to be gained from the idea, and waited as thousands of tourists flocked to south Florida. Most of Florida's local governments scrambled to build paved roads in the hopes of being included in the designated route.¹¹

To link the Midwest with the South, and more specifically his real estate investment in Miami Beach, Fisher organized the Dixie Highway Association.¹² Conceptualized as a north-south automobile corridor, he introduced the interstate highway idea in November 1914, at an American Roads Congress held in Atlanta. Initially proposed as the "Cotton Belt Route," the highway concept was endorsed by the governors of Georgia, Indiana, and Tennessee. In April 1915, they convened a north-south highway organization meeting in Chattanooga, a convention attended by 5,000 people, including business leaders and politicians from Florida, Georgia, Illinois, Indiana, Kentucky, and Ohio. The convention adopted the name of the Dixie Highway

¹⁰Preston, *Dirt Roads to Dixie*, 47, 57, 61-63, 69-70, 92, 96, 103, 129; *Jacksonville Florida Times Union*, 15 February 1907.

¹¹*Ibid.*, 60-63; Paxson, "The Highway Movement," 239-240.

¹²Preston, *Dirt Roads to Dixie*, 60-63; *New York Times*, 16 July 1939.

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Association and agreed that the governors of each state involved would appoint two members to serve in the Association. A proposed route of the Dixie Highway set off a spirited and often rancorous debate between villages, towns, and cities throughout the Midwest and South about which route would best represent the Dixie Highway. Interests in Atlanta and Savannah sparred over the best route through the Peach State, a similar argument that erupted in Florida between interests in Orlando and Tampa, and Daytona Beach and Jacksonville. At a subsequent meeting in May 1915, the Dixie Highway Association settled on a dual route system, divided into eastern and western alignments. Guided largely by Fisher and Clark Howell, a prominent Atlanta businessman, the Association revised its strategy, in part, to encourage participation in advertising the Dixie Highway to bring as many tourists as possible into urban centers in Indianapolis, Kentucky, Ohio, Tennessee, and parallel alignments in Georgia, North Carolina, and South Carolina. Consisting of 3,989 miles, the dual route system also provided Florida with east coast and central peninsula highways. The Florida route was especially daunting because its alignment was through undeveloped areas. It was an automobile neo-frontier replete with "individualism, naturalism, and even heroism" in the language of historian Howard Preston.¹³

Florida's first statewide Dixie Highway Association meeting was held in Jacksonville in September 1915. Governor Park Trammell welcomed officials from the Association, and hundreds of good roads proponents from Florida and Georgia. In October 1915, the Dixie Highway Association embarked on a seventy-five car inspection "motorcade" of automobiles that covered 1,800 miles between Chicago and Miami Beach. The motorcade consisted of organizers M. M. Allison, Carl Fisher, W. S. Gilbreath, and other Dixie Highway officials. In some states, the motorcade included governors and politicians who used the occasion to encourage counties to accelerate road building and express cooperation with the association. The grueling trip took fifteen days, and revealed huge gaps in the development of the highway. Fisher found that "the roads in Tennessee and some parts of Georgia are simply Hell." He believed that a completed Dixie Highway would "do more good for the South than if they should get ten cents for their cotton..." The Dixie Highway's eastern route in Florida essentially followed the modern-day alignment of U. S. Highway 1. It entered the state at Jacksonville, and extended through St. Augustine, Elkton, Hastings, Bunnell, Ormond Beach, and southward to Miami Beach. The western route ran through Tallahassee, Perry, High Springs, Gainesville, Micanopy, Lady Lake, Orlando, Winter Haven, Arcadia, and Fort Myers. In addition, east-west connectors joined the main highways. The connectors included Macon, Georgia, to Jacksonville, Florida; Jacksonville to Tallahassee; Hastings to Orlando; Kissimmee to Melbourne; and Arcadia to West Palm Beach. Fisher's enthusiasm for the Dixie Highway peaked in 1916, after which his interests turned to investments in road construction companies and developing Miami Beach. The enactment of major federal legislation to support the construction of highways in 1916 and 1921 affirmed Fisher's vision of cross-country and cross-region highways.¹⁴

¹³Preston, *Dirt Roads to Dixie*, 52-58.

¹⁴*Ibid.*, 52-58; www.us-highways.com/dixiehighway.htm; *New York Times*, 10 October 1915; *Jacksonville Florida Times Union*, 29, 30 September 1915; Mark Foster, *Castles in the Sand: The Life and Times of Carl Graham Fisher* (Gainesville: University Press of Florida, 2000), 121, 128.

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Based in Chattanooga, the Dixie Highway Association published a monthly magazine that reported on the progress of construction. Some issues extolled the benefits of touring Florida by automobile. The Association sponsored the installation of highway signs to identify the route of the Dixie Highway. In 1918, the Automobile Club of America published a "Dixie Tour," a guidebook that directed motorists on a 1,300 mile route between New York City and Miami Beach. That year, the Automobile Association of America published a directory that furnished information on 24,000 miles of roads throughout the nation.¹⁵ Signs had a long rectangular shape placed vertically on a post. They were executed with a black, red, and white color scheme. Visually divided into thirds, the signs bore a central red field flanked by white fields, and trimmed with black borders between the fields and along the edges. The initials "DH" appeared as white cutouts in the central red band. Although the Association did not contribute financially to the construction of the highway bearing its name, it did lobby the Congress for funding. Challenged with several river crossings and swamps, residents and officials in Nassau County, Florida, benefited from this process and received \$25,000 in federal aid for construction of the Dixie Highway. Most of Florida's counties, however, sponsored road building through bond issues. Construction accelerated during World War I, when the nation's railroads struggled to meet shipping demands, and concerns arose about safeguarding America through its highway system. In the South alone, approximately thirty-five military installations and forts, including several in Florida, found that railroads often failed to meet their transportation demands. In addition to lobbying by automobile associations, pressures from the military and trucking companies spurred highway construction.

By 1920, writer Florence Pettee reported in Motor Travel that Florida "no longer lay beyond arduous and impassable sands, behind impenetrable morasses of red gumbo and just around the corner from Stygian cypress swamps and other road unpleasanties." During the early-1920s, new alignments of the Dixie Highway were developed by some local governments to shorten distances between cities, replace older poorly built roads, and to open new areas to development. By 1925, the Florida State Road Department supplied funding for hundreds of miles of roads, including some stretches of the Dixie Highway. Subdivisions and businesses created along the highway often incorporated the Dixie rubric within their names. By 1926, most of the Dixie Highway had been paved combining local, state, or national funding. Still, some sections remained unpaved. In 1924, on yet another automobile journey between Indiana and Miami Beach, Carl Fisher found that the road between Macon, Georgia, and Jacksonville, Florida, was "almost impassable sand...much worse than it was five years ago." In 1926, the national government implemented a federal highway system, in part, to help complete interstate roads. Standardized black-and-white signs shaped like shields bearing federal route numbers replaced older signage. The Lincoln Highway largely became U. S. Highway 30. Most of the National Highway was numbered U. S. Highway 40; and U. S. Highway 90 largely followed the alignment of the El Camino Real and the Old Spanish Trail.¹⁶

¹⁵Preston, *Dirt Roads to Dixie*, 52-58, 115; www.us-highways.com/dixiehwy.htm.

¹⁶Preston, *Dirt Roads to Dixie*, 52-58, 115, 116; www.us-highways.com/dixiehwy.htm; Kendrick, *Florida Trails to Turnpikes*, 252-253; Paxson, "Highway Movement," 250; Foster, *Fisher*, 133, 134.

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The Dixie Highway, however, because of its dual mainlines, carried no single federal highway number. In Florida alone, the Dixie Highway routes extended along parts of federal highways 1, 17, 27, 41, 98, 221, 319, and 441, and various state roads. In 1927, the Dixie Highway Association disbanded, and its functions assumed by the County Highway Officials Association in 1927, the Florida State Road Department, and the Federal Highway Administration. By the mid-1930s, the Dixie Highway nomenclature had faded from popular usage, and many of the picturesque black, red, and white signs had been removed, or rusted away. In an effort to reclaim their transportation heritage, some county and municipal governments adopted the Dixie Highway name as a local designation for the street within their jurisdictions. In other cases, the name Old Dixie Highway or Old Brick Road was assigned as a tribute to the heritage of the transportation corridor.¹⁷

Graves Brick Company and Southern Clay Manufacturing Company

Most of the bricks contained on this designated highway were manufactured in Birmingham, and Chattanooga, important southern manufacturing and transportation centers, and crossroads for automobile travel in the early twentieth century. The Graves Brick Company was organized by William H. Graves in the early twentieth century. A native of Knoxville, Tennessee, Graves earned a law degree at the College of William and Mary, and returned to Tennessee to open a law firm. After the Civil War, he moved to Montgomery, Alabama, and relocated to Birmingham in 1890. Graves maintained his law practice and invested in real estate as Birmingham's economy showed signs of sustained growth. He began developing commercial buildings, and organized a brick company to supply those projects. The City of Birmingham's street paving program offered additional opportunities in the manufacturing of vitrified bricks. By 1901, Graves had organized the Graves Shale Brick Company. Over the following two decades, he also organized the Graves-Matthews Paving Company and the Graves-Gunster Paving Company, both with men who married his daughters. H. S. Matthews briefly served as general manager for the brick and paving businesses before moving to Florida. By 1915, the Graves Company had manufactured millions of bricks, both the type used in building construction and vitrified type for road construction. Eventually, Graves combined the brick and paving businesses, which he closed about 1925. By then, Graves was among the most prominent attorneys and property owners in Birmingham. The paving bricks were prominently imprinted "GRAVES B'HAM ALA." on the face, and were brown, orange, and red of the local clays.¹⁸

Founded in 1893, the Southern Clay Manufacturing Company of Chattanooga, Tennessee, was a reorganization of the Tennessee Paving Brick Company, which had been established in 1889. Early officers consisted of D. J.

¹⁷Preston, *Dirt Roads to Dixie*, 52-58, 115, 116; www.us-highways.com/dixiehw.htm; Kendrick, *Florida Trails to Turnpikes*, 252-253; Paxson, "Highway Movement," 250.

¹⁸George Cruikshank, *A History of Birmingham and Its Environs*, 3 volumes, (Chicago and New York: Lewis Publishing Company, 1920), 2:73-75; Maloney Publishing Company, *Birmingham City Directory* (Birmingham: Maloney Company, 1901), 284; R. L. Polk, *Birmingham City Directory* (Birmingham: Polk Company, 1905), 477; R. L. Polk, *Birmingham City Directory* (Birmingham: Polk Company, 1910), 592; R. L. Polk, *Birmingham City Directory* (Birmingham: Polk Company, 1915), 685, 686; R. L. Polk, *Birmingham City Directory* (Birmingham: Polk Company, 1918), 773.

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Chandler as president, William M. Lasley as secretary-treasurer, and D. P. Montague as vice-president. By 1915, William Lasley had become the company's president and his brother, Theodore H. Lasley, served as vice-president. Natives of Ohio, the Lasleys had moved in 1883 to Chattanooga, where they became prominent businessmen. A graduate of the University of Michigan in 1883, Theodore Lasley developed a regional clay products company for which he became recognized as a pioneer in the road construction and paving industry. He profited as an early investor in the Coca-Cola Company, and served as a director of the Hamilton National Bank in Chattanooga. Although the company's headquarters remained in Chattanooga, their first brick plant was northwest of Knoxville at Robbins, Tennessee. By the 1910s, the company opened new manufacturing plants in Birmingham, and Coaldale, Alabama. Consequently, many of the brick and clay products manufactured by the company reflected a variety of colors typical of Alabama and Tennessee clays, with brown, orange, red, and yellow hues. Their brick faces were impressed with a distinctive elongated diamond within which appeared the words "Southern Clay Mfg Co".¹⁹

HISTORICAL SIGNIFICANCE

The portion of the Dixie Highway/Hastings, Espanola and Bunnell Road here nominated was a part of a countywide highway improvement program implemented by the County of St. Johns in the second decade of the twentieth century. Prior to the construction of the highway, the county government improved some of its public roads with oyster shells, a common road surfacing material in many of Florida's coastal counties. As early as May 1913, St. Johns County's commissioners and St. Augustine's chamber of commerce had discussed plans for paving parts of the county's road system with brick-and-shell, but none of those plans encompassed a countywide program. St. Augustine businessmen and politicians Eugene Masters and A. M. Taylor supported the use of brick for highways for the entire county, pointing out how St. Augustine's brick paved streets were relatively maintenance free. Despite their support, the county commission continued to rely on shell to pave county roads. In January 1914, twenty railroad cars filled with oyster shells from Melbourne, Florida, were shipped to various locations in St. Johns County to surface the county's main public roads.²⁰

In late 1913, news of a brick road under construction in neighboring Duval County between the St. Johns County line and the Nassau County line compelled the St. Johns Board of Commissioners to investigate a hard-surface road. In January 1914, commissioners in Volusia County to the south began debating the benefits of concrete or brick in a countywide road paving plan. At a special meeting in early January 1914, Commissioner A. H. Faver, a St. Augustine businessman, recommended that the county move forward as quickly as possible. Additional support came from an old ally, St. Augustine's chamber of commerce, and J. E. Ingraham, vice-president of the Florida East Coast Railway Company. Later that year, Ingraham traveled between Ft. Pierce and St. Augustine in an automobile, a tortuous nine-hour trip with the worst roads near Bunnell. Henry H.

¹⁹*New York Times*, 8 April 1954; *Chattanooga Times*, 12 June 1936, 8 April 1954.

²⁰St. Johns County Commissioners Record Book D, p. 420-422, County Clerk's Office, County of St. Johns, St. Augustine, Florida; *St. Augustine Record*, 28 December 1906, 15, 17, 19, 21, 28 May 1913, 6, 23 January, 10 July 1914.

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Flagler had admonished the businessmen and politicians of St. Johns County as early as 1906 for neglecting to build hard-surfaced roads. He predicted that other communities would draw business away from St. Augustine if they did not soon improve their county roads. A keen observer, Flagler hailed from Ohio, the first state to brick pave public roads, and leader in the manufacturing of vitrified bricks.²¹

In January 1914, the county advertised bids for "paving the 'John Anderson Highway' from the Duval County line to the North City limit of St. Augustine...and...the County Road from Hastings to the Volusia County line..., a total of 64 miles." A. F. Harley, county engineer for Duval County, assisted St. Johns County with preparing its bids specifications. The bid request included the general specifications of "asphalt macadam, concrete, vitrified paving brick, or other suitable material, nine feet wide, from outside to outside of four by ten inch concrete curbing, the width of the curbing to be included in the paved portion of the road..." The contractors were required to conduct the paving work at three points in the county simultaneously, and at each point pave at least one mile per month. Six companies responded to the bid request: W. H. Cochran Company, Everett P. Maule Company, Seth Perkins & Sons, Southern Asphalt & Construction Company, Wilson Construction Company, and C. S. Young Construction Company. Led by its chairman, I. I. Moody of Bunnell, the county commission awarded a bid for \$527,155.20 to the J. Y. Wilson Construction Company of Jacksonville to pave the public road with brick in February 1914. The county reserved an additional \$26,844.80 for engineering fees associated with developing the road. The county commission retained the J. B. McCrary Company of Atlanta for engineering and design work on the highway in June 1914.²²

Following the award of the construction to the Wilson Company, the county commission and chamber of commerce embarked on a massive public relations campaign to help ensure the bonding necessary to pave the highway. Using the banner of "Good Roads, Progress, and Prosperity," rallies were held in Hastings and St. Augustine. Business officials encouraged St. Johns County's residents to vote for the road bonds. F. O. Miller of the Jacksonville Board of Trade and local school officials delivered brief addresses at St. Augustine's "brick road rally" in the downtown plaza. Enacted by a voter referendum by an overwhelming majority of 822 to 432 in April 1914, the county's road bonds amounted to \$650,000. Only the residents of the Diego, Elkton, and New Augustine precincts had majorities who voted against the bonds. In Bunnell, the vote was eighty-seven to two for the measure, and in Espanola all eighteen eligible voters approved of the bonds.²³

The Bunnell Home Builder attributed the financing and politics associated with the brick highway largely to I. I. Moody, Jr., a Bunnell developer and businessman who served as chairman of the St. Johns County

²¹St. Johns County Commissioners Record Book D, p. 420-422, County Clerk's Office, County of St. Johns; *St. Augustine Record*, 28 December 1906, 15, 17, 19, 21, 28 May 1913, 6, 23 January, 10 July 1914.

²²St. Johns County Commissioners Record Book D, p. 379-388, 420, 432-433, 461, 477, County Clerk's Office, County of St. Johns; "Road Improvement," *Bunnell Home Builder* (August 1913), 102; *St. Augustine Record*, 2 April 1914; *St. Augustine Record*, 16 January, 24 February 1914.

²³*St. Augustine Record*, 30, 31 March, 1, 2 April 1914; St. Johns County Commissioners Record Book D, p. 440, County Clerk's Office, County of St. Johns.

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Commission in 1913 and 1914. A native of Georgia, Moody arrived in St. Johns County in 1898 to work for George Deen in the turpentine business. By 1903, Moody had formed a lumber mill partnership with James Lambert, and later organized a real estate business. Instrumental in the founding of the Town of Bunnell and the Bunnell Development Company in 1909, Moody perceived the hard-surface road as a necessary development to link the nascent community of Bunnell with the established cities of Daytona Beach and St. Augustine. In 1917, Moody organized residents in Bunnell, Espanola, Neoga, and adjacent communities to lobby the Florida Legislature for the creation of Flagler County. Moody represented the new county in the legislature in 1917, but died the following year. It was largely Moody's political activism and his popularity in Bunnell and Espanola that resulted in the creation of the highway and the new county.²⁴

Espanola, an older community northwest of Bunnell and astride the Florida East Coast Railway tracks, had been organized about 1888 under the name of Raulerson, which was changed to Espanola in 1894. A town plan was laid out in 1911, and later the alignment of the Dixie Highway followed First Street West. In 1920, the census bureau counted 385 people in the Espanola precinct. Merchants included C. P. Hendry, who operated an automobile garage; the offices of the Neoga Naval Stores Company and naval stores owner S. L. Strickland; grocer C. E. Pappy; and general store owner T. F. Whitton. In the 1920s and 1930s, Elzie Hunter operated the Live and Let Live Tourist Camp along the Dixie Highway.²⁵

The county notified the Wilson and McCrary companies to proceed with the paving work in August 1914. The company graded the foundation and laid the brick and curbing for the St. Johns County highway only after the alignment, levels, and grades were established by the J. B. McCrary Company of Atlanta, Georgia. The Wilson and McCrary companies were prominent contracting and engineering businesses in their respective southern cities of Jacksonville and Atlanta. A native of Jacksonville, Florida, James Young Wilson was born in 1870, served as an Army officer during the Spanish-American War, and went to St. Augustine, where he was briefly attached to the U. S. District engineer's office. About 1901, he returned to Jacksonville and established the Jacksonville Tile & Paving Company with J. J. Holmes. Wilson's business consisted of paving streets and country highways, primarily with bricks. His paving activities extended throughout north Florida, including Camp Johnston during World War I and later Camp Foster. In 1916, the same year he completed his contract with St. Johns County, he completed the DeLand-Lake Helen Road in Volusia County, a sublet contract with the Southern Clay Manufacturing Company of Chattanooga, Tennessee. He operated the paving business for several decades, and in the mid-1920s reorganized the business as the Wilson Construction Company. In the mid-1930s, Wilson retired from the contracting business, and served as an engineer in the Civil Works

²⁴"Work to Begin of the New Brick Highway Shortly," *Bunnell Home Builder* (June 1914), 166; Mary Holland, *First Families of Flagler* (Bunnell: Mary Holland, 1995), 177-178; Map Book 2, p. 25, Clerk of Courts, Flagler County Courthouse, Bunnell, Florida.

²⁵"Work to Begin of the New Brick Highway Shortly," *Bunnell Home Builder* (June 1914), 166; Mary Holland, *First Families of Flagler* (Bunnell: Mary Holland, 1995), 177-178; Map Book 2, p. 25, Clerk of Courts, Flagler County Courthouse, Bunnell, Florida.

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Administration (CWA), then as a district administrator in the Works Projects Administration (WPA). Before his death in 1940, Wilson was acting state administrator for the WPA.²⁶

The much larger and ubiquitous McCrary Company designed hundreds of highways, roads, and municipal light, water, and sewer systems throughout the Southeast between the 1890s and 1940s. A native of Georgia, Joseph Boyd McCrary was graduated from the Georgia Institute of Technology in 1891 and worked for several engineering companies in Atlanta before organizing his own business in 1896. One of the company's first large jobs came in the late 1890s with the water works at Monticello, Florida. Initially specializing in water systems, the company soon expanded into road and highway engineering. In the 1910s and 1920s, the McCrary Company engineered approximately 2,000 miles of highways and roads in Florida alone, including the Tamiami Trail and the Ingraham Highway to Cape Sable. In 1926, the McCrary Company built fifteen miles of concrete highway in St. Johns County, the second largest contract let that year by the Florida State Road Department. During World War I and World War II, the company engineered the design of many military installations and training camps. Eventually, the company completed projects between El Paso, Texas, and Jackson, Michigan. For the new brick highway in St. Johns County, the company surveyed the alignments, provided the levels, designed bridges and culverts, superintended the Wilson Company's work, and conducted other design and engineering work.²⁷

Although the Wilson and McCrary companies received notices to proceed in August 1914, the Wilson Company made little headway until October 1914. Most of the brick was delivered to the road sides by trains operating on adjacent rails, but for the stretch of road between Hastings and Espanola, Wilson reported that mule teams would be used to haul the brick in the event that the railroad would not be available in that area. Initially, the county ordered the Wilson Company to divide its brick crews into three sections: one to start at the Duval County line and pave south to St. Augustine; another crew to start at Alligator Branch southeast of Bunnell and work north beyond Bunnell and north of Espanola; and the third crew to begin at Byrd, a settlement approximately fifteen miles northwest of Espanola, and work through Hastings, Elkton, Spuds, and St. Augustine. Several weeks later, however, to reduce costs and speed construction, the county commission altered its paving locations for the highway, placing the emphasis on the stretch of road between the Duval County line and St. Augustine, and from Byrd to Hastings and St. Augustine. In August 1914, Wilson ordered 5,000,000 bricks for the highway north of St. Augustine, in addition to a road scraper, grader, and roller. The county agreed to supply an eighteen-berth portable steel convict cage to transport inmates to grade the roads while Wilson's crews laid the curbs and brick. Even before construction began, the commission ruled that no truck over five tons could operate on the new highway "unless its wheels are extra wide tread."²⁸

²⁶*Jacksonville Florida Times Union*, 11 September 1940; *Jacksonville Journal*, 10 September 1940; Kendrick, *Florida Trails to Turnpikes*, 81, 254-255.

²⁷Franklin Garrett, *Atlanta and Environs: A Chronicle of Its People and Events*, 3 Volumes, (New York: Lewis Historical Publishing Company, Inc., 1954), 3:67-68; Kendrick, *Florida Trails to Turnpikes*, 71, 80, 97.

²⁸"Work to Begin of the New Brick Highway Shortly," *Bunnell Home Builder* (June 1914), 166; St. Johns County Commissioners Record Book D, p. 435, 477-478, 483, County Clerk's Office, County of St. Johns; *St. Augustine Record*, 19

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In September 1914, eight railroad cars of bricks arrived at the Durbin siding of the Florida East Coast Railway and twenty-five additional rail cars were in transit. Although the McCrary Company began laying the levels and alignments in August 1914, Wilson's brick laying crews remained in Seminole County, completing jobs near Sanford until October. After the engineers with the McCrary Company laid the levels for the road, the convicts graded the road, relocating some of the existing shell outside the curb lines to form the shoulders of the new highway. After Wilson's crews arrived, they prepared the bed with graders and rollers. Curb and brick laying began at Durbin and Hastings in October 1914. One of Wilson's innovations was to groove the ends of the four-by-ten inch concrete curbs so each piece fit tightly against an adjoining section. This protected the road from erosion and prevent the separation of the curbs. On 19 October 1914, the editors of the St. Augustine Record declared that "brick paving is now in full swing." For most of the highway, the Wilson Company used vitrified brick manufactured by the Graves Brick Company of Birmingham, Alabama, but also used some bricks from the Southern Clay Manufacturing Company of Chattanooga, Tennessee. By August 1915, the Wilson Company had paved fifty-seven miles, leaving unfinished four miles southwest of New Augustine and nine miles southeast of Byrd toward Espanola. Heavy rains and high water delayed the widening of the alignment and straightening the grade through the Big Cypress Swamp north of Espanola. Once the waters receded, the grade was established and brick culverts were built in several areas for drainage. The bricks and curbs were then laid, and Wilson's steam road roller smoothed the finished surface. Crews replaced broken bricks, and cleared brush and roots from the shoulders on which they packed shell.²⁹

In the months before the arrival of the Dixie Highway motorcade, the St. Johns County commissioners took action to address reported deficiencies in the highway. In early-1915, the county deferred on payment requests by the McCrary Company for an unacceptable condition of the brick road between Atwood's Ditch and Mile Post Nine. In July 1915, the commission passed a resolution discharging the McCrary Company from its duties, alleging that the company's "engineers were not present at the laying of brick between Bunnell and Espanola and between Bunnell and the South end of said brick road." Eventually, the disagreements were resolved, but not before additional conflicts emerged between the company and the county government. Responding to reports from various sources, the county made further allegations that the company had permitted bricks to be laid "without said roadway being watered properly before rolling... and the laying of brick on said road upon palmetto roots, etc." Further complaints surfaced about the engineering company "not furnishing the contractor the requisite lines and grades at many places from the North of St. Johns County to the limits of St. Augustine, and between Hastings and Elkton, between Bunnell and Espanola, and between Bunnell and the South end of said road." To resolve the dispute and retain the contract, the McCrary Company agreed to direct the necessary repairs and agreed to permit the county to hold \$2,000 of its final payment for sixty days after the completion of the repairs. North of Espanola, the engineers supplied the necessary surveys, lines,

August 1914.

²⁹St. Augustine Record, 25 August, 3, 9, 12 September, 14, 18, 19 October 1914, 9 August, 6 October 1915; Daytona Gazette-News, 13 August 1915.

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grades, and supervision during the paving process because of the difficult terrain associated with Big Cypress Swamp and Pringle Swamp. Through Espanola, where general store owner W. N. Mattox was compelled to relocate two buildings out of the right of way, the alignment followed First Street West.³⁰

During the construction of the highway, concerns regarding the nascent and volatile Dixie Highway Movement drew the attention of the county commission. In May 1915, the commissioners sent a resolution to the Dixie Highway Association, protesting the designation of the Dixie Highway through the central peninsula of the state. The commissioners recommended the route extend through Jacksonville and along Florida's east coast, and urged the Association to inspect the new brick highway under construction in St. Johns County. Reports of motorists experiencing some confusion about the correct route for the Dixie Highway alarmed some officials until new signs were installed. St. Johns County's officials discovered that some out-of-state motorists used out-of-date highway maps and selected the King's Road instead of the Dixie Highway for travel between St. Augustine and Ormond Beach. New signs bearing the DH emblem helped travelers avoid the unpaved King's Road. Later that year, the editors of the St. Augustine Record celebrated the arrival of the "Dixie Highway Motorcade," a procession of seventy-five automobiles that traveled from Chicago to Miami Beach. On 21 October 1915, a delegation of St. Augustine businessmen and good roads promoters met the motorcade at the Duval County-St. Johns County line and escorted them along the Dixie Highway into St. Augustine. Later that day, forty automobiles adorned with bunting and flags departed St. Augustine, led by I. I. Moody, A. H. Faver, and W. B. Edminster, to accompany the Association's officials along the brick-paved Dixie Highway into Daytona Beach. Citizens at Elkton and Hastings paid tribute to the motorcade, which also stopped in Bunnell at the state bank, where Moody delivered a brief speech. The highway officials complimented "the St. Johns County commissioners over the wonderful achievement in road-building, stating that St. Johns would probably occupy first place on the honor roll because of being the first county along the entire route to use a permanent paving material on such a long stretch of highway." The officials commented that they had experienced difficulties only along a five mile stretch between Byrd and the state convict camp in the Big Cypress Swamp.³¹

In December 1915, the McCrary and Wilson companies met their obligations for the brick paved road between St. Augustine and Duval County, and completed the stretch of highway south of Byrd, through Espanola and Bunnell to the Volusia County line in 1916. On 4 March 1916, the St. Augustine Record declared the entire Dixie Highway completed in St. Johns County. Wilson's crew celebrated with a barbecue with 160 pounds of pork and forty loaves of bread, and predicted that the road would be a "boon to the farmer and automobile tourist." The St. Augustine Record indicated that Wilson would have completed the job in late 1915 if the company had not experienced a shortage of materials. In March 1916, the road was declared open to traffic between the Duval County line and the Volusia County line, although some grades still needed to be widened

³⁰St. Johns County Commissioners Record Book D, p. 513, 550-551, County Clerk's Office, County of St. Johns; Map Book 2, p. 16, Clerk of Court, Flagler County Courthouse; R. H. Scott, *The Florida Growers Atlas of Florida: Map of St. Johns County, Florida* (Tampa: R. H. Scott, 1914).

³¹St. Johns County Commissioners Record Book D, p. 507, 534, County Clerk's Office, County of St. Johns; *St. Augustine Record*, 21, 23 October 1915; *Daytona Gazette-News*, 22 October 1915.

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and no beautification had occurred. One brick remained unlaid for later that year, when a formal Dixie Highway ceremony was held for the people of Bunnell, Espanola, and Hastings. One of the straightest sections of the highway extended for nearly ten miles beginning about five miles east of Byrd, where an abrupt turn at Kersey's Corner (current intersection of brick road and paved Highway 13/24) took the road south. From there it ran approximately ten miles with several slight bends on relatively flat, low terrain between the Big Cypress and Pringle swamps into Espanola. In April 1916, the McCrary Company requested a final inspection of the highway and final payment. The commissioners inspected the brick highway between the county lines and accepted it "in accordance with the plans and specifications furnished the said Wilson Construction Company." The final paved mileage was sixty-six miles.³²

One year later, in April 1917, the Florida Legislature created Flagler County. In its first official meetings, the new government itemized five of its most pressing concerns, one being the brick road. In appraising its adjustments with St. Johns and Volusia counties regarding public properties within the new jurisdiction, Flagler County's officials asserted that part of the brick road north of Espanola had never been accepted by St. Johns County's board of commissioners. To remedy what it believed to be a deficiency in the brick highway, the county contacted the Wilson Company about completing the section of highway. But, the construction company, believing it had completed its contractual duties with the formal inspection the previous year and receipt of final payment for services from St. Johns County, never responded. In November 1917, failing to gain satisfaction from the Wilson Company, Flagler County's officials directed A. F. Bell, the superintendent of roads, to delegate a convict work force on the highway to complete the paving activities. Later, after officials from Flagler and St. Johns counties discussed the amount due St. Johns County for the brick road, Flagler County established a sinking fund to retire the debt.³³

Few buildings or structures existed along the highway north of Espanola. One of the largest concentrations of buildings was approximately one mile north of the Flagler-St. Johns county line. Fifteen buildings were west of the Dixie Highway on the edge of the Big Cypress Swamp. In the 1910s and 1920s, the property was owned by the Hastings Operating Company, suggesting the buildings were part of a lumber or turpentine camp. Farther south, a system of unimproved roads radiated off the Dixie Highway toward Dinner Island, Neoga, and into the Big Cypress and Pringle Swamps, mainly logging roads. A small group of buildings stood along the highway about one mile north of Espanola and a few additional dwellings and buildings were distributed across the Pringle and Matanzas Swamps well east of the brick road, but no additional buildings or structures appeared along the alignment.³⁴

³²St. Johns County Commissioners Record Book D, p. 599, Book E, p. 17, 28, County Clerk's Office, County of St. Johns; *St. Augustine Record*, 4 March, 12 June 1916; *Daytona Gazette-News*, 22 October 1915; Florida State Road Department, *Florida Road Condition Map* (Tallahassee: State Road Department, 1923).

³³Flagler County Commissioners Record Book 1, p. 6-7, 26, 30, County Clerk's Office, County of Flagler, Bunnell, Florida.

³⁴U. S. Department of Agriculture, Bureau of Soils, *Soil Map of St. Johns County, Florida* (Washington, D.C.: GPO, 1917); U. S. Department of Agriculture, Bureau of Soils, *Soil Map of Flagler County, Florida* (Washington, D.C.: GPO, 1918).

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The Dixie Highway north of Bunnell, through Espanola, Hastings, Elkton, and into St. Augustine, for about one decade, served as the primary route of travel for tourists motoring along Florida's east coast. One observer of automobile travel in the region recorded 453 cars using the Dixie Highway in September 1915, most of those southbound. The following month, the number had increased to 647. Although many local farmers used trucks to transport crops to market and to rail sidings adjacent to the highway, tourism by automobile emerged as the heaviest impact and increased exponentially during the 1920s. In 1922, the editors of *Literary Digest* reported that 80,640 vehicles had passed through Jacksonville, Florida, on the Dixie Highway headed for St. Augustine, Ormond Beach, and points south, indicating a significant amount of traffic along the Dixie Highway north of Espanola. In 1923, using the recommendation of the Florida State Road Department, the Florida Legislature designated the brick road as State Road 4, a route that extended between Hilliard and Miami and largely followed the alignment of the Dixie Highway, including the highway north of Espanola. In the 1924-1925 winter season Jacksonville's chamber of commerce reported that 150,000 out-of-state automobiles passed through the city, many of which traveled south to St. Augustine and Daytona Beach. In August 1925 alone, the chamber counted 12,550 cars carrying 49,118 people south of Jacksonville on the Dixie Highway. Later estimates asserted that 2,500,000 people visited Florida in 1925, the majority in automobiles with Jacksonville and Lake City the main points of entry.³⁵

The tourists included hundreds of racing enthusiasts who traveled the highway each year to watch automobile speed trials and races on Daytona Beach. Seasonal tourists included businessman C. E. Luther of Providence, Rhode Island, who owned the Flagler Hotel in Daytona Beach. In 1915, Luther began annual automobile trips between Rhode Island and Florida, using the Dixie Highway south of Jacksonville. Automobile dealers, the Graham brothers of Maine, used the Dixie Highway to reach Daytona Beach in December 1915. From Bar Harbor, E. A. Graham drove one of his new touring models that year. Henry M. Leland, president of Cadillac Automobile Company in Detroit, drove one of his new "Cadillac eights" between Jacksonville and Daytona Beach on the Dixie Highway in 1916. That same year, roughly thirty Jacksonville and St. Augustine advertising agents traveled by automobile to Daytona Beach for a statewide convention of advertisers, a harbinger of activities that would come into full bloom during the Florida Land Boom of the 1920s. The first gubernatorial candidate to canvas the state by automobile, Sidney J. Catts drove hundreds of miles across Florida in late-1916. His campaign stops in Daytona Beach, Jacksonville, and elsewhere in north Florida took him along the Dixie Highway in a Model T Ford made famous during the campaign and later in the inaugural parade in Tallahassee in 1917. Historian J. Wayne Flynt later assessed the Catts campaign "as remarkable technologically as it was politically" because of Catts's use of the automobile.³⁶

³⁵*Daytona Gazette-News*, 15 October, 5, 19 November, 3, 31 December 1915; Preston, *Dirt Roads to Dixie*, 125; *Flagler Tribune*, 17 August 1925; Tebeau, *Florida*, 378-392; Michael Gannon, ed., *The New History of Florida* (Gainesville: University Press of Florida, 1996), 292; *General Acts and Resolutions Adopted by the State of Florida* (Tallahassee: Florida Legislature, 1923), 367-368.

³⁶*Daytona Gazette-News*, 15 October, 5, 19 November, 3, 31 December 1915, 4 January 1916; *Flagler Tribune*, 17 August 1925; *Jacksonville Florida Times Union*, 1 November 1916; J. Wayne Flynt, *Cracker Messiah: Governor Sidney J. Catts of Florida* (Baton Rouge: Louisiana State University Press, 1977), 76-77, 91, 144.

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Land holders with the most acreage along the Dixie Highway north of Espanola between 1915 and 1925 included the heirs of Henry S. Wilson, founder and president of the Wilson Cypress Company of Palatka. Also, Leonard Hillis of Hastings, as well as the Hastings Operating Company, which was managed by W. C. Jackson and Arthur Perry. In one transaction in 1914, the Hastings Operating Company conveyed 28,000 acres to the Wilsons, much of that astride the alignment of the future Dixie Highway and the adjoining wetlands. The Wilson Company harvested thousands of trees from the region over the following decade, built a tram road that bisected the Dixie Highway north of Espanola, and opened a mill at Neoga. Writing several generations later, environmental journalist Bill Belleville recorded that the company “chewed up trees to the tune of forty million board feet of lumber annually...,” and quoted a historian who believed the Wilson lumber mill at Palatka “was the most magnificent lumber mill on earth.” Property owners with smaller holdings on the north side of Espanola included N. P. Axson, Frank Foster, Elzie A. Hunter, James A. Hunter, and Celia Lord. Timber leases sprinkled the region as lumber and naval stores companies harvested the natural resources from the surrounding pine and cypress forests. During the Florida Land Boom, several ambitious developments were launched by developers hopeful of quick land sales along the relatively barren stretch of highway. In August 1925, builder Nathan Manilow of Chicago and Vero Beach purchased approximately 800 acres from the Wilsons four miles north of Espanola. There Manilow laid out a town plan for Flagler City. Manilow operated a real estate, finance, and commercial and residential construction business in Illinois and Florida between 1922 and 1932. During the Great Depression, he organized the Refinance Corporation, and in 1939 cooperated with the Federal Housing Administration (FHA) and the Chicago Planning Commission to build one of the city’s first private apartment complexes. Through Manilow & Associates and subsidiary companies, he planned and built the exclusive Park Forest community near Chicago. In 1946, *Fortune Magazine* claimed Manilow to be the largest private home builder in Chicago. In the 1950s, Manilow founded the American Community Builders, Inc. of Chicago, and endowed a chair in the planning department of Brandeis University.³⁷

Manilow had just entered the real estate business when he laid out the town plan for Flagler City. Adjacent to the Dixie Highway that served as a central feature, it consisted of a rectilinear grid of streets set at right angles to the highway. Parks and divided streets provided variety to the plan. Larger farm lots east of the highway several hundred feet contrasted with smaller commercial and residential lots bracketing the highway. To help encourage sales and development, Manilow built some streets, laid sidewalks, and reserved several lots for a school and a church. By January 1926, Manilow had conveyed his interest in the development to the Bleekman-Robinson Syndicate, Inc., which maintained offices in Daytona Beach, Jacksonville, Miami, New York, and Philadelphia. The syndicate produced several full-page advertisements in the *Flagler Tribune*. Typical of the bombastic hyperbole used by developers, the advertisements extolled the benefits of living at “Flagler City on the Dixie, a thrilling scene of activity--trucks, tractors, road-making equipment, sand, cement,

³⁷*New York Times*, 4 October 1958; Tax rolls, 1915, Clerk of Court, St. Johns County Courthouse; Plat Book 2, p. 23, 24, Deed Book 10, p. 121, Clerk of Court, Flagler County Courthouse; A. N. Marquis, comp., *Who's Who in America* (Chicago: A. N. Marquis, 1958), 1763; “Better Than a Quonset,” *Fortune* 33 (April 1946):221-222.

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rock, attractive street signs, and actual construction of buildings. All in preparation for what I am convinced will some day, not far distant, be a notable link in the great chain of thriving communities that will form an almost endless chain of humanity from one end of the United States to the other along the Dixie Highway.” Within several years the syndicate had abandoned Flagler City, and the entire tract was returned to the Wilsons in 1928. Coming near the close of the Florida Land Boom, the Flagler City real estate enterprise fell victim to the collapse of Florida real estate market in the mid-1920s, and the opening of new highways farther east. Despite their claims and grandiose scheme for Flagler City, both Manilow and the syndicate sold few lots, and even fewer buildings were constructed. Long-time residents recall a filling station, several buildings, street lamps, and even a stuccoed arch that spanned the highway bearing the words “Welcome to Flagler City” at the site, none of which remains. In July 1929, Flagler County formally vacated the alleys, drives, parks, roads, and streets of the subdivision. Little evidence of this development remains.³⁸

Equally ambitious in scope although smaller in scale was Flagler Heights. Located one mile north of Espanola, Flagler Heights was opened in 1925 east of Lake Neoga with 480 acres and 5,000 lots. The subdivision was a product of the Miami Syndicate, Inc., a Dade County real estate company that targeted properties along the Dixie Highway for development. The company’s promoter, W. M. Martin took out several full-page advertisements in the *Flagler Tribune* with picturesque scenes of lakes, trees, buildings, and the Dixie Highway. The developers promised the “folks of Bunnell” that “The Dixie has made and is making thousands for wise investors. The golden stream will flow your way, too, if you act on Flagler Heights on the Dixie.” Martin claimed he had sold 1,370 lots by November 1925. The Flagler County Courthouse recorded only a few such sales. Land prices ranged from \$75 to \$2,000, but following the pattern at Flagler City, the subdivision was abandoned by the developer and vacated by the county. The opening of Atlantic Shores, Flagler Beach, Flagler Shores, and Ocean City subdivisions on the coast in the mid-1920s, as well as new subdivisions in Bunnell, eclipsed land sales along the Dixie Highway north of Espanola.³⁹

Despite a lack of substantial development, the Dixie Highway north of Espanola was the scene of several accidents, and was a common route used to transport people with medical emergencies. Oncoming cars typically yielded to each other because the road was only nine feet wide, requiring each vehicle to travel partially on the shoulder. Despite the hazardous passing technique, most accidents involved single cars. In February 1925, a Packard “Six” about a mile north of Espanola left the road and overturned with four occupants who survived, only badly bruised. Later that year, a chauffeur traveling south lost control of a new six-cylinder Studebaker two miles north of Espanola, and plunged into a ditch with three ladies from St. Augustine. One of the ladies sustained fatal injuries and the driver broke his leg. In May 1925, T. F. Whitton of Espanola was transported along the Dixie Highway to the East Coast Hospital in St. Augustine, where he underwent

³⁸Flagler County Commission Minute Book 2, p. 407-408, Deed Book 17, p. 143, 216, 249, Clerk of Court, Flagler County Courthouse; J. B. High, comp., *Flagler County, Florida* (Bunnell: Hernandez Estates, Inc., 1926); *Flagler Tribune*, 28 January 1926; Otis Hunter and Norma Turner, informants.

³⁹*Flagler Tribune*, 29 October, 12, 19 November 1925.

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emergency surgery. In mid-1925, Bunnell residents Clarence E. Pellicer and Zeno W. Richardson used the highway to transport a bear cage by truck into the Big Cypress Swamp. By August 1925, the trappers had hauled two black bears weighing 250-pounds and 450-pounds out of the swamp north of Espanola into Bunnell, where they were briefly displayed. They sold one of the animals to the Town of Flagler Beach.⁴⁰

The traffic pattern on the Dixie Highway in Flagler and St. Johns Counties experienced significant changes in the late 1920s as new roads were opened farther east. In May 1925, federal highway engineers announced the creation of a new alignment for the Dixie Highway between St. Augustine and Bunnell. Impetus for the new alignment had begun as early as 1919, when hotel operators in Daytona Beach and Ormond Beach petitioned the Florida State Road Department for a new highway that would shorten the existing route of the Dixie Highway to bring travelers due south of St. Augustine, thereby avoiding the circuitous route through Elkton, Hastings, and Espanola. The new highway, known as the new Dixie Highway, new State Road 4, and eventually U. S. Highway 1, was initially paved with a lime rock foundation, and asphalt surface twenty feet in width. The new Dixie Highway was connected to the old Dixie Highway in two locations. One of those was two miles north of the Flagler-St. Johns County line, where the old highway running north from Espanola abruptly turned west toward Byrd and Hastings. At the turn, the old highway was extended east about five miles where it intersected the new Dixie Highway at Pellicer Creek (present-day County Road 204). A second intersection was built approximately five miles east of Espanola, and became the scene of various accidents in subsequent decades. In 1925, construction also began on Ocean Shore Boulevard, a highway with thirty miles of ocean-frontage on Anastasia Island. The respective routes shortened the distance to destinations south of St. Augustine by approximately fifteen miles. The coastal route offered one of Florida's first picturesque ocean-front highways. Both routes opened in 1927, after which traffic along the old Dixie Highway north of Espanola, often referred to by residents, on maps, and in newspapers and official proceedings as the "old brick road," was severely reduced.⁴¹

The state road designation of the old Dixie Highway was changed from State Road 4 to State Road 189 in the early-1930s. The Old Dixie Highway experienced light traffic from local farmers, residents, and the occasional tourist during the Great Depression and the 1940s. Activities along the highway during the New Deal included crews of Works Progress Administration (WPA) laborers grubbing and refinishing the shoulders and replacing broken bricks between Bunnell and the St. Johns County line. Early Florida State Road Department maps of the highway depicted few buildings along the alignment, but included five buildings just north of Espanola, and one stock yard loading pen in section twelve, one mile south of the former Flagler City site. The designation of State Road 189 persisted through World War II.⁴²

⁴⁰*Flagler Tribune*, 19 February, 14 May, 11 June, 6 August 1925.

⁴¹*Flagler Tribune*, 15 January, 26 February, 28 May 1925, 3, 17 February, 2 June, 7 July 1927, 12 August 1937.

⁴²*Flagler Tribune*, 29 August 1935; *General Acts and Resolutions Adopted by the Florida Legislature* (Tallahassee: Florida Legislature, 1931), 1152; *General Acts and Resolutions Adopted by the Florida Legislature* (Tallahassee: Florida Legislature, 1935), 1244-1245; Florida State Road Department, *General Highway Map of Flagler County, Florida* (Tallahassee: State Road Department, 1934, 1948, 1966, 1981); Florida State Road Department, *General Highway Map of St. Johns County, Florida*

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In 1941, the Florida Legislature enacted an extensive series of state road designations as a depression-era measure to establish municipal links between cities and state roads where none existed, and to help counties maintain and build roads. Between 1941 and 1945, a period associated with Governor Spessard Holland, the Florida State Road Department constructed 1,500 miles of new roads and maintained over 8,000 miles of highways. In Flagler County, the Florida Legislature designated two relatively small state roads that intersected with the old Dixie Highway north of Espanola. One of those began approximately three and one-half miles north of Espanola, and ran westerly to Dinner Island. A shorter state road was declared approximately two miles north of Espanola, and ran southwesterly to Neoga. In 1946, the county commission resurfaced the old Dixie Highway between Bunnell and Espanola with asphalt, but left the bricks exposed on the highway north of Espanola. In the 1950s, the highway was redesignated State Road 13, but was removed from the state highway system by 1964, after which it became County Road 13.⁴³

By World War II, most of the timber resources had been harvested from the properties adjacent to the brick highway north of Espanola. In the post-World War II era, various timber companies maintained ownership of the property abutting the old highway, replanted those lands in pines, and subsequently harvested and replanted trees in the following decades. State highway maps of the era depict an elaborate system of dirt roads in the Big Cypress and Pringle swamps, adjacent to the old Dixie Highway. Most were graded and drained roads that extended west toward Dinner Island or Neoga, or to the east through Pringle Swamp with some of those intersecting U. S. Highway 1. In the 1990s, concerns about timber companies hauling trees from those lands over the Old Dixie Highway compelled Flagler County officials to place sand on the highway as a temporary protective measure.⁴⁴

ENGINEERING CONTEXT

Vitrified bricks are clay bricks fired in kilns at temperatures sufficiently high to fuse grains and close the surface pores, making the mass impervious to water and possessing a high resistance to chemical corrosion.

(Tallahassee: State Road Department, 1936, 1956, 1958, 1976); Florida State Road Department, *Florida State Highway System* (Tallahassee: State Road Department, 1964).

⁴³*General Acts and Resolutions Adopted by the Florida Legislature* (Tallahassee: Florida Legislature, 1931), 1152; *General Acts and Resolutions Adopted by the Florida Legislature* (Tallahassee: Florida Legislature, 1935), 1244-1245; *General Acts and Resolutions Adopted by the Florida Legislature* (Tallahassee: Florida Legislature, 1941), 670; Florida State Road Department, *General Highway Map of Flagler County, Florida* (Tallahassee: State Road Department, 1934, 1948, 1966, 1981); Florida State Road Department, *General Highway Map of St. Johns County, Florida* (Tallahassee: State Road Department, 1936, 1956, 1958, 1976); Florida State Road Department, *Florida State Highway System* (Tallahassee: State Road Department, 1964); Kendrick, *Florida Trails to Turnpikes*, 153.

⁴⁴*General Acts and Resolutions Adopted by the Florida Legislature, 1941*, 670; Florida State Road Department, *General Highway Map of Flagler County, Florida*, 1934, 1948, 1966, 1981; U. S. Department of Agriculture, Soil Conservation Service, *Flagler County, Florida Aerials* CYU-2C-21, CYU-2C-22, CYU-2C-23, CYU-2C-24, CYU-2C-25, CYU-4C-23, CYU-4C-24, CYU-4C-25, CYU-4C-26, CYU-4C-27, CYU-4C-28 (Washington, D.C.: USDA, 1943).

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The curing process after the kiln firing takes seven to ten days, with the resulting brick possessing a crushing strength of eight to ten thousand pounds per square inch. More expensive to produce than common bricks, vitrified brick for street and highway paving in 1905 averaged about \$10.00 per thousand, while common red bricks cost \$5.90 per thousand. Ornamental bricks cost \$14.82 per thousand, and bricks for fire boxes and locations requiring resistance to extreme heat averaged \$17.00 per thousand.⁴⁵

Between 1890 and 1905, the purchases of vitrified brick increased from \$982,440 to \$7,256,088 nationwide. In the latter year, vitrified brick represented approximately nine percent of all brick and tile products manufactured in the United States. The peak production of vitrified bricks occurred about 1909. In 1915, the nation's manufacturers produced 824,359,000 vitrified bricks for street and highway paving, valued at \$11,114,427. The leading manufacturers were located in Ohio, Illinois, and Pennsylvania. In the South, only Alabama and Georgia clay manufacturers produced appreciable numbers of vitrified bricks, with the former manufacturing 29,018,000 that year. In 1917, Alabama brick manufacturers produced 21,319,000 vitrified bricks out of 562,234,000 produced nationwide. In Florida, William Pannell of Hernando County played an important role as head of the so-called "brick trust." Pannell represented brick companies in the second decade of the twentieth century, and helped bring large quantities of paving bricks into Jacksonville and Tampa from Baltimore, Birmingham, and Chattanooga. In the same way that Carl Rose introduced lime rock for streets and William P. MacDonald introduced asphalt into the state, Pannell became an important broker for vitrified brick during the 1910s and 1920s.⁴⁶

Rural highways paved with vitrified bricks were one of the by-products of the Good Roads Movement. The first rural brick road in the nation was built in 1893 on the Wooster Pike in Ohio. The expense associated with bricks and the introduction of bituminous macadam in 1906 and concrete in 1909 for rural roads slowly eroded the market for brick roads to the extent that by the 1930s bricks were rarely used to pave new roads or streets in America's cities. Between 1918 and 1923, most federal assistance for highway construction was allocated for concrete and gravel paving. In the 1923, 4,384 miles of concrete highways and 9,442 miles of gravel roads built with federal assistance crisscrossed America. By then, only 342 miles of the nation's highways constructed with federal funding had been paved with bricks. Most state road departments relied upon concrete and gravel to improve their highways. By the middle of the 1920s, concrete accounted for 27,874 miles while brick highways amounted to 3,111 miles nationally. Only the states of Ohio, Pennsylvania, and Florida had appreciable amounts of rural brick highways. In 1925, Ohio led the nation with 1,412 miles, Pennsylvania claimed 358 miles, and Florida had 337 miles. Florida's rural brick highways not in the state highway system accounted for an additional 389 miles.⁴⁷

⁴⁵Bureau of the Census, *Manufactures* (Washington, D.C.: GPO, 1908), 884, 886; Kendrick, *Florida Trails to Turnpikes*, 61.

⁴⁶U. S. Department of the Interior, *Mineral Resources of the United States* (Washington, D.C.: GPO, 1917), 866, 871; U. S. Department of the Interior, *Mineral Resources of the United States* (Washington, D.C.: GPO, 1921), 875; Bureau of the Census, *Manufactures* (Washington, D.C.: GPO, 1908), 884, 886; Kendrick, *Florida Trails to Turnpikes*, 61.

⁴⁷Rose, *Historic American Highways*, 97-98; U. S. Department of Agriculture, *Yearbook of Agriculture, 1923* (Washington, D.C.: GPO, 1924), 1196-1197; U. S. Department of Agriculture, *Yearbook of Agriculture, 1926* (Washington, D.C.: GPO, 1927),

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Competition between manufacturers of asphalt, bricks, and concrete helped drive the construction of various road types. Automobile associations, the Bureau of Public Roads, universities, other organizations and agencies investigated the use of bricks and other materials for durability, surfacing, and smoothness on roads. In 1913, Vernon Peirce and Charles H. Moorefield of the Bureau of Public Roads published one of the nation's most comprehensive studies on brick paving for rural roads. Peirce and Moorefield found that vitrified bricks were (1) durable under heavy traffic conditions; (2) afforded easy traction and good footing for horses; (3) were easily maintained and kept clean; and (4) presented a pleasing appearance. They asserted that the essential features of well-built brick roads consisted of a sub-grade with thorough drainage, firmness, uniformity in grade and cross section, and adequate shoulders. Common curb materials included stone, Portland cement, or vitrified clay shapes made for the purpose with a depth of eighteen to thirty-six inches, four inches thick, and seven to eight feet in length. The typical rural brick highway was paved with vitrified bricks that each measured 3.5" x 4" x 9", weighed approximately nine pounds, forty-five pounds to the square yard, and 237,600 pounds per mile.⁴⁸

Subsequent studies by the U. S. Department of Agriculture, Engineers' Society of Pennsylvania, and several universities compared the advantages and benefits associated with asphalt, brick, and concrete. In 1915, the Department of Agriculture published Bulletin 22, *Road Models*, which furnished extensive descriptions and comparisons of the road types then in use. The department also developed a series of miniature profiles, or models, of roads from antiquity through 1915. In addition to profiling the Apian Way in 300 B.C. and the first macadam road in 1816, the models illustrated contemporary asphalt, brick, concrete, earth, gravel, and sand-clay roads, drainage systems, bridges, and even miniature models of road building equipment.⁴⁹

The process for building rural brick highways in the early twentieth century consisted of a series of steps carried out in succession. After an alignment was selected and cleared of vegetation and roots, the sub-grade was moistened, packed, and rolled for firmness and uniformity, generally with a ten-ton roller. Then the curbing was laid in gravel or broken stone beds about three inches thick. Road foundations for heavy traffic areas were often poured concrete slabs; in areas with light traffic a sub-grade might consist of broken stone or a gravel-sand composite rolled with a ten-ton roller. The majority of vitrified bricks manufactured by the nation's brick companies measured 3.5 inches by 4 inches by 9 inches. They were laid in uniform courses at right angles to the curbs as close as possible and crowded together by means of a crowbar inserted at the curb. After the highway was laid, the pavement was swept clean and smoothed with rollers weighing between three

1256-1259.

⁴⁸Rose, *Historic American Highways*, 97-98; U. S. Department of Agriculture, Bulletin 220, *Road Models* (Washington, D.C.: GPO, 1915); Vernon Peirce and Charles Moorefield, "Brick Paving for Country Roads," *Engineering Magazine* 46 (November 1913), 283-286; Walter Marder, "'Pleasing to the Eye': Brick Paving and the Dixie Highway in the Sunshine State," unpub. mss., Tallahassee,

⁴⁹Rose, *Historic American Highways*, 97-98; U. S. Department of Agriculture, Bulletin 220, *Road Models* (Washington, D.C.: GPO, 1915).

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and five tons to eliminate irregularities. Various grouts, including Portland cement, sand, or bituminous materials, were often employed to help keep the bricks in their proper position and to protect the edges from chipping and spalling. Some roads were built with expansion joints. In this process, pieces of lumber ranging between three-eighths to one inch in thickness were laid with metal removal straps inside the curbs. Once the bricks were laid and rolled, the expansion joints were removed. In 1915, highway engineers and observers disagreed over the use of grouts and the thickness and even the use of expansion joints. One observer of grouts found that "brick pavements that had all joints grouted, expand so much with the heat of our summer weather, that the pavements burst up with a report like that of a cannon and scattered some square yards of brick all over the street."⁵⁰

ENGINEERING SIGNIFICANCE

The Dixie Highway, or Hastings, Espanola, and Bunnell Road is an excellent example of a rural brick highway. It was developed by a county for tourist and farm-to-market use. The Dixie Highway measures nine feet wide and consists of vitrified bricks flanked by concrete curbs and accompanying shoulders. In 1925, Florida contained 337 miles of rural brick highways that were part of the state highway system and an additional 389 miles of county and local brick highways. Florida contained the third highest concentration of rural brick highways in the nation by the mid-1920s, but now in 2005 has approximately less than fifty miles remaining. The ten-mile stretch of the Dixie Highway in Flagler and St. Johns counties is the longest known, contiguous remaining example of this type of rural highway in Florida. Other extant examples of brick highways built in the early twentieth century are located between Daytona Beach and DeLand, between Loughman and Kissimmee, near Ocoee and Palm Bay, and in Santa Rosa County (State Road #1, NR 1994). Although sand has been placed on the highway during the past decade to protect it from logging trucks, the highway retains its physical integrity to a high degree. The highway extends through undeveloped property that retains its historic setting to a high degree. No significant modern intersections interrupt the alignment; and neither asphalt nor concrete have been applied to the original surface within the nomination boundaries. Replacement bricks used in repair are historic, and the repairs reflect the original engineering and design. The rural brick highway contributes to the sense of time, place, and historical development through its character, and workmanship to the engineering and transportation heritage of North Florida.

⁵⁰Peirce and Moorefield, "Brick Paving for Country Roads," 283-286; USDA, Bulletin 220, *Road Models*, 19-20; *Daytona Gazette-News*, 3 August 1915.

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Flagler & St. Johns Counties, Florida**

Sec. #2 Location

County – Flagler and St. Johns Counties

Code – 035 and 109

Zip Code – 32110 and 32095

Property Owner

Telephone – (Flagler) 386-437-7480 and (St. Johns) 904-823-2400

Zip Code – 32110 and 32095

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**Dixie Highway/Hastings, Espanola & Bunnell Road,
Flagler & St Johns Counties, Florida**

VERBAL BOUNDARY DESCRIPTION

UTMs

Point	Zone	Easting	Northing	
1	17	469710	3265200	start
2	17	469700	3265600	
3	17	468830	3267490	
4	17	467150	3271220	
5	17	466780	3272010	
6	17	466360	3272840	
7	17	465800	3273560	
8	17	465720	3273640	
9	17	465390	3274210	
10	17	464450	3276300	
11	17	464190	3277090	
12	17	463840	3278800	
13	17	463250	3280010	end

The brick portion of County Road 13, historically known as a portion of Dixie Highway, or the Hastings, Espanola, Bunnell Road, is a sixty foot wide, and approximately ten mile long corridor identified by the above UTM's. The paving is nine feet wide, and the right-of-way encompasses sixty feet.

BOUNDARY JUSTIFICATION

The boundary encompasses the portion of Dixie Highway, or the Hastings, Espanola, and Bunnell Road, that retains its historic physical integrity, and is historically associated with the roadway.

United States Department of the Interior
National Park Service

National Register of Historic Places
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Dixie Highway/Hastings, Espanola & Bunnell Road
Flagler & St. Johns Counties, FL

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National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
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Section number _____ Photo _____ Page 1 **Dixie Highway/Hastings, Espanola & Bunnell Road,
Flagler and St. Johns Counties, Florida**

PHOTOGRAPHIC LIST

1. Dixie Highway, Hastings, Espanola & Bunnell Road, Old Brick Road
2. Flagler & St. Johns Counties, Florida Department of State
3. Sidney Johnston
4. September 2004
5. Environmental Services, Inc., Jacksonville, FL
6. South end of nominated brick road, looking south
7. Photo #1 of 13

Items 1 – 5 are the same for the following photographs.

6. South end of nominated brick road, looking north
7. Photo #2 of 13

6. North end of road showing asphalt and brick juncture, looking south
7. Photo #3 of 13

6. North end of road, looking north
7. Photo #4 of 13

6. Historic ca1915 building near the road, looking east
7. Photo #5 of 13

6. Power-line crossing the road, looking north
7. Photo #6 of 13

6. Pine woods along a south portion of the road, looking north
7. Photo #7 of 13

6. "Woods road" intersecting with road, looking north
7. Photo #8 of 13

6. Area of abandoned Flagler City, looking northwest
7. Photo #9 of 13

6. Area of abandoned logging camp, looking north
7. Photo #10 of 13

**United States Department of the Interior
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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

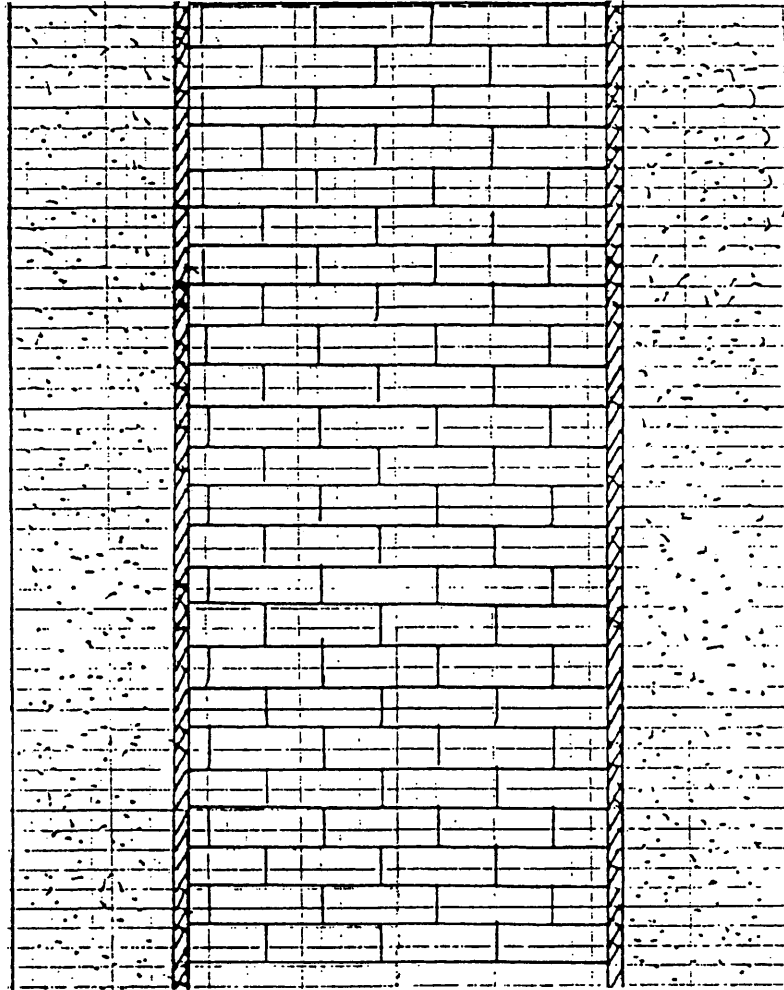
Section number _____ Photo _____ Page 2

**Dixie Highway/Hastings, Espanola & Bunnell Road,
Flagler and St. Johns Counties, Florida**

- 6. Vitrified bricks
- 7. Photo #11 of 13

- 6. Brick road surface, concrete curb and shoulder, looking east
- 7. Photo #12 of 13

- 6. Detail, bricks, curb, and shoulder
- 7. Photo #13 of 13



Shoulder Curb Brick Highway Curb Shoulder

Typical Profile 1 inch=3.75 feet

Dixie Highway/Hastings, Espanola, and Bunnell/Old Brick Road

Flagler & St. Johns Counties, FL

Profile Prepared August 2004

Sidney Johnston/Environmental Services, Inc.



Location Map

Dixie Highway/Hastings, Espanola, and Bunnell/Old Brick Road

Flagler & St. Johns Counties, FL

Sidney Johnston/Environmental Services, Inc. 2004

End of Road

CR 204

31

1

2

3

4

5

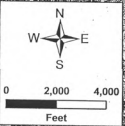
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6

Start of Road

Abandoned Florida East Coast Railway Road

Possible Extension



Boundary

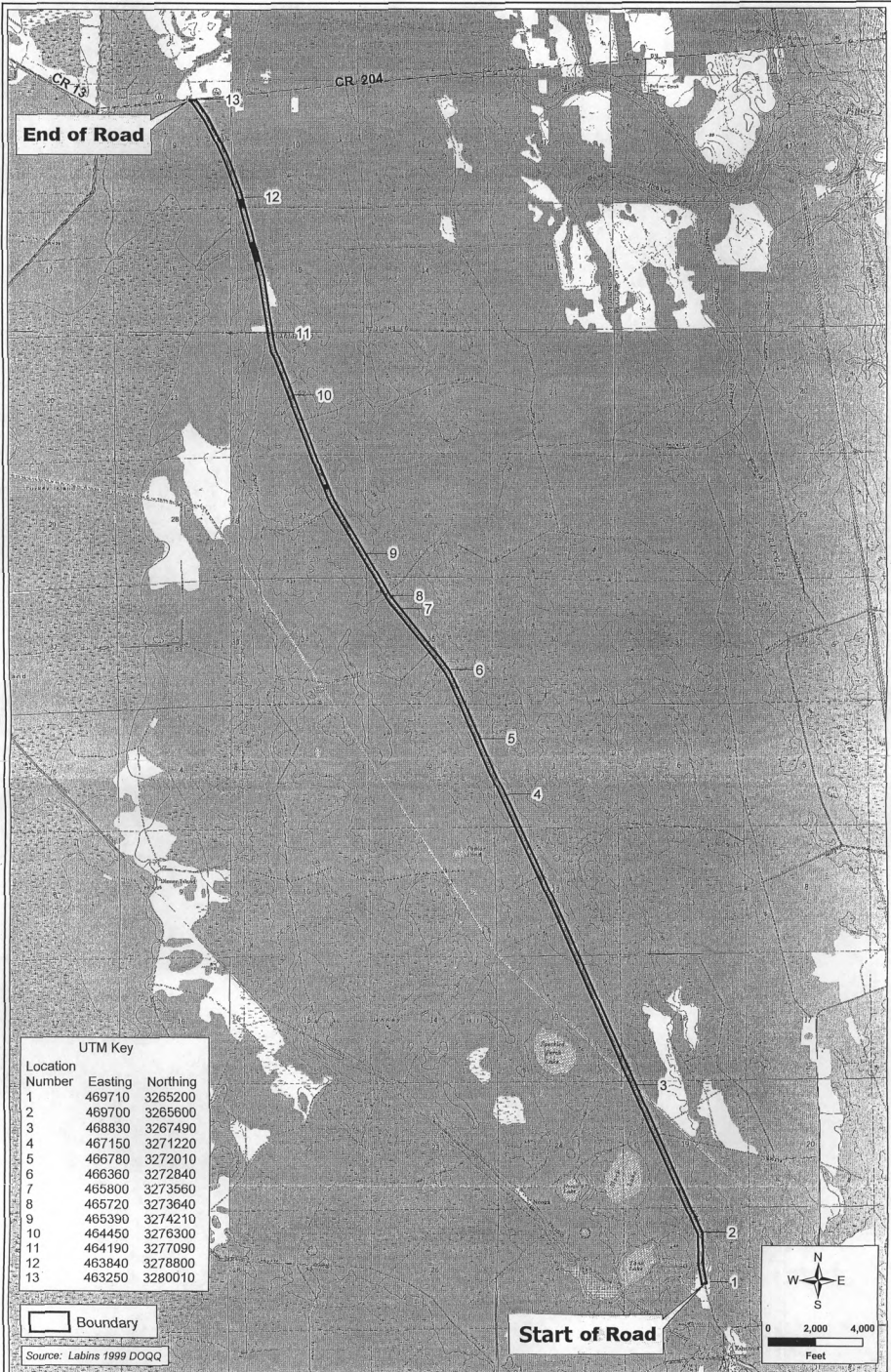
Source: Labins 1999 DOQQ



Dixie Highway/Hastings, Espanola, and Bunnell/Old Brick Road

St. Johns and Flagler County, Florida

August 2004
Photograph Key
Drawn By: B. Mullins
Prepared By: S. Johnson




End of Road

Start of Road

UTM Key

Location Number	Easting	Northing
1	469710	3265200
2	469700	3265600
3	468830	3267490
4	467150	3271220
5	466780	3272010
6	466360	3272840
7	465800	3273560
8	465720	3273640
9	465390	3274210
10	464450	3276300
11	464190	3277090
12	463840	3278800
13	463250	3280010

 Boundary

Source: Labins 1999 DOQQ

Dixie Highway/Hastings, Espanola, and Bunnell/Old Brick Road

St. Johns and Flagler Counties, Florida

August 2004
 UTM Key Map
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