

# ENVIRONMENTAL RE-EVALUATION CONSULTATION

**Note:** The purpose of this worksheet is to assist sponsoring agencies in gathering and organizing materials for re-evaluations required under the National Environmental Policy Act (NEPA). It is designed to provide FTA with information needed to do a re-evaluation. In lieu of the worksheet, the sponsoring agency may submit the same information in a different format. Submission of the worksheet by itself does not meet NEPA requirements. FTA must concur in writing with its determination and/or the sponsoring agency's NEPA recommendation. Contact the FTA Region 4 Planner if you have any questions regarding this worksheet. We strongly encourage you to contact us to discuss your project changes before you fill out this worksheet.

<i>For Agency Use</i> <i>Date Received:</i>	
<i>Recommendation by Planner or Engineer:</i> <input type="checkbox"/> <i>Accept</i> <input type="checkbox"/> <i>Return for Revisions</i> <input type="checkbox"/> <i>Not Eligible</i>	<i>Reviewed By:</i>  <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Regional Counsel:</i> <input type="checkbox"/> <i>Accept Recommendation</i> <input type="checkbox"/> <i>Return with Comments</i>	<i>Reviewed By:</i>  <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Approving Official:</i>	<i>Date:</i>

Please answer the following questions, fill out the impact chart and attach project area and site maps. Using a site map from the previously approved NEPA document, show project changes using a different color. Include additional site maps to help reviewer understand project changes.

<b>PROJECT TITLE</b> Lowcountry Rapid Transit (LCRT) Project
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<b>LIST CURRENT, APPROVED ENVIRONMENTAL DOCUMENTS (e.g. EIS/ROD, EA/FONSI, BA, RE-EVALUATION, etc.) If Re-evaluation, briefly describe.</b>
<b>Title:</b> LCRT NEPA Documented Categorical Exclusion (DCE) <b>Date:</b> July 19, 2021 <b>Type and Date of Last Federal Action:</b> Re-evaluation of 60% design approval 10/17/2024

<b>HAS THE MOST CURRENT AND OTHER PERTINENT APPROVED ENVIRONMENTAL DOCUMENTS BEEN <u>RE-READ</u> TO COMPARE PROPOSED PROJECT CHANGES?</b>
<input type="checkbox"/> <b>NO (STOP! The most current approved environmental document MUST be re-read prior to completing a re-evaluation.)</b>
<input checked="" type="checkbox"/> <b>YES</b> <b>NAME:</b> Jennifer Pearson <b>DATE:</b> May 2025

<b>IS THE PROJECT CURRENTLY UNDER</b> <input checked="" type="checkbox"/> <b>DESIGN</b> <b>OR</b> <input type="checkbox"/> <b>CONSTRUCTION?</b>
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**REASON FOR RE-EVALUATION**

Since publication of the DCE, the Berkeley-Charleston-Dorchester Council of Government (BCDCOG) advanced design to 90 percent and BCDCOG has proposed a change in bus fleet from battery electric buses (BEB) to a diesel fleet.

**DESCRIPTION OF PROJECT CHANGES OR NEW INFORMATION**

BCDCOG made the decision to change the bus fleet from BEB to diesel buses because it was determined there is not a feasible BEB option that will be able to provide the service frequencies needed to deliver the promised high-quality service of a BRT system. A diesel fleet helps reduce risk and future-proof the LCRT system so its service can operate as promised – frequent, reliable, and comfortable – and reduces potential for infrastructure or service issues like schedule delays. The fleet will be composed of 21 vehicles with 17 vehicles used during peak hours. Project infrastructure would not preclude the option to move to BEBs when the initial fleet has reached the end of its useful life.

Minor revisions have been made to Mitigation Measures in the DCE to provide further detail and clarification for future project phases. See Attachment 1.

**HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECTS THIS PROJECT? If yes, please explain.**

- NO
- YES

Rescinded CEQ regulations (40 CFR 771); CEQ NEPA Implementation Guidance

Rescinded executive orders including but not limited to: EO 12898, EO 13985, EO 14091, 14037 and new executive orders, including EO 14154.

**WILL THE NEW INFORMATION HAVE THE POTENTIAL TO CAUSE A CHANGE IN THE DETERMINATION OF IMPACTS FROM WHAT WAS DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT FOR ANY OF THE AREAS LISTED BELOW?** For each impact category, please indicate whether there will be a change in impacts. For all categories with a change, continue to the table at the end of this worksheet and provide detailed descriptions of the impacts as initially disclosed, new impacts and a discussion of the changes. The change in impact may be beneficial or adverse.

<b>Transportation</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Land Use and Economics</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Acquisitions, Displacements, &amp; Relocations</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Neighborhoods &amp; Populations (Social)</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Visual Resources &amp; Aesthetics</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Air Quality</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Noise &amp; Vibration</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Ecosystems (Vegetation & Wildlife)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Water Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Energy & Natural Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Geology & Soils	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazardous Materials	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Public Services	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Historic, Cultural & Archaeological Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Parklands & Recreation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Construction	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Secondary and Cumulative	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

**Will the changed conditions or new information result in revised documentation or determination under the following federal regulations?**

Endangered Species Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Magnuson-Stevens Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Farmland Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 404-Clean Water Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Floodplain Management Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazardous Materials	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 106 National Historic Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uniform Relocation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 4(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 6(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wild & Scenic Rivers	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Coastal Barriers	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Coastal Zone	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Sole Source Aquifer	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
National Scenic Byways	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

**If you checked yes to any of these, describe how the changes impact compliance and any actions needed to ensure compliance of the new project:** The additional ROW acquisitions will require compliance with the Uniform Relocation Act.

**Will these changes or new information likely result in substantial public controversy?**

Yes     No

**Comments:**

**COMMENTS:**

**CONCLUSIONS AND RECOMMENDATIONS:** Based on the information that has been reviewed, it has been determined that the revised design would not significantly alter the conclusions reached in the DCE.

**LIST OF ATTACHMENTS:** Noise Analysis

**SUBMITTED BY:**

By signing this, I certify that to the best of my knowledge this document is complete and accurate.

Name Jennifer Pearson	Date 05/16/2025
Title Sr Environmental Planner	

Submit two paper copies of this form, attachments, and a transmittal letter recommending a NEPA finding to the address below. Or you may submit one electronic version to the appropriate FTA Region 4 Planner. When the document is approved, FTA may request additional copies.

Federal Transit Administration, Region 4  
230 Peachtree Street, Suite 800  
Atlanta, GA 30303-1512

phone: (404) 865-5600  
fax: (404) 865-5605

Impact Category	Impacts as Initially Disclosed	New Impacts	Change in Impacts
<p><b>Transportation</b></p>	<p><u>Traffic Impacts</u> Temporary adverse impacts on traffic during construction. Long-term beneficial impacts because the BRT would provide an efficient, reliable alternative mode of transportation that would enhance regional mobility and shift some private vehicle use to public transit as congestion continues to grow.</p> <p><u>Bicycle and Pedestrian Impacts</u> Beneficial impacts on bicycle and pedestrian safety due to a proposed shared use path along the LCRT alignment.</p> <p><u>On-Street Parking Impacts</u> Parking impacts from the removal of parking spaces or use of flex-time parking at select areas would not result in significant impacts under NEPA due to adequate, convenient off-street parking availability for residential and commercial use. Access would be maintained as much as practical to businesses during times of limited access.</p> <p><u>Connectivity to Other Transportation Facilities and Modes</u></p>	<p><u>Traffic Impacts</u> The proposed station relocations, intersection improvements, and other design changes would result in slightly greater beneficial traffic impacts.</p> <p><u>Bicycle and Pedestrian Impacts</u> For first/last mile connectivity, design and further assessment of existing bicycle and pedestrian infrastructure identified existing sidewalk that could be retained to minimize construction impacts and cost. While the reconstruction of some existing sidewalks has been eliminated, pedestrian improvements such as the SUP, additional crosswalks and bike racks near stations will still be provided to enhance station accessibility. Beneficial impacts on bicycle and pedestrian safety described in the DCE are still expected due these enhancements.</p> <p><u>On-Street Parking Impacts</u> Due to the progression of design and lane configurations in downtown Charleston, approximately 11 additional on-street parking spaces will be removed.</p>	<p><u>Traffic Impacts</u> No changes in impacts during construction are anticipated from those described in the DCE.</p> <p><u>Bicycle and Pedestrian Impacts</u> No changes in impacts are anticipated from those described in the DCE.</p> <p><u>On-Street Parking Impacts</u> No changes in the number of removed parking spaces is anticipated from those described in the DCE.</p> <p><u>Connectivity to Other Transportation Facilities and Modes</u> No changes in impacts are anticipated from those described in the DCE.</p>

	Connectivity using transfers would be available via the Shipwatch Square Transit Center, the North Charleston Intermodal Transportation Center located on Gaynor Avenue, and any future shared transit stops with the Charleston Area Regional Transit Authority (CARTA) (to be determined). The transportation center provides connectivity between CARTA and inter-city bus services, Amtrak intercity passenger trains, and for-hire transportation services.	<u>Connectivity to Other Transportation Facilities and Modes</u> No new impacts are anticipated from those described in the DCE.	
<b>Land Use and Economics</b>	No adverse impacts on existing land uses due to the presence of existing transit service and compatible land use along the corridor.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Acquisitions, Displacements, &amp; Relocations</b>	Estimated ROW needs of 5.72 acres would not result in significant impacts under NEPA as the project corridor is 21.4 miles in length. None of the property acquisitions would result in the displacement of any residences.	Estimated permanent ROW needs of 17.77 acres, including the OMF and Park and Ride, and TCE needs of 17.96 acres would not result in significant impacts under NEPA as the project corridor is 21.4 miles in length. All new permanent ROW acquisitions and TCEs are within the original project study area (PSA). None of the property acquisitions would result in the displacement of any residences.	No changes in impacts are anticipated from those described in the re-evaluation approved 10/17/2024.
<b>Neighborhoods &amp; Populations (Social)</b>	Although the study area includes concentrations of minority and low-	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

	income populations greater than the City of Charleston, North Charleston, Goose Creek, Hanahan, and Ladson, the BRT would not result in disproportionately high and adverse impacts on minority and/or low-income populations. The alignment is constructed within existing ROW and would not create a barrier to any neighborhoods.		
<b>Visual Resources &amp; Aesthetics</b>	No adverse impacts on visual resources and aesthetics because the BRT features (vehicles, station, and infrastructure) would be consistent with the transportation character of the corridor.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Air Quality</b>	Beneficial impacts on regional air quality due to the reduction of vehicle miles traveled and proposed use of battery electric buses.	While BEB are no longer proposed for the project, beneficial impacts on regional air quality due to the reduction of vehicle miles traveled is still anticipated. Charleston and Berkeley Counties remain in attainment for all air quality standards. No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Noise &amp; Vibration</b>	Temporary adverse impacts to the ambient noise environment in the PSA during construction and no adverse impacts during operation. The project does not meet the three	The noise and vibration analysis for the LCRT project was updated to account for the change from an all-electric to an all-diesel bus fleet, and to capture design changes to operating speeds,	Noise: Four moderate noise impacts to Category 2 (residential/overnight sleep) land uses were identified as a result of these changes, but since these are the only

	vibration screening criteria prescribed in FTA guidance, and therefore FTA considers vibration impacts unlikely. No further vibration assessment is necessary.	volumes, and other factors that may affect noise and vibration results. See Noise and Vibration Analysis Update memo attached.	impacts and just above the moderate impact threshold, no mitigation is proposed.  Vibration: There are no changes to the previous findings in the DCE of no vibration impacts.
<b>Ecosystems (Vegetation &amp; Wildlife)</b>	No candidate species or U.S. Fish and Wildlife-designated critical habitat for federally listed species exists within the PSA. Temporary adverse impacts to essential fish habitat could occur during construction for access. Temporary clearing within the estuarine emergent wetlands would result from the installation of erosion and sediment control measures. These short-term adverse impacts would be minimal and as design progresses, efforts would be made to avoid, minimize, and mitigate these impacts.	Per the re-evaluation approved 10/17/24, impacts to all tidal streams and wetlands were eliminated, including New Market Creek. Temporary impacts to EFH in New Market Creek were disclosed in the DCE. Avoidance of impacts to New Market Creek has also eliminated the previously anticipated EFH impacts. No impacts to EFH are anticipated for the project.	No impacts to EFH are anticipated for the project.
<b>Water Resources</b>	Permanent adverse impacts to nine streams (four perennial and five intermittent) totaling 364 LF due to the extension of pipes and culverts to accommodate an increase or shift in ROW. Permanent adverse impacts to three non-tidal wetlands totaling 0.09 acre due to fill or excavation. No permanent adverse impacts to tidal streams or wetlands. Temporary	No changes in impacts are anticipated from those described in the re-evaluation approved 10/17/2024.	No changes in impacts are anticipated from those described in the re-evaluation approved 10/17/2024.

	<p>adverse impacts to six streams (five perennial and one intermittent) totaling 122 LF and two non-tidal wetlands totaling 0.06 acre due to erosion and sediment control measures and construction access. Impacts to surface waters have been avoided and minimized to the greatest extent practicable.</p>		
<b>Energy &amp; Natural Resources</b>	<p>Increased use of public transportation would result in decreased traffic congestion and vehicle idling, thereby increasing the transportation related energy efficiency within the project corridor for both public transportation and private vehicle use.</p>	<p>While BEB buses are no longer proposed for the project, decreased traffic congestion and vehicle idling increasing the transportation related energy efficiency within the project corridor is still anticipated. No new impacts are anticipated from those described in the DCE.</p>	<p>No changes in impacts are anticipated from those described in the DCE.</p>
<b>Geology &amp; Soils</b>	<p>The project is situated at and close to sea level and some soils within the study area could potentially be erodible and/or poorly drained, especially area that are hydric or have hydric inclusions or within the coastal critical areas. Soil corrective measures may be taken to stabilize roadway, roadway shoulders, and culvert crossings by augmenting existing soils with soils with stable properties. Soil erosion resulting from construction activities would be controlled using appropriate</p>	<p>No new impacts are anticipated from those described in the DCE.</p>	<p>No changes in impacts are anticipated from those described in the DCE.</p>

	environmental protective measures, including best management practices (BMPs) to prevent soil erosion.		
<b>Hazardous Materials</b>	The PSA has 98 sites of concern (seven low risk sites, 86 medium risk sites, and five high-risk sites). Each of these sites has the potential to impact the project via the presence or potential presence of contaminants in soil and/or groundwater. Contractors would implement BMPs such as developing and implementing a soil management plan and stopping subsurface activities and contacting the BCDCOG if hazardous materials are encountered.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Public Services</b>	No adverse impacts on public services.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Utilities</b>	Temporary adverse impacts because utility relocations may be required; however, this work could be completed in tandem with other roadway restriping and paving work to minimize impacts on traffic flow during this time.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Historic, Cultural &amp; Archaeological Resources</b>	No adverse impacts on historic properties in the PSA. The project would not result in the acquisition of new ROW from historic properties.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

	There are no Section 4(f) issues regarding historic properties.		
<b>Parklands &amp; Recreation</b>	FTA has determined that use of the Wannamaker County Park and Harmon Field resulted in a de minimis determination. A de minimis determination results when, after considering any measures to minimize harm, the impact would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Construction</b>	Temporary adverse construction impacts would be minimized through appropriate mitigation as described in the DCE.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
<b>Secondary and Cumulative</b>	No significant adverse cumulative impacts. Potential minor cumulative construction impacts with other planned projects in the area.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.



# **Attachment 1: Mitigation Measures**

*Lowcountry Rapid Transit*

*May 16, 2025*

## Mitigation Measures

The following mitigation measures were identified in the DCE and continue to be refined and clarified as the project progresses.

### 1.1.1 Environmental

- Preliminary design avoids and minimizes impacts to the existing waterway crossings. The project improvements do not include significant grading and are not anticipated to impact coastal flood elevations. Charleston County's Flood Damage Prevention Ordinance will be complied with. As the design progresses, these conditions will be documented in hydrologic and drainage studies and provided to the local floodplain administrators for their review and concurrence. Additionally, an assessment will be performed for compliance with Flood Resiliency Design Requirements in [Executive Order 13690](#).
- During construction activities, temporary siltation may occur in adjacent waters and erosion may be of a greater degree than presently occurring. The project's NPDES permit and SCDOT's standard specifications will set forth requirements that the contractor minimize this impact through the implementation of construction BMPs reflecting policies contained in [23 CFR 650 B](#) and [S.C. Code of Regulations 72-400](#).
- Compensatory mitigation is normally required to offset unavoidable losses of WoUS. It is anticipated that compensatory mitigation for permanent project impacts will be attained through the purchase of mitigation credits from a USACE approved mitigation bank. Specific mitigation requirements will be established during the [Section 404](#) permitting process.
- Tree clearing activities will be conducted during the inactive season for NLEB (December 15<sup>th</sup> to February 15<sup>th</sup> and May 1<sup>st</sup> to July 15<sup>th</sup>) and other minimization measures related to reduced lighting and contractor knowledge of commitments, according to SCDOT's Standard Operating Procedures.
- BMPs will be put in place prior to and during construction to minimize impacts to vegetation communities. Tree surveys will be used to minimize impacts to grand trees protected under local ordinances.
- Contaminated material encountered during construction will be disposed of at a facility permitted to accept such material.

### 1.1.2 Roadway / SUP

- Impacts to existing ROW for sidewalks and the SUP will be minimized where possible. Retaining walls are under consideration to mitigate potential ROW impacts adjacent to the corridor and at business parking areas along Rivers Avenue.
- Drainage improvements, pavement replacement, pavement markings, and new traffic signals are proposed throughout the corridor. Final placement of these improvements is under discussion.

### 1.1.3 Community

- [Section 106](#) compliance and consultation for historic properties was concluded with a Finding of No Adverse Effect. FTA concurred with this finding in a letter dated April 1, 2021.
- Requests for de minimis findings for Wannamaker Park and Harmon Field were submitted to Charleston County and the City of Charleston, respectively in 2021. The public was afforded an opportunity to review and comment on the effects of the Project on the protected activities, features, or attributes of these [Section 4\(f\)](#) properties during the Public Information meetings held in June 2019 and June 2020. Signed letters from the County and City to show concurrence with the de minimis findings were received in May and June of 2021, respectively.
- Potential mitigation measures to address community impacts will be developed through data collected during public engagement opportunities and/or stakeholder conversations. Four methods to address impacts will include: avoidance, minimization, mitigation, and enhancement. If appropriate, recommendations will be made regarding mitigation measures that would help alleviate or offset an impact. Project enhancements that would add a desirable or attractive feature and, thus, result in the Project being more fitting with the community will also be considered and developed, as appropriate.
- To provide safe, convenient pedestrian access for the transit dependent community of Union Heights a pedestrian bridge is proposed at Hackemann Avenue in North Charleston. This provides access to the King & Hackemann station located in the median across the CSX and Norfolk Southern railroad tracks.
- To address last mile connectivity to stations proposed sidewalk and SUP are included in the design.

## Contact Us

**Sharon Hollis**

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# Memo

Date: Friday, May 16, 2025

Project: Lowcountry Rapid Transit

To: Type recipient(s) here

From: Ben Copenhaver

Subject: LCRT Noise and Vibration Analysis Updates

## Summary

The noise and vibration analysis for the LCRT project was updated to account for the change from an all-electric to an all-diesel bus fleet, and to capture design changes to operating speeds, volumes, and other factors that may affect noise and vibration results. Four moderate noise impacts to Category 2 (residential/overnight sleep) land uses were identified as a result of these changes, but since these are the only impacts and just above the moderate impact threshold, no mitigation is proposed.

The analysis for the park and ride lot at the US-78 & Commerce Center station was also updated to account for refinement to the lot design and updated volume projections. No operational noise impacts associated with the park-and-ride lot are expected.

There are no changes to the previous finding of no vibration impacts.

## Introduction

This memo summarizes updates to the noise and vibration analysis that was previously carried out for the Lowcountry Rapid Transit (LCRT) project (the Project). The original analysis and this update were completed according to the Federal Transit Administration's (FTA) "Transit Noise and Vibration Impact Assessment Manual" (the FTA manual).

The original noise and vibration analysis was done at the 30 percent design stage. Since publication of the LCRT Documented Categorical Exclusion (DCE), the Berkeley-Charleston-Dorchester Council of Government (BCDCOG) advanced design to 90 percent, which identified several proposed design changes. The primary change requiring the noise analysis to be revisited is a change in bus fleet from all electric buses to all diesel buses. Other design changes such as speed changes and refinements to bus lanes and station locations are also incorporated into the updated analysis.

## Noise

### Methodology

The original noise analysis was carried out according to the methodology in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (the FTA Manual) dated September 2018 for a "General" noise assessment. This overall methodology is

unchanged for this update. The following design changes or updates to the Project affect the noise analysis:

- Change from an all-electric fleet to an all-diesel fleet
- Refinements to design speeds
- Refinements to bus routes and lane locations
- Changes in park and ride layout
- Refinements to park and ride volume projections

To reflect the change in fleet from electric to diesel, the reference SEL was increased from 80 dBA at 50 feet to 82 dBA at 50 feet, per Table 4-11 in the FTA Manual, and the speed constant was changed from 28 to 15, per Table 4-12 in the FTA manual.

Bus volumes throughout the day are shown in Table 1 below, including the resulting peak hour bus volume, the average daytime hourly bus volume and the average nighttime hourly bus volume. The volumes in this table represent the total operating buses, including both northbound and southbound buses.

**Table 1 Bus Volumes**

Hours	Period	Buses per hour
1 AM – 4 AM	Nighttime	0
4 AM – 6 AM	Nighttime	4
6 AM – 7 AM	Nighttime	10
7 AM – 9 PM	Daytime	12
9 PM – 10 PM	Daytime	6
10 PM – 11 PM	Nighttime	4
11 PM – 1 AM	Nighttime	3
<b>Peak hour bus volume:</b>		12
<b>Average daytime hourly bus volume:</b>		11.4
<b>Average nighttime hourly bus volume:</b>		2.7

For reference, an overview of FTA land use categories is given in Table 1. Noise impact thresholds for each land use category are determined based on existing baseline noise levels. Existing noise levels for the original analysis were determined by measurements made in 2019. These measurements were also used as the basis for existing noise levels in this update.

**Table 2 FTA Noise Land Use Categories**

Land use category	Noise metric (dBA)	Description of land use category
1	Outdoor $L_{eq(h)}$	Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheatres and concert pavilions, as well as National Historic Landmarks with significant outdoor use. Also included are recording studios and concert halls.
2	Outdoor $L_{dn}$	Residences and buildings where people normally sleep. This category includes homes, hospitals, and hotels where nighttime sensitivity to noise is assumed to be of utmost importance.
3	Outdoor $L_{eq(h)}$	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities can also be considered to be in this category. Certain historical sites and parks are also included.

Source: FTA 2018.

Notes: Outdoor  $L_{eq(h)}$  uses the noisiest hour of transit-related activity during hours of noise sensitivity

Noise contour distances, or the distances from the project within which noise impacts would occur, are determined by existing noise levels in conjunction with project noise. For this project, project noise in different areas of the project is a function only of bus speed, since the bus type and hourly bus volume are constant throughout the project area. Thus, the project area was broken into 18 different noise assessment area segments based on proximity to noise measurement locations in conjunction with project speeds. Since project design speeds have changed from the original analysis, the noise assessment extents are slightly different than those originally presented.

Table 3 shows updated noise assessment area limits with maximum bus design speeds, existing noise levels in terms of peak hour  $L_{eq}$  and  $L_{dn}$ , and the resulting moderate and severe noise impact thresholds for each land use category according to FTA guidelines.

Figures 1-8 show the LCRT project corridor with the locations where ambient noise measurements occurred, maximum bus design speeds along the corridor (speed regimes), and noise assessment areas.

**Table 3 Noise Impact Thresholds**

Noise Assessment Area & Limits	Bus Design Speed	Land Use Category 1			Land Use Category 2			Land Use Category 3		
		Peak Hour $L_{eq}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)	$L_{dn}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)	Peak Hour $L_{eq}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)
1 US-78 & Commerce Center station to Ingleside Blvd	45	67 (ST-4)	63	68	72 (LT-2)	66	72	67 (ST-4)	68	73
2 Ingleside Blvd to University & BUC Club station	45	60 (ST-5)	58	64	70 (LT-3)	65	70	60 (ST-5)	63	69
3 University & BUC Club station to Rivers & Melnick station	45	62 (LT-3)	59	65	70 (LT-3)	65	70	62 (LT-3)	64	70
4 Rivers & Melnick station to Rivers & Eagle Landing station	45	58 (LT-4)	57	63	70 (LT-4)	65	70	58 (LT-4)	62	68
5 Rivers & Eagle Landing station to W Aviation Ave	45	66 (ST-6)	62	68	70 (LT-4)	65	70	66 (ST-6)	67	73
6 W Aviation Ave to I-526	45	62 (ST-7)	59	65	68 (LT-6)	63	69	62 (ST-7)	64	70
7 I-526 to Piggly Wiggly Dr	45	60 (LT-6)	58	64	68 (LT-6)	63	69	60 (LT-6)	63	69
8 Piggly Wiggly Dr to Rivers & Dorchester station	35	70 (LT-7)	65	70	77 (LT-7)	66	75	70 (LT-7)	70	75
9 Rivers & Dorchester station to Carner Ave	35	63 (ST-8)	60	66	77 (LT-7)	66	75	63 (ST-8)	65	71
10 Carner Ave to Railroad bridge	35	60 (ST-9)	58	64	77 (LT-7)	66	75	60 (ST-9)	63	69
11 Railroad bridge to King & Hackemann station	35	55 (ST-10)	56	62	65 (LT-8)	61	67	55 (ST-10)	61	67
12 King & Hackemann station to King & Hagood station	30	68 (ST-11)	63	69	65 (LT-8)	61	67	68 (ST-11)	68	74

Noise Assessment Area & Limits	Bus Design Speed	Land Use Category 1			Land Use Category 2			Land Use Category 3		
		Peak Hour $L_{eq}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)	$L_{dn}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)	Peak Hour $L_{eq}$ (Location)	Moderate Impact Threshold (dBA)	Severe Impact Threshold (dBA)
13 King & Hagood station to US Hwy 17	30	62 (LT-8)	59	65	65 (LT-8)	61	67	62 (LT-8)	64	70
14 US Hwy 17 to Line St	30	66 (LT-9)	62	68	68 (LT-9)	63	69	66 (LT-9)	67	73
15 Line St to Calhoun St	30	82 (ST-12)	66	76	59 (LT-11)	58	64	82 (ST-12)	71	81
16 Calhoun St to Smith St	25	59 (ST-13)	58	64	59 (LT-11)	58	64	59 (ST-13)	63	69
17 Smith St to Courtenay Dr	25	63 (LT-12)	60	66	67 (LT-12)	63	68	63 (LT-12)	65	71
18 Courtenay Dr to Line & Westedge station	30	63 (LT-12)	60	66	67 (LT-12)	63	68	63 (LT-12)	65	71

Figure 1 Noise Monitoring Locations and Noise Assessment Areas 1-2

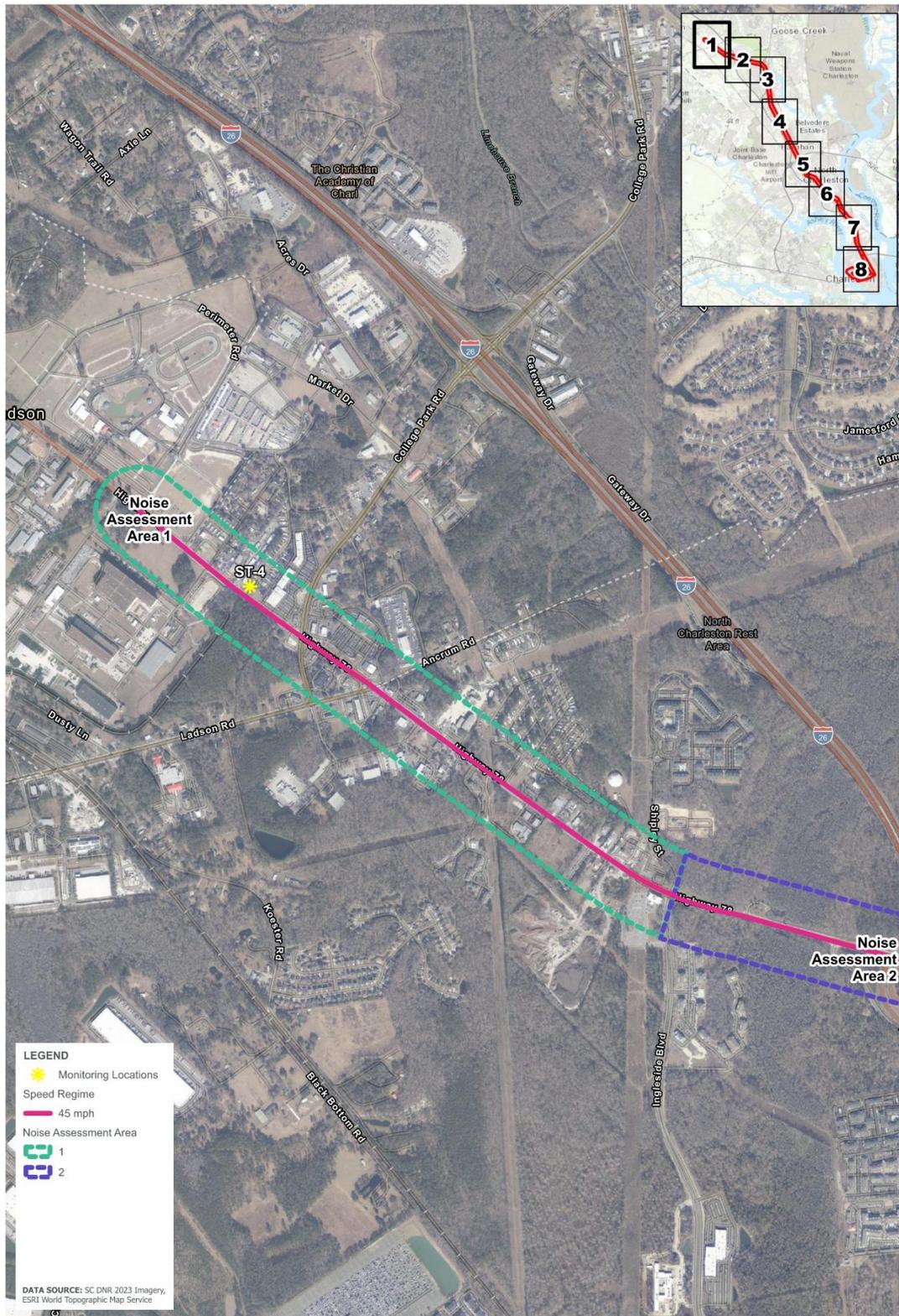


Figure 2 Noise Monitoring Locations and Noise Assessment Areas 2-3

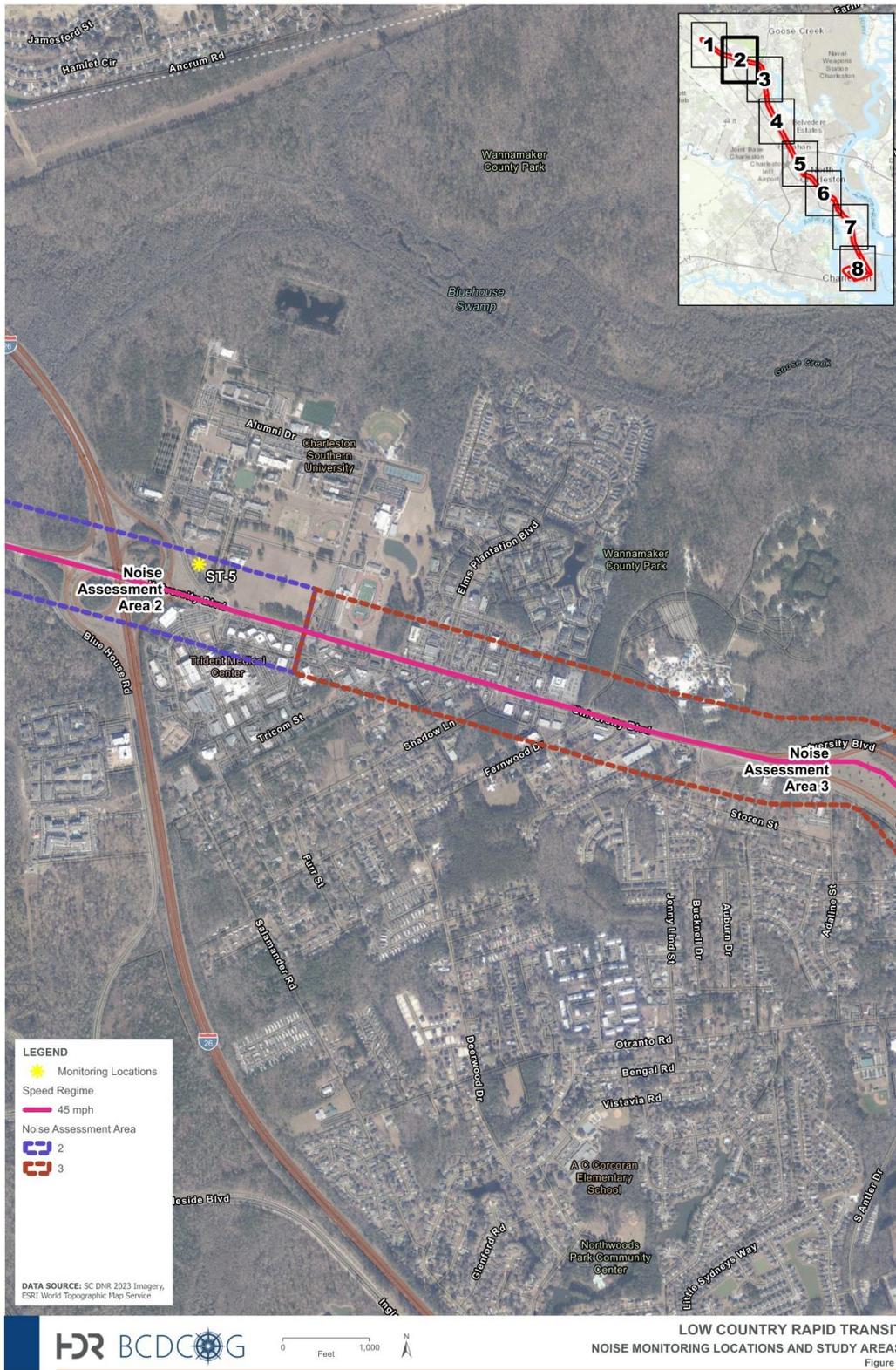


Figure 3 Noise Monitoring Locations and Noise Assessment Areas 3-5

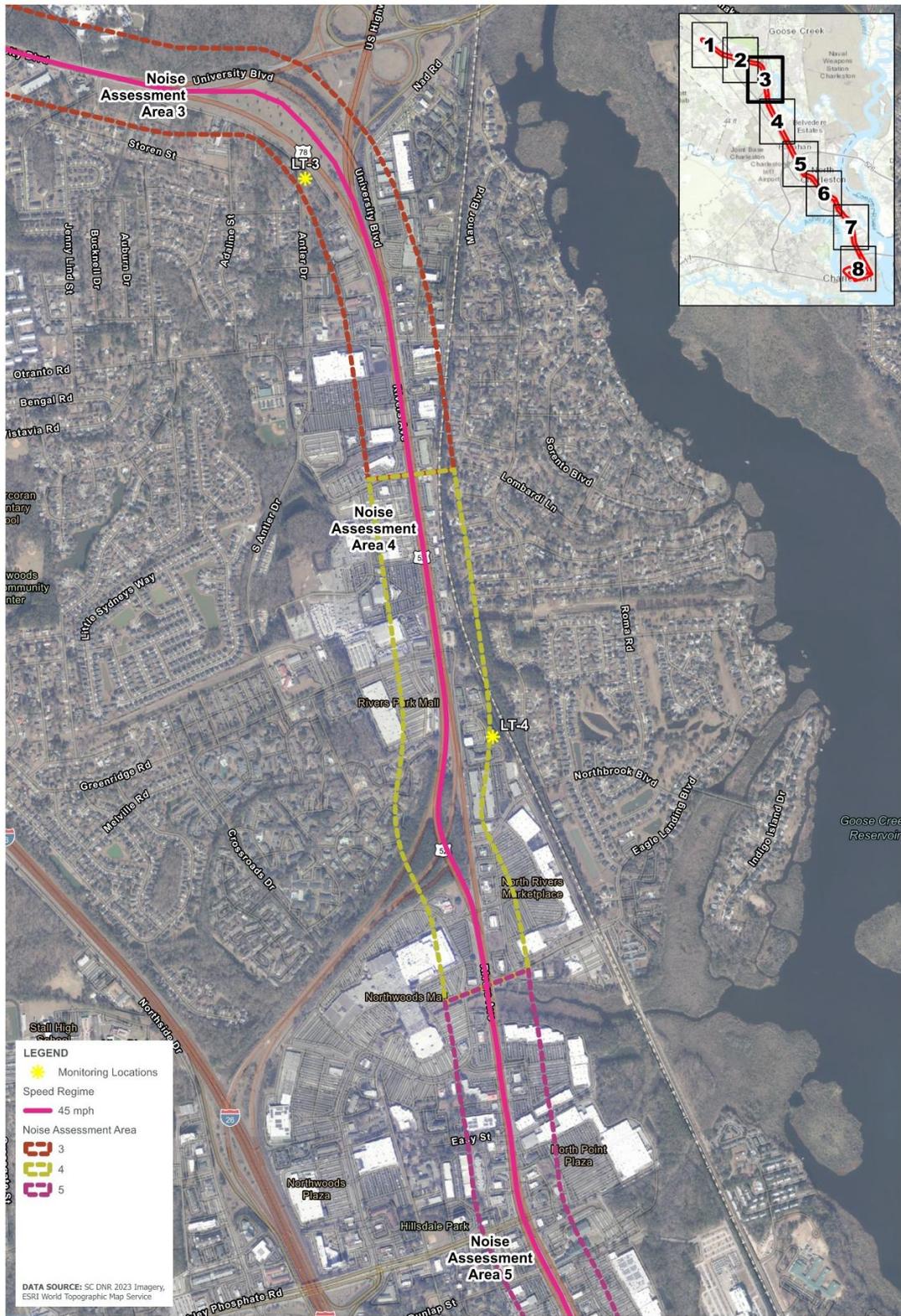


Figure 4 Noise Monitoring Locations and Noise Assessment Areas 5-6

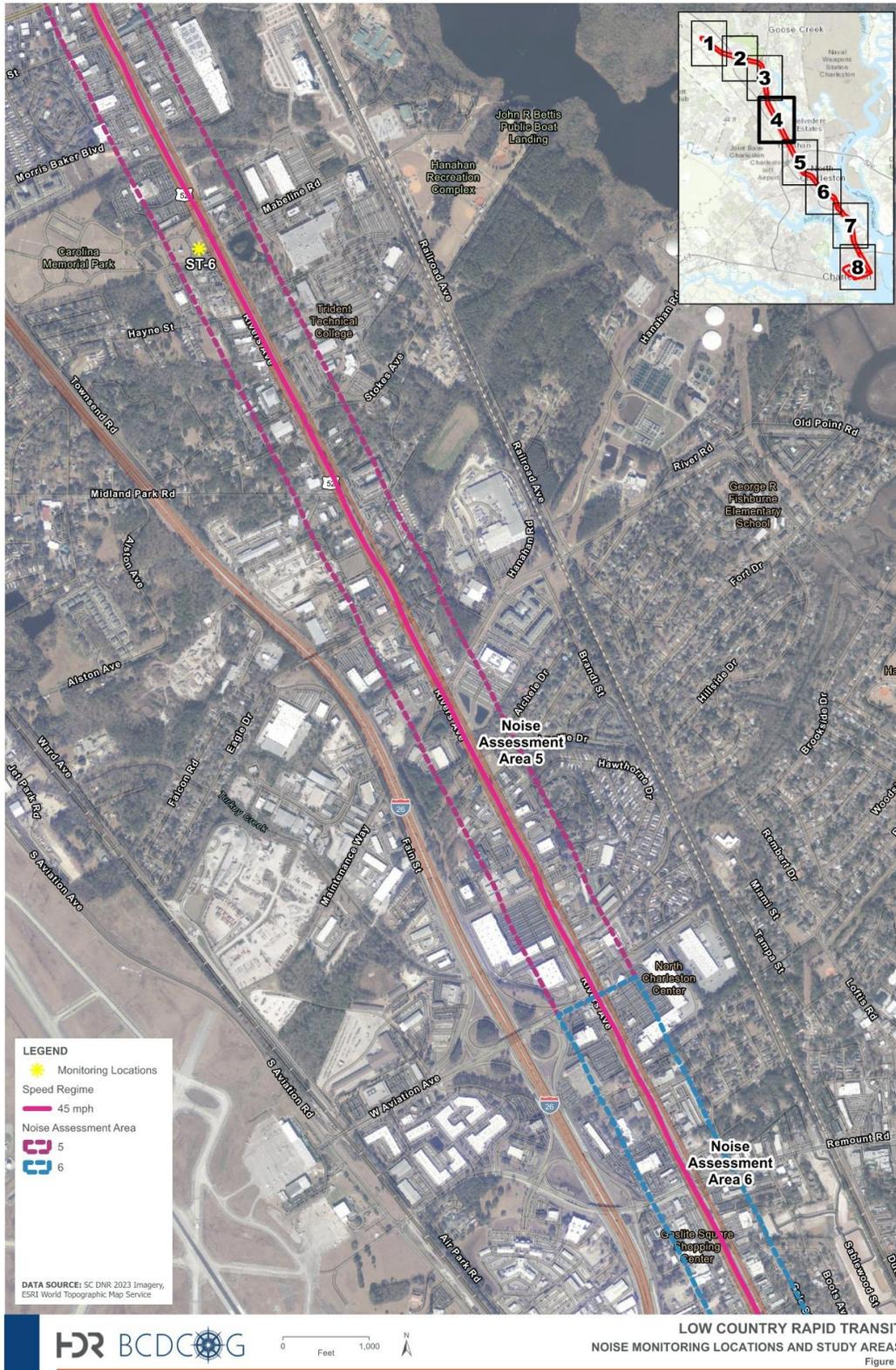


Figure 5 Noise Monitoring Locations and Noise Assessment Areas 6-8

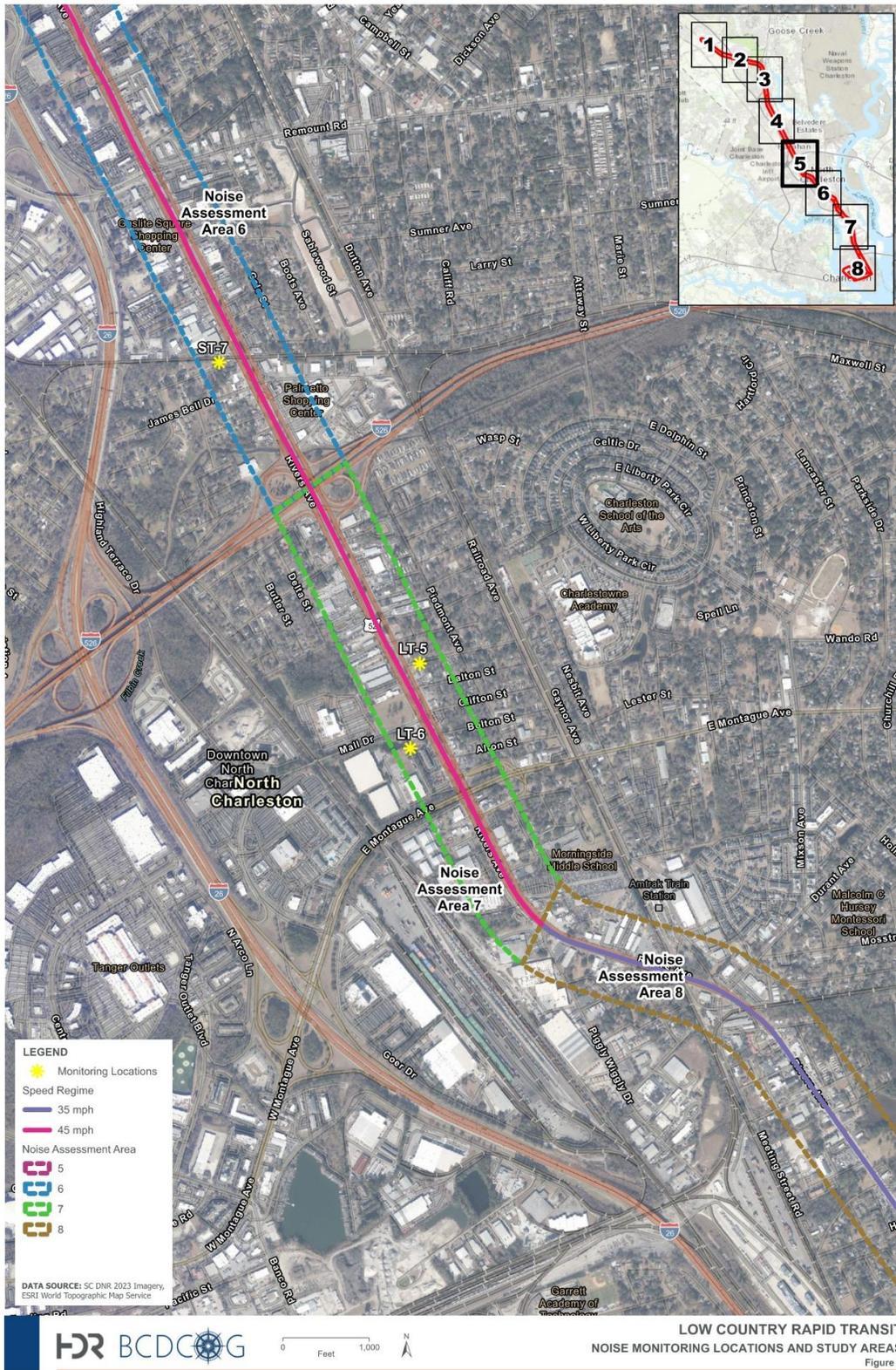


Figure 6 Noise Monitoring Locations and Noise Assessment Areas 8-11

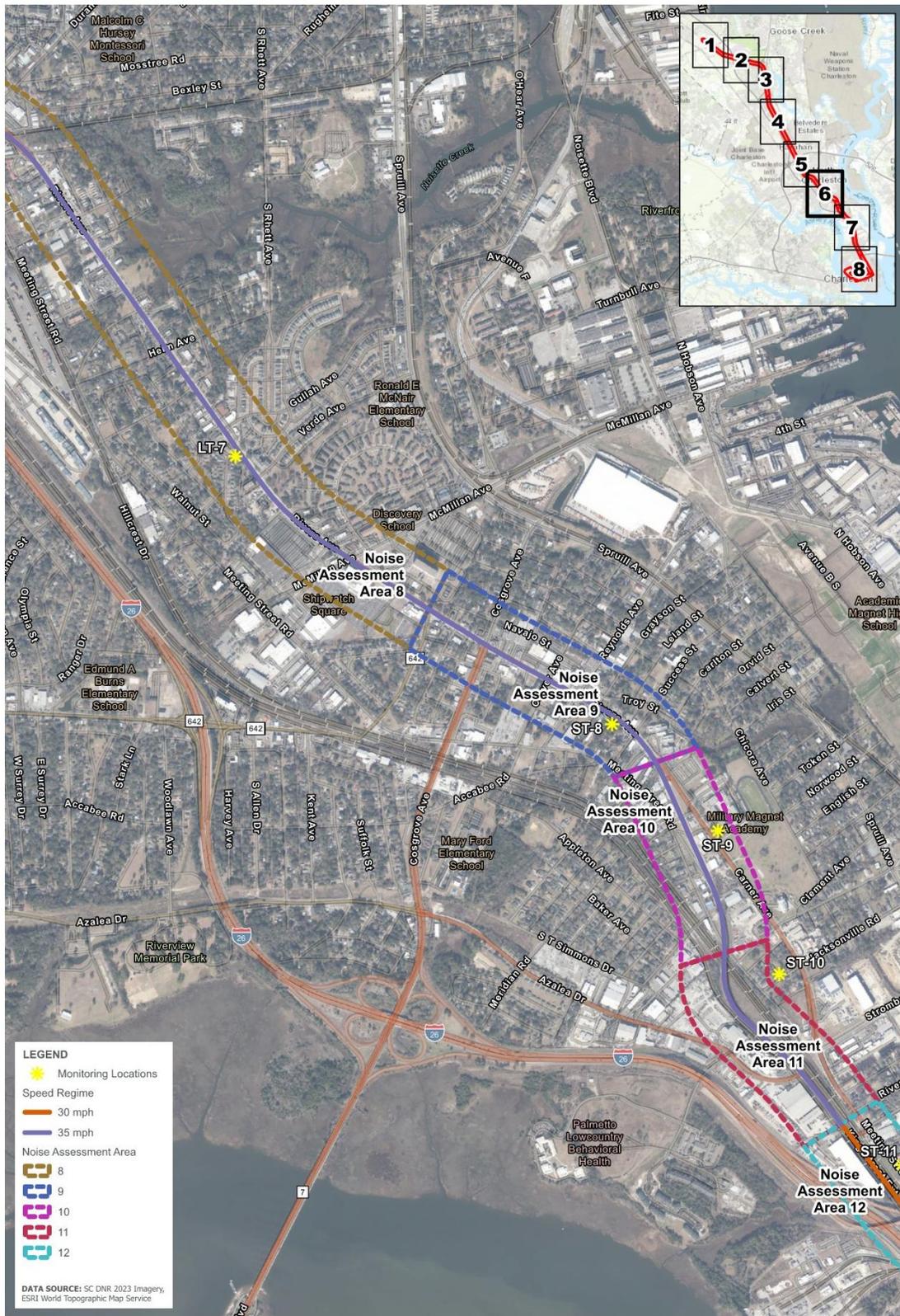


Figure 7 Noise Monitoring Locations and Noise Assessment Areas 12-13

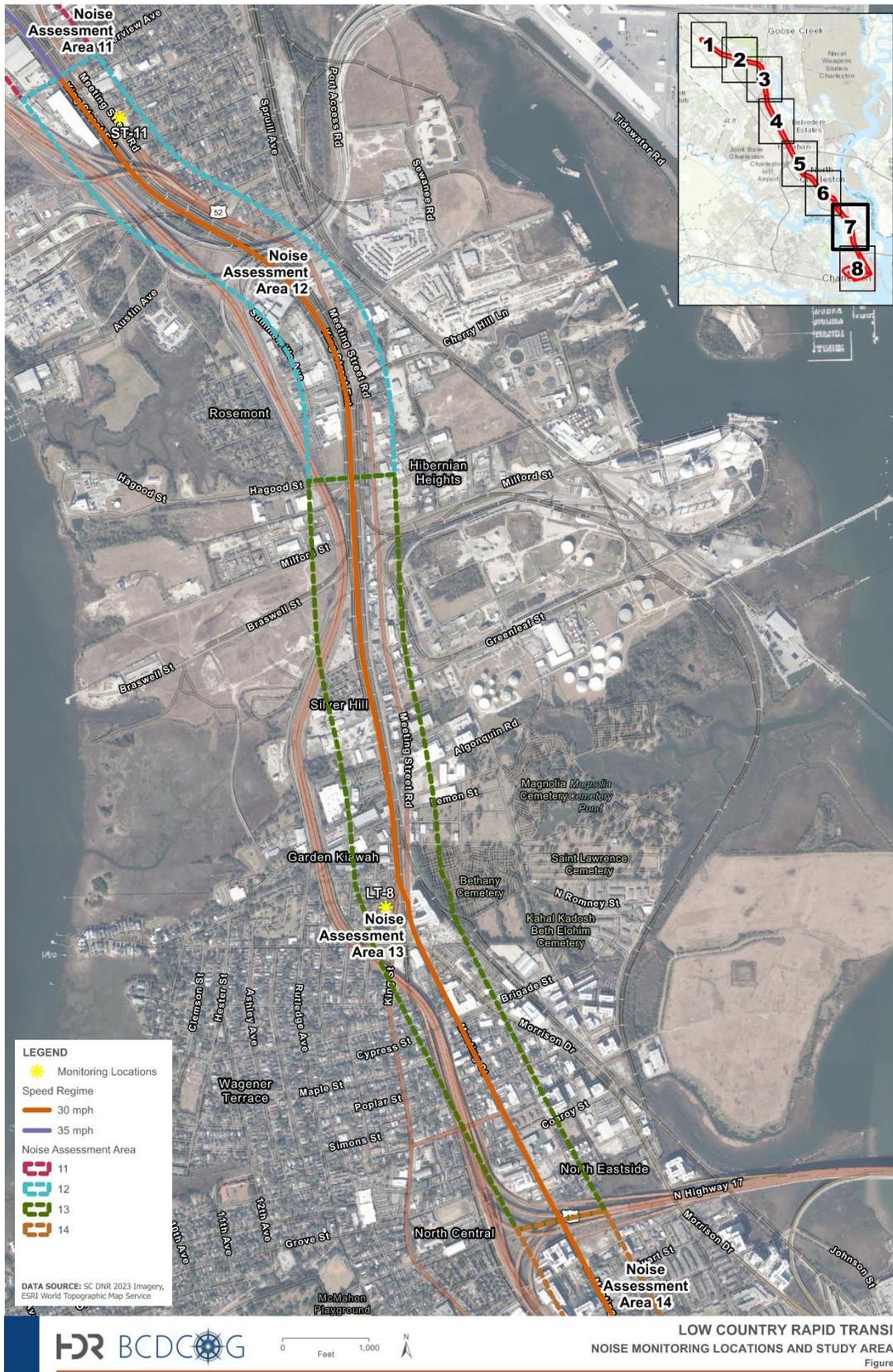
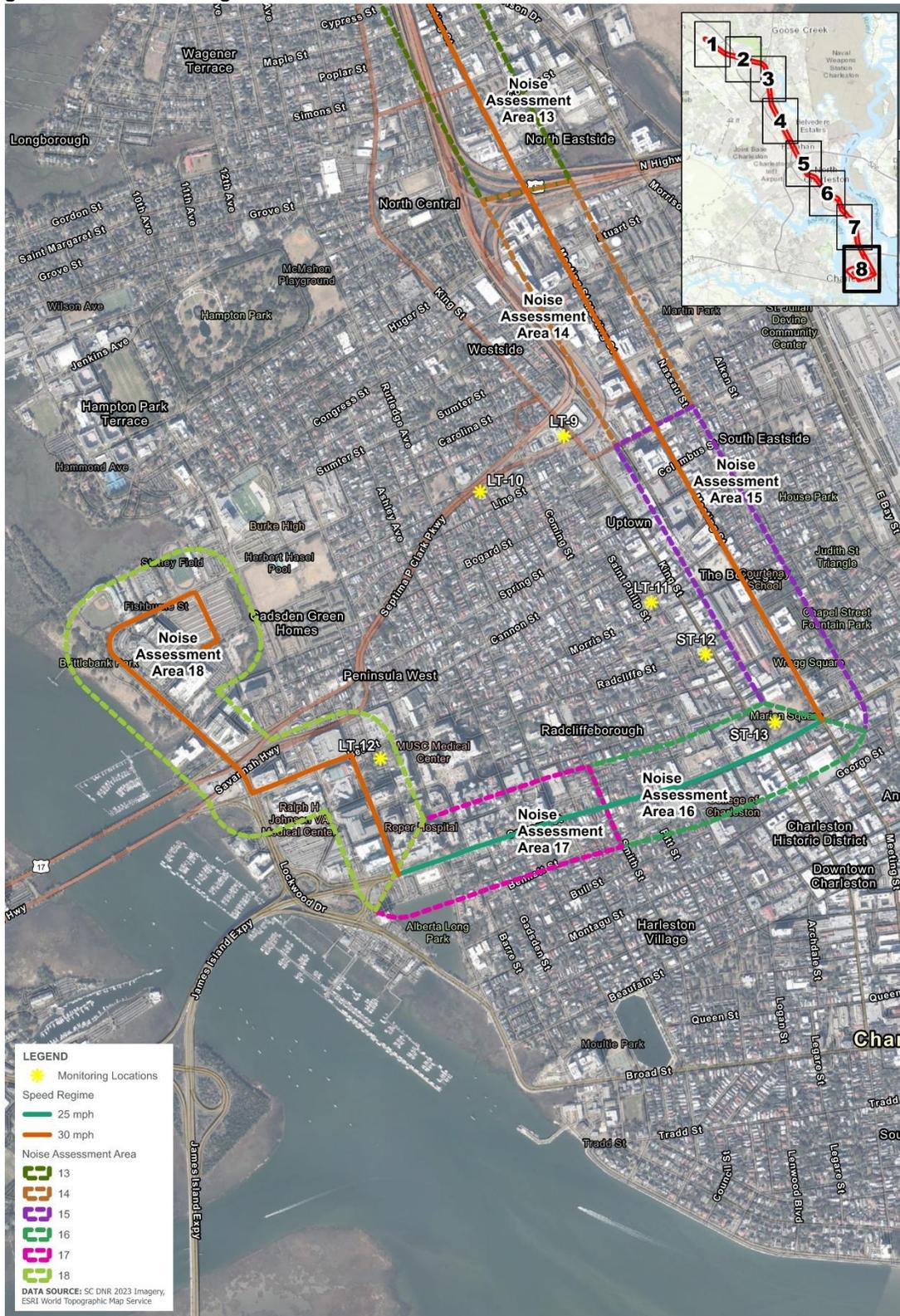


Figure 8 Noise Monitoring Locations and Noise Assessment Areas 14-18



## Results

Table 4 presents the updated General Noise Assessment results expressed as contour distances beyond which moderate and severe noise impacts are no longer projected to occur. Results are presented for each of the 18 assessment areas with unique combinations of speed and existing noise. Contour distances are referenced to the centerline midway between the bus lanes in each direction, or the centerline of the roadway for areas where the buses travel in mixed traffic.

**Table 4 Noise Impact Contour Distances**

Noise Assessment Area & Limits	Land Use Category 1		Land Use Category 2		Land Use Category 3	
	Moderate Impact Distance (feet)	Severe Impact Distance (feet)	Moderate Impact Distance (feet)	Severe Impact Distance (feet)	Moderate Impact Distance (feet)	Severe Impact Distance (feet)
1 US-78 & Commerce Center station to Ingleside Blvd	18	9	15	6	9	4
2 Ingleside Blvd to University & BUC Club station	40	16	17	8	18	7
3 University & BUC Club station to Rivers & Melnick station	34	14	17	8	16	6
4 Rivers & Melnick station to Rivers & Eagle Landing station	46	18	17	8	22	9
5 Rivers & Eagle Landing station to W Aviation Ave	22	9	17	8	10	4
6 W Aviation Ave to I-526	34	14	23	9	16	6
7 I-526 to Piggly Wiggly Dr	40	16	23	9	18	7
8 Piggly Wiggly Dr to Rivers & Dorchester station	11	5	11	3	5	2
9 Rivers & Dorchester station to Carner Ave	23	9	11	3	11	4
10 Carner Ave to Railroad bridge	31	12	11	3	14	6
11 Railroad bridge to King & Hackemann station	42	17	25	10	20	8
12 King & Hackemann station to King & Hagood station	12	5	21	8	6	2
13 King & Hagood station to US Hwy 17	23	9	21	8	11	4
14 US Hwy 17 to Line St	14	6	16	6	7	3
15 Line St to Calhoun St	8	2	34	13	4	1
16 Calhoun St to Smith St	22	9	28	11	10	4
17 Smith St to Courtenay Dr	16	6	13	6	8	3
18 Courtenay Dr to Line & Westedge station (includes loop)	19	8	16	7	9	4

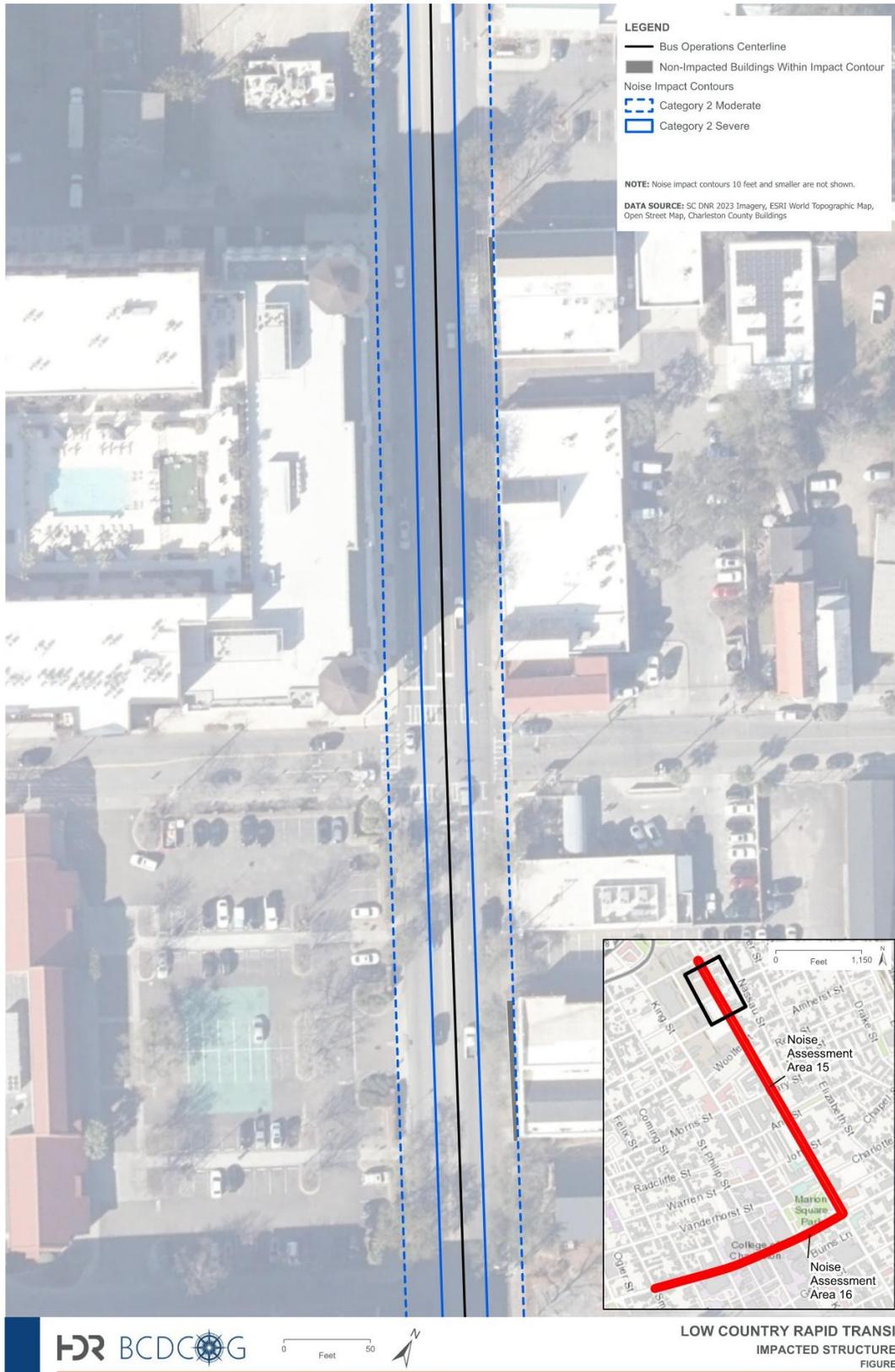
In most of the noise assessment areas, the noise impact contours defined above end within the roadway right-of-way or on sidewalks, indicating that no noise impacts are expected. However, the noise impact contours do overlap with other land uses in areas 15 and 16. Each land use that any contour overlaps was assessed to see which FTA land use category it belongs to, if any. If the land use category matched the category of an overlapping contour, a noise impact was identified. A summary of the identified noise impacts is given in Table 5 below. A map showing the noise impact contours in areas 15 and 16 is given in Figure 9 through Figure 13. The figures highlight each building/land use that falls within the contours and indicates which of these qualify as noise impacts. Please note the following about these figures:

- Only the parts of areas 15 and 16 where buildings/land uses fall within the contours are shown.
- Overlaps were identified using building footprints from OpenStreetMap and Charleston County data, which may vary slightly from the building outlines as they appear on the aerial imagery in the maps.
- Impact contours with distances less than 10 feet are not shown on the maps. This means that Category 2 Moderate and Severe contours are the only contours shown in Area 15, and Category 1 Moderate and Category 2 Moderate and Severe contours are the only contours shown in Area 16.

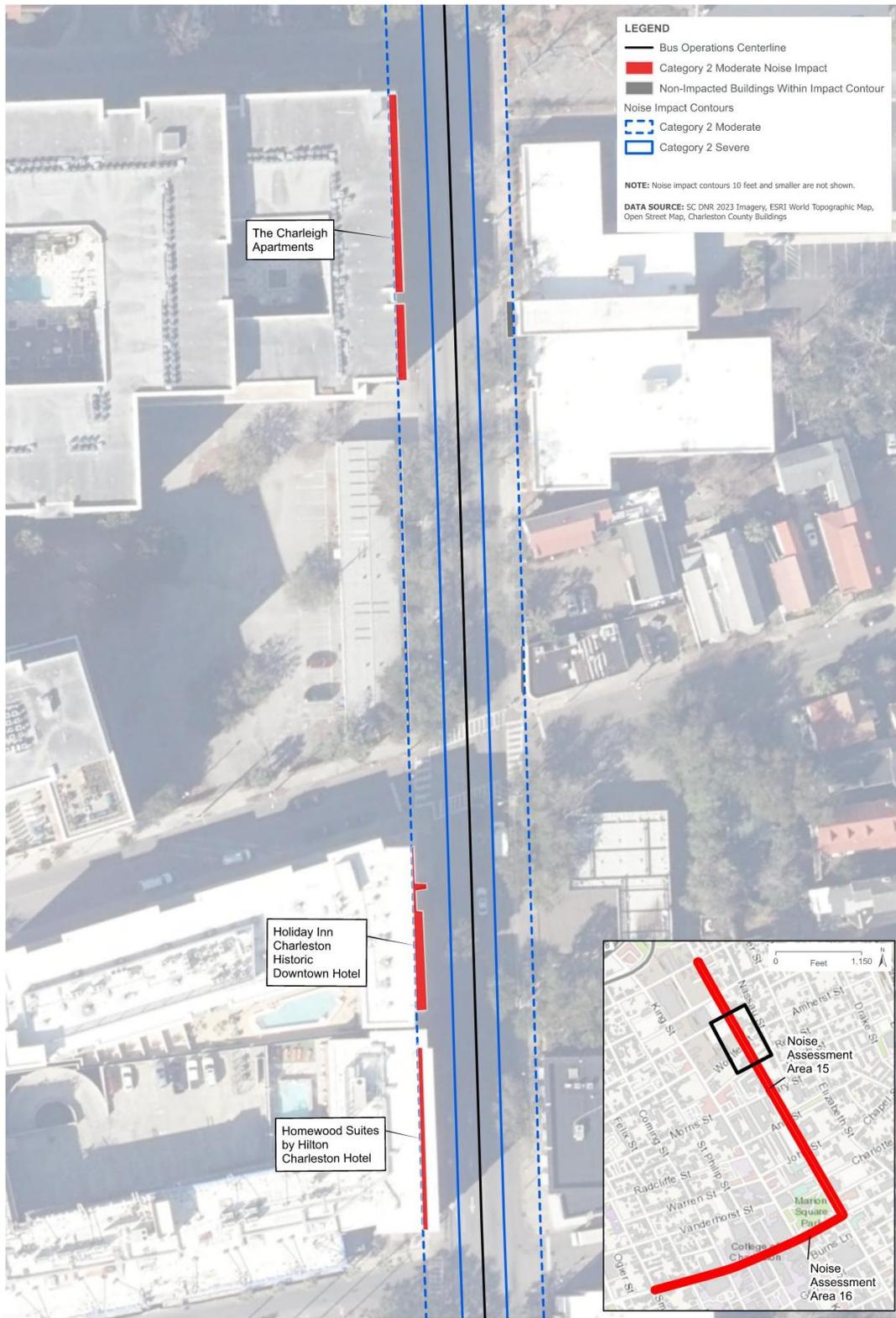
**Table 5 Noise Impacts**

Land Use	Land Use Category	Impact Severity
The Charleigh (Apartments)	2	Moderate
Holiday Inn Charleston Historic Downtown (Hotel)	2	Moderate
Homewood Suites by Hilton Charleston (Hotel)	2	Moderate
Hampton Inn Charleston Historic District (Hotel)	2	Moderate

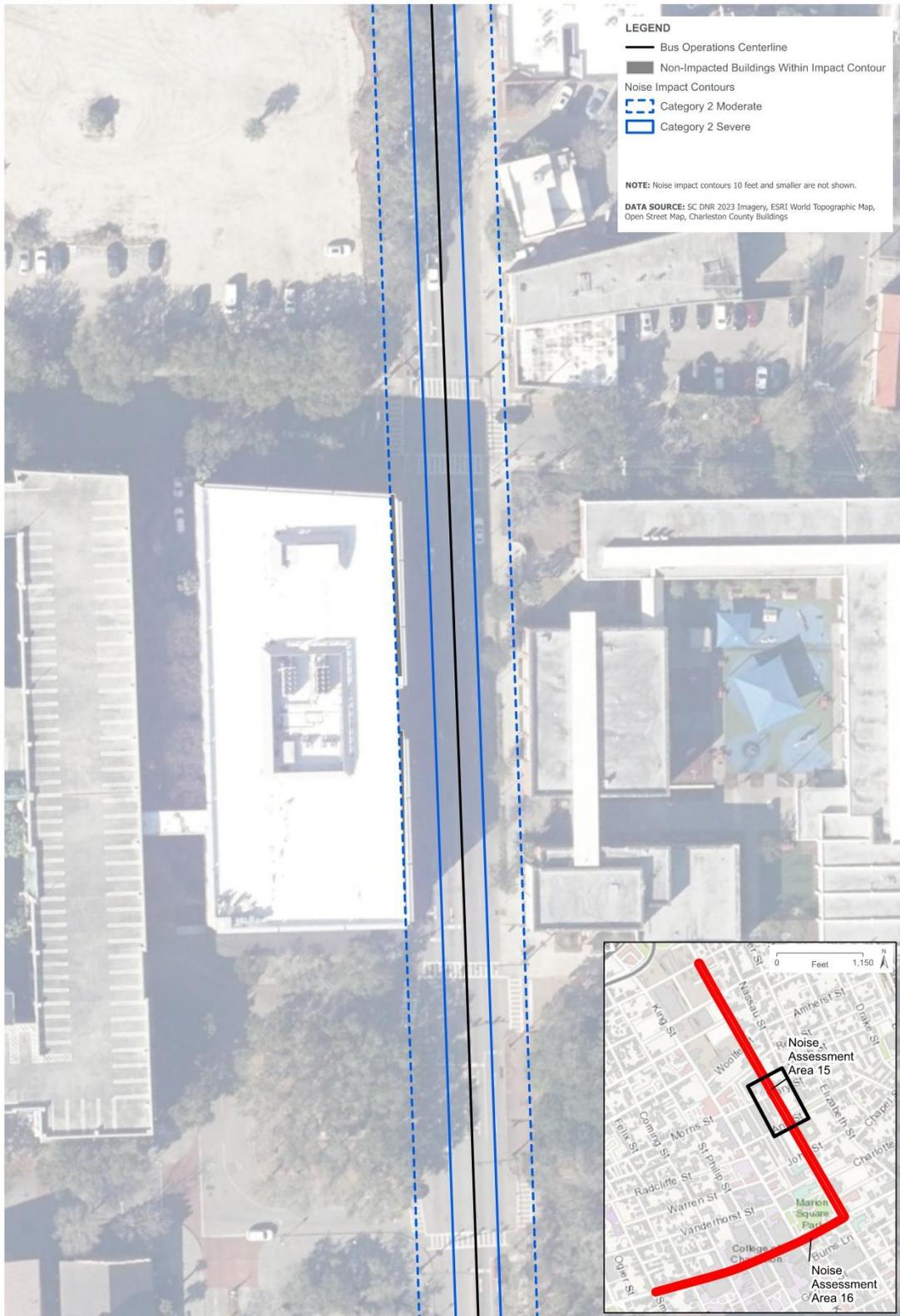
**Figure 9 Noise Impact Contours (Noise Assessment Area 15)**



**Figure 10 Noise Impact Contours (Noise Assessment Area 15)**



**Figure 11 Noise Impact Contours (Noise Assessment Area 15)**



**LEGEND**

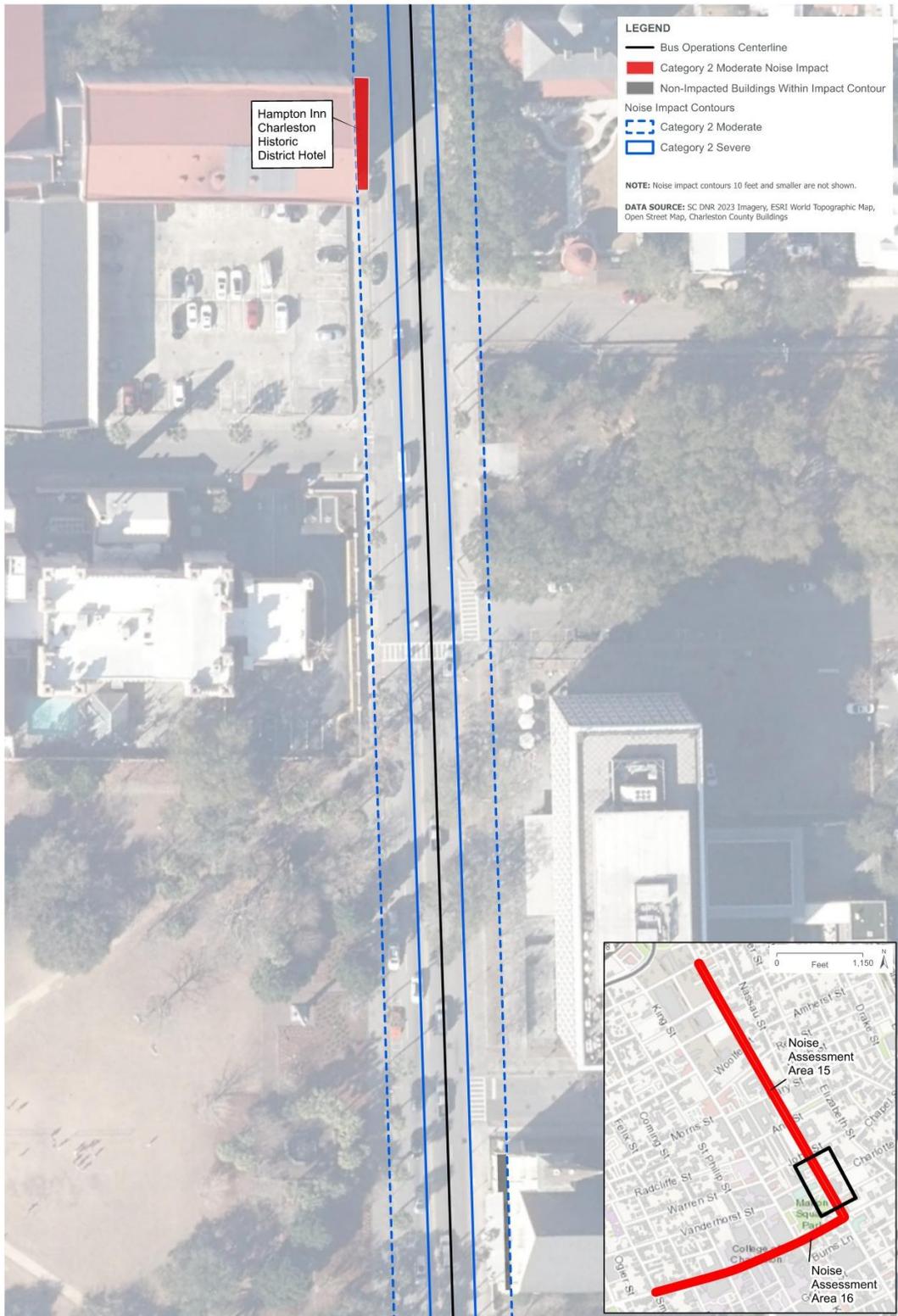
- Bus Operations Centerline
- Non-Impacted Buildings Within Impact Contour
- Noise Impact Contours
- Category 2 Moderate
- Category 2 Severe

**NOTE:** Noise impact contours 10 feet and smaller are not shown.

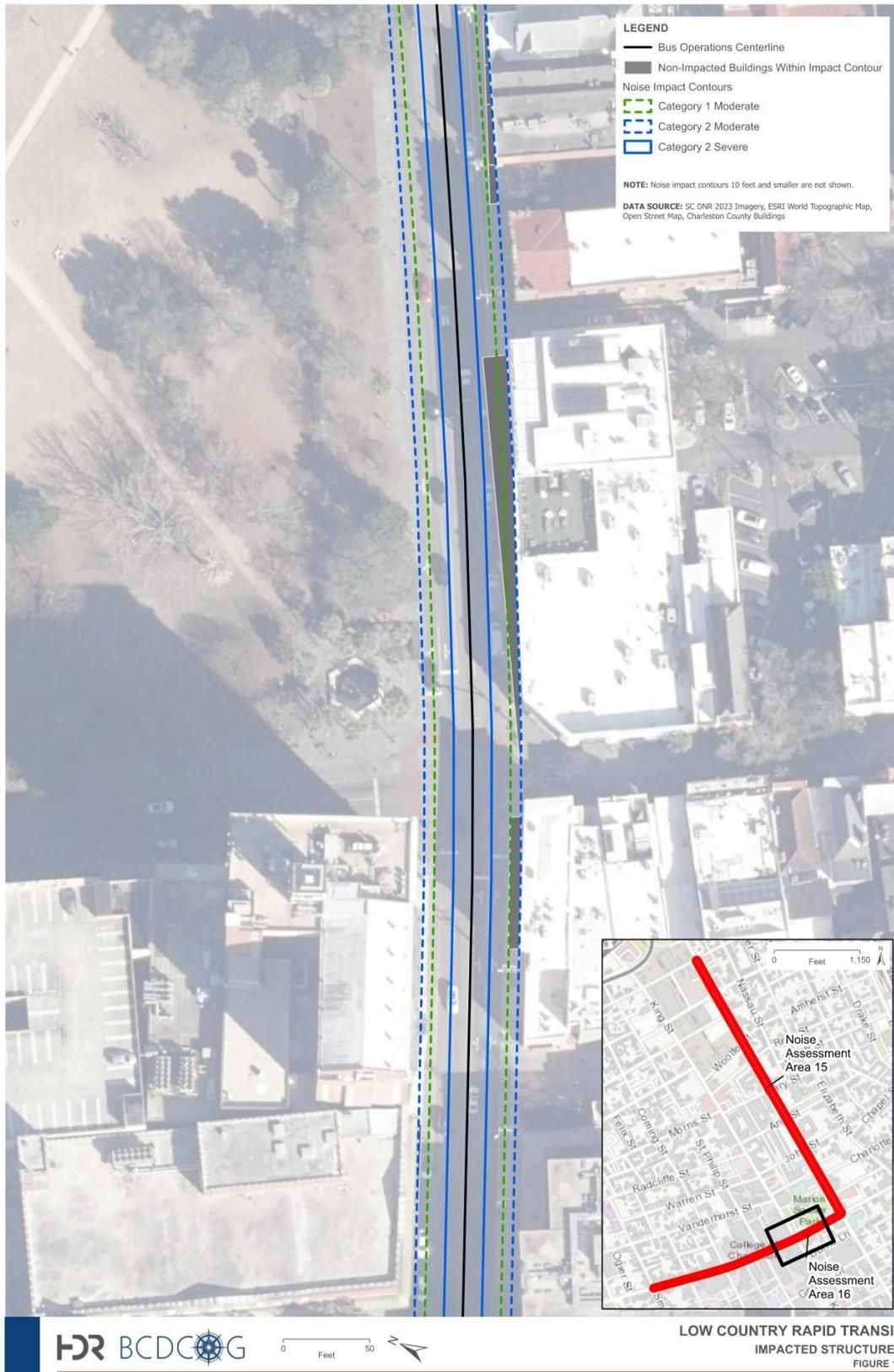
**DATA SOURCE:** SC DNR 2023 Imagery, ESRI World Topographic Map, Open Street Map, Charleston County Buildings

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Figure 12 Noise Impact Contours (Noise Assessment Area 15)



**Figure 13 Noise Impact Contours (Noise Assessment Area 16)**



Four noise impacts were identified. All of these are in Noise Assessment Area 15, and all are Category 2 Moderate impacts. In each case, the impact contour just grazes the side of the building facing the street, indicating that this portion of the building is just above the threshold for a moderate noise impact.

### Park and Rides

Noise from the Park and Ride lot at the Meeting & Mount Pleasant station was evaluated in the original analysis. This lot is now planned for a future project, so noise for this lot is not evaluated in the current update.

Noise from the Park and Ride lot at the US-78 & Commerce Center station was also evaluated in the original analysis (in which it was referred to as the Fairgrounds park and ride). The layout of this lot has been updated, and more refined traffic projections are available, so the analysis has been updated accordingly. Updated traffic projections for the Park and Ride lot are given in Table 6. Bus volumes are the same as those shown in Table 1.

**Table 6 Park-and-Ride Lot Traffic Projections**

Peak autos per hour	71
Average daytime autos per hour	30.9
Average nighttime autos per hour	7.2

The noise impact thresholds are the same as those given for Segment 1 in Table 3. Table 7 shows the updated impact distance contours to moderate and severe impacts for Type 2 and Type 3 land uses. There are no Category 1 land uses in the vicinity of the lot.

**Table 7 Impact Contour Distances for Park-and-Ride Lot**

Lot Description	L <sub>dn</sub> Source	Peak Hour L <sub>eq</sub> Source	Cat 2 (L <sub>dn</sub> ) Moderate Impact Distance (ft.)	Cat 2 (L <sub>dn</sub> ) Severe Impact Distance (ft.)	Cat 3 (L <sub>eq</sub> ) Moderate Impact Distance (ft.)	Cat 3 (L <sub>eq</sub> ) Severe Impact Distance (ft.)
US-78 & Commerce Center	LT-2	ST-4	42	24	31	19

Figure 14 shows these contour distances buffered from the edge of the updated park and ride lot layout. There are no noise-sensitive land uses within these contours, so no noise impacts are expected for the lot.

Figure 14 Fairgrounds Park-and-Ride Noise Contours



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## **Mitigation**

All identified noise impacts were in the moderate category, and just above the no-impact threshold. According to the FTA manual, the justification for mitigation for impacts that fall just within the threshold may not be strong, depending on project needs. Since there are no more severe impacts, no mitigation is proposed for these low-end moderate impacts.

## **Vibration Screening**

The original noise analysis found that the Project did not meet any of the vibration screening conditions for rubber-tired vehicle projects. The change in fleet mix does not affect FTA vibration screening distances or methodology. The refinements to the bus routes do not affect any of the conclusions of the original analysis in regard to the following criteria for rubber-tired vehicle projects:

- Expansion joints
- Proximity to vibration-sensitive uses
- Routes underneath buildings

Therefore, no vibration impacts due to operation of the Project are expected.

## **Construction Noise and Vibration**

The original analysis included a discussion of noise and vibration related to construction of the project. None of the design changes would affect the original report's recommendation to use best management practices to manage construction noise and vibration. A more detailed assessment of construction noise and vibration may be undertaken once more details of construction equipment, phasing and usage are available.

## **Conclusions**

The noise and vibration analysis for the LCRT project was updated to account for the change from an all-electric to an all-diesel bus fleet, and to capture design changes to operating speeds, volumes, and other factors that may affect noise and vibration results. Four moderate noise impacts to Category 2 (residential/overnight sleep) land uses were identified as a result of these changes, but since these are the only impacts and just above the moderate impact threshold, no mitigation is proposed.

The analysis for the park and ride lot at the US-78 & Commerce Center station was also updated to account for refinement to the lot design and updated volume projections. No operational noise impacts associated with the park-and-ride lot are expected.

There are no changes to the previous finding of no vibration impacts.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Carolina Ecological Services  
176 Croghan Spur Road, Suite 200  
Charleston, SC 29407-7558  
Phone: (843) 727-4707 Fax: (843) 727-4218

In Reply Refer To:

06/09/2025 21:04:31 UTC

Project Code: 2025-0107449

Project Name: Lowcountry Bus Rapid Transit, BCDCOG

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Marine Mammals
- Wetlands

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**South Carolina Ecological Services**

176 Croghan Spur Road, Suite 200

Charleston, SC 29407-7558

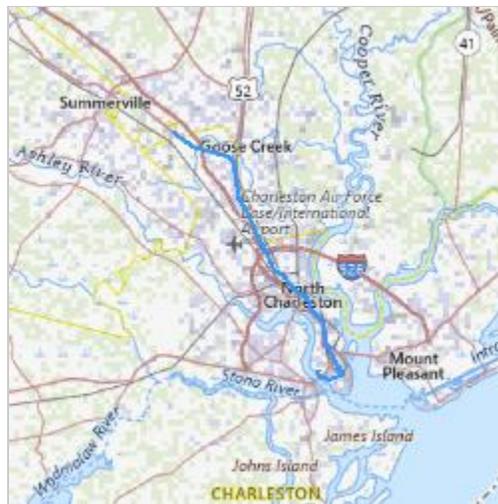
(843) 727-4707

## PROJECT SUMMARY

Project Code: 2025-0107449  
Project Name: Lowcountry Bus Rapid Transit, BCDCOG  
Project Type: Commercial Development  
Project Description: Establish BRT system from downtown Charleston to North Charleston. FTA funding. NEPA DCE approved 7/19/21. NEPA Re-evaluation underway for design progression. Project is primarily within existing roads and right of way

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@32.89141835,-80.01272010502873,14z>



Counties: Berkeley and Charleston counties, South Carolina

## ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

**MAMMALS**

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered
West Indian Manatee <i>Trichechus manatus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <b><i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i></b> Species profile: <a href="https://ecos.fws.gov/ecp/species/4469">https://ecos.fws.gov/ecp/species/4469</a>	Threatened

**BIRDS**

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10477">https://ecos.fws.gov/ecp/species/10477</a>	Threatened
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Red-cockaded Woodpecker <i>Dryobates borealis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7614">https://ecos.fws.gov/ecp/species/7614</a>	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a>	Threatened

**REPTILES**

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: North Atlantic DPS There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a>	Threatened
Kemp's Ridley Sea Turtle <i>Lepidochelys kempii</i> There is <b>proposed</b> critical habitat for this species.	Endangered

NAME	STATUS
Species profile: <a href="https://ecos.fws.gov/ecp/species/5523">https://ecos.fws.gov/ecp/species/5523</a>	

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Proposed Threatened

## FLOWERING PLANTS

NAME	STATUS
American Chaffseed <i>Schwalbea americana</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1286">https://ecos.fws.gov/ecp/species/1286</a>	Endangered
Canby's Dropwort <i>Oxypolis canbyi</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7738">https://ecos.fws.gov/ecp/species/7738</a>	Endangered
Pondberry <i>Lindera melissifolia</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1279">https://ecos.fws.gov/ecp/species/1279</a>	Endangered

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act <sup>2</sup> and the Migratory Bird Treaty Act (MBTA) <sup>1</sup>. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow

appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

### Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

### Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Jul 31



## MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) <sup>1</sup> prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a>	Breeds Apr 1 to Aug 31
American Oystercatcher <i>Haematopus palliatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8935">https://ecos.fws.gov/ecp/species/8935</a>	Breeds Apr 15 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Jul 31
Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/5234">https://ecos.fws.gov/ecp/species/5234</a>	Breeds May 20 to Sep 15
Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9427">https://ecos.fws.gov/ecp/species/9427</a>	Breeds Mar 1 to Jul 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a>	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
<p>Chuck-will's-widow <i>Antrostomus carolinensis</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9604">https://ecos.fws.gov/ecp/species/9604</a></p>	Breeds May 10 to Jul 10
<p>Coastal (waynes) Black-throated Green Warbler <i>Setophaga virens waynei</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/11879">https://ecos.fws.gov/ecp/species/11879</a></p>	Breeds May 1 to Aug 15
<p>Eastern Whip-poor-will <i>Antrostomus vociferus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/10678">https://ecos.fws.gov/ecp/species/10678</a></p>	Breeds May 1 to Aug 20
<p>Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8329">https://ecos.fws.gov/ecp/species/8329</a></p>	Breeds Jun 1 to Aug 20
<p>Gull-billed Tern <i>Gelochelidon nilotica</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9501">https://ecos.fws.gov/ecp/species/9501</a></p>	Breeds May 1 to Jul 31
<p>Kentucky Warbler <i>Geothlypis formosa</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9443">https://ecos.fws.gov/ecp/species/9443</a></p>	Breeds Apr 20 to Aug 20
<p>King Rail <i>Rallus elegans</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8936">https://ecos.fws.gov/ecp/species/8936</a></p>	Breeds May 1 to Sep 5
<p>Least Tern <i>Sternula antillarum antillarum</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/11919">https://ecos.fws.gov/ecp/species/11919</a></p>	Breeds Apr 25 to Sep 5
<p>Lesser Yellowlegs <i>Tringa flavipes</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p>Marbled Godwit <i>Limosa fedoa</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	Breeds elsewhere

NAME	BREEDING SEASON
<b>Painted Bunting <i>Passerina ciris</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9511">https://ecos.fws.gov/ecp/species/9511</a>	Breeds Apr 25 to Aug 15
<b>Pectoral Sandpiper <i>Calidris melanotos</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9561">https://ecos.fws.gov/ecp/species/9561</a>	Breeds elsewhere
<b>Prairie Warbler <i>Setophaga discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9513">https://ecos.fws.gov/ecp/species/9513</a>	Breeds May 1 to Jul 31
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9439">https://ecos.fws.gov/ecp/species/9439</a>	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9398">https://ecos.fws.gov/ecp/species/9398</a>	Breeds May 10 to Sep 10
<b>Ruddy Turnstone <i>Arenaria interpres morinella</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/10633">https://ecos.fws.gov/ecp/species/10633</a>	Breeds elsewhere
<b>Rusty Blackbird <i>Euphagus carolinus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9478">https://ecos.fws.gov/ecp/species/9478</a>	Breeds elsewhere
<b>Saltmarsh Sparrow <i>Ammospiza caudacuta</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9719">https://ecos.fws.gov/ecp/species/9719</a>	Breeds May 15 to Sep 5
<b>Semipalmated Sandpiper <i>Calidris pusilla</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9603">https://ecos.fws.gov/ecp/species/9603</a>	Breeds elsewhere
<b>Short-billed Dowitcher <i>Limnodromus griseus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere

NAME	BREEDING SEASON
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8938">https://ecos.fws.gov/ecp/species/8938</a>	Breeds Mar 10 to Jun 30
Whimbrel <i>Numenius phaeopus hudsonicus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/11991">https://ecos.fws.gov/ecp/species/11991</a>	Breeds elsewhere
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10669">https://ecos.fws.gov/ecp/species/10669</a>	Breeds Apr 20 to Aug 5
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9431">https://ecos.fws.gov/ecp/species/9431</a>	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

### Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

### Survey Effort (|)

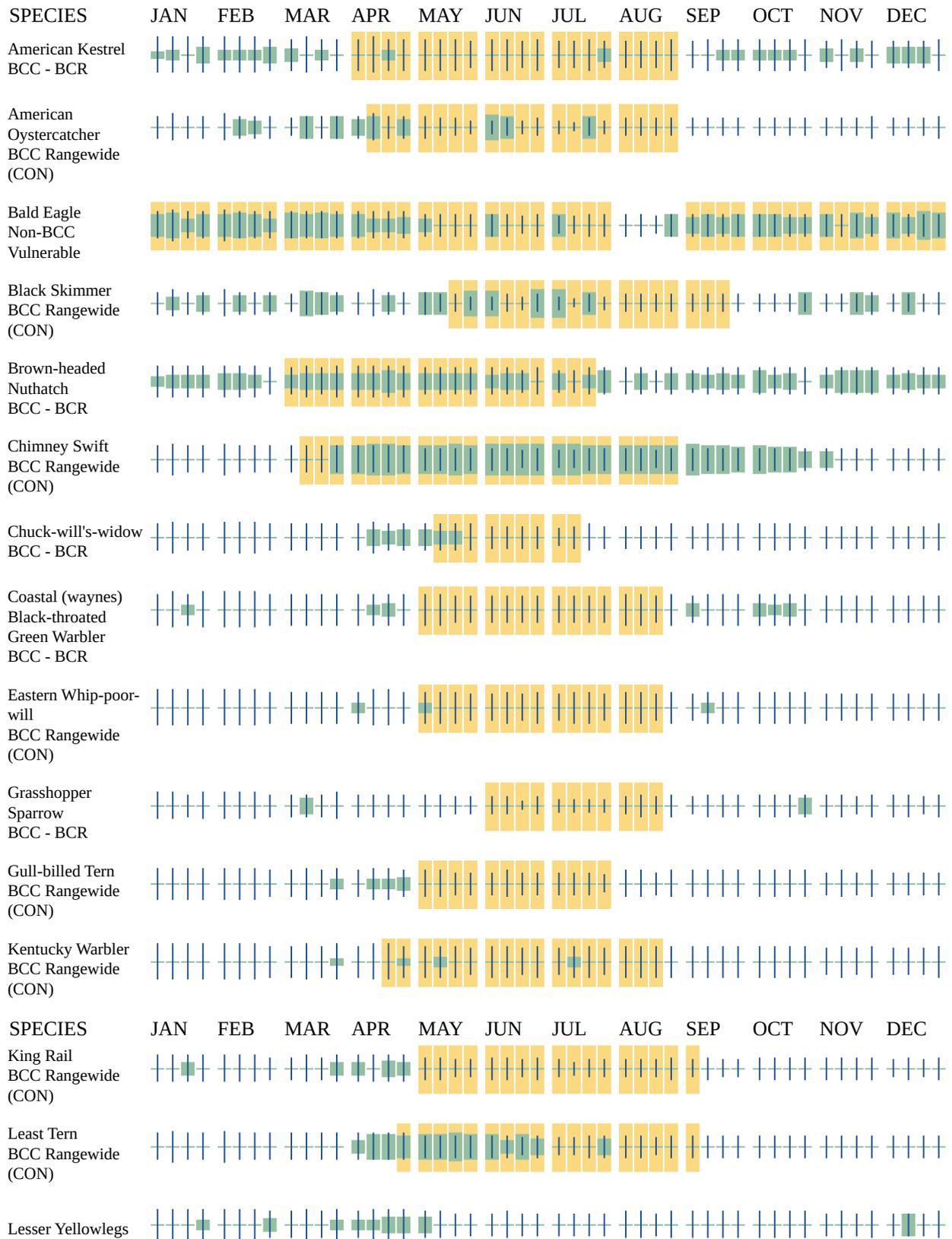
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

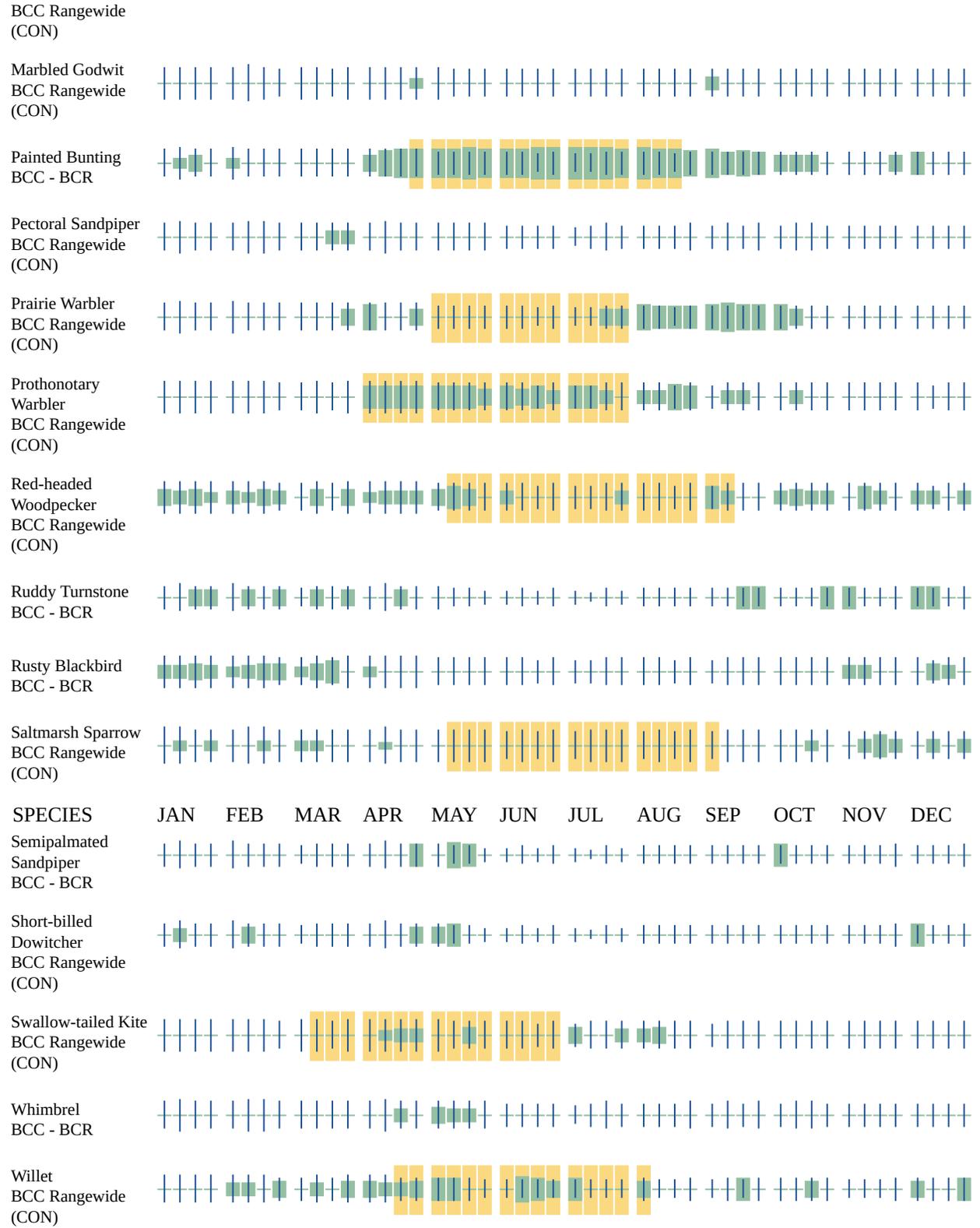
### No Data (—)

A week is marked as having no data if there were no survey events for that week.

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■ probability of presence   ■ breeding season   | survey effort   — no data





Wood Thrush  
BCC Rangewide  
(CON)



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## MARINE MAMMALS

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act<sup>1</sup> and the Convention on International Trade in Endangered Species of Wild Fauna and Flora<sup>2</sup>.

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries<sup>3</sup> [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

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1. The [Endangered Species Act](#) (ESA) of 1973.
  2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
  3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: <https://ecos.fws.gov/ecp/species/4469>

# WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

## FRESHWATER POND

- PUBHx

## RIVERINE

- R5UBH
- R2UBH
- R2UBHx
- R4SBC

## ESTUARINE AND MARINE WETLAND

- E2EM1Nx

## FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PFO1/2F

## **IPAC USER CONTACT INFORMATION**

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## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: County of Berkeley