

Project Manual
For

2023-2024
Resurfacing Project
#23346CF

June 2024

County Management

Josh Edwards, County Manager

County Council

District 1: Tom Audette

District 2: Allison Love, Vice-Chairwoman

District 3: Tommy Adkins

District 4: William “Bump” Roddey

District 5: Christi Cox, Chairwoman

District 6: Watts Huckabee

District 7: Debi Cloninger

York County Engineering Reference No: 23346CF 23-24 Paving Project

Prepared by

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BID FORM

2023-2024 Paving Project #23346CF

Submitted: May 15, 2024

York County Government
6 South Congress Street
York, SC 29745

Sir or Madam:

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid, as principal or principals, is or are named herein and that no other person than herein mentioned has any interest in the Bid of the Contract to which the work pertains; that this Bid is made without connection or arrangement with any other person, company, or parties making a bid or proposal and that the Bid is in all respects fair and made in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the Work and, through personal knowledge and experience and/or subsurface investigations, has fully satisfied himself in regard to all conditions pertaining to such site and he assumes full responsibility therefore; that he has examined the Drawings and Specifications for the Work and from his own experience or from professional advice that the Drawings and Specifications are sufficient for the Work to be done; that he has examined the other Contract Documents and all addenda relating thereto, and that he has satisfied himself fully, relative to all matters and conditions with respect to the Work to which this Bid pertains.

The Bidder proposes and agrees, if this Proposal is accepted, to contract with York County Government (OWNER) in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation and labor and to perform all work necessary to complete the Work specified in the Bid and other Contract Documents.

The Bidder further proposes and agrees to commence substantial work on this project within 15 days of a Notice to Proceed and agrees that the Work will be completed and ready for final payment on or before May 30, 2025.

The Bidder further agrees that the deductions for liquidated damages, as stated in the Agreement and General Conditions, constitute fixed, agreed, and liquidated damages to reimburse the OWNER for additional costs to the OWNER resulting from the Work not being completed within the time limit stated in the Contract Form. The liquidated damages shall be \$600.00 for each consecutive calendar day thereafter.

The Bidder further agrees to execute a Contract and furnish satisfactory Performance and Indemnity and Payment Bonds, and the required Certificates of Insurance, within ten consecutive calendar days after receipt of Notice of Award of the Contract, and the undersigned agrees that in case of failure on his part to execute the said Contract and Performance and Indemnity and Payment Bonds within the ten (10) consecutive calendar days after the award of the Contract, the Bid Guarantee accompanying his Bid and the money payable thereon shall be paid to the OWNER as liquidation of damages sustained by the OWNER; otherwise, the Bid Guarantee shall be returned to the undersigned after the Contract is signed and the Performance and Indemnity and Payment Bonds are filed.

Acknowledgement is hereby made of the following Addenda received since issuance of the Bid Documents:

Addendum No. _____ Dated: _____

Addendum No. _____ Dated: _____

Addendum No. _____ Dated: _____

Note:

All work performed by the Contractor as essential to the completion of the intent of the Contract Documents shall be paid in accordance with the Bid Schedule. No direct payment will be made for work performed which is not shown as a separate Bid Item. The undersigned proposes the following unit prices to be utilized on the Work or Extra Work should modifications or variations incorporate these items of work into the Work.

Bid Form

2023-2024 Paving Project #23346CF

Package A (C-Funds)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Traffic Control	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
3.	Removal of Existing Asphalt (2" Uniform)	27,515 <u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
4.	Cement Modified Recycled Base (10" Uniform)	45,855 <u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
5.	2" HMA Surface Course, Type C	45,855 <u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
5.	Speed tables (4)	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
6.	Permanent Pavement Markings	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
	Base Bid Subtotal			\$ _____
	Subtotal (use words)	_____		

For prices if needed

1.	Full Depth Asphalt Pavement Patching (6" Uniform)	<u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Removal of Unsuitable Material	<u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			

Contingency

(Contingency covers Owner authorized changes in the scope of work.)

Number	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$ _____
Contingency Subtotal (in words) _____			
TOTAL BASE BID			\$ _____
(Base Bid Subtotal + Contingency)			
Total (use words) _____			

***Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.**

Alternative A (Bonner Horton Rd)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Traffic Control	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
3.	8" Graded Aggregate Base Course	1,585 <u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
4.	6" HMA Surface Course, Type C	150 <u>SY</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
5.	Clearing and Grubbing	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
6.	Removal of Topsoil and Organic Removal	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			
7.	Crossline Entrance Pipe and Ditch	1 <u>LS</u>	\$ _____	\$ _____
	Unit Price (in words) _____			

Base Bid Subtotal \$ _____

Subtotal (use words) _____

For prices if needed

1. Full Depth Asphalt Pavement Patching (6" Uniform) SY \$ _____ \$ _____

Unit Price (in words) _____

2. Removal of Unsuitable Material (12" Uniform) SY \$ _____ \$ _____

Unit Price (in words) _____

Contingency

(Contingency covers Owner authorized changes in the scope of work.)

Number	Item	Unit Price	Total Cost
--------	------	------------	------------

1.	Contingency	10% of Base Bid Subtotal	\$ _____
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Contingency Subtotal (in words) _____

TOTAL BASE BID \$ _____

(Base Bid Subtotal + Contingency)

Total (use words) _____

***Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.**

Alternative B (Lakewood Road)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
--------	------	----------	------------	------------

1.	Mobilization	1 <u>LS</u>	\$ _____	\$ _____
----	--------------	-------------	----------	----------

Unit Price (in words) _____

2.	Traffic Control	1 <u>LS</u>	\$ _____	\$ _____
----	-----------------	-------------	----------	----------

Unit Price (in words) _____

3.	8" Graded Aggregate Base Course	655 <u>SY</u>	\$ _____	\$ _____
----	---------------------------------	---------------	----------	----------

Unit Price (in words) _____

4.	2" HMA Surface Course, Type C	655 <u>SY</u>	\$ _____	\$ _____
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Unit Price (in words) _____

Base Bid Subtotal \$ _____

Subtotal (use words) _____

For prices if needed

1. Full Depth Asphalt Pavement Patching (6" Uniform) SY \$ _____ \$ _____

Unit Price (in words) _____

2. Removal of Unsuitable Material SY \$ _____ \$ _____

Unit Price (in words) _____

Contingency

(Contingency covers Owner authorized changes in the scope of work.)

Number	Item	Unit Price	Total Cost
--------	------	------------	------------

1.	Contingency	10% of Base Bid Subtotal	\$ _____
----	-------------	--------------------------	----------

Contingency Subtotal (in words) _____

TOTAL BASE BID \$ _____

(Base Bid Subtotal + Contingency)

Total (use words) _____

***Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.**

Package B (Critical Needs)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 LS	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Traffic Control	1 LS	\$ _____	\$ _____
	Unit Price (in words) _____			
3.	Removal of Existing Asphalt (2" Uniform)	7,625 SY	\$ _____	\$ _____
	Unit Price (in words) _____			
4.	Cement Modified Recycled Base (10" Uniform)	25,750 SY	\$ _____	\$ _____
	Unit Price (in words) _____			
5.	2" HMA Surface Course, Type C	25,750 SY	\$ _____	\$ _____
	Unit Price (in words) _____			
6.	Permanent Pavement Markings	1 LS	\$ _____	\$ _____
	Unit Price (in words) _____			
Base Bid Subtotal				\$ _____
Subtotal (use words) _____				

For prices if needed

1.	Full Depth Asphalt Pavement Patching (6" Uniform)	SY	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Removal of Unsuitable Material	SY	\$ _____	\$ _____
	Unit Price (in words) _____			

Contingency

(Contingency covers Owner authorized changes in the scope of work.)

Number	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$ _____

Contingency Subtotal (in words) _____

TOTAL BASE BID \$ _____
(Base Bid Subtotal + Contingency)
Total (use words) _____

***Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.**

Alternative A (SAGRADA DR)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 LS	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Traffic Control	1 LS	\$ _____	\$ _____
	Unit Price (in words) _____			
3.	Cement Modified Recycled Base (10" Uniform)	2,190 SY	\$ _____	\$ _____
	Unit Price (in words) _____			
4.	2" HMA Surface Course, Type C	2,190 SY	\$ _____	\$ _____
	Unit Price (in words) _____			
	Base Bid Subtotal			\$ _____
	Subtotal (use words) _____			

For prices if needed

1.	Full Depth Asphalt Pavement Patching (6" Uniform)	SY	\$ _____	\$ _____
	Unit Price (in words) _____			
2.	Removal of Unsuitable Material	SY	\$ _____	\$ _____
	Unit Price (in words) _____			

Contingency

(Contingency covers Owner authorized changes in the scope of work.)

Number	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$ _____

Contingency Subtotal (in words) _____

TOTAL BASE BID \$ _____

(Base Bid Subtotal + Contingency)

Total (use words) _____

****Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.***

Attached hereto is a cashier's check on the _____
_____ Bank of _____
_____ or Bid Bond for the sum
_____ Dollars (_____), made payable
to _____ (Owner).

_____ L.S.
(Name of Bidder) (Affix Seal)

_____ L.S.
(Signature of Officer)

_____ L.S.
(Title of Officer)

Address:

P.O. Box _____ Street: _____

City: _____ State, Zip Code: _____

Telephone: _____ Fax: _____

Federal ID#: _____

Email address: _____

Contractor License type: _____ Contractor License number: _____

License status: _____ Expiration: _____

Classification: _____

The full names and residences of persons and firms interested in the foregoing bid, as principals, are as follows:

Name of the executive who will give personal attention to the work:

Attach list of subcontractors as required by Article 13.4 of Instruction to Bidders.

END OF SECTION

BID BOND

STATE OF SOUTH CAROLINA
COUNTY OF YORK

KNOW ALL MEN BY THESE PRESENTS, that _____
as Principal, and _____, as Surety, a
Corporation chartered and existing under the laws of the State of _____
_____, with its principal offices in the City of _____, and authorized to do business
in the State of South Carolina are held and firmly bound unto the OWNER, _____
_____ in the penal Sum of _____
_____ Dollars (\$_____) lawful money of the
United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs,
executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted to the
OWNER the accompanying bid, dated _____, **2024**, for:

2023-2024 Paving Project #23346CF

NOW, THEREFORE,

- A. If said Bid shall be rejected, or
- B. If the principal shall not withdraw said Bid within twenty-four (24) hours after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to him for signature, enter into a written contract with the OWNER in accordance with the Bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.
- C. In the event of the withdrawal of said Bid within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if the principal shall pay the OWNER the difference between the amount specified in said bid and the amount for which the OWNER may procure the required work and supplies, if the latter amount be in excess of the former, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals, this ____ day of _____, A.D., 2024, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS: (If Sole Ownership or Partnership, two (2) Witnesses required).
(If Corporation, Secretary only will attest and affix seal).

WITNESSES:

PRINCIPAL:

Name of Firm

Signature of Authorized Officer
(Affix Seal)

Title

Business Address

City State

WITNESS:

SURETY:

Corporate Surety

(Affix Attorney-in-Fact Seal)

Business Address

City State

Name of Local Insurance Agency

CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the within bond; that _____ who signed the said bond on behalf of the principal, was then _____ of said corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said corporation by authority of its governing body.

(Corporate Secretary Seal)

STATE OF SOUTH CAROLINA
COUNTY OF YORK

Before me, a Notary Public duly commissioned, qualified and acting, personally appeared _____ to me well known, who being by me first duly sworn upon oath, says that he is the Attorney-in-Fact, for the _____ and that he has been authorized by _____ to execute the foregoing bond on behalf of the Contractor named therein in favor of the OWNER, the _____.

Subscribed and sworn to before me this ____ day of _____, 2024, A.D.

(Attach Power of Attorney
to original Bid Bond)

Notary Public
State of South Carolina-at-Large

My Commission Expires: _____

END OF SECTION

SUMMARY OF THE WORK

PART 1 - GENERAL

Related Documents

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

Project/Work Identification:

General: Project name is the 2023-2024 Resurfacing Project #23346CF, as shown on Contract Documents prepared by York County Engineering Department.

The Work: The work consists of the FY 23/24 Resurfacing Project #23346CF for twenty-two (22) County maintained roads, three (3) Town of Clover roads, three (3) Town of Fort Mill roads and one (1) Town of Sharon road. The project total estimated length of roadway is 28,800 linear feet, (5.45 miles).

Submittals Quantity

Where material or equipment submittal data is required, furnish two copies plus the number of approved copies required by the Contractor. Submittals which are not approved by the Engineer will be returned in two copies to the Contractor.

Location of Existing Utilities

The location of existing utilities, as shown on the Construction Drawings, is approximate. The Contractor is to contact all utility companies for exact location of underground utilities. The Engineer is to be contacted if interference exists.

Restoration and Surface Stabilization

Utilize construction methods which will minimize damage to existing improvements and vegetation. Avoid any activity which might result in significant ditch siltation. Accomplish these objectives by restricting construction operations to favorable seasons, constructing temporary siltation impoundments, installing of sediment fence, stockpiling and respreading topsoils and vegetation, grassing, and other effective means.

Promptly restore ground surfaces, vegetation and improvements.

Areas disturbed by the new construction are to be final dressed, seeded, fertilized and mulched as soon as construction is completed. Final payment to CONTRACTOR by the OWNER will not be made until permanent vegetation is established and all temporary erosion and sediment control devices are removed.

Accessibility and Maintenance

For the convenience of the public, the Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience and he shall have under construction no greater amount of work than he can prosecute properly with due regard to the rights of the public.

Construction operations shall be scheduled and executed in such a manner as to cause minimal inconvenience to owners of abutting property. Convenient access to all property, roads, highways, sidewalks and driveways along the line of Work shall be maintained. Routes normally used by vehicular traffic shall be safely negotiable without slipping, sliding or loss of traction.

Maintenance operations are to be performed on a day to day basis as necessary to provide access at all times. Once construction operations have begun, it shall be the Contractor's responsibility to maintain access until final Project acceptance.

No material or equipment shall be stored where it will interfere with the free and safe passage of public traffic. At the end of each work day, and at other times when construction operations are not in progress for any reason, the Contractor shall remove all equipment and other obstructions from that portion of the project intended for public use.

Access to fire hydrants shall be maintained by the Contractor throughout the prosecution of the Work. Hydrants shall be kept clear of obstructions and visible at all times. If visibility cannot be maintained, the Contractor shall provide clearly visible signs showing the location of the fire hydrant.

Utility companies and public agencies having facilities within the limits of the Work shall have access to their facilities at all times for inspection and repair.

The Contractor's ability and intention to maintain access must be demonstrated by his construction schedule, required to be submitted elsewhere in these Contract Documents.

All costs of maintaining access during construction, and before the Project is accepted, shall be considered distributed pro rata among the payment items listed on the Bid Form.

Contractor Use of Premises

General: During the entire construction period the Contractor shall limit his work and storage areas to areas which include the rights-of-way that have been procured.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).

END OF SECTION

ALLOWANCES

PART 1 – GENERAL

Related Documents

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

Summary

This Section includes administrative and procedural requirements governing allowances.

Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order

Types of allowances include the following:

- Lump-sum allowances.
- Unit-cost allowances.
- Contingency allowances.
- Inspection and testing allowances.

Submittals

Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

Contingency Allowances

Use the contingency allowance only as directed for the Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

The Contractor's related costs for products and equipment ordered by the Owner under the contingency allowance are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

At Project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

Inspection and Testing Allowances

Inspection and testing allowances include the cost of engaging the inspection or testing agencies, the actual inspections and tests, and reporting the results.

The allowance does not include incidental labor required to assist the testing agency or costs for retesting upon failure of previous tests and inspections.

Costs of services not required by the Contract Documents are not included in the allowance.

At Project closeout, credit unused amounts remaining in the inspection and testing allowance to Owner by Change Order.

Unused Materials

Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.

When requested by the Owner, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Owner, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the contractor's responsibility.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

Examination

Examine products covered by an allowance promptly upon delivery for damage or defects.

Preparation

Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

Schedule of Allowances

Contingency: Include the sum of 10% of the total base bid for changes to the scope of work authorized by the Owner.

END OF SECTION

UNIT PRICES

PART 1 - GENERAL

Related Documents

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

Summary

This Section includes administrative and procedural requirements for unit prices.

Definitions

Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.

Procedures

Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, profit, and applicable taxes.

Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.

Schedule: A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

Base Bid

Package A (C-Funds)

Mobilization

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

Traffic Control

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

Removal of Existing Asphalt (2" Uniform)

Removal of Existing Asphalt (2" Uniform) will be measured for payment on the basis of per square yard (SY) of material removed from the roadway, **prior to introduction of cement/lime**, in order to prepare for a desired final grade.

Payment will be full compensation for removal of two (2) inches of material off the top of the roadway before the initial pulverization, prior to introduction of chemical treatment, to prepare for a desired final grade in relation to existing curb and gutter; location and protection of existing above and below ground utilities and structures; hauling and legally disposing of removed materials off-site; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

Removal of Existing Asphalt will be used on the following roads in this project for the entire area specified.

1. Abingdon Way – 1,120 SY
2. Adair Marble Street – 1,395 SY
3. Brittany Lane – 1,610 SY
4. Caliper Place – 1,935 SY
5. Canterbury Crossing – 2,785 SY
6. Crofton Drive – 7,045 SY
7. Stirling Heights – 3,045 SY
8. Turquoise Way – 5,790 SY
9. Warwick Way – 1,350 SY
10. Whitmyre Court – 1,440 SY

Cement Modified Recycled Base (10" Uniform)

Cement Modified Recycled Base (10" Uniform) will be measured for payment on the basis of per square yard (SY) of construction of a cement modified base at a rate of sixty (60) pounds per square yard (LB/SY)* of portland cement in accordance with these specifications.

Payment will be full compensation for constructing the cement modified recycled base course per contract documents; including pulverizing and scarifying the existing pavement or base material to a minimum depth of 10 inches; furnishing, weighing, applying and spreading cement at a rate established in the mix design for each road; watering and maintaining proper moisture content; processing and mixing base course material; compacting, finishing, establishing a 2% cross slope and curing base course; **an application of a modified cationic emulsion (CRS-2P) and an application of aggregate that conforms to Section 406 of the SCDOT Standard Specifications**, constructed on a prepared base course until application of the specified HMA; selecting curing method from specifications and submitting for approval; allowing for a curing time of no less than 3 days; cleaning construction area of construction debris and excess material; locating and protecting existing above and below ground utilities and structures; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition;

and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

**Cement rate of 60 lb/sy, previously specified, is for bidding purposes only. Bid price shall include the cost of a third party testing service approved by OWNER. The testing service shall provide a mix design specifying cement rate, optimum moisture, and maximum dry density for each road in the project. Should mix design dictate a cement rate other than 60 lb/sy, CONTRACTOR and OWNER will negotiate price adjustment. Testing service shall also be present on site to verify and monitor moisture and compaction for each road in the project.*

CMRB will be used on the following roads in this package for the entire area specified.

1. Abingdon Way – 1,120 SY
2. Adair Marble Street – 1,395 SY
3. Brittany Lane – 1,610 SY
4. Caliper Place – 1,935 SY
5. Canterbury Crossing – 2,785 SY
6. Crofton Drive – 7,045 SY
7. Stirling Heights – 3,045 SY
8. Turquoise Way – 5,790 SY
9. Warwick Way – 1,350 SY
10. Whitmyre Court – 1,440 SY
11. Bridges Drive – 1,000 SY
12. Cheek Rd. – 2,225 SY
13. Cloverbrook Drive – 3,155 SY
14. Deertrack Drive – 4,945 SY
15. Evelyn Street – 1,660 SY
16. Hempstead Rd. – 1,130 SY
17. Marine Drive – 2,380 SY
18. Old Depot Rd. – 1,845 SY

2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

1. Abingdon Way – 1,120 SY
2. Adair Marble Street – 1,395 SY
3. Brittany Lane – 1,610 SY
4. Caliper Place – 1,935 SY
5. Canterbury Crossing – 2,785 SY
6. Crofton Drive – 7,045 SY

7. Stirling Heights – 3,045 SY
8. Turquoise Way – 5,790 SY
9. Warwick Way – 1,350 SY
10. Whitmyre Court – 1,440 SY
11. Bridges Drive – 1,000 SY
12. Cheek Rd. – 2,225 SY
13. Cloverbrook Drive – 3,155 SY
14. Deertrack Drive – 4,945 SY
15. Evelyn Street – 1,660 SY
16. Hempstead Rd. – 1,130 SY
17. Marine Drive – 2,380 SY
18. Old Depot Rd. – 1,845 SY

Speed Tables (See attached details for speed tables)

1. Brittany Lane – 2 speed tables
2. Mobley Road – 2 speed tables

Permanent Pavement Markings

This item will be measured for payment on a lump sum (LS) basis to complete the permanent pavement markings described on sheet 4 pavement and striping plan in the attached plans.

Payment for the Permanent Pavement Markings shall be full compensation for providing all labor, equipment, and materials necessary for applying fast dry paint, thermoplastic pavement markings, and RPM's as specified for the (1) road listed below; including preparing the pavement surface; removing existing pavement markings as needed; and all other material, labor, equipment, supplies, and incidentals necessary to complete the work. Locations will be marked by York County.

Permanent pavement markings will be used on the following roads in this package for the entire area specified.

1. Adair Marble St. – 1 crosswalk, 2 Stop Bars (See strip map for location)
2. Marine Drive – 2 Railroad crossings, 2 Stop Bars
3. Caliper Place – 1 Stop Bar

Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

Removal of Unsuitable Material - 2' uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

Alternative A (Lakewood Road)

Mobilization

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

Traffic Control

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

8" Graded Aggregate Base Course

This item will be measured for payment on the basis of square yards (SY) specified in the Contract.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a 8" uniform graded aggregate base per the contract documents. Remove existing subgrade to a depth of 8 inches, clear all debris from road bed, compact the total area for stability, perform foundation proof roll to confirm proper compaction. Place the base course aggregate on the prepared foundation. Perform the spreading so that the finished base course conforms to the lines, grades, dimensions, and the typical cross-sections shown in the contract. Use crushed stone meeting the grading requirements of Aggregate Number CR-14. Spread and grade the aggregate to a uniform 8" thickness while at optimum moisture content, consolidate it until the aggregates and subbase is compacted to at least 98.0% of the maximum dry density as determined by ASTM D-698. Continue operations until a 8" uniform, dense surface, free from loose material, is produced. Take care during the shaping and rolling operations to retain the material within the limits indicated in the contract. If during the shaping and rolling operations, the material becomes segregated, then re-work the material until a 8" uniform thickness is obtained. Material must be wet at a minimum of twice per day until paved. Once a passing final proof roll is complete, paving operations can commence. All construction in this section must confine to the **2007 SCDOT Standard Specifications Section 305**.

Graded aggregate base course will be used on the following roads in this project for the entire area specified.

1. Lakewood Road – 655 SY

2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

1. Lakewood Road – 655 SY

Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

Removal of Unsuitable Material - 2' uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

Alternative B (Bonner Horton Rd.)

Mobilization

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

Traffic Control

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

8" Graded Aggregate Base Course

This item will be measured for payment on the basis of square yards (SY) specified in the Contract.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a 8" uniform graded aggregate base per the contract documents. Remove existing subgrade to a depth of 8 inches, clear all debris from road bed, compact the total area for stability, perform foundation proof roll to confirm proper compaction. Place the base course aggregate on the prepared foundation. Perform the spreading so that the finished base course conforms to the lines, grades, dimensions, and the typical cross-sections shown in the contract. Use crushed stone meeting the grading requirements of Aggregate Number CR-14. Spread and grade the aggregate to a uniform 8" thickness while at optimum moisture content, consolidate it until the aggregates and subbase is compacted to at least 98.0% of the maximum dry density as determined by ASTM D-698. Continue operations until a 8" uniform, dense surface, free from loose material, is produced. Take care during the shaping and rolling operations to retain the material within the limits indicated in the contract. If during the shaping and rolling operations, the material becomes segregated, then re-work the material until a 8" uniform thickness is obtained. Material must be wet at a minimum of twice per day until paved. Once a passing final proof roll is complete, paving operations can commence. All construction in this section must confine to the **2007 SCDOT Standard Specifications Section 305.**

Graded aggregate base course will be used on the following roads in this project for the entire area specified.

2. Bonner Horton Rd. – 1,585 SY

6" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a Six (6) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum Six (6) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

6" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

2. Bonner Horton Rd. – 150 SY

Clearing and Grubbing

Clearing and Grubbing will be measured for payment on the basis of lump sum (LS) cost required to clear and grub all of the trees and bushes, in alignment with the new centerline, within the proposed road right-of-way. This includes stump and root removal/disposal.

Payment will be full compensation for all materials, labor, and equipment necessary for removal and constructing of the new roadway.

Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

Removal of Unsuitable Material - 2' uniform (if needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

Package B (Critical Needs)

Mobilization

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

Traffic Control

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

Removal of Existing Asphalt (2" Uniform)

Removal of Existing Asphalt (2" Uniform) will be measured for payment on the basis of per square yard (SY) of material removed from the roadway, **prior to introduction of cement/lime**, in order to prepare for a desired final grade.

Payment will be full compensation for removal of two (2) inches of material off the top of the roadway before the initial pulverization, prior to introduction of chemical treatment, to prepare for a desired final grade in relation to existing curb and gutter; location and protection of existing above and below ground utilities and structures; hauling and legally disposing of removed materials off-site; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

Removal of Existing Asphalt will be used on the following roads in this project for the entire area specified.

1. Bethelfield Terrace – 2,832 SY
2. Landing Pointe Dr. – 4,790 SY

Cement Modified Recycled Base (10" Uniform)

Cement Modified Recycled Base (10" Uniform) will be measured for payment on the basis of per square yard (SY) of construction of a cement modified base at a rate of sixty (60) pounds per square yard (LB/SY)* of portland cement in accordance with these specifications.

Payment will be full compensation for constructing the cement modified recycled base course per contract documents; including pulverizing and scarifying the existing pavement or base material to a minimum depth of 10 inches; furnishing, weighing, applying and spreading cement at a rate established in the mix design for each road; watering and maintaining proper moisture content; processing and mixing base course material; compacting, finishing, establishing a 2% cross slope and curing base course; **an application of a modified cationic emulsion (CRS-2P) and an application of aggregate that conforms to Section 406 of the SCDOT Standard Specifications**, constructed on a prepared base course until application of the specified HMA; selecting curing method from specifications and submitting for approval; allowing for a curing time of no less than 3 days; cleaning construction area of construction debris and excess material; locating and protecting existing above and below ground utilities and structures; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

**Cement rate of 60 lb/sy, previously specified, is for bidding purposes only. Bid price shall include the cost of a third party testing service approved by OWNER. The testing service shall provide a mix design specifying cement rate, optimum moisture, and maximum dry density for each road in the project. Should mix design dictate a cement rate other than 60 lb/sy, CONTRACTOR and OWNER will negotiate price adjustment. Testing service shall also be present on site to verify and monitor moisture and compaction for each road in the project.*

CMRB will be used on the following roads in this package for the entire area specified.

1. Bethelfield Terrace – 2,835 SY
2. Landing Pointe Dr. – 4,790 SY
3. Cyrus Dr. – 2,155 SY
4. Fairwood Dr. – 2,400 SY
5. Farm Branch Dr. – 6,205 SY
6. Impulse Ln. – 2,745 SY
7. Rippling Creek Dr. – 4,620 SY

2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

1. Bethelfield Terrace – 2,835 SY
2. Landing Pointe Dr. – 4,790 SY
3. Cyrus Dr. – 2,155 SY
4. Fairwood Dr. – 2,400 SY
5. Farm Branch Dr. – 6,205 SY
6. Impulse Ln. – 2,745 SY
7. Rippling Creek Dr. – 4,620 SY

Permanent Pavement Markings

This item will be measured for payment on a lump sum (LS) basis to complete the permanent pavement markings described on sheet 4 pavement and striping plan in the attached plans.

Payment for the Permanent Pavement Markings shall be full compensation for providing all labor, equipment, and materials necessary for applying fast dry paint, thermoplastic pavement markings, and RPM's as specified for the (1) road listed below; including preparing the pavement surface; removing existing pavement markings as needed; and all other material, labor, equipment, supplies, and incidentals necessary to complete the work. Locations will be marked by York County.

Permanent pavement markings will be used on the following roads in this package for the entire area specified.

1. Landing Pointe Dr. – 2 Stop Bars

Full Depth Asphalt Pavement Patching – 6” Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

Removal of Unsuitable Material - 2’ uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

Alternative A (Sagrada Dr.)

Mobilization

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

Traffic Control

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

Cement Modified Recycled Base (10” Uniform)

Cement Modified Recycled Base (10” Uniform) will be measured for payment on the basis of per square yard (SY) of construction of a cement modified base at a rate of sixty (60) pounds per square yard (LB/SY)* of portland cement in accordance with these specifications.

Payment will be full compensation for constructing the cement modified recycled base course per contract documents; including pulverizing and scarifying the existing pavement or base material to a minimum depth of 10 inches; furnishing, weighing, applying and spreading cement at a rate established in the mix design for each road; watering and maintaining proper moisture content; processing and mixing base course material; compacting, finishing, establishing a 2% cross slope and curing base course; **an application of a modified cationic emulsion (CRS-2P) and an application of aggregate that conforms to Section 406 of the SCDOT Standard Specifications**, constructed on a prepared base course until application of the specified HMA; selecting curing method from specifications and submitting for approval; allowing for a curing time of no less than 3 days; cleaning construction area of construction debris and excess material; locating and protecting existing above and below ground utilities and structures; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

**Cement rate of 60 lb/sy, previously specified, is for bidding purposes only. Bid price shall include the cost of a third party testing service approved by OWNER. The testing service shall provide a mix design specifying cement rate, optimum moisture, and maximum dry density for each road in the project. Should mix design dictate a cement rate other than 60 lb/sy, CONTRACTOR and OWNER will negotiate price adjustment. Testing service shall also be present on site to verify and monitor moisture and compaction for each road in the project.*

CMRB will be used on the following roads in this package for the entire area specified.

1. Sagrada Dr. – 2,835 SY

2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

1. Sagrada Dr. – 2,835 SY

Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall

also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

Removal of Unsuitable Material - 2' uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

END OF SECTION

CEMENT MODIFIED RECYCLED BASE

PART 1- GENERAL

RELATED DOCUMENTS

General provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section contains provisions for the materials, equipment, construction, measurement, and payment for the modification of an existing roadway or shoulder by scarifying the existing pavement structure, mixing it with Portland cement, and constructing the base course in conformance with the lines, grades, dimensions, and cross-sections as specified or directed. The work is to be in accordance with York County Road Design Standards and the SCDOT Standard Specifications for Highway Construction.

QUALITY ASSURANCE

Some products and execution specified in this Section are reference to the latest edition of published specifications or standards of the following (with respective abbreviations)

- South Carolina Department of Transportation (SCDOT) “Standard Specifications for Highway construction”
- SCDOT “Manual on Uniform Traffic control Devices for Streets and Highways”

SUBMITTALS

General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

Mix Design or Material Certificates signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements.

SITE CONDITIONS

Weather Limitations: Apply cement only when the temperature is 40°F in the shade and rising. Do not perform work on frozen or excessively wet subgrade. The temperature restrictions for single treatment, when used as a curing option, shall meet the requirements of the successive HMA course to be placed. If the successive course is a surface course, the seasonal restrictions of December, January and February apply unless otherwise approved.

Construction Limitations: Perform work in daylight hours unless adequate artificial light is provided. Limit the area over which the cement-pavement mixture is spread so that all operations specified in Subsections 306.4.3 and 306.4.4 are performed continuously until completion of a section. Complete all work on a section within 2 hours after the application of water to the aggregate and cement mixture.

If operations are interrupted for a continuous period of greater than 1 hour after the cement has been mixed with the aggregate, reconstruct the entire affected section in accordance with these specifications. When the un-compacted mixture of aggregate and cement is wetted so that the moisture content exceeds that specified, manipulate and aerate the mixture to reduce the moisture to the specified content provided the base course is completed within the time limits of these specifications.

Traffic Control: Schedule and conduct Work in a manner which will minimize inconvenience to vehicular and pedestrian traffic. Provide flagmen, barricades, warning signs, warning lights, and other warning means as appropriate. Signing of construction area will comply with the SCDOT "Manual on Uniform Traffic Control Devices for Streets and Highways".

PART 2 – MATERIALS

Portland Cement: Use Portland cement that conforms to the requirements of SCDOT Subsection 301.2.1.

Water: Use water conforming to the requirements of SCDOT Subsection 701.2.11.

PART 3- EXECUTION

CONSTRUCTION

General: Regulate the sequence of work to process the necessary quantity of material to provide the full depth of modification as specified in the reference maps:

- Use the proper amount of Portland cement.
- Maintain the work.
- Rework the courses as necessary to meet the requirements of this specification.
- Incorporate appropriate material as specified in the plans for drainage correction, cross-slope correction or roadway strengthening.

Shoulders: Remove all excess vegetation generated from the cleaning of shoulders prior to performing the mixing operations from the roadway.

Pulverization and Scarification: Pulverize the pavement so that at the completion of moist-mixing 100% (by weight) passes a 1½-inch sieve. Carefully control the depth of scarification and conduct blading operations in a manner to ensure that the surface of the roadbed below the scarified and pulverized material remains undisturbed and conforms to the required cross-section.

Application of Cement: The rate of cement will be determined by the Owner. Spread Portland cement uniformly on the roadway at the rate (in pounds per square yard) established by the Owner. Spread the cement with equipment that can be calibrated and adjusted so that the established rate is attained uniformly throughout the length and width of the roadway.

Use spreading equipment that has adjustable openings or gate headers and that is not solely dependent on vehicle speed to obtain the required spread rate. A tolerance of 5% will be allowed in the spread rate for individual sections of roadway; however, adjustments should be made in order to keep the actual spread rate as close to that established by the Owner. Only apply cement to such an area that all the operations can be continuous and completed in daylight, unless adequate artificial light is provided, within 6 hours of such application.

Do not allow the percentage of moisture in the soil at the time of cement application to exceed the quantity that permits uniform and thorough mixture of soil and cement during dry mixing operations and do not exceed the specified optimum moisture content for the soil-cement mixture. Do not allow equipment, except that used in spreading and mixing, to pass over the freshly spread cement until it is mixed with the soil. Apply cement only when the temperature is above 40°F in the shade and rising. Do not perform work on a frozen or excessively wet roadway.

Mixing and Processing: Unless otherwise provided or shown on the Reference Maps, mix and process the soil-pavement material as specified in Subsection 301.4.5. Select the single pass or multiple pass method based on the required depth of reclamation and the equipment capabilities. Excess material generated from the mixing process after final grading operations have been completed shall be removed from the roadway.

Compaction: Compact the base as specified in Subsection 307.4.5. The moisture content of the reclaimed roadway must be verified within 30 minutes of the initial watering application to ensure that the moisture is within 2% of optimum moisture prior to beginning grading and compaction efforts.

Surface Smoothness and Rideability: Ensure that the finished surface of the recycled base meets the requirements of Subsection 301.4.10. The grade of the road will be based on existing conditions of the roadway. The cross slope will be graded to obtain positive drainage as well as smooth transitions from crown to superelevated sections of the roadway. Roads with a pre-existing cross slope of 2% or greater shall be re-graded to the same cross slope. On roads with a pre-existing cross slope of less than 2%, the Contractor and Owner shall determine the measures required to obtain positive drainage and the final cross slope.

The final asphalt surface placed on cement modified recycled base course shall meet the Rideability requirements of SC-M 403 for either New Construction or Resurfacing, whichever is applicable based on the specified pavement structure.

Manholes and Valves: After the final pass of the reclaimer and final compaction, water shutoffs valves and manholes shall be adjusted to the appropriate height to accommodate the final overlay.

END OF SECTION

EROSION AND SEDIMENT CONTROLS

PART 1 - GENERAL

Related Documents

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division - 1 Specification sections, apply to work specified in this section.

Summary

Furnish all labor, materials, equipment and incidentals required to install and maintain erosion control devices shown on the Drawings and specified herein, including but not limited to silt fences.

Quality Assurance

Some products and execution specified in this section are referenced to the latest edition of published specifications or standards of the following (with respective abbreviations).

- South Carolina Department of Health and Environmental Control (SCDHEC) "South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities"
- South Carolina Department of Transportation (SCDOT) "Standard Specification for Highway Construction"
- York County "Stormwater Management and Sediment Control Ordinance"

Schedule

A construction schedule shall be an integral part of the erosion control plan. It shall establish a sequence of construction operations that will facilitate control for erosion and permanent seeding.

Site grading operations shall not be commenced until immediate and temporary soil erosion measures are installed.

Whenever land-disturbing activity is undertaken, a ground cover sufficient to restrain erosion must be planted or otherwise provided within 30 days on that portion of the tract upon which further active construction is not being undertaken.

Jurisdiction

The contractor shall, at all times, comply with the York County "Stormwater Management and Sediment Control Ordinance" and the SCDHEC "South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities". Routine inspections of the site will be made by an authorized representative of the County and/or State. Any and all deficiencies noted by the representative shall be corrected in a timely manner.

PART II - MATERIALS

Temporary Silt Fence

Fence material shall be a minimum of 2-foot-6-inches high with a 14 gauge (min) wire fence having a maximum grid spacing of 6 inches. All fencing is to be galvanized.

Posts for the fence shall be standard 4-foot steel fence posts. Post spacing shall be a maximum of 6-foot on center.

Silt fence fabric will be Mirafi 140 or approved equal.

PART III - EXECUTION

Final dressing, seeding, fertilizing, and mulching of disturbed areas are to begin as soon as possible after grading activities have been completed.

Silt fence shall be installed as necessary prior to beginning cleaning and grading work.

Temporary erosion control measures are to be inspected at least once every seven (7) calendar days and after any storm event of greater than 0.5 inches of precipitation during any 24-hour period. All erosion control measures are to remain fully functional at all times until construction is completed and all areas have been stabilized.

Sediment is to be removed from behind the temporary silt fence when it becomes approximately 6 inches deep at the fence. The sediment fence will be repaired as necessary.

Sediment removed from erosion control structures will be placed on-site, upstream of erosion and sediment control measures. Sediment shall be stabilized by seeding, fertilizing, and mulching.

Once surface stabilization has been achieved and the threat of sediment runoff has been eliminated, the temporary measures shall be removed and legally disposed offsite. Any areas disturbed during the removal of the temporary measures are to be dressed, seeded, fertilized, and mulched in accordance with the specifications.

END OF SECTION

ASPHALT PAVING

PART 1- GENERAL

RELATED DOCUMENTS

General provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section includes provisions for preparing subbase, proof-rolling subbase, applying base course, proof-rolling base course (if required) and applying bituminous pavements. The work is to be in accordance with York County Road Design Standards and the SCDOT Standard Specifications for Highway Construction.

QUALITY ASSURANCE

Some products and execution specified in this Section are reference to the latest edition of published specifications or standards of the following (with respective abbreviations)

- South Carolina Department of Transportation (SCDOT) "Standard Specifications for Highway Construction"
- SCDOT "Manual on Uniform Traffic control Devices for Streets and Highways"

SUBMITTALS

General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

Mix Design or Material Certificates signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements of the South Carolina Department of Transportation (SCDOT) "Standard Specifications for Highway Construction."

SITE CONDITIONS

Weather Limitations: Apply prime coats, tack coats, hot mix asphalt surface courses, and hot mix aggregate base courses in accordance with the requirements of the SCDOT "Standard Specifications for Highway Construction".

Weather and surface temperature restrictions for placing bituminous pavements are included in section 401.44 – Weather and Surface Temperature Restrictions of the SCDOT "Standard Specifications for Highway Construction". No bituminous pavements are to be applied during restricted periods as stipulated in the specifications.

Do not apply HMA when the existing surface is wet or frozen.

Place HMA in accordance with the following relationship of minimum air temperature and lift thickness:

1.0 inch or less – 55.0 degrees Fahrenheit

1.1 to 3.0 inches – 45.0 degrees Fahrenheit

**Measuring the ambient air temperature in the shade with a calibrated thermometer, away from artificial heat in compliance with SC-T-84.*

HMA asphaltic courses can not be placed during the months of December, January and February, except by written approval from York County Engineering.

Traffic Control: Schedule and conduct Work in a manner which will minimize inconvenience to vehicular and pedestrian traffic. Provide flagmen, barricades, warning signs, warning lights, and other warning means as appropriate. Signing of construction area will comply with the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways".

Site Conditions: Site must be kept in order. No trash or miscellaneous equipment/supplies shall be left on site that may pose a hazard to the residents or traveling public (i.e., asphalt, gravel, sand, oils, gasoline, etc.)

Overnight storage or general parking of equipment must be done within the provided rights-of-way and must not cause damage to adjacent properties. Damage occurring would be the responsibility of the CONTRACTOR.

PART 2 – MATERIALS

General: Use locally available materials and gradations that exhibit a satisfactory record of previous installations. Minimum compacted thicknesses are found in the Reference Maps and these specifications.

Base Course Materials: Base course materials are to meet the requirements of Section 305 - Graded Aggregate Base Course of the SCDOT "Standard Specifications for Highway Construction".

Prime or Tack Coat: Prime and/or tack coats are to be in accordance with Section 401.4.18 – Application of Prime or Tack Coat of the SCDOT "Standard Specifications for Highway Construction".

Asphalt (HMA) Pavement: Materials for asphalt pavements are to meet the requirements of Section 401 – Hot Mixed Asphalt (HMA) Pavement of the SCDOT "Standard Specifications for Highway Construction".

Hot Mix Asphalt Intermediate (or Binder) Course: Materials shall conform to Section 402 – Hot Mix Asphalt Binder Course of the SCDOT "Standard Specifications for Highway Construction".

Primary Roadways: Hot Mix Asphalt Binder Course, Type C

Secondary Roadways, Local Streets and Parking Areas: Hot Mix Asphalt Binder Course, Type C

Hot Mix Asphalt Surface Course: Materials shall conform to Section 403 – Hot Mix Asphalt Surface Course of the SCDOT "Standard Specifications for Highway Construction". Hot Mix Asphalt Surface Courses are to be as follows:

Primary Roadways: Hot Mix Asphalt Surface Course, Type C

Secondary Roadways, Local Streets and Parking Areas: Hot Mix Asphalt Surface Course, Type C

PERMANENT PAVEMENT MARKINGS

Cleaning: Sweep and clean surface to eliminate loose material and dust.

Do not apply striping until layout and placement have been verified with Engineer.

Permanent Pavement Markings: Permanent pavement markings are to meet the requirements of Section 625 – Permanent Pavement Markings of the SCDOT “Standard Specifications for Highway Construction”, fast-dry waterborne paint.

PART 3- EXECUTION

Pavement Repair

Inspection: Examine areas and conditions under which pavement repair will be conducted, giving special attention to stability of subbase. Do not proceed with pavement patching work until unsatisfactory conditions have been corrected in a manner acceptable to personnel or subcontractor doing the paving work.

Preparation: Saw cut any ragged edges of existing pavement or in the case of concrete work, remove existing pavement to nearest joint. Remove all loose material from underlying and adjacent surfaces.

Strength and Stability: Use material and construction techniques as necessary to obtain strength, stability and durability of pavement patch at least equal to that of remaining adjacent pavement of the same type. Do not permit the finished surface to have dips, objectionable roughness or discontinuity or non-draining areas. Do not create any unsafe pavement conditions.

Placing: Construct pavement using methods and equipment in general use for the type of work being performed.

Subbase

Subbase is to be prepared in accordance with Division 300 – Bases and Subbases of the SCDOT “Standard Specifications for Highway Construction”.

Base Course

Application of base materials is to meet the minimum depth requirements (if any) as shown on the Drawings. Base course materials are applied in accordance with Section 305 - Graded Aggregate Base Course of the SCDOT “Standard Specifications for Highway Construction”.

Preparation of Base Course for Bituminous Pavement

General: Remove loose material from compacted base surface immediately before applying prime coat.

Adjust utility and valve box elevations so that the top of the casting will match surrounding finished pavement surface grades.

Proof-roll prepared macadam base surface to check for unstable areas and areas requiring additional compaction. Proof-roll with a tandem dump truck having a minimum load weight ticket of fifteen (15) tons. The proof-rolling procedure should consist of the following:

1. Parking areas: Two complete passes of the area being tested, with each pass being in a direction perpendicular to the previous one.
2. Roadways: Complete coverage of the area receiving pavement. The first pass should be completed with the wheels of the truck adjacent to the curb (if curb is present) or a minimum distance of 1 foot outside the limits of pavement where curb is not present. Subsequent passes shall be completed with the truck located adjacent to the previous pass. Number of

passes shall be determined by the proposed pavement width, and the proof-roll shall be conducted until the entire width of the area to be paved is tested.

If any area deflects, ruts, or pumps excessively during proof-rolling or fails to "tighten up" after successive passes, determine cause for failure, make repairs (at Contractor's expense) and repeat proof-roll. Contractor is responsible for obtaining good proof-roll test of the site.

Emphasis shall be placed on uniform mixing and cement distribution across the entire roadway paving width, in addition to ensuring compliance with the desired cross-section with designed crown.

Do not begin paving work until deficient base areas have been corrected and are ready to receive paving.

Prime Coat: Apply at rate of 0.10 to 0.18 gallons per square yard (targeting 0.14 gallons per square yard). Apply material to penetrate and seal, but not flood, surface. Cure and dry as long as necessary to attain penetration and evaporation of volatile. In areas where residences are inhabited, apply the prime coat directly in front of the bituminous course being placed, allowing as much time as possible for the prime or tack coat to "break," so as to avoid the tracking of prime material on adjacent paved surfaces, including curb and gutter, and driveways. Remove and clean damaged surfaces.

Placing Mix

General: Place hot-mixed asphalt mixture on prepared surface, spread, and strike off. Spread mixture at minimum temperature of the design mix, customarily 275 deg F. Place areas inaccessible to equipment by hand. Place each course to required grade, cross-section, and compacted thickness.

Paver Placing: Place in strips not less than 10 feet wide, unless otherwise acceptable to Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.

Immediately correct surface irregularities in finish course behind paver. Remove excess material forming high spots with shovel or lute.

Joints: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density, and smoothness as other sections of hot-mixed asphalt course. Clean contact surfaces and apply tack coat.

Rolling

General: Begin rolling when mixture will bear roller weight without excessive displacement. Shall be in compliance with SCDOT Section 401.3.11 Rollers.

Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling and repair displaced areas by loosening and filling, if required, with hot material. Between 8 and 12 ton rollers.

Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been evenly compacted. Between 8 and 12 ton rollers.

Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained 95 percent laboratory density (D-698). Pneumatic-Tire rollers with a minimum effective width of 60 inches.

Roller specifics and guidance:

Steel-Wheel Rollers – As specified, use steel wheel rollers that are between 8 and 10 tons in weight, which develop a minimum pressure of 250 psi of compression per inch of roller width under working conditions. Ensure rollers are in good working condition, without leaks, and capable of reversing without backlash. Ensure the rollers have adjustable scrapers to keep the rollers clean and with effective means of keeping the wheels/drums wet to prevent mixes from sticking to the rollers. Ensure the surface of the rollers are free of flat areas, openings and projections which could mar the pavement surface.

Vibratory Rollers – Utilize vibratory rollers of a minimum 8-ton size, with 1 or 2 vibrating wheels/drums. The vibratory roller shall be operated at a speed, frequency and amplitude that yields the desired maximum compaction and a smooth pavement. Care should be given to vibratory operations during direction changes to prevent heaving and shoving.

Pneumatic-Tire Rollers – The pneumatic-tire rollers shall be self-propelled and have an effective rolling width of not less than sixty (60) inches. The roller shall be equipped with pneumatic tires of equal size and diameter that will be capable of providing uniform contact pressures. The desired contact pressure is 60psi to 80 psi, which will be achieved by monitoring the ballast and tire inflation pressures. The roller shall be operated so that the wheels will provide complete coverage of the rolling width of the machine in one pass. Ensure that the wheels are tight, do not wobble and provide a minimum ¼ inch overlap with the tracking wheels. The roller shall be designed and maintained to ensure that the contact pressure is uniform on all wheels and the tire pressures do not vary more than 5 psi. The pneumatic-tire roller shall be constructed with enough ballast weight to provide the required uniform wheel loading. Be capable of varying the total operating weight and tire pressure on the roller, at the direction of the QC/QA inspector, in order to achieve the desired contact pressures and the required compaction.

Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot hot-mixed asphalt. Compact by rolling to specified surface density and smoothness.

Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

FIELD QUALITY CONTROL

General: Testing in-place hot-mixed asphalt courses for compliance with requirements for thickness and surface smoothness will be done by Contractor's testing laboratory. The CONTRACTOR must have a Quality Control inspector present during all paving installation. The Quality Control inspector shall demonstrate to the York County inspector that asphalt has been compacted per SCDOT 401.4.20 and 401.4.21.

Repair or remove and replace unacceptable paving as directed by the county. CONTRACTOR shall make provisions for all testing required by the South Carolina State Highway Department Standard Specifications for Highway Construction, latest edition, and in accordance with the General Conditions. CONTRACTOR will submit SCDOT approved mix design or material specifications prior to placement. In the event of a significant failure of the roadway or related materials, additional core density testing per SCDOT SC-M-400 may be required at the expense of the CONTRACTOR. Testing results shall be provided to the OWNER and ENGINEER for review.

Asphalt cores will be required for each project. The core sampling must be performed during the asphalt inspection with a York County Inspector present and will be up to the CONTRACTOR to provide these to York County at no cost. The frequency and location of the cores is noted in the South Carolina State Highway Department Standard Specifications for Highway Construction. All core holes must immediately be properly cleaned out, repaired with hot mix asphalt, and be properly compacted after being inspected or it will not pass the inspection.

All asphalt courses provided in the contract must meet the minimum required compacted depth. Areas not meeting this minimum depth will require an asphalt overlay. Areas of repair with less than 150 feet in length and/or less than the entire road width will require extended overlays to reduce the impact to the appearance of the roadway surface. The extent of the areas will be determined by the ENGINEER. In cases where minimum depths are not met for longer areas of repair, the entire roadway may require overlays to ensure the minimum required depth is provided.

Thickness: In-place compacted thickness tested in accordance with ASTM D3549 will not be acceptable if exceeding following allowable variations:

- | | | |
|----|----------------------|-----------------------|
| 1. | Intermediate Course: | Plus or minus ¼ inch. |
| 2. | Surface Course: | Plus or minus ¼ inch. |

Surface Smoothness: Test finished surface of each hot-mixed asphalt course for smoothness, using 10-foot straightedge applied parallel with and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:

- | | | |
|----|-------------------------|------------|
| 1. | Intermediate Course: | 1/4 inch. |
| 2. | Wearing Course Surface: | 3/16 inch. |

Check surface areas at intervals as directed by Engineer.

END OF SECTION

PLANTING

PART 1 - GENERAL

Related Documents

General provisions of the contract, including General Conditions, Supplementary Conditions, and Technical Specification sections, apply to work of this section.

Summary

This specification pertains to preparing planting, fertilizing, and maintaining grass on all fill slopes, cut slopes, and graded areas disturbed by installation of utilities or by road construction. The Contractor shall furnish all labor, equipment, tools, and materials necessary to perform all tasks required to complete all grassing within the limits of right-of-way and other disturbed areas shown on the Reference Maps and these specifications, in coordination with all other divisions of work. Any incidental work, material, or appurtenances not specifically shown, but necessary for completion of the work, shall be furnished as required. All unpaved areas cleared and grubbed, graded, filled, excavated, or otherwise disturbed during construction, both within and beyond the right-of-way limits shown on the plans, shall be stabilized with grass. Planting may include both temporary and permanent grassing. Establishment of permanent grassing is required for the completion of the contract and final payment.

Established lawns and landscaped areas damaged by construction are to be restored to their former condition by seeding, sod or other necessary means.

Quality Assurance

Some products and execution specified in this Section are referenced to the latest edition of published specifications or standards of the following:

- South Carolina Department of Transportation (SCDOT) Designation SC-M-810 (11/08)
- York County "Stormwater Management and Sediment Control Ordinance."

Submittals

The Contractor will, upon request, furnish the invoices and or other documentation of all materials used in order to determine rates and quality of materials. This includes seed, lime and fertilizer as well as any other materials used.

Delivery, Storage, and Handling

Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site.

Job Conditions

This specification is intended to provide a complete grassing procedure, which is to be carefully followed. Some procedures may be adjusted, upon consultation with the Engineer, so as to meet unforeseen weather and soil conditions.

Proceed with and complete grassing work as rapidly as portions of the project site become available.

Special Project Warranty

Warranty grassing throughout the specified maintenance period, and until final acceptance.

PART 2 - PRODUCTS

Soil Amendments

A certified soil test analysis is preferred on disturbed areas. In the absence of a soil test general recommendations required are as follows:

Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve. Use a minimum of 2000 pounds (1 ton) of dolomitic limestone per acre.

Commercial Fertilizers: Use complete fertilizer of neutral character, with some elements derived from organic sources and containing the following percentages of available plant nutrients.

For grassing provide fertilizer with not less than 10% total nitrogen, 10 % available phosphoric acid, and 10 % soluble potash. Nitrogen is to be a form that will be available to grass during the initial growth period. If no soil sample is available, use a minimum of 600 pounds of 10-10-10 or equivalent per acre. (example: approximately 360 lbs. of 17-17-17 per acre is equivalent to 600 lbs of 10-10-10 per acre)

Grass Materials

Grass Seed: Provide fresh, clean, new-crop seed. At a minimum, seed shall have a purity of no less than 90 percent and a germination rate of no less than 80 percent, and complying with SC-M-810 of the SCDOT Seeding Specifications.

Anti-Erosion Materials

Mulch: Provide clean, seed-free hay or straw of wheat, rye, oats, or barley.

Permanent Erosion Control Matting: North American Green SC150 or approved equal, unless otherwise indicated in the Drawings. Install in accordance with Manufacturer's recommended installation guidelines in locations as shown on the Drawings as required.

PART 3 - EXECUTION

Preparation

Preparation of Planting Soil: Lime should be applied and mixed with soil before planting.

Preparation of Seed Bed: The seed shall be prepared by pulverizing the soil in an approved manner to a depth of four (4) inches for field conditions or slopes that are 3:1 or flatter and to a depth of three (3) inches, as determined on site for slopes steeper than 3:1. The soil shall be tilled until a well pulverized, firm, reasonably uniform seed bed is prepared conforming substantially to ground elevations as shown on the Plans and/or existed prior to construction. The disturbed area shall blend uniformly into adjacent topography. Good surface drainage must be provided, allowances for settlement made and ground elevations adjusted accordingly. Visible ponding will not be allowed. Rocks, roots, sticks, trash and other objectionable material shall be removed. Slopes should be "tracked in" parallel to the slope or otherwise prepared to hold seed in place.

Apply specified commercial fertilizer at the specified rates, and thoroughly mix into the upper 2 inches of the seedbed. Delay application of fertilizer if lawn planting will not follow within a few days.

In established lawn areas, fine grade seedbed to a smooth, even surface with loose, uniformly fine texture.

Roll, rake, and drag lawn areas, remove ridges and fill depressions as required to meet finished grades. Limit fine grading to areas, which can be planted immediately after grading.

Watering prepared lawn areas before grassing if soil is dry is recommended. Water thoroughly and allow surface moisture to dry before planting. Do not create a muddy soil condition.

Restore seedbeds to specified conditions if eroded or otherwise disturbed after fine grading and prior to planting.

Seeding

Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.

The seed bed must be in good, friable condition and not muddy or hard at the time the seeding is performed.

Sow seed using a spreader or seeding machine. Do not spread seed when there is excessive wind velocity. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other.

Sow not less than the quantity of seed specified.

Rake or cover seed lightly into the top one-eighth inch of soil, roll lightly, and water with a fine spray when necessary.

Slopes must be "tracked in" or seed shall be applied at the rate specified and raked or tilled into the topsoil with the resulting furrows running across the natural slope of the ground. Under no circumstances will any tilling activity be allowed parallel with slopes. Slopes steeper than 3:1 or more than 8 feet in length will require an approved matting or the use of hydraulic seeding to achieve the 70% achieved stand results unless otherwise specifically approved by the Engineer.

Fertilizer, lime, and seed should be applied within 24 hours of completing seed bed preparation.

Protect seeded slopes against erosion by spreading specified mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not less than 1 ½ inches, loose measurement, over seeded areas.

Hydroseeding

Mix specified seed, fertilizer, and pulverized mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogenous slurry, suitable for hydraulic application.

Apply slurry uniformly to all areas to be seeded. Rate of applications is to be as required to obtain specified seed sowing rate and acceptable end results.

Maintenance

The Contractor shall maintain the seeded areas until there is uniform growth three (3) inches high with at least 80% total coverage of each square foot of the site. Maintenance shall consist of watering, weed and pest control within established areas, fertilization, erosion repair, reseeding and all else necessary to establish a vigorous healthy and uniform stand of permanent grass. All areas and spots which do not show a uniform stand of grass, for any reason, shall be treated repeatedly until a uniform stand is attained.

Mulch and Tackifiers

Hydraulic Mulch (HM), Stabilized Mulch Matrix (SMM), Bonded Fiber Matrix (BFM), Fiber Reinforced Matrix (FRM) as well as straw or hay with an environmentally friendly tackifier may be used as necessary to achieve stabilization. Erosion control blankets (ECB's) and turf reinforcement matting (TRM's) may also be used as necessary or as per plans.

After fertilizing, seeding, raking, and tilling, dried straw is to be uniformly spread over the area at a minimum rate of 2000 pounds per acre. "Environmentally friendly" tackifiers or mulch is required when used. **Diluted emulsified asphalt is not an acceptable alternative.**

Inspection and Maintenance

When grassing is completed, including maintenance, the Engineer or his representative will, upon request, make an inspection to determine acceptability. (Permanent grass must be in place for final acceptance.)

Grassing may be inspected for acceptance in parts agreeable to the Engineer, provided work offered for inspection is complete, including maintenance.

When inspected grassing does not comply with the requirements, replace rejected work and continue specified maintenance until reinspected by the Engineer and found acceptable.

Seasonal Seeding

Seasonal seeding mixtures and rates of application shall be as follows. All rates are in pounds per acre. This includes lime, fertilizer, seed and other materials.

Unless otherwise required by the County or the Engineer (pursuant to potential erosion of ditches or steep slopes) seeding within road right-of-way will be treated like all other disturbed areas.

Temporary Grassing

Temporary grassing shall be performed in selected areas in advance of permanent grassing operations for the purpose of minimizing erosion on disturbed areas during construction. Temporary grassing is considered to be a supplement to, and not a substitute for, permanent grassing operations or, erosion or sediment control measures. The work shall include preparing seed beds; furnishing, placing, and covering fertilizer and seed; mowing; and any other operations necessary for establishing temporary grassing.

Temporary grassing shall be done promptly at the location and times directed by the Engineer and under the following conditions:

- When a graded area cannot be brought to final grade and will remain disturbed during construction, temporary grassing shall be provided until final grade can be obtained and the graded area permanently grassed. Temporary mulch or grassing may be used when site will not be worked for 14 to a maximum of 21 days. If not worked for 21 days or longer, a temporary grass must be planted.
- When washing or erosion can occur on disturbed areas where temporary suspension of construction activity has taken place.
- When an immediate ground cover is desirable to minimize washing, erosion, sedimentation, or pollution on any area.
- When the season of the year is not suitable for establishing permanent grass.

Areas to be Grassed shall be loosened to a depth of 4 inches. The area to be grassed shall be "tracked in" or

otherwise suitably prepared to lessen erosion or prevent seed and soil loss.

Seed and Fertilizer shall be applied uniformly at the required application rates over the prepared area to be grassed.

10-10-10 Fertilizer or equivalent shall be applied at a rate of 600 pounds per acre and dolomitic limestone shall be applied at the rate of 2000 pounds per acre.

Areas of Temporary Grassing shall be maintained in satisfactory condition until being permanently grassed. The maintenance shall include repair of erosion, reseeding, and mowing. All work to maintain areas of temporary seeding shall be done promptly at the direction of the Engineer or his representative.

Use of Temporary Mulch

In some cases if a site will not be worked for a short period of time (14 to 21 days) a temporary organic mulch cover may be used for temporary stabilization only.

Seasonal Seeding Specifications (all rates are in pounds per acre)

Permanent Seeding

September – March

Tall Fescue (Ky31) – 50lbs. per acre
Plus 10-10-10 Fertilizer – 600 lbs per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre
Or

Tall Fescue (Ky31) – 40 lbs. per acre
Plus Rye Grain – 10 lbs per acre (nurse - crop)
Plus 10-10-10 Fertilizer – 600 lbs. per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre

April – August

Bahia grass – 30 lbs per acre
Or Bermuda grass – 30 lbs. per acre (hulled = hull off)
Plus 10-10-10 Fertilizer – 600 lbs. per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre
(May use 10lbs. Millet or Sudan grass with Bahia or Bermuda as a nurse crop.)

Sericea Lespedeza or Weeping Lovegrass may be used on steep slopes (3:1 or greater or more than 8 feet in length) to achieve the desired 70% permanent stabilization requirement.

***Note: Special Consideration:**

Disturbed lawns and landscape areas must be re-established to their original condition and grass type. Some may require other grasses than those listed above. (Example: Centipede grass, Carpet Grass or others at recommended rates.)

Temporary Seeding

September – March

Rye Grain – 55 lbs. per acre or Oats – 150 lbs. per acre or
Wheat – 100 lbs. per acre or Barley – 190 lbs. per acre
Plus Fertilizer and lime at listed rates.

April – August

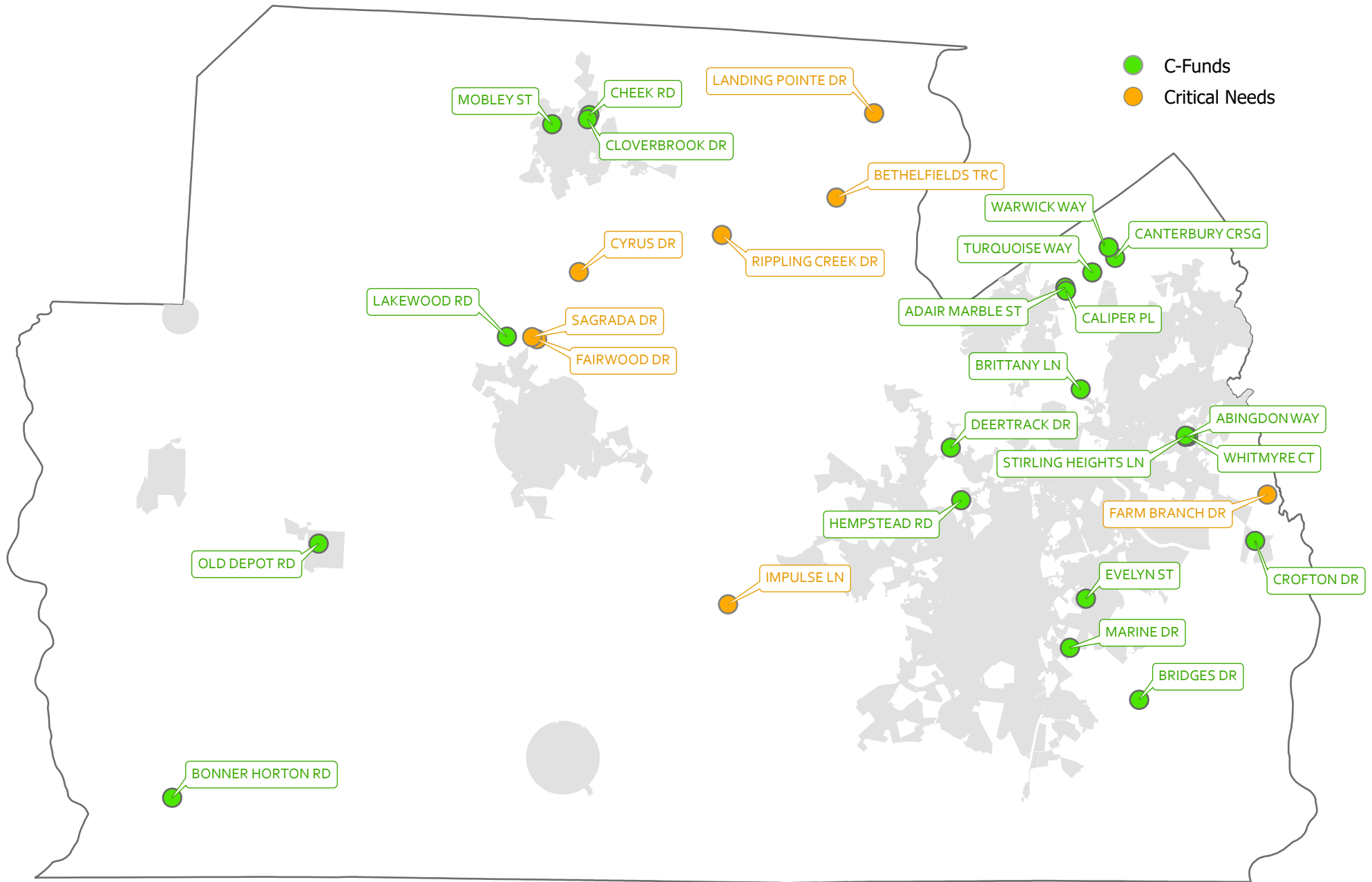
Browntop Millet – 40 lbs. per acre or
Sundangrass – 60 lbs. per acre
Plus Fertilizer and lime at listed rates.

***Notes**

1. Annual Ryegrass is not recommended.
2. Any substitutions or changes must be approved by County Engineer or his representative prior to planting.
3. The Contractor will, upon request, submit the invoices and/or other documentation of all materials used in order to determine rates and quality.
4. Seeding recommendations are based on ideal soil, planting and weather conditions. Some changes may be made on approval of the County Engineer or his representative to achieve desired results.

END OF SECTION

2023-2024 C-Funds and Critical Needs Paving Projects



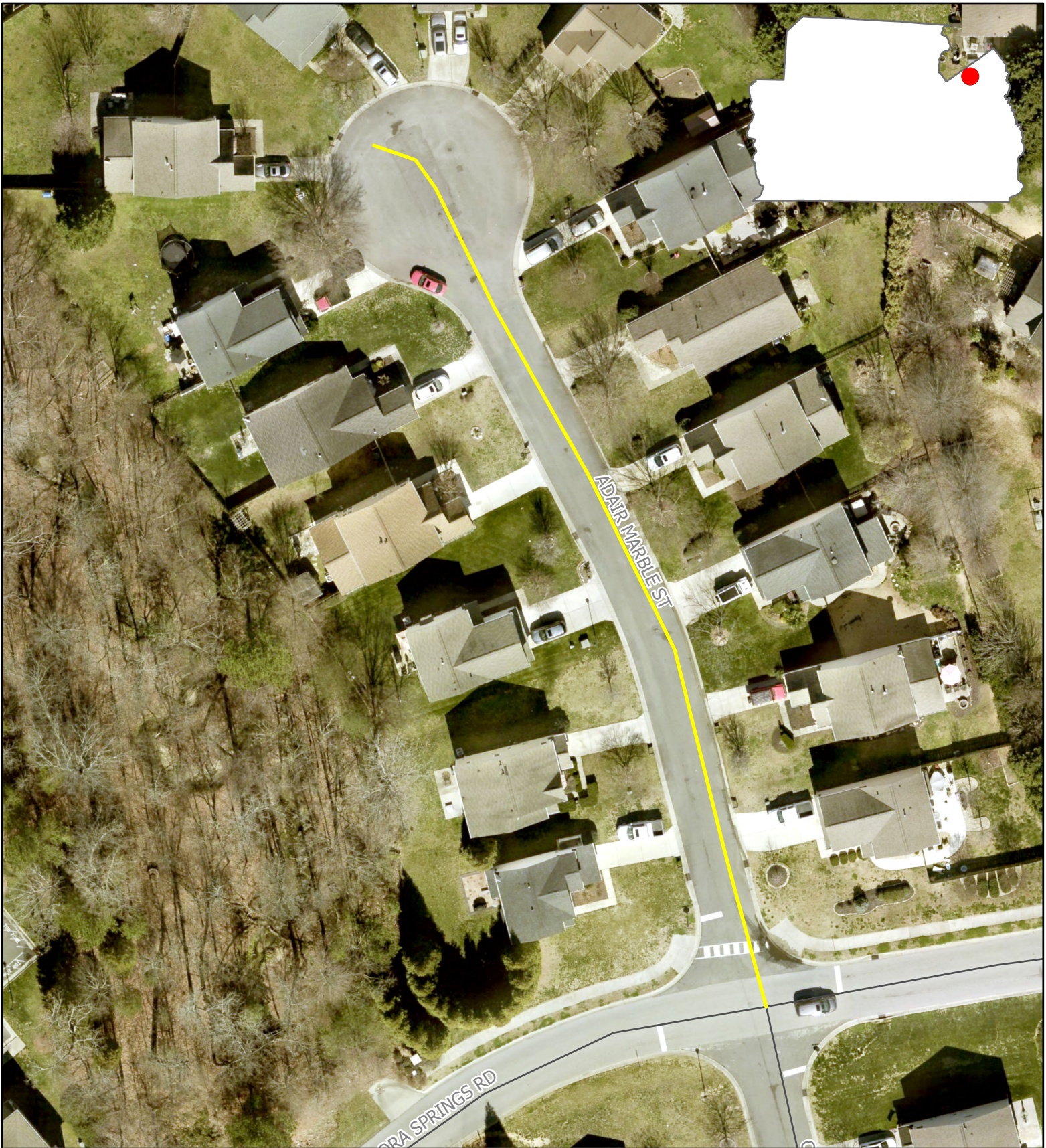


May 09, 2024

2023-2024 Resurfacing Project

**all quantities are estimates and need field
verification by bidding contractor
(highlighted areas are for reference only)**

Abingdon Way
Fort Mill
305 LF 22.5' Wide



May 09, 2024

2023-2024 Resurfacing Project

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Adair Marble Street
H3-203
390 LF 23' Wide



May 09, 2024

2023-2024 Resurfacing Project

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Bridges Drive
J6-034
450 LF 20' Wide



2023-2024 Resurfacing Project

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Brittany Lane
H4-079
650 LF 21' Wide

May 09, 2024



2023-2024 Resurfacing Project

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Caliper Place
H3-202
600 LF 23' Wide

May 09, 2024



2023-2024 Resurfacing Project

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Canterbury Crossing
J3-065
970 LF 22' Wide

May 09, 2024

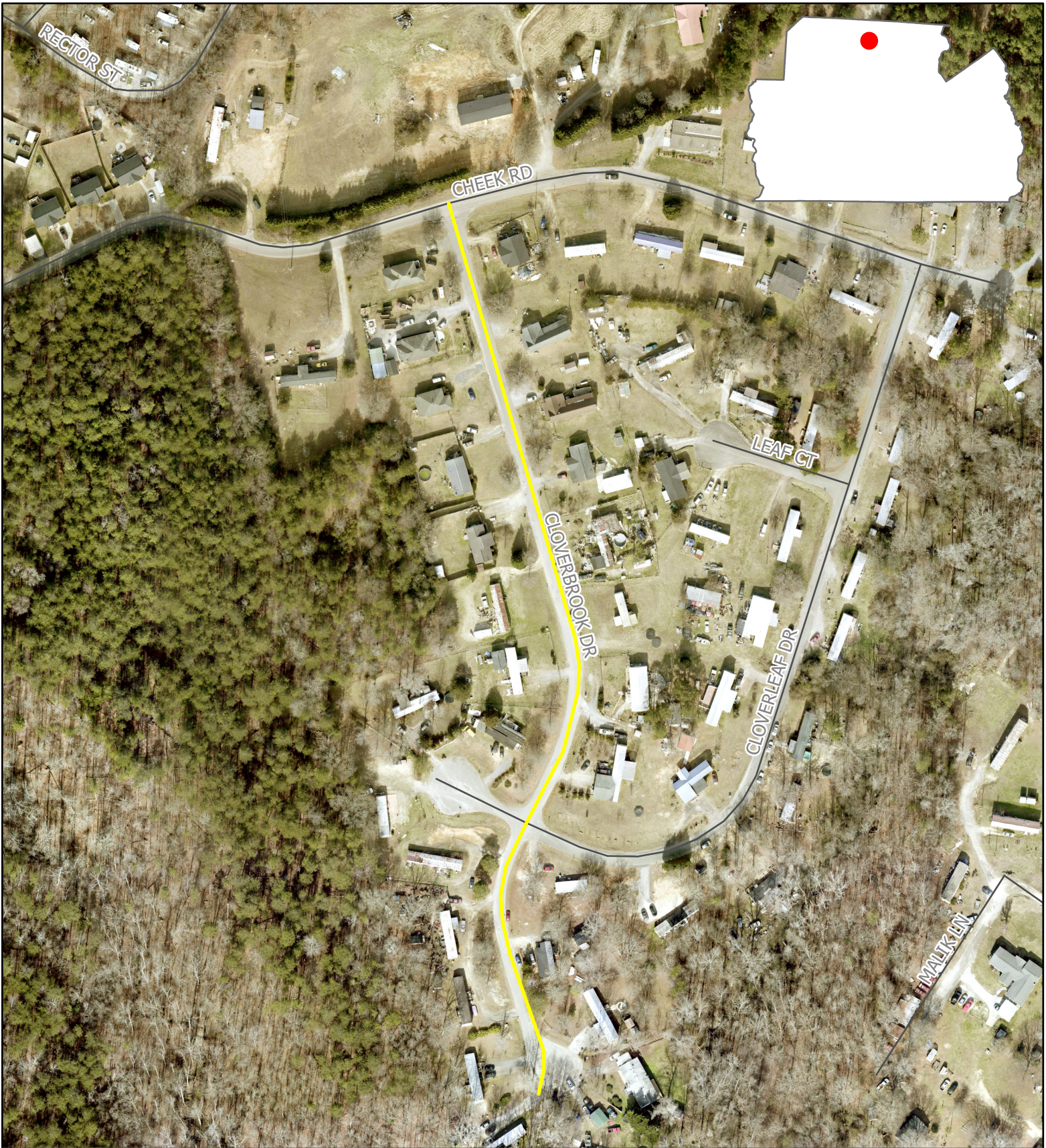


May 09, 2024

2023-2024 Resurfacing Project

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Cheek Road
Clover
790 LF 21' Wide

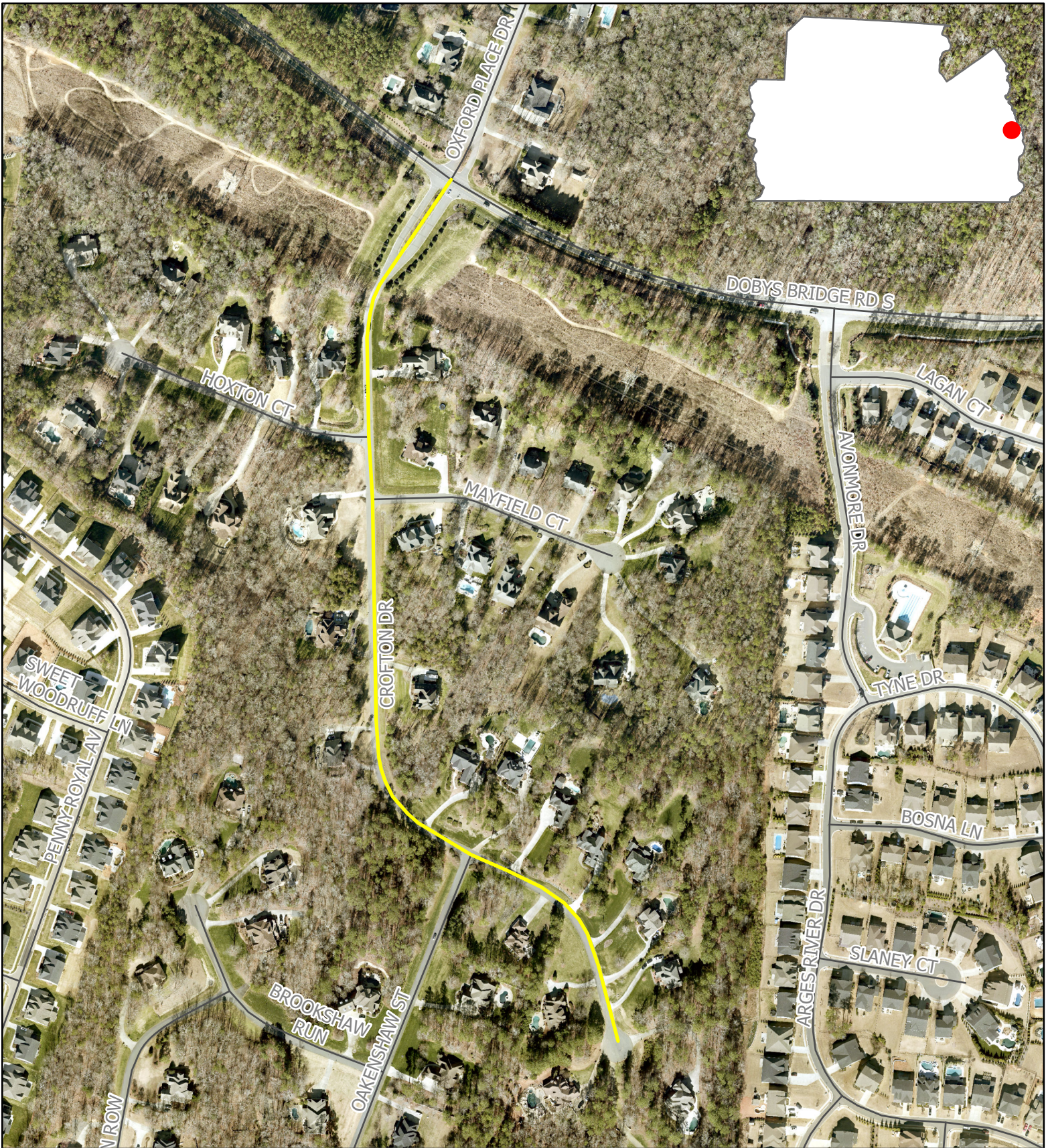


May 09, 2024

2023-2024 Resurfacing Project

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Cloverbrook Drive
Clover
1280 LF 19' Wide

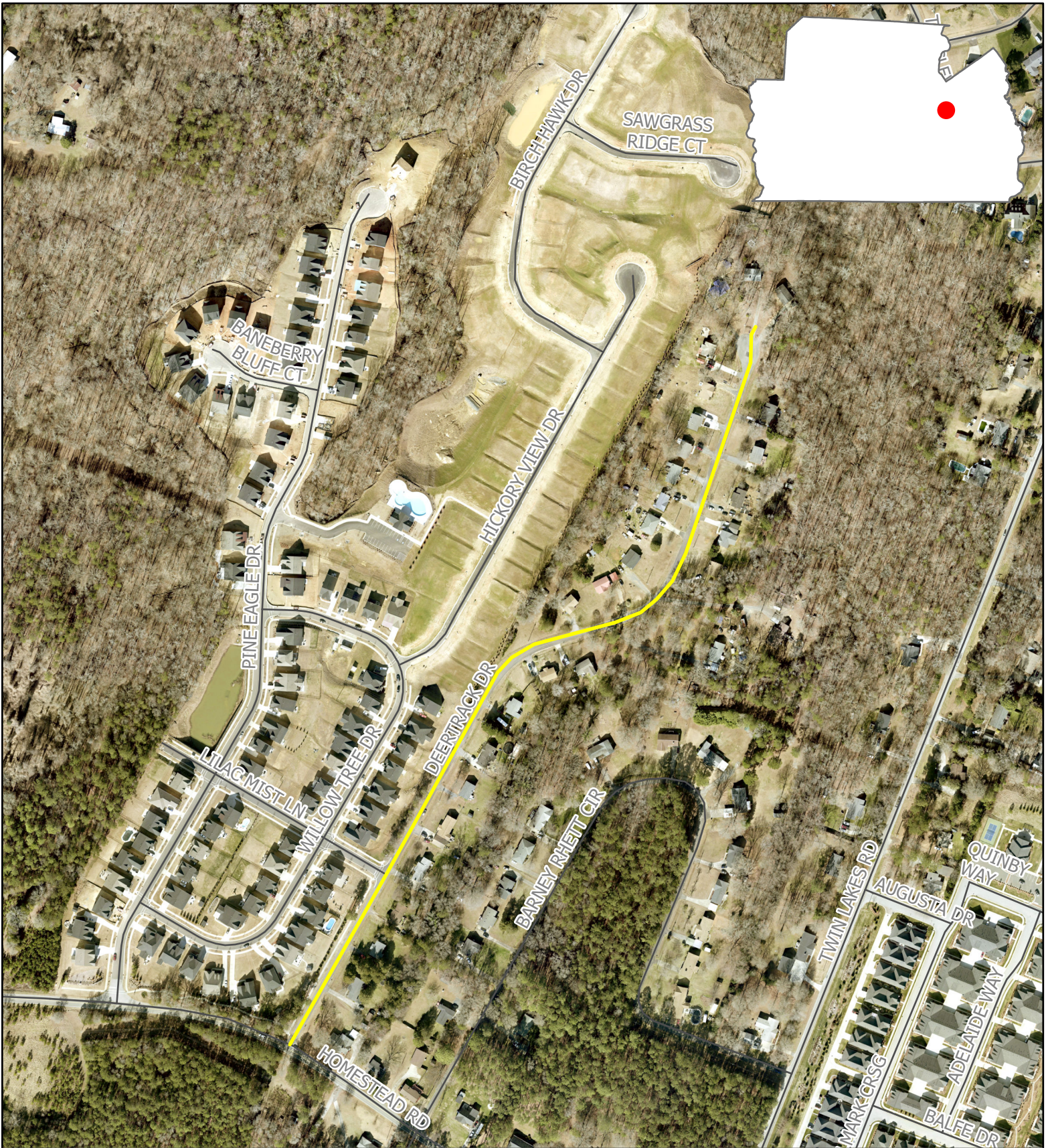


2023-2024 Resurfacing Project

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Crofton Drive
K5-017
2510 LF 22' Wide

May 09, 2024

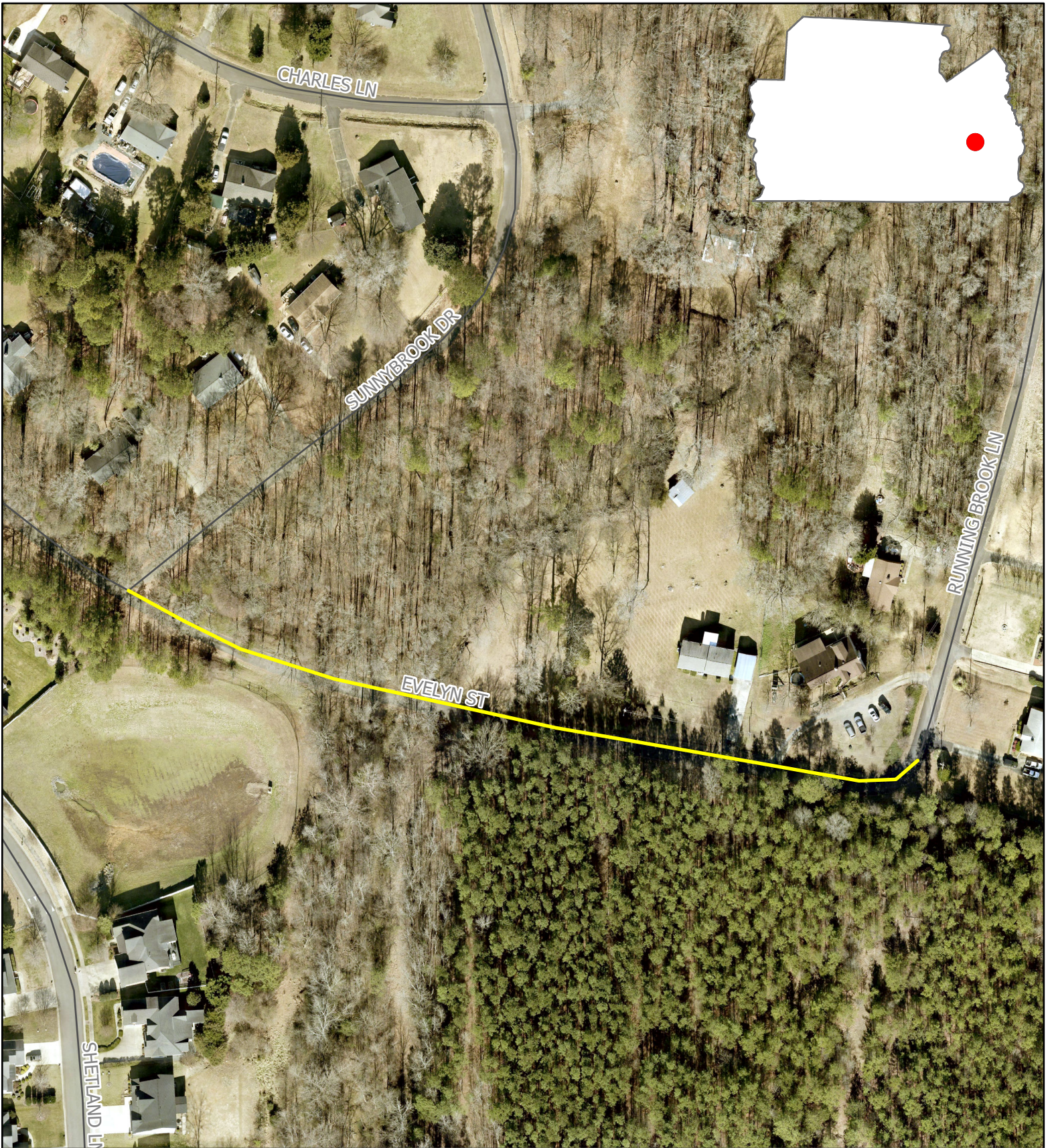


May 09, 2024

2023-2024 Resurfacing Project

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Deertrack Drive
G4-059
2320 LF 18' Wide



2023-2024 Resurfacing Project

all quantities are estimates and need field verification by bidding contractor (highlighted areas are for reference only)

Evelyn Street
H5-028
785 LF 19' Wide

May 09, 2024



May 09, 2024

2023-2024 Resurfacing Project

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Hempstead Road
G4-062
480 LF 20' Wide

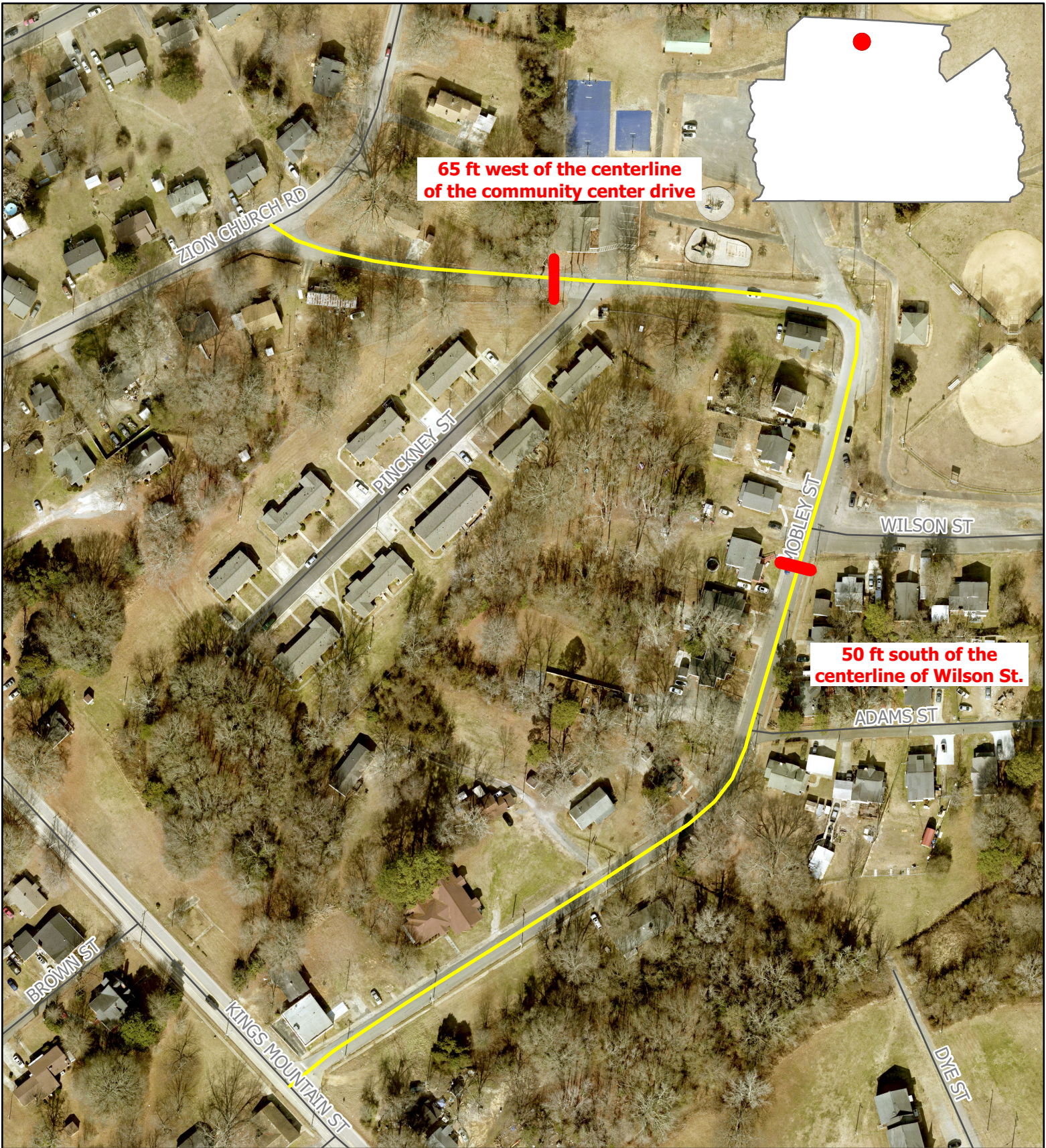


2023-2024 Resurfacing Project

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Marine Drive
H6-083
670 LF 26' Wide

May 09, 2024



65 ft west of the centerline
of the community center drive

50 ft south of the
centerline of Wilson St.

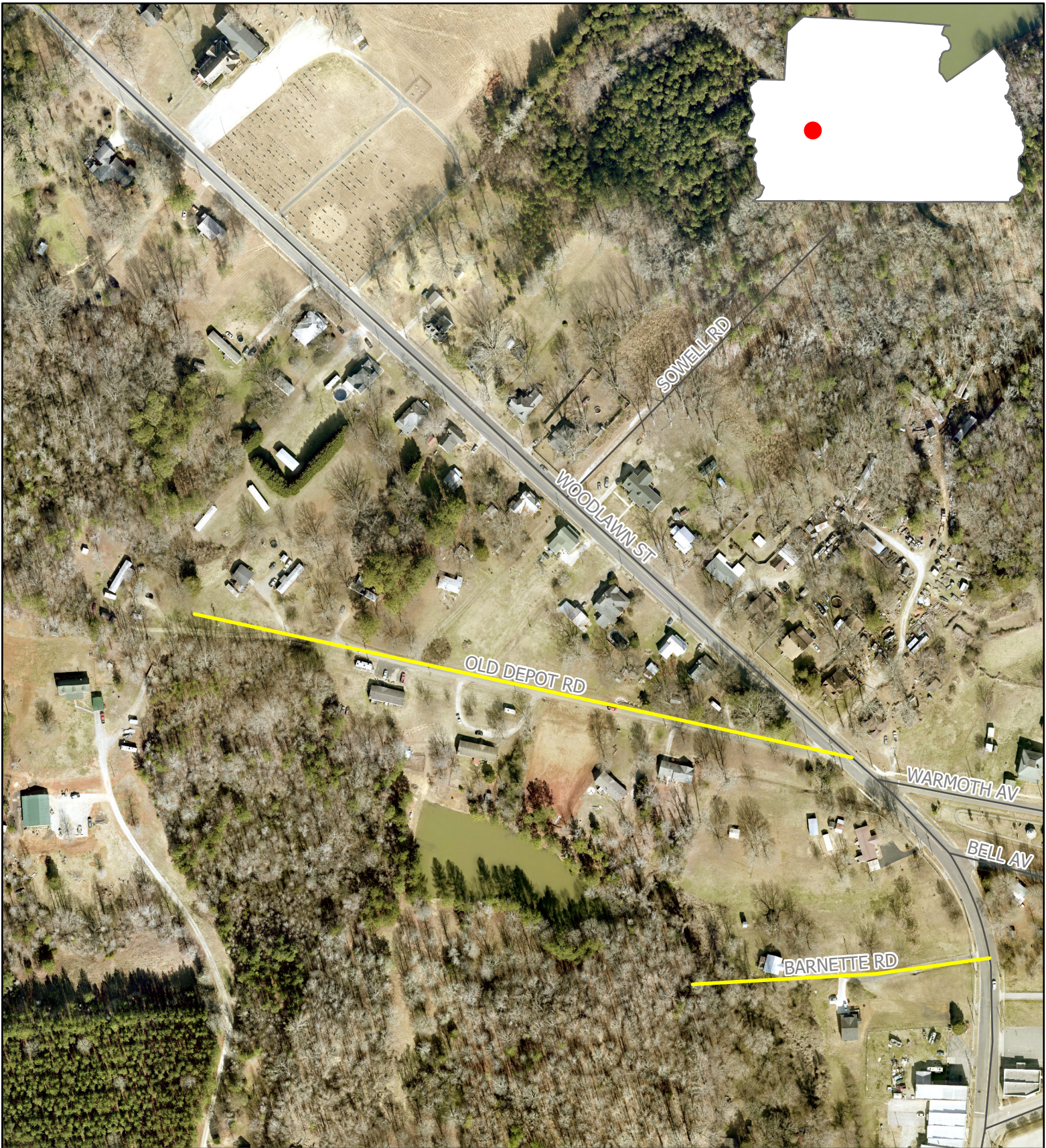


2023-2024 Resurfacing Project

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(highlighted areas are for reference only)

Mobley Street
Clover
Speed Tables

May 09, 2024

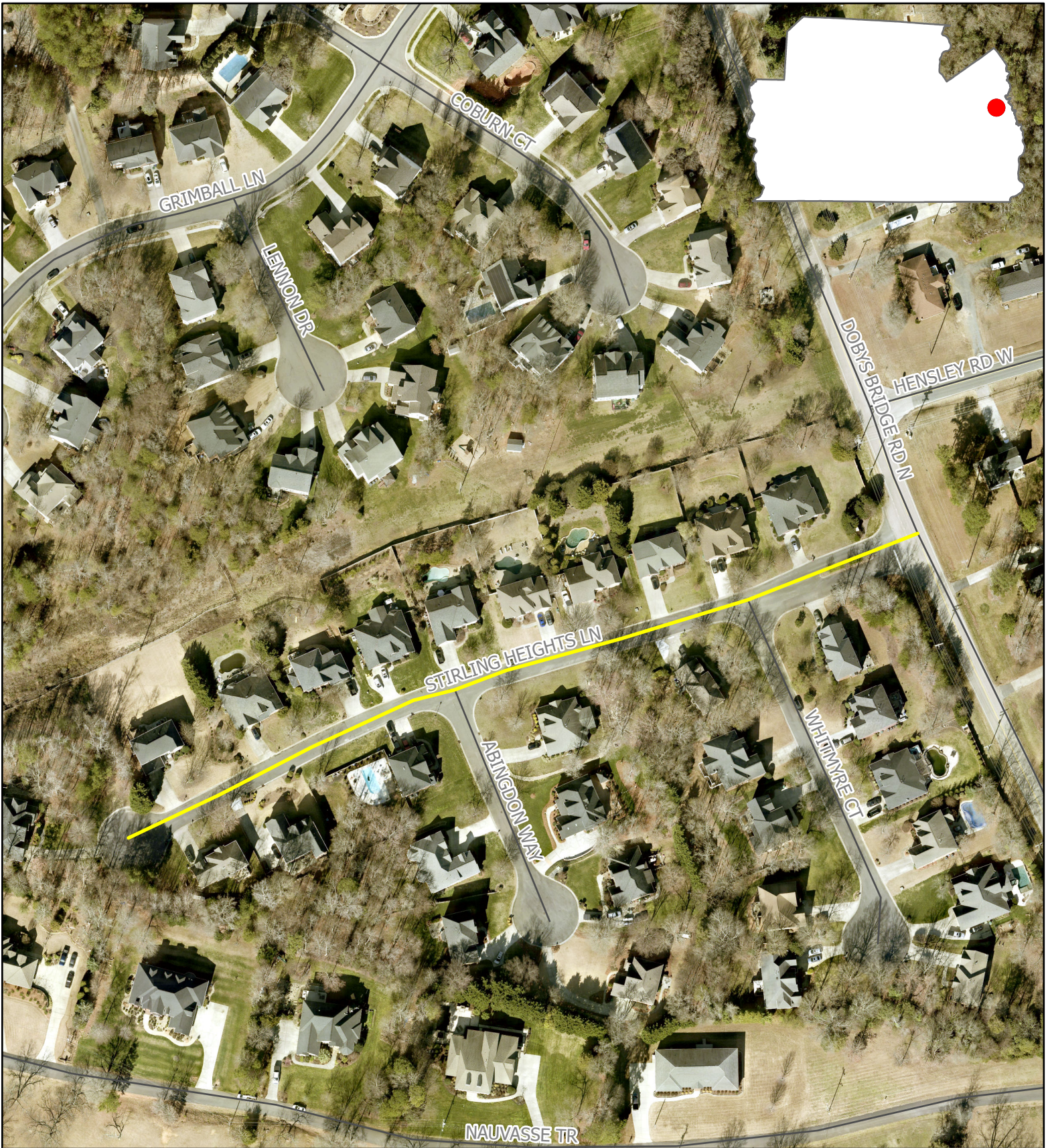


May 09, 2024

2023-2024 Resurfacing Project

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Old Depot Road
Sharon
1005 LF 16' Wide

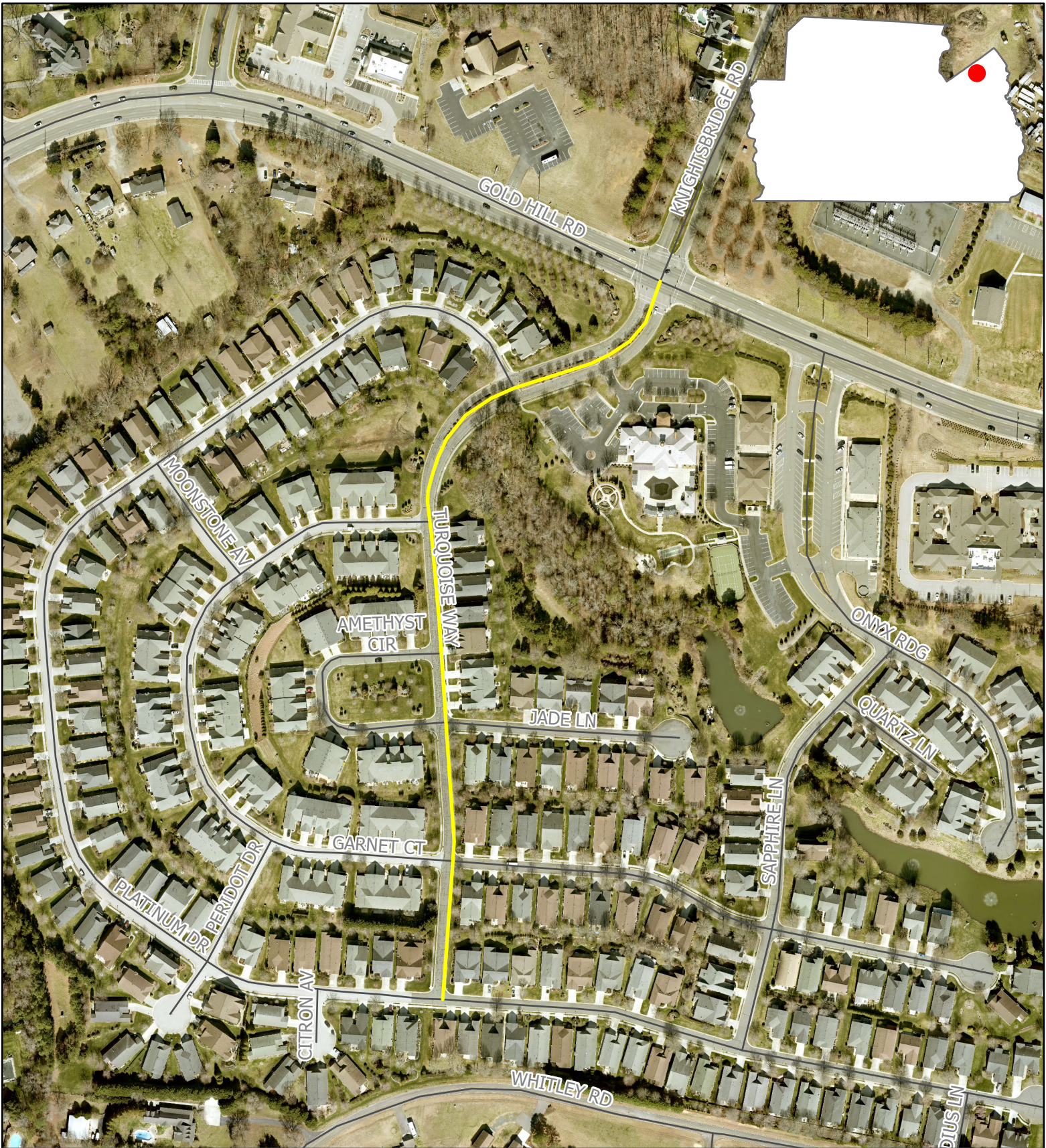


2023-2024 Resurfacing Project

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Stirling Heights
Fort Mill
975 LF 22.5' Wide

May 09, 2024

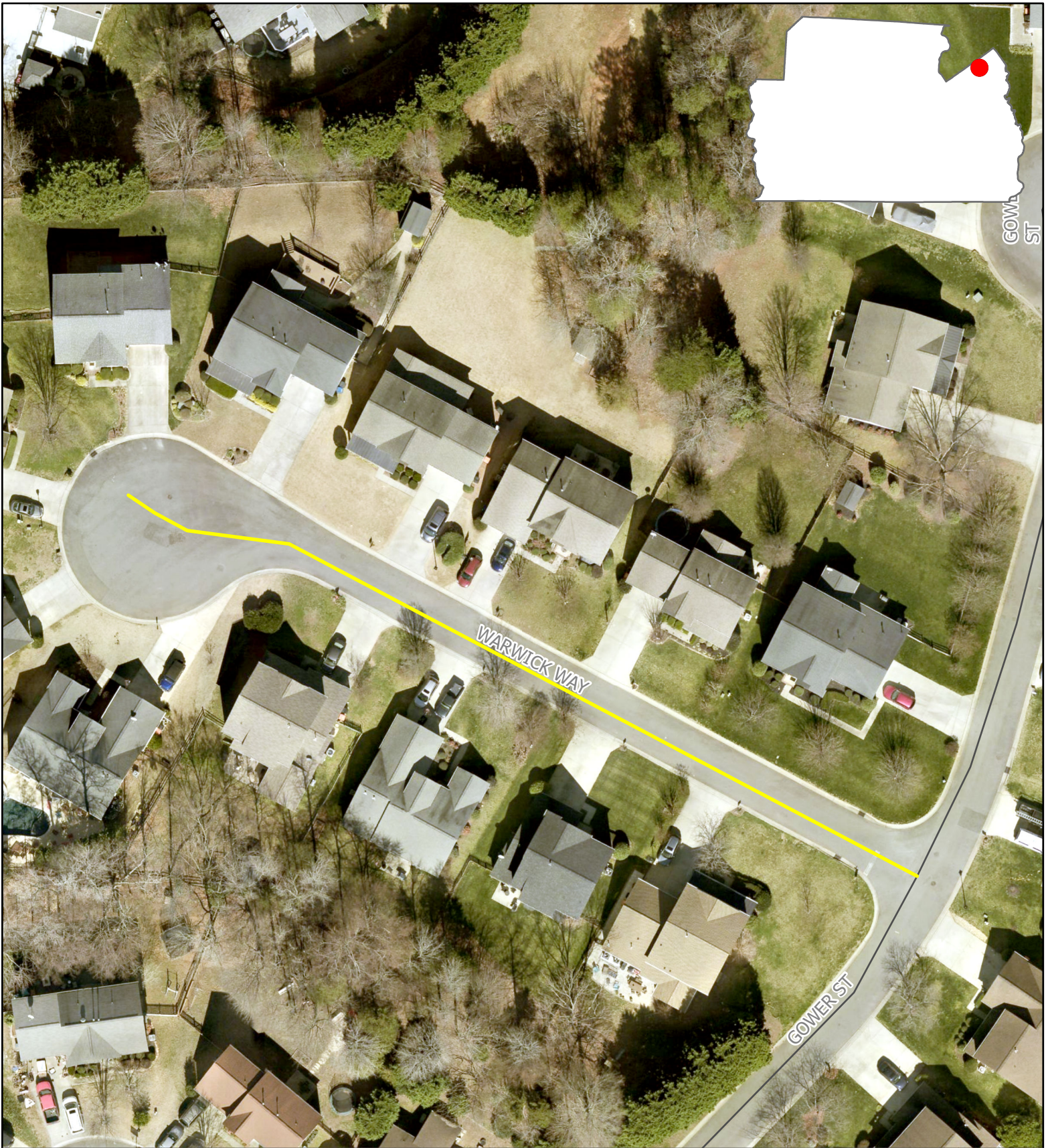


2023-2024 Resurfacing Project

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Turquoise Way
H3-212
1710 LF 22' Wide

May 09, 2024



2023-2024 Resurfacing Project

all quantities are estimates and need field verification by bidding contractor
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Warwick Way
H3-172
410 LF 20' Wide

May 09, 2024



2023-2024 Resurfacing Project

all quantities are estimates and need field verification by bidding contractor (highlighted areas are for reference only)

Whitmyre Court
Fort Mill
435 LF 22.5' Wide

May 09, 2024



May 09, 2024

2023-2024 Resurfacing Project

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Bonner Horton Road
A6-001
Intersection



FILBERT HWY

LAKEWOOD RD



2023-2024 Resurfacing Project

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Lakewood Rd
D3-007
Gravel Pave

May 09, 2024



2023-2024 Resurfacing Project

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Bethelfields Trace
G2-075
1140 LF 22' Wide



May 09, 2024

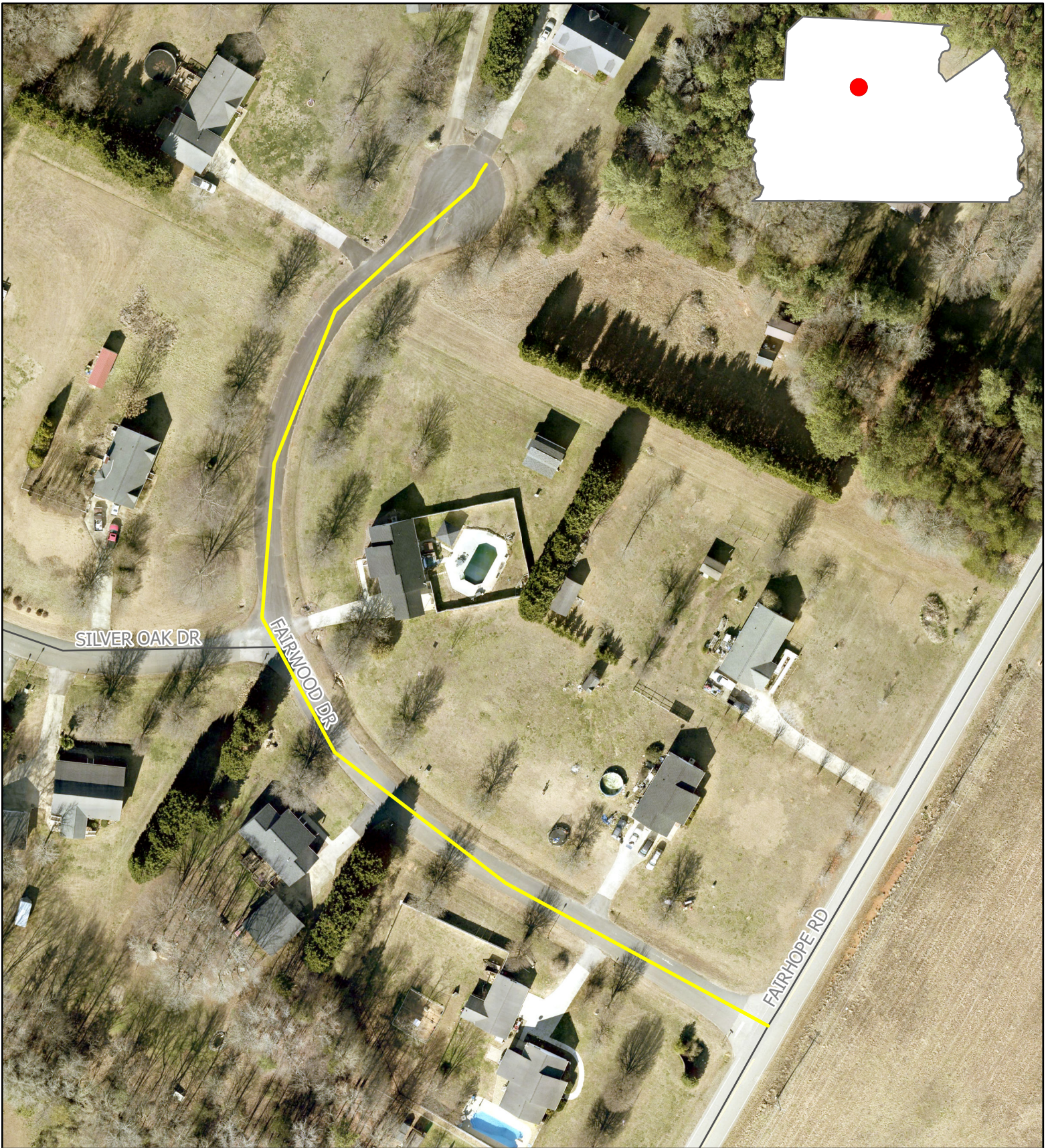


May 09, 2024

2023-2024 Resurfacing Project

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Cyrus Drive
E3-049
860 LF 22' Wide

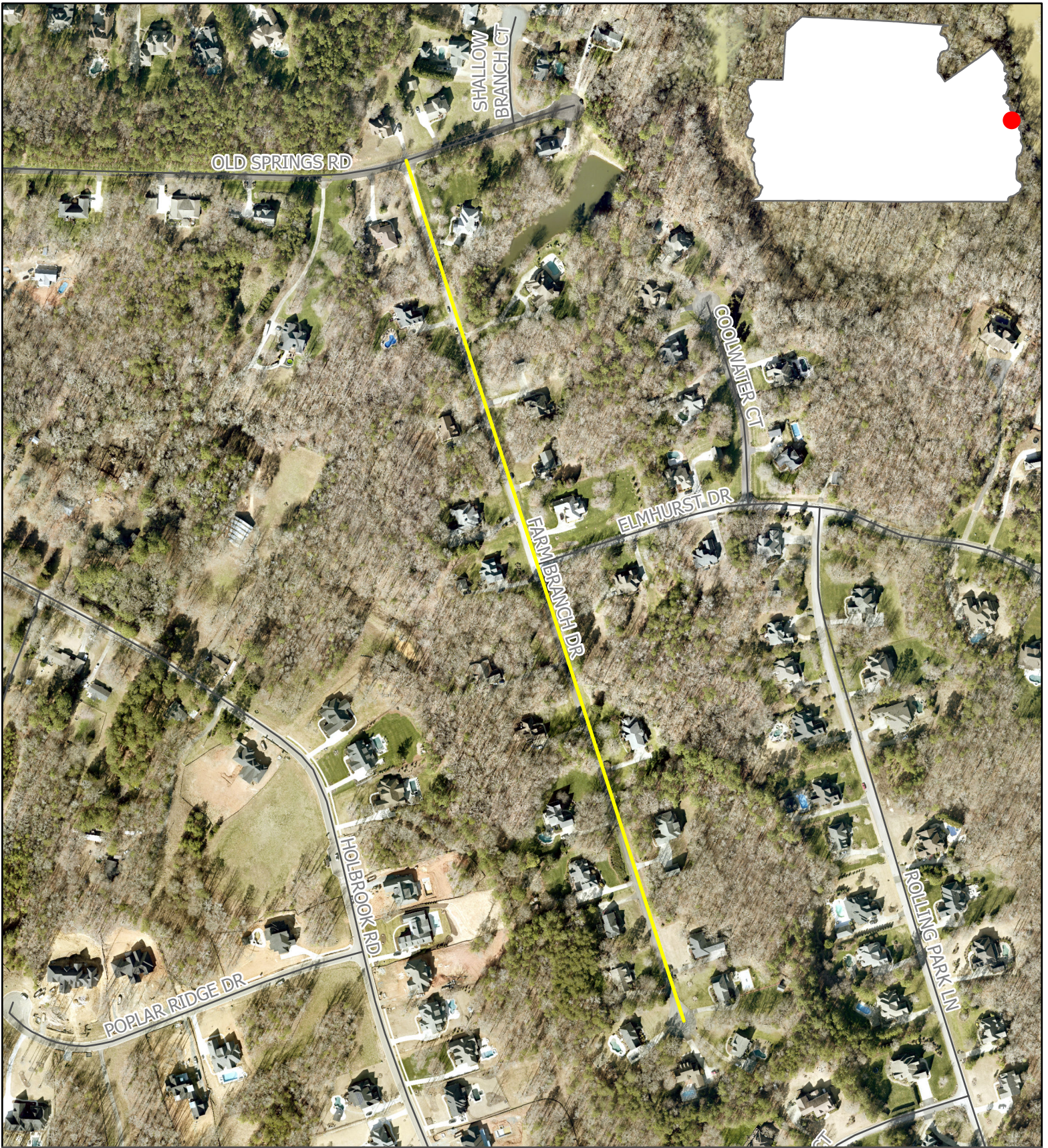


2023-2024 Resurfacing Project

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Fairwood Drive
D3-054
865 LF 22' Wide

May 09, 2024



2023-2024 Resurfacing Project

all quantities are estimates and need field verification by bidding contractor (highlighted areas are for reference only)

Farm Branch Drive
K4-011
2370 LF 22' Wide

May 09, 2024



May 09, 2024

2023-2024 Resurfacing Project

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Impulse Lane
F5-032
1275 LF 19' Wide

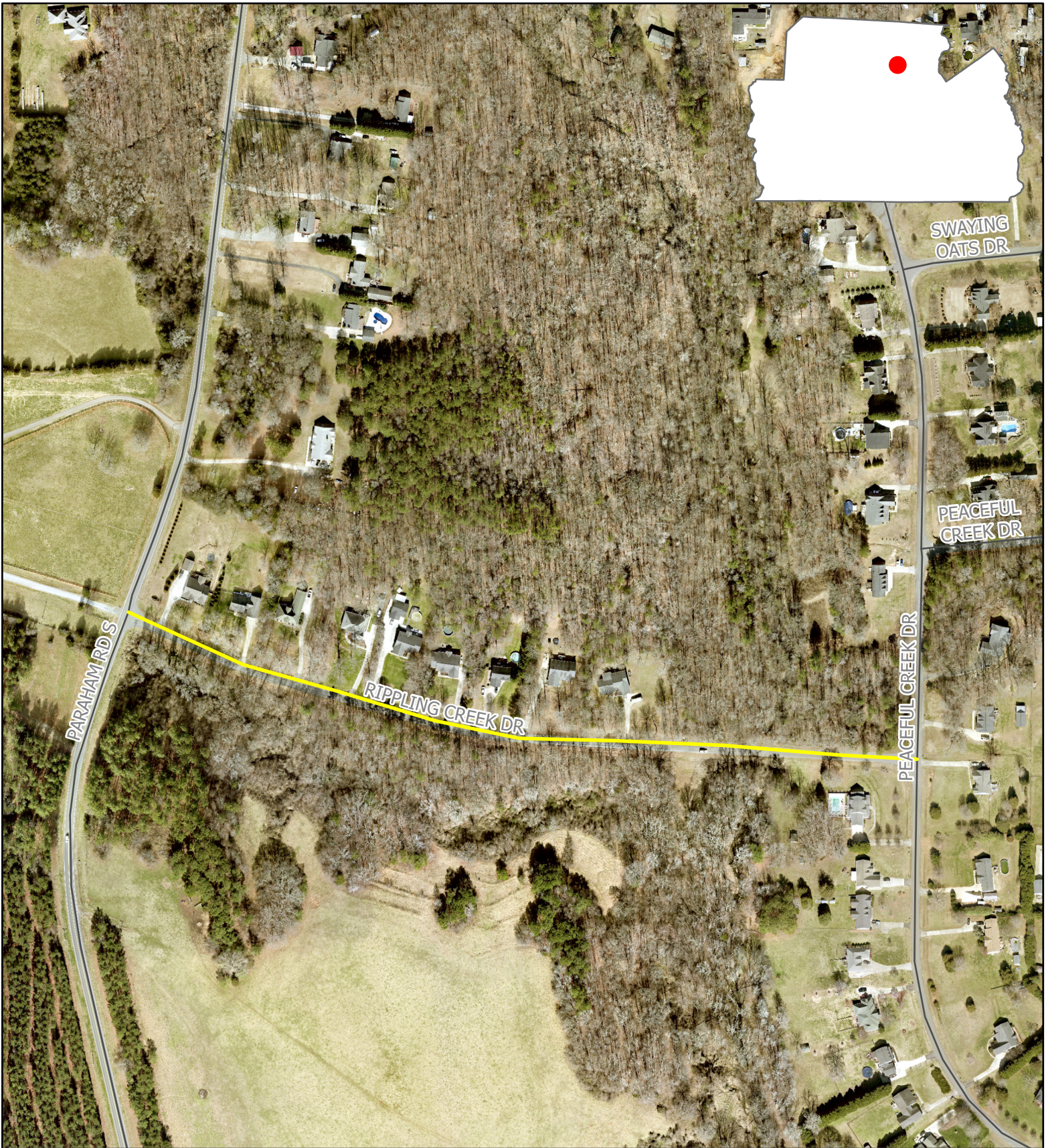


2023-2024 Resurfacing Project

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Landing Pointe Drive
G2-039
1950 LF 22' Wide

May 09, 2024



May 09, 2024

2023-2024 Resurfacing Project

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Rippling Creek Drive
F3-102
1870 LF 22' Wide

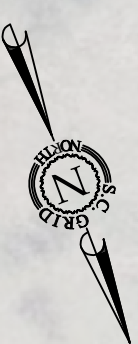


May 09, 2024

2023-2024 Resurfacing Project

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Sagrada Drive
D3-059
780 LF 22' Wide



- PROPOSED GRAVEL ROAD RELOCATION
- COUNTY RIGHT OF WAY
- 🌳 TREE



 POST OFFICE BOX 148

 6 SOUTH CONGRESS STREET

 YORK, SOUTH CAROLINA 29745

 (803) 684-8571

BONNER HORTON RD

 ROAD RELOCATION PROJECT

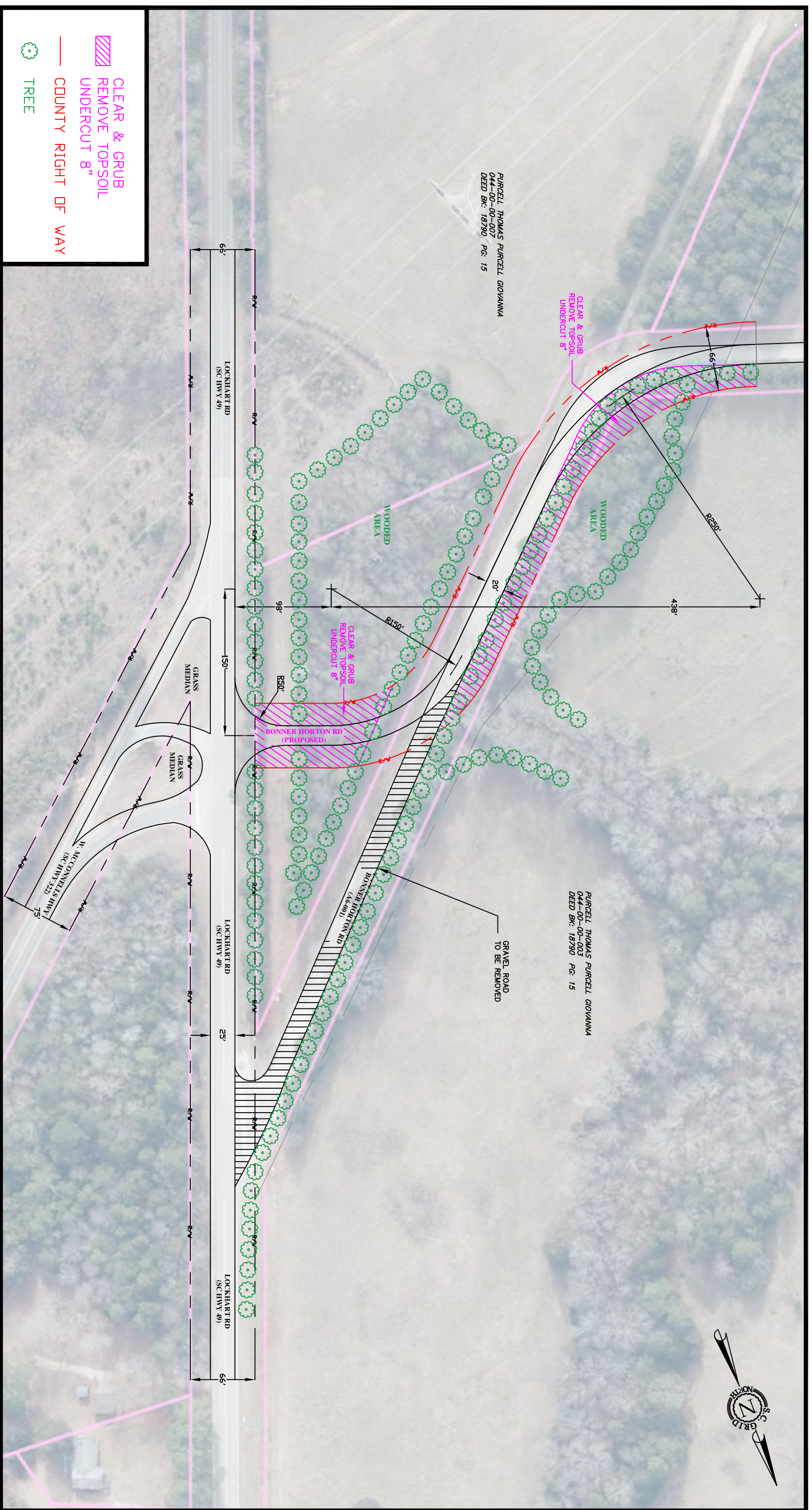
 YORK COUNTY, SOUTH CAROLINA

BONNER HORTON RD

(A6-001)

ROAD RELOCATION

DATE:	04-05-21
SCALE:	NTS
DRAWN BY:	MAP
CHECKED BY:	
PROJECT NO.:	
SHEET NO.:	1/2



- CLEAR & GRUB REMOVE TOPSOIL UNDERCUT 8"
- COUNTY RIGHT OF WAY
- TREE

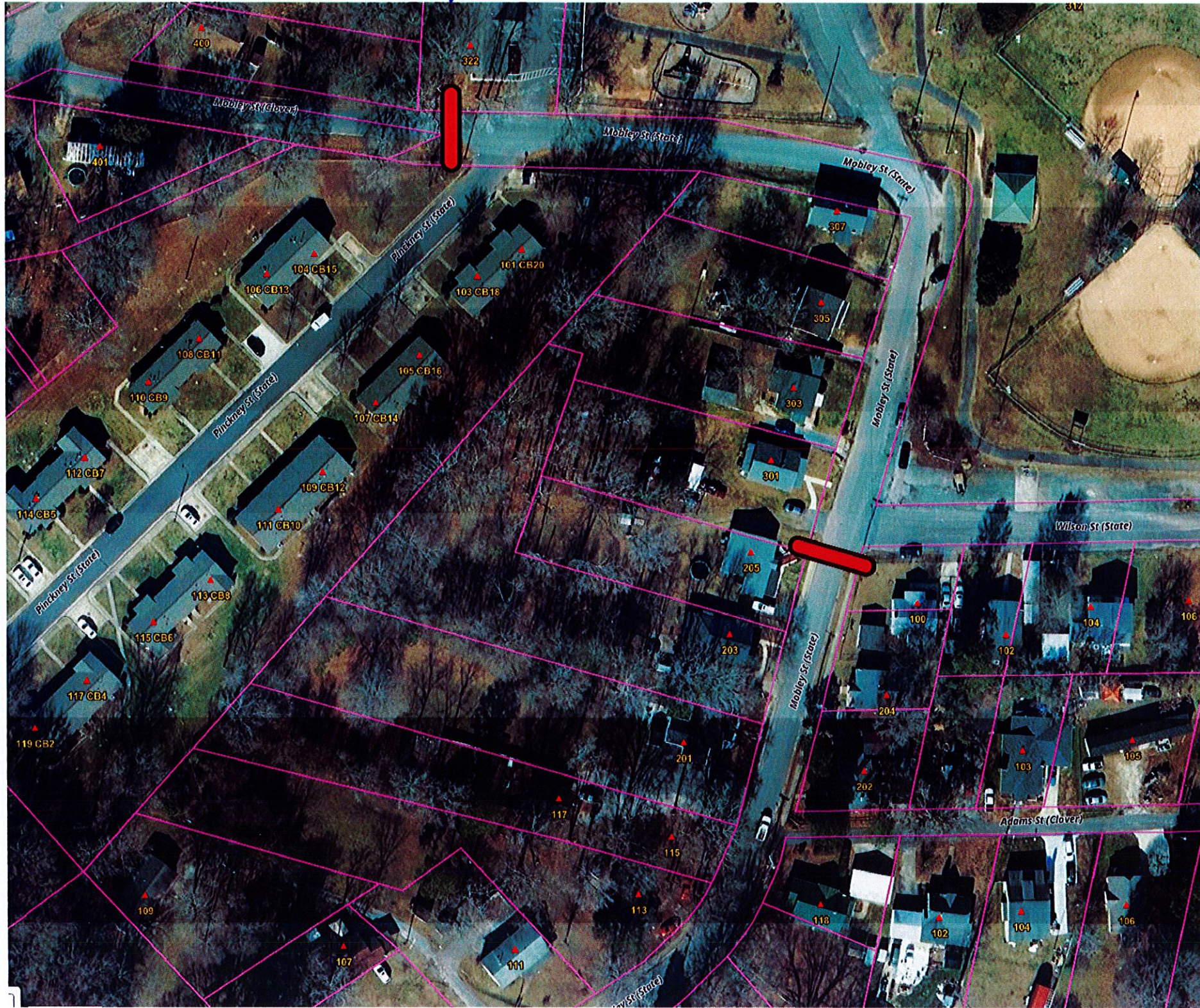
York County
south carolina
POST OFFICE BOX 148
6 SOUTH CONGRESS STREET
YORK, SOUTH CAROLINA 29745
(803) 684-8571

BONNER HORTON RD
ROAD RELOCATION PROJECT
YORK COUNTY, SOUTH CAROLINA

BONNER HORTON RD
(A6-001)
TREE REMOVAL

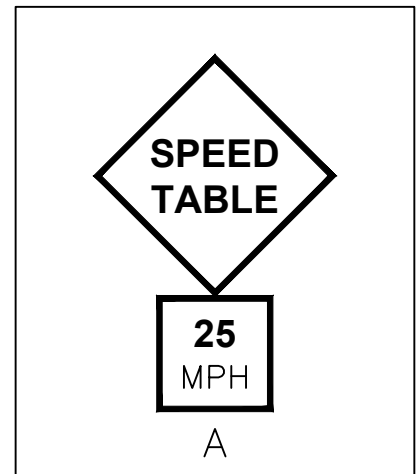
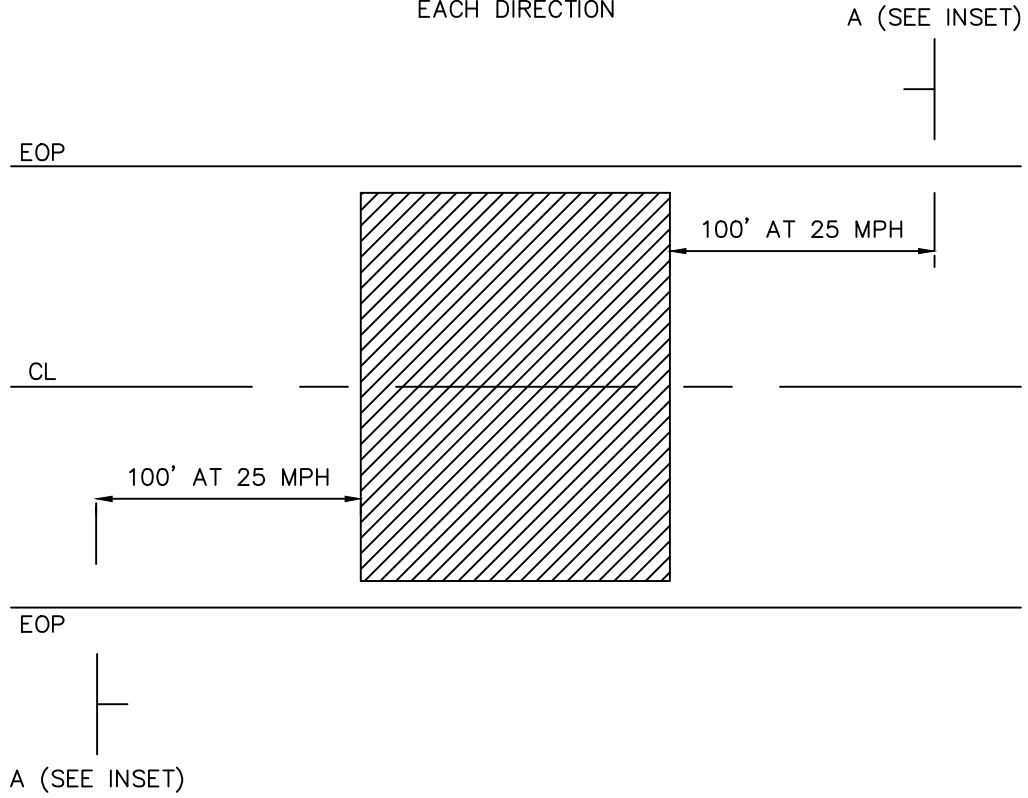
DATE:	04-05-21
SCALE:	NTS
DRAWN BY:	MAP
CHECKED BY:	
PROJECT NO.:	
SHEET NO.:	2/2

65' WEST OF THE CENTERLINE
OF THE COMMUNITY
CENTER DRIVE



50' SOUTH OF THE
CENTERLINE OF
WILSON ST.

SIGNAGE
ONE SIGN
EACH DIRECTION



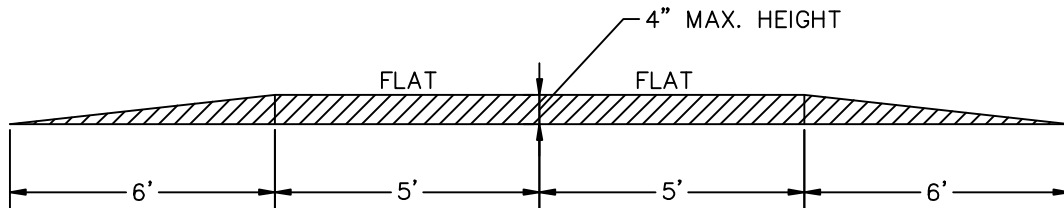
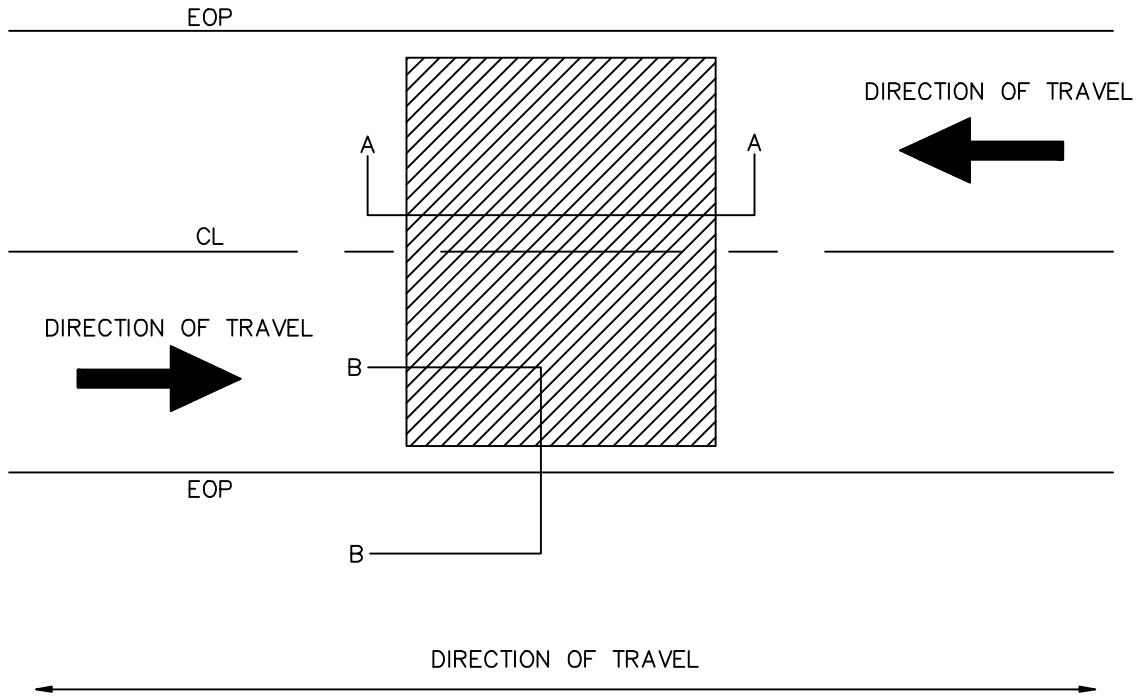
YORK COUNTY ENGINEERING DEPARTMENT
POST OFFICE BOX 148
6 SOUTH CONGRESS STREET
YORK, SOUTH CAROLINA 29745
(803) 684-8571

**SPEED TABLE
DETAIL**

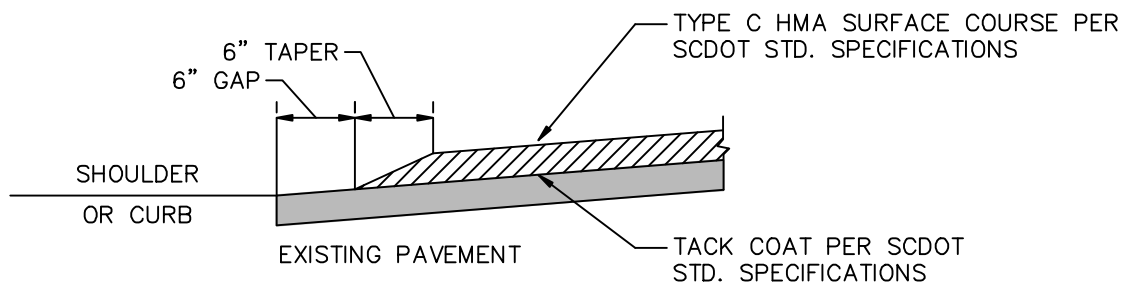
SCALE: N.T.S.

SHEET NO.: 2/2

PLAN VIEW



AA CROSS SECTION AND TABLE DIMENSIONS
N.T.S.



BB EDGE DETAIL
N.T.S.

YORK COUNTY ENGINEERING DEPARTMENT
POST OFFICE BOX 148
6 SOUTH CONGRESS STREET
YORK, SOUTH CAROLINA 29745
(803) 684-8571



**SPEED TABLE
DETAIL**

SCALE: **N.T.S.**
SHEET NO.: **1/2**