

A R T I C L E

# ROADS TO NOWHERE IN FOUR STATES: STATE AND LOCAL GOVERNMENTS IN THE ATLANTIC SOUTHEAST FACING SEA-LEVEL RISE

by Shana Campbell Jones, Thomas Ruppert, Erin L. Deady, Heather Payne, J. Scott Pippin, Ling-Yee Huang, and Jason M. Evans

*Shana Campbell Jones, Esq., is Associate Public Service Faculty at the Carl Vinson Institute of Government at the University of Georgia and Director of the Georgia Sea Grant Legal Program. Thomas Ruppert, Esq., is the Coastal Planning Specialist for Florida Sea Grant. Erin L. Deady, Esq., is President of Erin L. Deady, P.A., in Delray Beach. Heather Payne is an Associate Professor of Law at Seton Hall Law School. J. Scott Pippin, Esq., is Assistant Public Service Faculty at the Carl Vinson Institute of Government at the University of Georgia. Ling-Yee Huang, Esq., is a private consultant focusing on water and policy issues. Jason M. Evans is an Associate Professor of Environmental Science and Studies at Stetson University.*

Local governments in the coastal zone play a key role in adapting to the changing climate.<sup>1</sup> This Article presents an analysis of coastal communities in four states, Florida, Georgia, South Carolina, and North Carolina, and provides three proposals for local governments that take action to address climate impacts: (1) redefining the scope of the duties that define reasonable conduct for governments

making decisions about public infrastructure in an era of rising sea levels; (2) defining the scope of sovereign immunity protections in a way that encourages innovative and creative decisionmaking in an era of climate uncertainty; and (3) calling for consistent adaptation duties and authorities at the state level as a crucial first step in mending the legal-standards patchwork that currently exists at the state, county, and city levels in our four-state study area.

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## I. Background on Sea-Level Rise, Coastal Science, and Transportation Infrastructure

### A. Four Southeastern States Facing Sea-Level Rise

Coastal communities and ecosystems are vulnerable to sea-level rise.<sup>2</sup> Addressing sea-level rise and its impact on infrastructure presents itself as a paramount concern due to the physical impacts and costs of sea-level rise. Coastal roads subject to sea-level rise have shorter functional lifespans and require more frequent and costly repairs and maintenance.

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1. Maxine Burkett, *Duty and Breach in an Era of Uncertainty: Local Government Liability for Failure to Adapt to Climate Change*, 20 GEO. MASON L. REV. 775, 777 (2013).

2. DONALD J. WUEBBLES ET AL., U.S. GLOB. CHANGE RESEARCH PROGRAM, CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT 164, 167, 222, 294 (2017), [https://science2017.globalchange.gov/downloads/CSSR2017\\_FullReport.pdf](https://science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf) [<https://perma.cc/MPT6-8P4W>] [hereinafter NATIONAL CLIMATE ASSESSMENT].

**Table 1. Public Road Miles by Ownership (2015)**

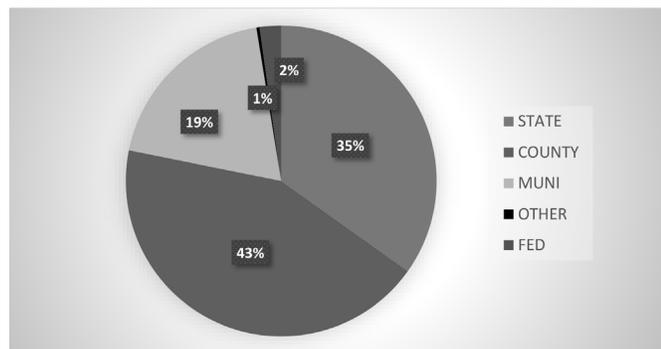
		State	County	Municipality	Other	Federal	Total Rural/ Urban Mileage	Total Mileage
FL	Rural	5,643	26,454	2,578	81	1,733	36,489	122,659
	Urban	6,473	43,981	35,251	5	459	86,170	
GA	Rural	12,588	58,257	4,078	90	2,775	77,788	128,134
	Urban	5,361	29,156	15,757	31	41	50,346	
NC	Rural	59,229	-	2,375	1,017	2,881	65,502	106,334
	Urban	20,330	-	20,310	22	170	40,832	
SC	Rural	29,792	25,583	523	194	1,589	57,681	76,250
	Urban	11,567	4,345	2,654	1	3	18,569	

**B. State and Local Government Adaptation—  
Roads Are Ground Zero**

Climate change will affect the entirety of our transportation infrastructure. The U.S. Department of Transportation (USDOT) identified three vulnerabilities that require “resiliencies” to climate change:

- (1) *Existing Infrastructure Resilience:* Existing transportation infrastructure varies in age, service life, and sophistication. Decisions about replacement or abandonment should take into account changing future risks.
- (2) *New Infrastructure Resilience:* New infrastructure should be designed in recognition of the best understanding of environmental risks. Public and private entities need to incorporate an understanding of projected climate changes into their infrastructure planning.
- (3) *System Resilience:* Selectively adding redundant infrastructure may be necessary to increase system resilience.<sup>3</sup>

**Figure 1. Total Percentages of Public Road Ownership Across the Four-State Study Area**



3. U.S. DEP’T OF TRANSP., CLIMATE CHANGE ADAPTATION PLAN: ENSURING TRANSPORTATION INFRASTRUCTURE AND SYSTEM RESILIENCE 6 (2014),

**Table 2. Annual Vehicle Miles by Functional System (in Millions)**

	Rural	Urban	Total
Florida	20,289	88,856	109,145
Georgia	14,816	45,608	60,424
North Carolina	15,258	38,935	54,193
South Carolina	12,782	16,733	29,515

The overarching vulnerabilities identified by USDOT are closely intertwined with state and local transportation responsibilities—and action at the state and local levels directly affects our nation’s overall transportation system resilience.

In our four-state study, the vast majority of roads are either state or locally owned. Tables 1 and 2 list each state and its road miles by ownership, dividing the states between rural and urban road miles. Inventorying high traffic areas will be critical for addressing climate impacts on road infrastructure.<sup>4</sup>

**II. Repair, Upgrade, or Abandon the Roadway: Hard Choices for Governments**

Adaptation planning is often described in three categories: protect/defend, accommodate/adapt, or relocate. Even if a governmental entity wanted to make an adaptive choice, current laws make such choices difficult.

<https://www.transportation.gov/sites/dot.dev/files/docs/DOT%20Adaptation%20Plan.pdf> [<https://perma.cc/KEP4-5S7K>].

4. TRANSP. RESEARCH BD., NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS., POTENTIAL IMPACTS OF CLIMATE CHANGE ON U.S. TRANSPORTATION 8-9 (2008), <http://onlinepubs.trb.org/onlinepubs/sr/sr290.pdf> [<https://perma.cc/X6JF-PU3E>].

**Table 3. Comparing Duties to Maintain Roads**

	State	County	Municipality
<b>Florida</b>	The Florida Department of Transportation (“FDOT”) has a duty to maintain roads under its control.	A county has a duty to keep roads in good order and provide a reasonable level of maintenance that affords meaningful access.	A municipality has a duty to maintain roads in a reasonably safe condition.
<b>Georgia</b>	The Georgia Department of Transportation (“GDOT”) has a duty to improve, manage, and maintain the state highway system.	A county has a duty to maintain county roads in a condition such that they can be continuously used for ordinary loads with ordinary ease and facility.	A municipality has a duty to keep roads in repair and reasonably safe from dangerous conditions.
<b>North Carolina</b>	The North Carolina Department of Transportation (“NCDOT”) has a duty to establish, construct, and maintain a statewide system of hard-surfaced and other dependable highways running to all county seats and to all principal towns.	Counties do not have maintenance duties. A county may enter into an agreement with NCDOT to repair, maintain, or improve a road.	A municipality has an affirmative duty for municipalities to keep roads in proper repair and open for travel and free from unnecessary obstructions.
<b>South Carolina</b>	The South Carolina Department of Transportation (“SCDOT”) has a duty to maintain the state highway system in a safe and serviceable condition.	A county has a duty to repair roads in unincorporated areas of the county.	A municipality with a population greater than 1,000 has a duty to keep streets open, in good repair, and in reasonably safe condition for public travel. Towns with populations less than 1,000 must keep open and in good repair all streets and ways which may be necessary for public use within the limits of the town.

#### A. Roads and Duties in Four States: A Doctrinal Stew

States, counties, and municipalities have primary responsibility for most roads in the United States. When they fail to maintain or design these roads adequately, they may face tort liability, such as negligence. Each state may define this duty differently, and the scope may differ depending on the entity. Even when negligence by a government entity is demonstrated, sovereign immunity may bar claims.

Duties of care appear to be the most consistent at the state level, with arguably only Georgia presenting an affirmative duty to “improve” roads alongside the more standard duties for repair and maintenance. Duties vary more at the county and municipal levels. For example, in Florida, counties must provide reasonable maintenance that results in meaningful access, but it is unclear from case law interpreting duties if this standard might include upgrades needed to address sea-level rise or other environmental challenges. Counties in Georgia must maintain county roads so that “ordinary loads, with ordinary ease and facility, can be continuously hauled over” them. South Carolina counties have a duty to repair roads in unincorporated areas,

but the duty is not defined, while North Carolina counties have no road maintenance duties unless they choose to do maintenance through agreement with the state. The variations continue at the municipal level in each state, adding further confusion. Despite the lack of incentive, some local governments are undertaking responses to sea-level rise due to political pressure or to protect their communities.<sup>5</sup> Careful consideration of the many distinctions between maintenance duties leads to the question of when the need to “maintain” and keep roads reasonably safe could lead to conflict with the general legal rule in all four states that governments are not usually required to “upgrade” existing infrastructure. In other words, sea-level rise and increased erosion might make it impossible to meet standards such as “reasonably safe” or “available for normal use” without significant upgrades that usually fall outside the scope of mandatory government duties.

5. See, e.g., JASON M. EVANS ET AL., NAT’L SEA GRANT PROGRAM, TYBEE ISLAND SEA LEVEL RISE ADAPTATION PLAN 33-34, 45 (2016); ERIN L. DEADY ET AL., MONROE COUNTY PILOT ROADS PROJECT: THE SANDS AND TWIN LAKES COMMUNITIES (2017).

## 1. Comparing Immunities

Distinctions in sovereign immunity protections raise challenges for adaptation at the local level. In Florida and North Carolina, immunity does not apply to road maintenance.<sup>6</sup> Georgia counties are protected by sovereign immunity for failing to maintain roads, but municipalities are not. In South Carolina, immunity applies to road maintenance.

Sea-level rise will push governments to take actions that are arguably upgrades and not repairs. This could mean that maintenance failures that were once actionable may become barred by sovereign immunity.<sup>7</sup> Sovereign immunity can also discourage adaptation planning. For example, Georgia distinguishes between discretionary actions, where immunity applies, and ministerial duties, where no immunity applies.<sup>8</sup> If a decisionmaking body develops a policy on how it utilizes its discretion, courts have interpreted the policy as now creating duties for which sovereign immunity is waived, meaning a lawsuit may go forward. This creates a perverse incentive to decline to adopt policies so that waiver of sovereign immunity is avoided.

## 2. Governmental Inaction When Failing to Maintain a Road: Economic Damages

An unsafe road raises liability concerns, but closing such a road could adversely affect landowners.<sup>9</sup> At the same time, at least once court in North Carolina has been sympathetic to the dilemma in which local governments can find themselves: a road that the local government cannot afford to repair to keep safe or close and abandon without potential liability for damages to abutting landowners. Climate change and sea-level rise will force courts to consider whether the state has a duty under such circumstances to provide a road at all.

### B. Nuisance and Mandamus Actions: Compelling Governments to Repair and Maintain Roads

In Florida, Georgia, and North Carolina, if a government fails to maintain a road, a plaintiff could allege that the entity is maintaining a nuisance and seek an injunction.<sup>10</sup> Governments in South Carolina are not liable for nuisan-

ces.<sup>11</sup> In all four states, a citizen may petition for a writ of mandamus to compel a government to fulfill its duty to repair a road.<sup>12</sup> However, mandamus actions are reserved for extraordinary circumstances.

## C. Road Abandonment and Takings Claims

### 1. Comparing Abandonment Authority

Abandonment comes at a price as “takings” claims often successfully maintain that property owners abutting abandoned roads are owed compensation. When deciding whether abandonment is proper, courts consider a variety of factors, including the burden of maintaining the road, the public’s dependence on the road, and what caused a decrease in the public’s use of the road.<sup>13</sup> Having the authority to abandon roads even when they abut private property is likely to be a critical tool for adaptation. In Florida, rights-of-way are held in trust for the public, but this does not preclude abandoning streets “when done in the interest of the general welfare.”<sup>14</sup> In North Carolina, closing the street may not be “contrary to the public interest” and no adjacent landowner should be “deprived of reasonable means of ingress and egress” to her property.<sup>15</sup> In South Carolina, a court will determine whether abandoning the street is in the best interest of all parties.<sup>16</sup>

### 2. Eliminating a Property Owner’s Access to a Road: Issues and Distinctions

If an entity abandons a public road that abuts a landowner’s property, and such abandonment substantially interferes with the landowner’s ability to enter and exit his property, a compensable taking of private property may have occurred. In Florida, interfering with the right to access constitutes a taking if the property owner’s right of access was *substantially diminished*. In Georgia and South Carolina, if the easement of access is substantially interfered with, the property owner is entitled to compensation, even if an alternative route exists.<sup>17</sup> In North Carolina, eliminating *direct access* to property can trigger a takings claim, but such claims may be mitigated by providing reasonable alternative access.

6. *Commercial Carrier Corp. v. Indian River Cty.*, 371 So. 2d 1010 (Fla. 1979); *Trianon Park Condominium Assoc. v. City of Hialeah*, 468 So. 2d 912 (Fla. 1985).  
 7. See Thomas Ruppert, *Castles—and Roads—in the Sand: Do All Roads Lead to a “Taking”?*, 48 ELR 10914 (Oct. 2018). See also Thomas Ruppert & Carly Grimm, *Drowning in Place: Local Government Costs and Liabilities for Flooding Due to Sea-Level Rise*, 87 FLA. B.J., Nov. 2013, at 29.  
 8. *Banks v. Happoldt*, 608 S.E.2d 741, 744-45 (Ga. Ct. App. 2004).  
 9. *Kirkpatrick v. Town of Nags Head*, 713 S.E.2d 151, 153 (N.C. Ct. App. 2011).  
 10. Florida courts define a nuisance as, in part, omitting to perform a duty that injures or endangers the safety of a person or that interferes with or otherwise renders unsafe another’s use of his property. *Prior v. White*, 180 So. 347, 355 (Fla. 1938). Georgia law defines nuisance as “anything that causes hurt, inconvenience, or damage to another . . .” GA. CODE ANN. §41-1-1 (2018).

11. S.C. CODE ANN. §15-78-60(7) (2018).

12. S.C. CODE ANN. §§14-8-290, 14-3-310 (2018); FLA. CONST. art. V, §3; GA. CODE ANN. §§9-6-20, 9-6-21(b) (2018); N.C. GEN. STAT. ANN. §7A-32 (2018).

13. In *Scarborough et al. v. Hunter et al.*, 746 S.E.2d 119, 125 (Ga. 2013), the court held that evidence that the county would need to rebuild the road at a cost of \$600,000 to \$800,000, and that plaintiff’s less expensive proposal would not make the road stable, supported the board’s decision.

14. *Sun Oil Co. v. Gerstein*, 206 So. 2d 439, 441 (Fla. Dist. Ct. App. 1968).

15. N.C. GEN. STAT. §160A-299(a) (2018).

16. *First Baptist Church of Mauldin v. City of Mauldin*, 417 S.E.2d 592 (S.C. 1992).

17. *Circle K General, Inc. v. Ga. Dep’t of Transp.*, 396 S.E.2d 522, 524-25 (1990).

**Table 4. Comparing the Authority to Abandon Roads**

	State	County	Municipality
<b>Florida</b>	FDOT may redesignate or relocate a road or undertake a project that closes or modifies existing access to a road.	A county may vacate, abandon, discontinue, or close a road but may not act to harm the public welfare.	A municipality may abandon or vacate a public road under its powers to perform municipal functions but may not act to harm the public welfare.
<b>Georgia</b>	GDOT may abandon a road if the agency determines that the road no longer serves a substantial public purpose or abandoning the road is in the best public interest.	A county may abandon a road if the county board of commissioners determines that the road no longer serves a substantial public purpose or abandoning the road is in the best public interest.	A municipality may abandon a road if the governing board determines that the road no longer serves a substantial public purpose or abandoning the road is in the best public interest.
<b>North Carolina</b>	NCDOT may abandon a road when the agency determines that the public good requires the road to be abandoned.	A county may permanently close any public road if it is not contrary to public interest and if no adjacent landowner would be deprived of reasonable means of access.	A municipality may close a public road if closing the road is not contrary to public interest and if no adjacent landowner would be deprived of reasonable means of access.
<b>South Carolina</b>	SCDOT may abandon a public road if it is in the best interest of all parties.	A county governing body may discontinue a public road found to be useless and if it is in the best interest of all parties.	A municipal council may close a street when, in its judgment, it may be necessary for the improvement of the municipality and if it is in the best interest of all parties.

### 3. Governmental Inaction When Failing to Maintain a Road: Takings

Two states in our study area—Florida and South Carolina—have considered issues involving whether insufficient maintenance results in abandonment. A Florida court found that failing to maintain a road to certain standards despite extreme erosion might be sufficient to support a compensable taking, even when the local government continued to expend funds for maintenance; the court found that the local government’s failure to take action that resulted in meaningful access for property owners abutting the road could support a “takings” claim based on local government inaction. This Florida case is an outlier, representing a more fringe view by allowing inaction to support a takings claim. For example, South Carolina has made clear that only an “affirmative . . . act” can serve as the basis for an inverse condemnation claim.<sup>18</sup> Similarly, federal case law has made it clear that an authorized government action represents a prerequisite to a valid taking claim.<sup>19</sup> Thus, other than possibly in Florida, it appears that a government could not be held liable under a takings claim for failure to maintain a road, even if, as noted above, a tort case might still be possible.

18. *Hawkins v. City of Greenville*, 594 S.E.2d 557, 562-63 (S.C. Ct. App. 2004) (emphasis added).

19. *St. Bernard Parish Gov’t v. United States*, 887 F.3d 1354, 1357, 48 ELR 20065 (Fed. Cir. 2018).

### III. Roads Less Traveled: Toward Adaptive Duties and Abandonment Authorities for State and Local Governments Facing Sea-Level Rise

#### A. Toward an Adaptive Duty to Maintain Road Systems: Adopting a Resilience Standard

We propose modifying the scope of the duty to maintain roadways to incorporate an “adaptive” component that views the road network as an interconnected system rather than as individual segments. As increased flooding is readily foreseeable in coastal communities,<sup>20</sup> and uncertainty about the timing and severity of local impacts is not the same as low probability,<sup>21</sup> we see a need for the duty to maintain to include sovereign immunity that protects governments that will have to make risky decisions, unless they act with gross negligence. It is time to emphasize the public trust nature of government road ownership so that the public’s collective interests inform the scope of government’s duty to maintain a roadway, mitigating viewing

20. Foreseeability of the harm also often plays a role, although the extent of risk usually depends on the specific facts of the case. RESTATEMENT (THIRD) OF TORTS: PHYSICAL AND EMOTIONAL HARM §7 (Am. Law Inst. 2010).

21. R. Henry Weaver & Douglas A. Kysar, *Courting Disaster: Climate Change and the Adjudication of Catastrophe*, 93 NOTRE DAME L. REV. 295, 307 (2017).

access as a property right connected to individual parcels. An adaptive duty to maintain would allow for an alteration of the concept of “reasonable means of access.” Such an approach is in line with some cases. Florida courts have emphasized how streets are held in trust for the benefit of the public, and abandoning such streets is allowable “when done in the interest of the general welfare.”<sup>22</sup>

### 1. Minimum Maintenance Standard

Deteriorating road conditions coupled with prohibitive maintenance costs have long been an issue for many rural areas. Several states allow special designation of roads as “low volume” or “minimum maintenance,”<sup>23</sup> decreasing maintenance costs and reducing liability. Just as rural states have statutes to allow communities to balance costs and resources, coastal communities need the same ability.

### 2. Vulnerability Assessments

An adaptive duty to maintain should reflect short- and long-term vulnerability assessments, characterizing the potential impacts from climate change. An adaptive duty to maintain should be fulfilled by formal process with community-defined time lines and risk thresholds to ensure that decisionmaking occurs objectively and equitably.

### 3. Evaluating the Adaptive Duty to Maintain: Resilience Standard

We propose “resilience” as a legal standard to judge local government actions. Resilience generally describes “the capacity of a system to withstand or adapt to disturbance while maintaining the same basic structures and functions.”<sup>24</sup> How a local community defines resilience should be determined at the local level through the adaptation planning process.

A resilience standard would evaluate government action in light of whether it is likely to promote community resilience and whether the community’s adaptation goals are reasonable.<sup>25</sup> Those actions that promote resilience would promote the public interest, even where private interests are adversely affected. Thus, such actions should be protected under sovereign immunity. Management practices that best illustrate resilience goals include incorporating best available science into decisionmaking; assessing vulnerabilities; and evaluating the effectiveness of actions taken. A system’s resilience can degrade or even collapse. When

this occurs, a reasonable resilience standard would allow actions such as road abandonment.<sup>26</sup>

### 4. Sovereign Immunity

Expanding a duty while simultaneously weakening sovereign immunity protections would paralyze most local governments. If we want to encourage local leaders to invest significant time, money, and staff resources to assess their communities’ vulnerabilities, these communities need to have the protection of sovereign immunity for making adaptation planning decisions with inherently uncertain data. As is currently true generally in tort law, immunity for an adaptive duty to maintain can and should include exceptions for gross negligence, such as allowing the development of roadways in repeatedly flooded areas or ignoring the best available science.

### 5. Adaptive Duty to Maintain

Sovereign immunity should not turn on whether a government’s action is a “repair” or an “upgrade.” An adaptive duty to maintain would include both repairs and upgrades as long as the reasonable resilience standard is met and would allow for more appropriate maintenance actions. An adaptive duty to maintain would also encourage jurisdictions to set priorities and put property owners on notice about the likely future conditions of roads.

In Georgia, an adaptive duty to maintain with associated sovereign immunity would address the current conundrum regarding discretionary and ministerial duties: that the presence of a policy that directs a government to repair or maintain results in a waiver of sovereign immunity.<sup>27</sup> Governments should develop adaptation plans that trigger direct action when certain thresholds are met, but flexibility may be necessary. In South Carolina, an adaptive duty of care might incorporate the already-existing tiers of duties that recognize the fiscal limits of some communities. An adaptive duty to maintain could spur governments to take more proactive approaches to maintaining South Carolina’s overall roadway system. In North Carolina, an adaptive duty to maintain falls within the definition of governmental functions and would result in sovereign immunity; however, road maintenance remains a proprietary function for which sovereign immunity is not available. With rising sea levels, road maintenance will no longer be routine making it within the traditional conception of a governmental function.

If we want governments to make their communities more resilient, it is time to clarify the scope of their duty to do so. Adaptation decisions will cost a lot of money and cre-

22. Sun Oil Co. v. Gerstein, 206 So. 2d 439, 441 (Fla. Dist. Ct. App. 1968).

23. See, e.g., N.Y. STATE TUG HILL COMM’N, TECHNICAL PAPER: QUESTIONS AND ANSWERS ABOUT LOW-VOLUME ROAD DESIGNATION (2014), <http://www.tughill.org/wp-content/uploads/2011/09/Questions-and-Ans.-Low-Volume-Road-Design-03-14.pdf> [<https://perma.cc/MHQ3-MNMG>].

24. Craig Anthony (Tony) Arnold, *Resilient Cities and Adaptive Law*, 50 IDAHO L. REV. 245, 261-62 (2014).

25. Maxine Burkett, *Duty and Breach in an Era of Uncertainty: Local Government Liability for Failure to Adapt to Climate Change*, 20 GEO. MASON L. REV. 775, 790 (2013).

26. See, e.g., DEADY ET AL., *supra* note 5, at 50-58; THOMAS RUPPERT, JOHN FERGUS & ALEX STEWART, ENVIRONMENTALLY COMPROMISED ROAD SEGMENTS—A MODEL ORDINANCE 8-9 (2015), [https://www.flseagrant.org/wp-content/uploads/Envirntly-Comp-Rds-FINAL\\_10.20.15.pdf](https://www.flseagrant.org/wp-content/uploads/Envirntly-Comp-Rds-FINAL_10.20.15.pdf) [<https://perma.cc/8S6A-Z7NM>].

27. See Georgia Dep’t of Transp. v. Crooms, 729 S.E.2d 660, 662 (Ga. Ct. App. 2012) (overruled on different grounds by Rivera v. Washington, 784 S.E.2d 775 (Ga. 2016)); Georgia Dep’t of Transp. v. Balamo, 806 S.E.2d 622, 624 (2017), cert. denied (May 7, 2018).

ate controversy. While the science is very good, adaptation decisions will be made with some degree of uncertainty. This duty is designed to avoid bad development in dangerous places, potentially putting them into the category of gross negligence. Anticipating future risks is different from managing risks based on the past. An adaptive duty of care draws a framework to manage this reality.

### B. *Toward an Adaptive Authority to Abandon: Property Rights and Roads*

We also recognize that there will be situations where road abandonment is the most prudent course of action. An adaptive authority to abandon should reflect values of holding roadways in the public trust, decisionmaking with overall system functionality as a priority, and principles of adaptive management. Adaptive abandonment decisions should be made in the context of short- and long-term thresholds as well as the overall public interest.

We advocate for an abandonment standard that allows abandonment when a road no longer serves “a substantial public purpose”<sup>28</sup> and explicitly incorporates resilience into the determination of the public interest. Additional factors could include whether vulnerability assessments and adaptation planning has occurred; whether a step-by-step policy for managing road maintenance and abandonment has been established; and whether public notice has been provided to residents.

While takings claims are likely to remain a concern, developing an adaptive authority to abandon presents an opportunity to mitigate such claims, shaping future expectations. An adaptive authority to abandon under Georgia’s current jurisprudence would be affirmed, even in situations where a road abuts private property. In Florida, where counties and municipalities have wide authority to abandon roads but must not harm the public welfare,<sup>29</sup> consideration of the public interest would allow the entire road system to be taken into account.<sup>30</sup> North Carolina, on the other hand, would be directed away from individual and toward community concerns. South Carolina’s approach of allowing abandonment at the county level when roads are

“useless” would pivot toward considering the necessity of a road as well as the overall “improvement” of the city.

### C. *Mending the Patchwork: States Must Lead*

Our preference would be for an adaptive duty to maintain to be adopted by statute and applied consistently across state, county, and municipal jurisdictions. It would send a consistent policy signal that adaptation planning is expected—and that governments will be protected from liability. Sea-level rise will not follow jurisdictional boundaries. Therefore, an adaptive duty to maintain that applies across all jurisdictions, affirms a holistic approach to road maintenance, and emphasizes the public trust nature of government ownership and maintenance of the road *system*. A statewide adaptive authority to abandon would improve coordination in adaptation planning. While takings claims will remain a concern, an adaptive authority to abandon would mitigate takings liability by putting property owners on notice.

## IV. Conclusion

Decisions regarding infrastructure development will continue to be critical to successful climate adaptation. Local governments are on the frontline of adaptation action, yet have limited resources. Determining duties and obligations based on a static environment is increasingly untenable. Conflicting standards already exist between jurisdictions. Sea-level rise will exacerbate these tensions and will likely reward government inaction and short-term compromises.

Our proposals address these tensions and inform local planning for climate change impacts. An adaptive duty to maintain furthers necessary action while acknowledging risks. Statewide standards would facilitate state and local coordination. If community resilience is our goal, then we must develop new duties and authorities to facilitate forward-looking, creative, and difficult decisionmaking. While the Talking Head’s song “The Road to Nowhere” is an absolute classic, it cannot be our anthem for local adaptation. We are not on a road to paradise, and time is not on our side.

28. See, e.g., GA. CODE ANN. §32-2-2 (2018).

29. See FLA. STAT. §§335.02, 335.199 (2018).

30. *City of Naples v. Miller*, 243 So. 2d 608, 611 (Fla. Dist. Ct. App. 1971).