



Fox Ridge Trace

Environmental Narrative – Railroad Proximity

Fox Ridge Trace has been thoroughly evaluated for its environmental suitability in accordance with SC Housing’s Qualified Allocation Plan (QAP), including specific consideration of its proximity to a nearby rail line. Based on this assessment, it is clear the site does not meet the threshold outlined in Section 3.a of the QAP that would warrant disqualification due to excessive noise or vibration and that no waiver is applicable.

A noise analysis conducted by the project engineer using HUD’s Day/Night Noise Level (DNL) calculator produced a site-level Rail DNL of 48 dB, which is well below HUD’s threshold of 65 dB for acceptable residential noise exposure. This result confirms that the site experiences minimal railroad noise or vibration and is consistent with established federal standards used in evaluating residential suitability.

Supporting this conclusion is data from the U.S. DOT Crossing Inventory for the adjacent rail line (Crossing ID #715765C). This rail line is a short track that accommodates a maximum of only one switching train per day at a speed of 10 miles per hour. There is no through freight or passenger train traffic, and the switching activity is low-impact and localized in nature.

Further enhancing the site’s suitability is an over 450-foot-wide expanse of mature forest laying between the railroad tracks and the closest proposed residential building. This wooded area will remain undisturbed as part of the site’s development plan and serves as an additional natural barrier for sound attenuation and visual separation.

Even without these additional measures, the combined road and rail DNL is below any levels of noise concern. With the construction of the buildings, even using standard wall and window assemblies, the DNL for residents will be further reduced to around 33 decibels, half of the required levels before noise mitigation is recommended by HUD.

It is also relevant to note that another LIHTC development in the area—The Village at Dupont Landing—has units located at a comparable distance from the same rail line, but without the benefit of a forested buffer. That community operates successfully.

In summary, Fox Ridge Trace clearly satisfies all applicable noise and vibration standards. The combination of an exceptionally low train frequency, a robust natural buffer, and favorable DNL results collectively demonstrate that no noise or vibration concerns are present or need to be mitigated with a waiver. Supporting documentation, including noise analysis results and site exhibits, is included with this application.



U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 04 / 01 / 2025	B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input checked="" type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 715765C
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Part I: Location and Classification Information

1. Primary Operating Railroad Aiken Railway Company, LLC [AIKR]		2. State SOUTH CAROLINA		3. County AIKEN	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near AIKEN		5. Street/Road Name & Block Number RUTLAND DRIVE (Street/Road Name) * (Block Number)		6. Highway Type & No. SC-18	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR		
9. Railroad Division or Region <input checked="" type="checkbox"/> None		10. Railroad Subdivision or District <input checked="" type="checkbox"/> None		11. Branch or Line Name <input checked="" type="checkbox"/> None	
12. RR Milepost AB 0022.11 (prefix) (nnnn.nnn) (suffix)					
13. Line Segment * ab		14. Nearest RR Timetable Station * natka		15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A	
16. Crossing Owner (if applicable) <input checked="" type="checkbox"/> N/A					
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.	19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Type of Train <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other	22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input checked="" type="checkbox"/> N/A	27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 33.5770858		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -81.7073236		29. Lat/Long Source <input type="checkbox"/> Actual <input checked="" type="checkbox"/> Estimated
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use *		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 866-427-7712		34. Railroad Contact (Telephone No.) 864-334-5374		35. State Contact (Telephone No.) 803-737-1624	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 0	1.B. Total Night Thru Trains (6 PM to 6 AM) 0	1.C. Total Switching Trains 1	1.D. Total Transit Trains 0	1.E. Check if Less Than One Movement Per Day <input type="checkbox"/> How many trains per week? _____
2. Year of Train Count Data (YYYY) 2020		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 10 3.B. Typical Speed Range Over Crossing (mph) From 10 to 10		
4. Type and Count of Tracks Main 1 Siding 0 Yard 0 Transit 0 Industry 0				
5. Train Detection (Main Track only) <input type="checkbox"/> Constant Warning Time <input checked="" type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 04/01/2025		PAGE 2		D. Crossing Inventory Number (7 char.) 715765C	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 0		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 2 <input type="checkbox"/> W10-3 _____ <input type="checkbox"/> W10-11 _____ <input type="checkbox"/> W10-2 _____ <input type="checkbox"/> W10-4 _____ <input type="checkbox"/> W10-12 _____	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input checked="" type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____			2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		
2.L. LED Enhanced Signs (List types)					
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 2 <input type="checkbox"/> Incandescent Not Over Traffic Lane 2 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 8			
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ <input type="checkbox"/> Not Required		3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/_____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.I. Bells (count) 1					
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input checked="" type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic Number of Lanes 4 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/_____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____					
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) 500		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input checked="" type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Highway Speed Limit 40 _____ MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *					
7. Annual Average Daily Traffic (AADT) Year 2013 AADT 017078		8. Estimated Percent Trucks 10 _____ %		9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day 34	
10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No					
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

Day/Night Noise Level (DNL) Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](#).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	<input type="text" value="Rutland Drive Aiken, SC"/>
Record Date	<input type="text" value="06/24/2025"/>
User's Name	<input type="text" value="Derrick Smith"/>

Road # 1 Name:	<input type="text" value="Rutland Drive"/>
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Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="150"/>	<input type="text" value="150"/>	<input type="text" value="150"/>
Distance to Stop Sign	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Average Speed	<input type="text" value="40"/>	<input type="text" value="40"/>	<input type="text" value="40"/>
Average Daily Trips (ADT)	<input type="text" value="15900"/>	<input type="text" value="917"/>	<input type="text" value="315"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/>
Vehicle DNL	<input type="text" value="50"/>	<input type="text" value="47"/>	<input type="text" value="62"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="62"/>	<input type="button" value="Reset"/>	

Railroad #1 Track Identifier:	<input type="text" value="ID# 715765C"/>
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Rail # 1

Train Type	Electric <input type="checkbox"/>	Diesel <input checked="" type="checkbox"/>
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Effective Distance	<input type="text"/>	475
Average Train Speed	<input type="text"/>	10
Engines per Train	<input type="text"/>	2
Railway cars per Train	<input type="text"/>	50
Average Train Operations (ATO)	<input type="text"/>	1
Night Fraction of ATO	<input type="text"/>	15
Railway whistles or horns?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Bolted Tracks?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Train DNL	<input type="text" value="0"/>	<input type="text" value="48"/>
<input type="button" value="Calculate Rail #1 DNL"/>	<input type="text" value="48"/>	<input type="button" value="Reset"/>
<input type="button" value="Add Road Source"/>	<input type="button" value="Add Rail Source"/>	
Airport Noise Level	<input type="text" value="n/a"/>	
Loud Impulse Sounds?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Combined DNL for all Road and Rail sources	<input type="text" value="63"/>	
Combined DNL including Airport	<input type="text" value="NaN"/>	
Site DNL with Loud Impulse Sound	<input type="text"/>	
<input type="button" value="Calculate"/>	<input type="button" value="Reset"/>	

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - Contact your Field or Regional Environmental Officer (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

Day/Night Noise Level Assessment Tool Flowcharts (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)



SITE DATA:

PARCEL ID: 120-10-06-001

SITE ACREAGE: ± 19.04 ACRES (± 829,202 SF)

ZONING: CURRENT: SINGLE FAMILY (RS-10)
PROPOSED: PLANNED RESIDENTIAL (PR)

SETBACKS:
FRONT: 30'
SIDE: 10'
REAR: 25'

PARKING:
REQUIRED: 24 ONE BEDROOM X 1 SPACES = 24
108 TWO BEDROOM X 1.5 SPACES = 162
60 THREE BEDROOM X 2 SPACES = 120
TOTAL REQUIRED SPACES = 306
PROVIDED: 306 PARKING SPACES (INCLUDES 18 H/C PARKING SPACES)

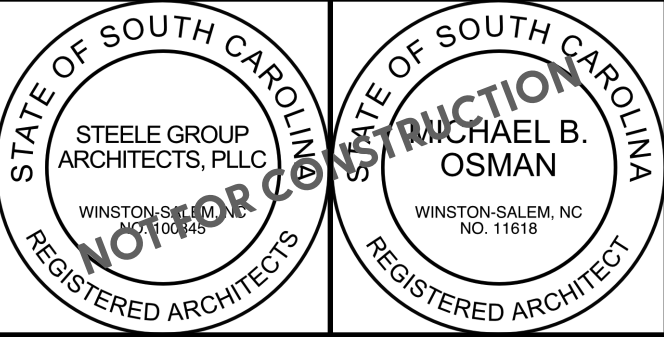
REQUIRED OPEN SPACE:
40% REQUIRED OPEN SPACE = ± 7.61 ACRES (± 331,680 SF)
20% OF REQUIRED OPEN SPACE TO BE RECREATIONAL = ± 3.80 ACRES (± 165,840 SF)

TOTAL OPEN SPACE PROVIDED = ± 11.40 ACRES (± 496,840 SF)
RECREATIONAL OPEN SPACE PROVIDED = ± 3.80 ACRES (± 165,840 SF)



STEELE GROUP
ARCHITECTS

STATUS: 2025 SC HOUSING
LIHTC APPLICATION



Fox Ridge Trace
Rutland Drive
Aiken, SC 29801

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Version	Transmittal Set Name	Date

DATE: 2025-06
PROJECT NUMBER: 2025 SC
SHEET TITLE: **OVERALL SITE PLAN**

SHEET: **A-001**

