May 1, 2025

To:
South Carolina Department of Environmental Services (SCDES)
Bureau of Water – Coastal Services Section
2600 Bull Street, Columbia, SC 29201

From:
Park West Master Association, Smart Growth 41, and Concerned Community Members

Subject: Community Submission – Highway 41 Corridor Improvements Project (Charleston County)

Re: Public Comment on Charleston County's Permit Application for the Highway 41 Corridor Project

Dear SCDES Review Team,

On behalf of residents of the Park West Master Association, the surrounding neighborhoods in Charleston County, and the Smart Growth 41 committee, we respectfully submit the following community comments concerning the proposed Highway 41 Corridor Improvements Project. Our intent is to support a permitting process that is both thorough and consistent with SCDES's own recent precedents for infrastructure projects of similar scale, location, and environmental sensitivity.

We recognize the importance of improving safety and mobility along Highway 41. However, we are concerned that several critical aspects of the environmental review and public accountability process have not received sufficient attention in Charleston County's September 2024 response to SCDES or supporting documentation. The sections below reflect both specific technical concerns and broader procedural recommendations drawn from public input, past permitting decisions, and applicable policy frameworks.

We offer these comments in the spirit of constructive engagement..

1.0: Concern Raised in Public Comments: Independence and Transparency of Hydrologic Modeling

In public comments, numerous residents, including members of the Park West Master Association and Smart Growth 41, voiced concerns regarding the transparency and independence of the hydrologic and environmental modeling utilized for the Highway 41 project. Charleston County's documentation does not identify the individuals or firms responsible for the modeling, their qualifications, or whether the models were reviewed by anyone outside the project's engineering team. The modeling is also presented without clear explanation of how future rainfall patterns, changing land use, or wetland loss were accounted for.

Given that these models help determine the project's impact on flooding, wetlands, and endangered species habitat, the lack of clarity makes it difficult for the community—and for SCDES—to know whether the science behind the project is reliable and unbiased.

Precedent Showing Risk of Inaction: ACE Basin Parkway and Gadsden Creek

In the **US-17 ACE Basin Parkway Project**, flawed hydrologic modeling caused unexpected subsidence and stormwater backups. SCDES later had to intervene with emergency oversight, and the community bore the cost of environmental and infrastructure damage that might have been prevented with stronger upfront modeling review.

In the **Gadsden Creek redevelopment project**, SCDES issued a permit without requiring disclosure of modeling assumptions, despite widespread public concern. The community later experienced increased localized flooding and long-term mistrust in the permitting process, especially because affected neighborhoods were not given a clear explanation of the data or methods used to support the project.

SCDES Should Ensure the Following Review Standards Are Applied:

We believe the community and the environment are best protected when the science behind major infrastructure projects is open, reviewable, and independently verified. Similar projects in South Carolina have shown that when SCDES requires transparency and third-party input on modeling, it can prevent expensive mistakes and restore community confidence. We respectfully ask SCDES to apply those same standards here, so that residents and regulators alike can have faith in the project's underlying data.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to disclose the firms or individuals who prepared the hydrologic modeling, including professional credentials.

Why This Is Necessary:
Knowing who prepared the models helps reviewers assess technical qualifications and potential conflicts of interest.

Evidentiary Justification:

- In the ACE Basin Parkway Project, SCDES required credential verification after modeling discrepancies were discovered.
- In the I-526 WEST FEIS, model authorship and affiliations were listed in the environmental appendix for public review.

County Omission:

- The County's submission does not name modeling firms or staff.
- No professional certifications, licenses, or expertise were disclosed.
- The September 2024 letter offers no way to validate whether modelers were qualified or impartial.

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2. Require confirmation that the environmental modeling was conducted independently from the project engineering or design team.

Why This Is Necessary:
Segregating environmental analysis from design functions ensures objectivity and reduces the risk of modeling results that favor a predetermined outcome.

Evidentiary Justification:

- In the Savannah Harbor Expansion, independent hydrologists were retained to validate flood and habitat models.
- In the Charleston Regional Resilience Framework, peer review was required for all capital project modeling included in the plan.

County Omission:

- The County does not state whether the modeling team was independent.
- No separation of design and environmental analysis is disclosed.
- No quality control, external audit, or reviewer documentation is provided.

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3. Require peer review of major modeling assumptions and inputs, including rainfall intensity, soil type, and boundary conditions.

Why This Is Necessary:
Peer review can identify outdated assumptions, missed variables, or errors in scope. It improves accuracy and fosters accountability.

Evidentiary Justification:

- In the Savannah River Basin Flood Study, peer review flagged underestimates of runoff, leading to updated FEMA maps.
- In the I-526 WEST project, reviewers evaluated rainfall inputs and time-of-concentration metrics before final design approval.

County Omission:

- No peer review of any kind is disclosed in Charleston County's response.
- Public commenters requested this safeguard, but the County did not respond.
- No evidence of model validation, error-checking, or review is included in the submission.

If Charleston County believes that transparency, independence, or peer review of hydrologic modeling is not necessary for this corridor, we respectfully request a written explanation of how this project differs from others—such as ACE Basin Parkway, I-526 WEST, or Savannah Harbor—where these safeguards were required.

2.0 Evaluation of Public Comments and Updated Analysis

Charleston County's September 2024 response states that it "carefully considered" public comments submitted regarding the Highway 41 project. However, the County does not provide a comment-response matrix, does not explain whether additional technical analysis was performed in response to public input, and does not indicate whether any design or mitigation changes were made as a result. The language used was general and conclusory, offering no evidence that specific community concerns were addressed in any meaningful way.

Community organizations—including the Park West Master Association and Smart Growth 41—submitted detailed comments identifying concerns such as the adequacy of floodplain modeling, the omission of cumulative impact analysis, and the lack of mitigation specificity. By failing to document how these issues were considered, the County has left the public uncertain whether their input played any role in the environmental review process.

Why These Safeguards Matter: Real Project Outcomes

I-526 Lowcountry Corridor WEST (Charleston County, 2020–2022):
SCDOT and FHWA prepared a detailed, publicly released comment-response matrix that directly linked major community concerns to environmental reanalysis and specific design revisions. This helped prevent misunderstandings, improved agency accountability, and earned credibility with affected neighborhoods. (526lowcountrycorridor.com)

Port Access Road Project (Charleston County, 2019):
A full comment matrix was published alongside the Environmental Assessment, documenting how public concerns about wetland impacts, construction phasing, and noise were addressed in agency responses and mitigation plans. It remains publicly accessible on SCDOT's archived project website.

Why We're Asking for SCDES to Look More Closely

Public comment is not just a formality, it is a core safeguard meant to improve project outcomes, catch overlooked risks early, and build public trust in environmental decision-making. When comments raise technical concerns, agencies have a responsibility to evaluate those issues with seriousness and transparency.

Past projects have demonstrated that thorough documentation and responsiveness to public input lead to more effective and accepted infrastructure developments. We respectfully ask SCDES to apply clear, measurable comment evaluation standards here, to ensure the Highway 41 project benefits from the local knowledge and technical input the public has provided.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to prepare and publicly release a formal comment-response matrix summarizing each significant comment and how it was addressed.

Why This Is Necessary:
A clear comment matrix ensures that community concerns are tracked and shows whether they led to environmental reanalysis, design revisions, or mitigation measures.

Evidentiary Justification:

- In the **I-526 LCC WEST FEIS**, SCDOT published a structured matrix mapping public comments to resulting changes in the document.
- In the **US-17 ACE Basin Parkway Project**, a public matrix helped clarify why some concerns triggered further analysis while others did not, fostering transparency even in controversial areas.

County Omission:

- Charleston County's letter refers only generally to having "considered" public input, without indicating how it was evaluated or whether it informed the design or modeling.
- No comment matrix has been made public to date.
- The County did not state whether comments were categorized, prioritized, or internally reviewed before being dismissed or accepted.

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2. Require Charleston County to explain whether any environmental studies were updated or project design changes were made as a result of public comments.

Why This Is Necessary:
This is critical for confirming that public feedback was not only received but integrated into the technical review and decision-making process.

Evidentiary Justification:

- In the **Port Access Road project**, SCDOT modified wetland mitigation locations and stormwater routing following technical concerns raised by local experts and the community.
- In the **Charleston Area Intermodal Transportation Plan (CHATS)** process, public input about traffic patterns and environmental justice led to rerouting elements of the design.

County Omission:

- The County's response contains no mention of supplemental hydrologic modeling, impact reevaluation, or updated endangered species analysis.
- No design revisions are listed or justified as resulting from community concerns.
- The lack of even a single acknowledged modification tied to public comment suggests the County treated input as a procedural checkbox rather than a meaningful engagement tool.

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3. Require Charleston County to specifically address cumulative impact concerns raised by the public regarding increased runoff, downstream flooding, and wetland loss.

Why This Is Necessary:
These long-term, interconnected effects are some of the most important to evaluate in Lowcountry floodplain environments, especially in projects that will accelerate development and impervious surface growth.

Evidentiary Justification:

- In the **I-526 LCC WEST project**, cumulative floodplain and land use changes were modeled across watersheds feeding into the Ashley River, not just within the construction zone.

- In the **Long Savannah Development**, Charleston County incorporated future growth and climate trend projections into the wetland and stormwater analysis at the request of public commenters.

County Omission:

- The Highway 41 documents reviewed make no reference to watershed-scale cumulative runoff modeling.
- The County's response did not address land use multiplier effects or induced growth.
- There is no mention of climate-adjusted hydrologic inputs despite repeated community requests to include future rainfall intensity and elevation change in flood modeling.

If Charleston County believes that requiring a structured and transparent public comment evaluation is unnecessary for the Highway 41 project, we respectfully ask that the County provide a written explanation of how this project differs from others—such as I-526 LCC WEST, Port Access Road, or Long Savannah—where these steps were treated as necessary safeguards.

Our community believes that requiring careful comment review is not an obstruction, but an essential part of building a resilient and trusted project for all.

3.0 Cumulative Impact Assessment

Charleston County's September 2024 response focused narrowly on the direct, immediate effects of construction along the Highway 41 corridor. It did not meaningfully assess the broader cumulative environmental impacts across the surrounding floodplain and wetland systems—particularly as they relate to stormwater runoff, long-term hydrologic changes, and the compounding effects of infrastructure placement in a high-risk watershed. This omission is especially troubling given the project's location in a sensitive and increasingly flood-prone area.

Community commenters, including the Park West Master Association, Smart Growth 41, and other organizations, raised specific concerns that the County had not modeled or disclosed how highway expansion in this location could affect flood dynamics, wetland systems, and adjacent properties. These concerns were reinforced by prior studies and project outcomes showing that incomplete watershed-scale modeling can result in underestimated risks to nearby homes and natural resources.

Community commenters, including the Park West Master Association and Smart Growth 41, raised specific concerns about the indirect and long-term effects of increased impervious surfaces and loss of natural water storage systems. However, Charleston County's response does not acknowledge or address these risks in a measurable or science-based way.

Why These Safeguards Matter: Real Project Outcomes

I-526 Lowcountry Corridor WEST (Charleston County, 2023):
SCDES and SCDOT required a watershed-scale hydrologic impact analysis as part of the Final Environmental Impact Statement. This included modeling floodplain interactions, wetland storage loss, and climate-adjusted rainfall. That process led to changes in culvert design, wetland buffer zones, and drainage alignment before permit issuance.

Carolina Crossroads Project (Columbia, SC, 2021):
During the planning stages of the Carolina Crossroads Project, comprehensive hydrologic and hydraulic studies were conducted to assess the potential impacts on surrounding floodplains and water bodies. The studies informed design modifications to mitigate adverse effects, ensuring compliance with environmental regulations and safeguarding nearby communities from increased flood risks.

Why We're Asking SCDES to Look More Closely

Cumulative effects—such as altered flood behavior, wetland system stress, and downstream stormwater backups—are often the most difficult to correct after project construction. They are also the most commonly overlooked when reviews are limited to direct impacts only.

We respectfully ask SCDES to ensure that Highway 41's environmental evaluation includes broader watershed-scale modeling before a final decision is made.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to conduct watershed-scale cumulative floodplain modeling across the project-affected area.

Why This Is Necessary:
Localized models cannot account for interconnected runoff systems that cross parcels and jurisdictions. Flood risk is influenced by both direct and upstream hydrologic conditions.

Evidentiary Justification:

- In the **I-526 WEST project**, modeling extended into the broader Ashley River basin and was critical to reconfiguring flood conveyance elements.
- In the **Savannah Harbor Expansion Project**, modeling was required for the full estuarine and backwater system, not just dredging zones.

County Omission:

- The County's documents do not reference the Wando watershed or any off-corridor floodplain analysis.
- There is no discussion of stormwater carryover or interconnected wetland systems.
- The modeling appears to be confined to roadbed elevations, not regional impacts.

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2. Require Charleston County to identify and model hydrologic connectivity between wetlands, roadside drainage, and offsite floodplain systems.

Why This Is Necessary:
Many environmental risks are cumulative, including lost wetland capacity, altered drainage timing, and fragmentation of natural water storage areas.

Evidentiary Justification:

- In the **Long Savannah development**, SCDES required modeling to confirm how disconnected wetland patches would respond to a new internal road network.

- In the **US-21 Harbor River Bridge project (Beaufort County, 2021)**, bridge and roadbed expansion was permitted only after modeling showed that wetland flow-through would be preserved and storm surge would not be intensified.

County Omission:

- There is no wetland flow analysis or basin-scale runoff pathway shown in the submitted materials.

- Public comments raised this concern, but the County did not include additional study results or acknowledgments.

- The interaction between constructed drainage and surrounding natural systems remains undefined.

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3. Require integration of future rainfall and runoff projections based on regional climate data.

Why This Is Necessary:
Using outdated rainfall data underrepresents actual risk. SCDES has endorsed climate-adjusted modeling practices as part of flood-resilient design guidance.

Evidentiary Justification:

- The **Charleston Regional Hazard Mitigation Plan** includes guidance for incorporating anticipated rainfall intensification in drainage calculations.

- The **I-526 WEST project** included projected rainfall and sea level rise metrics, which influenced elevation and culvert sizing decisions.

County Omission:

- There is no mention of rainfall trend analysis in the County's documentation.

- Modeling appears to rely on historic 100-year storm assumptions.

- Public commenters specifically requested climate-adjusted modeling, but no response or supplemental study was offered.

If Charleston County believes that cumulative and climate-informed modeling is not necessary for the Highway 41 project, we respectfully request a written explanation of how this project differs from others—such as I-526 WEST, Long Savannah, or US-21 Harbor River—where these steps were standard permitting expectations.

4.0 Interagency Coordination

Charleston County's September 2024 response did not include any documentation showing coordination with key agencies responsible for floodplain, wetland, and stormwater oversight. These include the Federal

Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers (USACE), the South Carolina Office of Resilience (SCOR), and the Charleston Regional Stormwater Consortium.

Given that the Highway 41 corridor crosses multiple low-elevation areas with historic flooding, and contains jurisdictional wetlands and tidal tributaries, the public reasonably expected to see evidence of coordination with these technical agencies. Their absence raises concerns about whether the flood risk modeling and mitigation plans were vetted using the most accurate and current data.

Why These Safeguards Matter: Real Project Outcomes

Gadsden Creek Redevelopment (Charleston, 2021):
A permit was issued without documented coordination with FEMA or the Charleston Stormwater Consortium. After approval, the project drew substantial criticism from community members and coastal scientists over downstream flooding risks and missed opportunities for interagency collaboration.

I-526 Lowcountry Corridor WEST (Charleston County, 2023):
In contrast, this project included formal interagency coordination letters from FEMA Region IV, USACE Charleston District, and local stormwater agencies. Their input led to modifications in drainage design, wetland buffers, and modeling methods used in the FEIS.

Why We're Asking SCDES to Look More Closely

When federal, state, and regional stormwater agencies work together early, it helps ensure that flood risk modeling, mitigation strategies, and jurisdictional impacts are addressed using consistent, science-based inputs.

We respectfully ask SCDES to ensure Charleston County demonstrates such coordination before any decision is made regarding a Highway 41 permit.

Therefore, we ask that SCDES ensure the following:

1. Request formal letters of coordination or comment from FEMA, USACE, SCOR, and the Charleston Stormwater Consortium.

Why This Is Necessary:
These agencies maintain the best available data and expertise on flood zones, base elevation shifts, jurisdictional wetlands, and local infrastructure capacity.

Evidentiary Justification:

- In the **I-526 WEST corridor**, FEMA and USACE reviews were included in the FEIS and helped shape final hydrologic assumptions.
- In the **Port Access Road project**, USACE coordinated early with SCDOT and required modifications to avoid unauthorized wetland fill.

County Omission:

- The September 2024 response contains no letters from any coordinating agency.
- There is no FEMA data usage or correspondence cited.

- No reference is made to USACE feedback, jurisdictional determinations, or Charleston Stormwater Consortium review.

2. Request documentation that USACE reviewed and approved the wetland impacts and permitting boundaries for Highway 41.

Why This Is Necessary:
Projects that affect jurisdictional wetlands must receive USACE review under Section 404 of the Clean Water Act.

Evidentiary Justification:

- In the **Highway 17 ACE Basin project**, USACE provided permitting boundaries and wetlands determinations that modified construction limits.
- In the **US-21 Harbor River Bridge**, USACE's input shaped the mitigation package and ensured permit conditions were enforceable.

County Omission:

- No Section 404 or USACE coordination materials were included in the documentation submitted by the County.
- The County's response omits any mention of wetlands permitting outside of mitigation credit purchases.
- The permitting boundary maps do not include jurisdictional delineations or stamped USACE approval.

If Charleston County believes this level of interagency coordination is not necessary for the Highway 41 project, we respectfully ask the County to explain how this project differs from others—such as I-526 WEST, Gadsden Creek, or US-21 Harbor River—where coordination with FEMA, USACE, and local floodplain managers was expected.

SECTION 5.0 – Wetland Mitigation Plan Deficiencies

Concern Raised in Public Comments:

Charleston County's September 2024 response states that wetland impacts will be mitigated through purchase of mitigation credits but provides no meaningful details regarding quality or ecological equivalence of those credits.

The response also does not specify whether the wetlands to be restored or enhanced are in the same watershed or ecological class. Additionally, it does not describe how the project will mitigate the risk of Highway 41 causing permanent destruction of the wetland in Laurel Hill Park, which could lead to worsening localized flooding and habitat loss, increasing vulnerability for Park West, Dunes West and Phillips Community residents. In an area as hydrologically complex as the Wando basin, this level of ambiguity does not reflect the standard SCDES has applied to similar Lowcountry projects.

This generic approach the County has put forth appears to be inconsistent with both best practices and SCDES's treatment of similar projects elsewhere in the state—especially in coastal wetland systems where mitigation success requires close alignment with local hydrology, soil conditions, and ecosystem type.

Why These Safeguards Matter: Real Project Outcomes

Port Access Road Project (Charleston, 2019): SCDES required the disclosure of the exact bank being used and did not approve a proposal to buy credits from a site outside the same wetland system type. Wetland equivalent was defined by hydrologic regime, vegetation class, and soil type.

ACE Basin Parkway Project (Beaufort and Colleton Counties):
In this case, SCDES required a 3:1 mitigation ratio for high-value floodplain wetlands and additional monitoring to ensure functional replacement. When no adequate bank credits were available within the watershed, the applicant was required to develop an in-kind mitigation site.

Why We're Asking SCDES to Look More Closely

Wetland mitigation should protect floodplains and ecological functions. Vague or offsite mitigation can result in lost wetland services and increased downstream flood risk. We urge SCDES to hold Charleston County to the same standards as nearby projects, especially in tidal and transitional floodplain zones.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to demonstrate functional equivalency between the wetlands being impacted and the mitigation credits being purchased.

Why This Is Necessary:
Not all wetlands provide the same flood protection, water filtration, or habitat value. When a flood-buffering forested wetland is replaced by preservation of a salt marsh 50 miles away, local environmental services may be lost even if acreage is technically "replaced." Functional equivalency matters—especially in tidal systems like the Wando River basin.

Evidentiary Justification:

- In the Point Farm Mitigation Bank case (Charleston County, 2023), SCDNR and legal advocates objected to credit use from low-risk salt marshes, citing their limited relevance to the functions lost on the impacted site. The controversy delayed other local permits and triggered closer scrutiny of mitigation credit sourcing.
- In the I-526 WEST project, SCDES required demonstration that mitigation wetlands performed similar hydrologic and ecological roles, using soil type, hydroperiod, and vegetation classification as criteria.

County Omission:

- Charleston County has identified its proposed mitigation banks but does not explain how those sites replicate the stormwater retention, baseflow moderation, or floodplain integration functions of the wetlands being removed.
- No wetland classification or functional scoring was provided.

- The County offers no rationale for why credits located more than 50 miles away from the core of the Wando River watershed adequately replace local ecosystem services.

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2. Require documentation that credits will come from wetlands that are ecologically equivalent (same hydroperiod, vegetation class, and floodplain function).

Why This Is Necessary:
Replacing one wetland with a different type (e.g., tidal marsh for a forested floodplain) may reduce functionality and storage capacity.

Evidentiary Justification:

- In the **ACE Basin Parkway**, equivalency was assessed using hydrology and NRCS soil maps.
- In the **I-526 WEST project**, SCDES required confirmation that the proposed credit source mirrored the impacted wetland's ecological function.

County Omission:

- The response includes no wetland classification system, no soil data, and no vegetation match.
- No mention of equivalency review is made.
- There is no evidence SCDES was asked to evaluate whether the mitigation meets functional replacement.

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3. Require a contingency plan for how mitigation will be achieved if credits are unavailable at the time of permit issuance.

Why This Is Necessary:
Increased credit demand often results in shortfalls. Without a fallback plan, critical impacts may proceed without mitigation.

Evidentiary Justification:

- In the **Ridgeway Gold Mine permit**, SCDES required a contingency in the event credits were exhausted in the targeted basin.
- In the **Highway 41 Resilience Corridor Concept Plan (2021)**, early drafts called for pre-certification of credit availability for phased projects.

County Omission:

- Charleston County's submission does not state whether credits have been secured or reserved.
- There is no fallback proposal or discussion of alternative mitigation options.
- The term "credit" is used generically with no timeline, availability guarantee, or source verification.

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4. Require mitigation ratios that reflect the flood control and ecological value of wetlands impacted (e.g., above 1:1 for floodplain or buffer wetlands).

Why This Is Necessary:
Low mitigation ratios may meet legal minimums but not environmental needs in flood-prone systems where wetlands provide critical buffering.

Evidentiary Justification:

- The **ACE Basin Parkway** mitigation ratio reached 3:1 for high-value areas.
- In the **Gills Creek Restoration Plan (Columbia, 2020)**, SCDES endorsed 2:1 mitigation ratios for wetlands near residential areas with repetitive flood claims.

County Omission:

- No ratio was specified by Charleston County in its September 2024 response.
- No distinction was made between wetland classes, proximity to structures, or flood retention value.
- No explanation was provided for why 1:1—or any other ratio—is sufficient in this case.

If Charleston County believes this level of mitigation analysis is not necessary for the Highway 41 project, we respectfully ask the County provide a written explanation why such scrutiny—required in comparable Charleston-area projects—is not appropriate in this case. Transparency is important for maintaining trust and ensuring consistency in environmental oversight.

SECTION 6.0 Climate-Resilient Flood Modeling

Charleston County's September 2024 response does not address whether future rainfall trends, intensifying storm events, or updated flood data were used to assess floodplain impacts in the Highway 41 corridor. Public comments raised concerns about whether outdated hydrologic assumptions were used, especially in light of sea level rise, high base elevation variability, and FEMA's transition to Risk Rating 2.0. As one of the most flood-sensitive corridors in the Lowcountry, this project area demands careful, forward-looking modeling to avoid avoidable infrastructure strain and neighborhood exposure.

Why These Safeguards Matter: Real Project Outcomes

Charleston Regional Hazard Mitigation Plan (2020):
The plan recommends that all capital infrastructure projects incorporate future rainfall intensity projections, citing the shift toward higher frequency, higher volume storm events in the Lowcountry. This recommendation was part of planning guidance for counties, municipalities, and special districts.

Folly Beach Drainage Upgrade (2021):
FEMA and SCDES required flood modeling to reflect projected rainfall for 2050 conditions. The project was redesigned after early modeling underestimated runoff volumes and street-level exposure. The updated hydrologic model prevented future retrofits and secured grant eligibility.

Why We're Asking SCDES to Look More Closely

Flood modeling is only as good as the assumptions that support it. If Charleston County based Highway 41's hydrology on historic rainfall, legacy floodplain maps, or pre-2021 FEMA data, the modeling may not capture the true risk to homes, roadways, and wetlands.

We respectfully request that SCDES ensure Highway 41 modeling reflects best-available climate data and regionally endorsed rainfall projections.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to state whether Risk Rating 2.0 and future rainfall projections were incorporated into modeling assumptions.

Why This Is Necessary:
Risk Rating 2.0 represents the most comprehensive FEMA flood risk dataset currently available. Ignoring it may underestimate exposure and impair downstream drainage planning.

Evidentiary Justification:

- In the Folly Beach Drainage Upgrade, Risk Rating 2.0 flood depth data led to design changes in curb inlet spacing and overflow channels.
- In the Charleston Resilience Planning Framework, use of 2050 rainfall rates was required for drainage structure modeling and mitigation sizing.

County Omission:

- No references to FEMA Risk Rating 2.0 or future rainfall assumptions appear in County materials.
- No discussion of sea level rise or rainfall intensity shift was included in the County's response.
- The County's submission does not indicate whether this modeling is current, future-facing, or based solely on historic data.

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2. Require disclosure of the rainfall recurrence interval and time-of-concentration

Why This Is Necessary:
Modeling without disclosure of inputs prevents public review and limits SCDES's ability to compare the approach to state-endorsed planning standards.

Evidentiary Justification:

- In the I-526 WEST FEIS, SCDOT and SCDES published the design storm frequency and runoff assumptions.
- In the Greenville County Resilience Study, transparency in time-of-concentration and rainfall selection helped identify critical undersized conveyances.

County Omission:

- Charleston County did not state what rainfall intervals or historical datasets were used.
- Modeling assumptions were not disclosed, making it impossible for technical reviewers or the public to confirm compliance.
- There is no discussion of model sensitivity or margin of error tied to rainfall curves.

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3. Require Charleston County to evaluate stormwater detention requirements based on projected precipitation volumes, not historic values.

Why This Is Necessary:
Permitting based on outdated rainfall may meet minimum legal standards but may be insufficient in preventing public and environmental harm as conditions worsen.

Evidentiary Justification:

- In the **Gills Creek Watershed Study**, projected rainfall was used to model detention basin sizing and was tied to priority project rankings.
- In the **Charleston County Stormwater Design Manual (2020 Update)**, rainfall depth increases were recommended as part of climate-informed basin management.

County Omission:

- The County's September 2024 response does not reference stormwater detention sizing or assumptions.
- There is no indication that projected storm intensity was factored into retention or flow control design.
- Public comments requesting future-facing stormwater calculations received no formal response.

If Charleston County believes that climate-informed modeling is not appropriate for the Highway 41 corridor, we respectfully ask the County to explain how this corridor differs from other projects—such as Folly Beach, I-526 WEST, or Gills Creek—where future rainfall planning was required.

SECTION 7.0 – Accountability and Procedural Consistency

Throughout the public record for the Highway 41 project, Charleston County has submitted materials that omit several critical analyses or coordination steps that SCDES has required in other, similar projects across South Carolina. These include the lack of cumulative watershed modeling, no documented interagency coordination, limited mitigation detail, and the absence of a structured response to public comments.

While each item may be defensible in isolation, together they raise concerns about whether the Highway 41 permit is being reviewed with the same rigor that has been applied to other major infrastructure projects in Charleston County and other flood-prone regions. Public confidence in the fairness and credibility of the permitting process depends on consistency—especially when precedent exists just miles away.

Why These Safeguards Matter: Real Project Outcomes

I-526 Lowcountry Corridor WEST (Charleston County, 2023):
This project was reviewed by SCDES using a comprehensive standard: cumulative hydrologic modeling, FEMA coordination, public comment matrices, and a detailed wetland mitigation strategy were all required before approval. The process was transparent, well-documented, and broadly understood.

ACE Basin Parkway and Port Access Road Projects:
In both cases, SCDES required mitigation ratios above minimum thresholds, site-specific modeling documentation, and interagency coordination. Though the project types varied, the permitting standards for wetlands, floodplains, and public transparency were consistently high.

Why We're Asking SCDES to Look More Closely

We are not requesting new policies—we are asking for application of the same expectations used before. If a project with a similar footprint, flood risk, and jurisdictional overlap received more detailed review in the past, then the public has a right to ask why Highway 41 would be evaluated using a different standard.

Therefore, we ask that SCDES ensure the following:

1. Require Charleston County to demonstrate how its current application aligns with other SCDES-reviewed projects of similar scope and sensitivity.

Why This Is Necessary:
Permitting standards should not vary arbitrarily across counties or between similar road corridor projects.

Evidentiary Justification:

- In the **I-526 WEST FEIS**, SCDES reviewed an extensive record of interagency input, hydrologic assumptions, mitigation metrics, and design revision history.
- In the **ACE Basin Parkway**, SCDES documented all Section 404 coordination and publicly released rationale for mitigation ratios and modeling parameters.

County Omission:

- Charleston County's application materials do not include any direct comparison to prior SCDES projects.
- There is no discussion of alignment with or deviation from regional precedent.
- The County's responses do not indicate how its approach satisfies known permitting benchmarks.

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2. Require Charleston County to disclose whether any elements of this project were granted reduced review due to schedule, funding, or procedural constraints.

Why This Is Necessary:
If project scope or permitting depth was adjusted to meet deadlines, that should be disclosed for public awareness and review accuracy.

Evidentiary Justification:

- In the **Charleston Greenbelt Expansion (2022)**, SCDES issued an explanatory addendum when timelines limited comment periods.
- In the **Greenville I-85 Corridor Mitigation Agreement**, SCDES clarified when conditional permit language was used due to external agency delays.

County Omission:

- There is no discussion of whether timing, external coordination, or funding considerations led to abbreviated analysis.
- The County's response does not mention phased review, permit conditions, or interim measures.
- Public commenters flagged concerns about the completeness of modeling, but no supplemental explanation was offered.

If Charleston County believes that procedural adjustments, reduced modeling, or abbreviated coordination were appropriate for the Highway 41 project, we respectfully request that the County provide a written explanation of how these decisions align with expectations applied to projects such as I-526 WEST, Port Access Road, or ACE Basin Parkway.

In Conclusion

It is important that Charleston County meet the same standards that have served this region well in the past. If Charleston County believes that any of the safeguards discussed in this letter—such as cumulative modeling, agency coordination, or transparent comment response—are not appropriate for Highway 41, we respectfully request that the County provide a written explanation for why this corridor warrants a different permitting approach.

Sincerely,
Travis Korson
Vice-President, Park West Master Association
Chairman, Smart Growth 41