

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 0008346 **OFFICE** Design Policy & Support
CSSTP-00008-00(346)
Columbia County
GDOT District 2 - Tennille **DATE** 6/27/2014
SR 28 Widening, from the South Carolina
State Line to CR 1236/Evans-to-Locks Road (TIA)

FROM 
for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Jeff Fletcher, Statewide Location Bureau Chief
Jimmy Smith, District Engineer
Neal O'Brien, District Preconstruction Engineer
Lynn Bean, District Utilities Engineer
George Brewer, Project Manager
BOARD MEMBER - 12th Congressional District

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Type: Road Widening P.I. Number: 0008346
 GDOT District: 2 County: Columbia
 Federal Route Number: N/A State Route Number: 28
 Project Number: CSSTP-0008-00(346)

This project involves widening SR 28/Furys Ferry Road from Evans To Locks Road to the South Carolina state line. The road will be widened from two lanes to four lanes with a raised median. This project also includes the addition of sidewalk and bike lanes.

Submitted for approval:

<u><i>Thik Costen</i></u>	<u>4/14/2014</u>
Consultant Designer & Firm, URS Corporation	DATE
<u><i>Albert Shelby</i></u> <i>BA</i>	<u>4/18/14</u>
State Program Delivery Engineer	DATE
<u><i>Greg M. Brown</i></u>	<u>4/14/2014</u>
GDOT Project Manager	DATE

Recommendation for approval:

Program Control Administrator	<u><i>HIRAL PATEL* /EKP</i></u>	<u>5/15/2014</u>
State Environmental Administrator	<u><i>KATHY ZAHUL* /EKP</i></u>	<u>4/25/2014</u>
State Traffic Engineer	<u><i>LISA MYERS* /EKP</i></u>	<u>4/29/2014</u>
Project Review Engineer	<u><i>LEE UPKINS* /EKP</i></u>	<u>4/25/2014</u>
<i>FOR</i> State Utilities Engineer	<u><i>JIMMY SMITH* /EKP</i></u>	<u>4/29/2014</u>
District Engineer		DATE
State Transportation Financial Management Administrator	<u><i>BEN ROBIN* /EKP</i></u>	<u>5/28/2014</u>
STATE BRIDGE DESIGN ENGINEER		DATE
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).		
State Transportation Planning Administrator	<u><i>CINDY VANDUYKE /EKP</i></u>	<u>4/25/2014</u>
		DATE

** - RECOMMENDATION ON FILE*

PROJECT LOCATION



LOCATION MAP

SR 28 from Evans To Locks Rd to South Carolina state line

COLUMBIA COUNTY

PROJECT NO. CSSTP-0008-00(346) / P.I. NO. 0008346

County: Columbia

PLANNING & BACKGROUND DATA

Project Justification Statement:

In Columbia County, State Route 28 from just north of the Savannah River (South Carolina state line) is a north-south route classified as an urban minor arterial. In this area, SR 28 is a two lane roadway which becomes four lanes as it crosses Evans To Locks Road. The SR 28 corridor is currently listed as a designated bike route in the Statewide Bicycle Plan.

A project is included in the Augusta-Richmond County Metropolitan Planning Organization's (MPO) 2035 Long Range Transportation Plan to widen SR 28 in Georgia to the State line due to unacceptable existing and future traffic congestion conditions. There is no project to widen SR 28 over the Savannah River into South Carolina. The Georgia project was programmed in July 2006 as GDOT project PI 0008346 with the intent to improve this route. In September 2009, funding for the project's scoping phase was assigned for fiscal year 2011.

Traffic counts are available from the GDOT State Traffic and Report Statistics (STARS) program on SR 28 between the Savannah River and Evans To Locks Road. In the year 2010, STARS indicated a traffic volume at count station 116 of 11,990 AADT. Historic trend analysis was completed for this count station and the projected traffic volume is 20,300 AADT in the year 2035. These volumes correspond to a year 2010 level-of-service (LOS) of "D" and projected year 2035 LOS "E" without improvements; both conditions are considered unacceptable levels of traffic congestion. Using the last three years of available crash data, the analyzed crash rates for the corridor were below the state average.

Based upon only one traffic count available in the area, these general limits appear appropriate. Further refinements to the limits are expected based on results of more detailed design-level traffic volumes that will be completed as project development proceeds.

This section of the SR 28 corridor under review is in need of capacity increasing improvements demonstrated through high traffic and deficient Level of Service. Providing these improvements in the corridor will serve to improve Level of Service on the corridor and relieve traffic congestion in this area as proposed in the TIA application.

Existing conditions: The existing SR 28 corridor between Evans To Locks Road and the South Carolina state line is 2 lane road with rural shoulders and some auxiliary lanes at intersections. There are few sidewalks along the corridor. The major intersections along SR 28 are at Evans To Lock Road, Southern Pines Drive, North Belair Road/Mullikin Road, and Hardy McManus Road.

Other projects in the area:

0009623 – Resurfacing and maintenance of CR 1236/Evans To Locks Road from SR 104 to SR 28

221860 – Widening of SR 28/Furys Ferry Road from Riverwatch Parkway to north of CR 98

0008352 – Widening of Stevens Creek Road from Evans To Locks Road to Claussen Road

MPO: Augusta Regional Transportation Study (ARTS)

MPO Project ID STP-9

Regional Commission: Central Savannah River RC

RC Project ID RC07-000024

County: Columbia

Congressional District(s): 12

Federal Oversight: Full Oversight Exempt State Funded Other

This is a TIA project.

Projected Traffic: ADT

Current Year (2013): 21,500 Open Year (2022): 25,050 Design Year (2042): 35,300
 Traffic Projections Performed by: Gresham Smith and Partners.

Functional Classification (Mainline): Urban Minor Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes

Pavement Evaluation and Recommendations

Preliminary Pavement Evaluation Summary Report Required? No Yes

Preliminary Pavement Type Selection Report Required? No Yes

Feasible Pavement Alternatives: HMA PCC HMA & PCC

Preliminary Pavement Evaluation Summary Report will be completed during preliminary design.

DESIGN AND STRUCTURAL DATA

Description of the proposed project:

The proposed project will widen a 3.8 mile section of SR 28 in Columbia County, Georgia from Evans To Locks Road to the South Carolina State Line. It is proposed to widen the existing two lane section to a four lane urban section divided by a planted raised median with median breaks at designated locations. The project also includes the addition of sidewalks and bike lanes. The existing right of way varies from 90 to 160 feet. Additional right of way will be required for widening of the existing roadway, and will have a standard width of 145 feet, with additional right of way as required.

Major Structures:

Structure	Existing	Proposed
073-0002-0	43' long double barrel 10ft X 9ft Culvert. SI&A report	Will extend the existing culvert approximately 20ft to the east and 60ft to the west.
Retaining walls	None	To avoid encroaching on existing parking lots and retention ponds.

County: Columbia

Mainline Design Features: State Route 28

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	4	4
- Lane Width(s)	12'	11' to 12'	11'
- Median Width & Type	None	20' Raised	20' Raised
- Outside Shoulder or Border Area Width		10' rural	12' urban
- Outside Shoulder Slope		6% rural	2%
- Inside Shoulder Width	None	N/A	N/A
- Sidewalks	5' intermittent	None	5'
- Auxiliary Lanes	None	None	None
- Bike Lanes	None	4'	4'
Posted Speed	55 mph		45 mph
Design Speed		55 mph	45 mph
Min Horizontal Curve Radius			643'
Maximum Superelevation Rate		6%	4%
Maximum Grade		6%	6%
Access Control	Permitted	Permitted	Permitted
Design Vehicle		SU	WB-50
Pavement Type	Asphalt		Asphalt

*According to current GDOT design policy if applicable

Major Interchanges/Intersections:

Hardy McManus Rd at SR 28 – Hardy McManus Rd has one left turn lane and one channelized right turn lane in the eastbound direction. SR 28 currently has a left turn lane in the northbound direction, a channelized right turn lane in the southbound direction, and one through lane in each direction.

N Belair Rd/Mullikin Rd at SR 28 – N Belair Rd and Mullikin Rd each has a left turn lane and a right-through lane with a channelized right turn. SR 28 has a left turn lane in both directions as well as a through lane and a right turn lane in the northbound direction and a right-through lane in the southbound direction. The intersection is signalized and has crosswalks crossing each approach.

Southern Pines Dr at SR 28 – Southern Pines Dr has one left turn lane and one channelized right turn lane in the northbound direction. SR 28 has one right-through lane in the eastbound and one left-through lane in the westbound direction.

Evans To Locks Rd at SR 28 – Evans To Locks Rd has one left turn lane, one right turn lane, and two through lanes in both the eastbound and westbound directions. SR 28 has one left turn lane, a channelized right turn lane, and two through lanes in both the northbound and southbound directions.

Lighting required: No Yes

County: Columbia

Off-site Detours Anticipated: No Undetermined Yes

It is expected that traffic will be staged and no off-site detours will be required.

Transportation Management Plan [TMP] Required: No Yes

If Yes: Project classified as: Non-Significant Significant

TMP Components Anticipated: TTC TO PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undeter- -mined	Yes	Appvl Date (if applicable)
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bridge Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Horizontal Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Superelevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Vertical Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Bridge Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undeter-- -mined	Yes	Appvl Date (if applicable)
1. Access Control/Median Openings	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Intersection Sight Distance	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Skew Angle	DP&S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Lateral Offset to Obstruction	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Rumble Strips	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Safety Edge	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Median Usage	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Roundabout Illumination Levels	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Complete Streets	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. ADA & PROWAG	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. GDOT Construction Standards	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. GDOT Drainage Manual	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Bridge & Structural Manual	Bridges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

The skew angle of the intersection at SR28 and Mullikin Road/N Belair Road is less than the GDOT required angle of 70 degrees but greater than the AASHTO required angle of 60 degrees. This project

County: Columbia

does not include the adjustment of the intersection due to the issue of having to realign both side streets which would lead to multiple displacements.

VE Study anticipated: No Yes Completed – Date:

UTILITY AND PROPERTY

Temporary State Route needed: No Yes Undetermined

Railroad Involvement: None

Utility Involvements:

- Atlanta Gas Light Company – Gas
- AT&T – Telephone
- Columbia County Broadband Utility - Telecommunications
- Columbia County Traffic Engineering – Traffic
- Columbia County Water Utility – Water & Sewer
- Georgia Power – Power
- Comcast – Cable
- Wide Open West – Cable
- Level 3 Communications - Telecommunications
- Tower Cloud – Telecommunications

SUE Required: No Yes
QL-D is being provided as a part of the concept.

Public Interest Determination Policy and Procedure recommended (Utilities)? No Yes

Right-of-Way (ROW): Existing width: 90 to 160 ft Proposed width: 145 ft standard
Required Right-of-Way anticipated: No Yes Undetermined
Easements anticipated: None Temporary Permanent Utility Other

Anticipated number of impacted parcels:	110
Displacements anticipated:	Total: 8
	Businesses: 0
	Residences: 8
	Other: 0

Location and Design approval: Not Required Required

County: Columbia

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern:

1. The existing roadway corridor has little to no bicycle or pedestrian accommodations.
2. Adding extra pavement and changing the hydraulics of the area could result in flooding.

Context Sensitive Solutions:

1. Sidewalks and bike lanes will be added along the corridor, also conforming to the Augusta Regional Transportation Study, Bicycle and Pedestrian Plan.
2. To minimize the risk of flooding, under the GAR41000 NPDES/MS4 permit, the implementation of post-construction BMPs is required to treat the first 1.2 inches of stormwater runoff for water quality, provide detention of the channel protection volume, and provide safe passage of the 100-year storm event.

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: NEPA: CE EA/FONSI EIS

Project is fully funded by TIA and is only required to have a GEPA document.

MS4 Compliance – Is the project located in an MS4 area? No Yes

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Project will need to comply with the GAR 10002 permit for erosion and sediment control as well as the GAR 41000 permit for MS4 since Columbia County is within the Phase 1 boundary.

County: Columbia

Is a PAR required? No Yes Completed – Date:

Environmental Comments and Information:

NEPA/GEPA:

A GEPA environmental document is currently anticipated because this is a TIA project

Ecology:

See the Ecology Report in the appendices.

History:

See the History Report in the appendices.

Archeology:

No archaeological sites have been recorded within a one-kilometer radius of the project area.

Air Quality:

Is the project located in a PM 2.5 Non-attainment area?

No

Yes

Is the project located in an Ozone Non-attainment area?

No

Yes

Is a Carbon Monoxide hotspot analysis required?

No

Yes

Noise Effects:

Not necessary for TIA projects.

Public Involvement:

The level of public involvement on this project is to be determined later.

Major stakeholders:

Columbia County
Riverside Middle School

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: None

Early Completion Incentives recommended for consideration: No Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: Not held

Concept Meeting: Meeting was held 2-20-2014 – minutes attached

Other coordination to date: None

County: Columbia

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	URS Corporation
Design	Columbia County
Right-of-Way Acquisition	Columbia County
Utility Relocation	Regional Program Manager
Letting to Contract	Columbia County
Construction Supervision	Regional Program Manager
Providing Material Pits	Contractor
Providing Detours	Columbia County
Environmental Studies, Documents, and Permits	Columbia County
Environmental Mitigation	Columbia County
Construction Inspection & Materials Testing	Regional Program Manager

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
By Whom	TIA	TIA	TIA	TIA	TIA	
\$ Amount	\$648,269.00	\$11,521,000.00	\$4,049,000.00	\$16,837,313.00	\$1,082,670.00	\$34,138,252.00
Date of Estimate	8/2/2012	3/3/2014	3/25/2014	4/3/2014	3/26/2014	

*CST Cost includes: Construction, Engineering and Inspection, and Liquid AC Cost Adjustment.

Comments:**Attachments:**

1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection
 - b. Completed Fuel & Asphalt Price Adjustment forms
 - c. Right-of-Way
 - d. Utilities
 - e. Environmental Mitigation (EPD, etc)
4. Traffic Diagrams
5. Traffic Data Approval Letter
6. Hydrology Study for MS4 Permit
7. Historic Resources Survey Report
8. Ecology Report
9. Phase I Environmental Site Assessment Report
10. Minutes of Meetings
11. TIA Project Sheet
12. SI&A Report

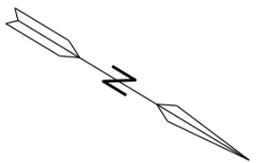
APPROVALS

Concur: _____ *W/A*
Director of Engineering

Approve: _____ *[Signature]*
Chief Engineer

_____ *6-23-14*
Date

Attachment #1



PROPERTY AND EXISTING R/W LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	---C---F---
EASEMENT FOR CONSTR OF SLOPES	---C---F---
EASEMENT FOR CONSTR OF DRIVES	---C---F---

BEGIN LIMIT OF ACCESS.....BLA	---
END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---

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SCALE IN FEET
0 100 200 400

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
TO THE SOUTH CAROLINA STATE LINE

DRAWING No. 1



SEE SHEET 1

SEE SHEET 3

<p>PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES</p>	<p>---e--- ---c---f--- [Hatched Box] [Hatched Box] [Hatched Box]</p>
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<p>BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS</p>	<p>---o---o--- --- --- </p>
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SR 28 FROM EVANS TO LOCK ROAD
TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
2



SEE SHEET 2

SEE SHEET 4

PROPERTY AND EXISTING R/W LINE	-----E-----
REQUIRED R/W LINE	—————
CONSTRUCTION LIMITS	—G—F—
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF SLOPES	[Diagonal Hatched Box]
EASEMENT FOR CONSTR OF DRIVES	[Cross-hatched Box]

BEGIN LIMIT OF ACCESS.....BLA	—o—o—o—o—
END LIMIT OF ACCESS.....ELA	— — — — —
LIMIT OF ACCESS	— — — — —
REQ'D R/W & LIMIT OF ACCESS	— — — — —

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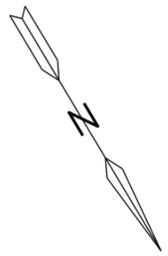
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
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CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
3



SEE SHEET 3

SEE SHEET 5

BRIDLEWOOD TRAIL

PROPERTY AND EXISTING R/W LINE	-----E-----
REQUIRED R/W LINE	—————
CONSTRUCTION LIMITS	—C—F—
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF DRIVES	[Hatched Box]

BEGIN LIMIT OF ACCESS.....BLA	—•••••
END LIMIT OF ACCESS.....ELA	—•••••
LIMIT OF ACCESS	—•••••
REQ'D R/W & LIMIT OF ACCESS	—•••••

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CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
TO THE SOUTH CAROLINA STATE LINE

DRAWING No. 4



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES

-----E-----
 ---C---F---
 [Hatched Box]
 [Hatched Box]
 [Hatched Box]

BEGIN LIMIT OF ACCESS.....BLA
 END LIMIT OF ACCESS.....ELA
 LIMIT OF ACCESS
 REQ'D R/W & LIMIT OF ACCESS

GEORGIA
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REVISION DATES

STATE OF GEORGIA
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 OFFICE: PROGRAM DELIVERY
CONCEPT PLAN
 SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
5



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES

---e--- BEGIN LIMIT OF ACCESS.....BLA
 ---c--- END LIMIT OF ACCESS.....ELA
 ---f--- LIMIT OF ACCESS
 ---h--- REQ'D R/W & LIMIT OF ACCESS

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 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
 6



PROPERTY AND EXISTING R/W LINE	-----E-----
REQUIRED R/W LINE	=====
CONSTRUCTION LIMITS	-----C-----
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	-----F-----
EASEMENT FOR CONSTR OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF DRIVES	[Cross-hatched Box]

BEGIN LIMIT OF ACCESS.....BLA	-----E-----
END LIMIT OF ACCESS.....ELA	=====
LIMIT OF ACCESS	-----C-----
REQ'D R/W & LIMIT OF ACCESS	[Hatched Box]

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SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

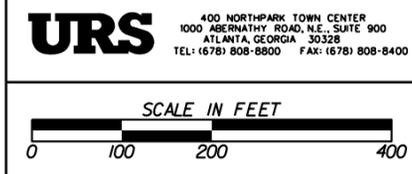
DRAWING No. 7



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES

-----B-----
 BEGIN LIMIT OF ACCESS.....BLA
 END LIMIT OF ACCESS.....ELA
 LIMIT OF ACCESS
 REQ'D R/W & LIMIT OF ACCESS

GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION



REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
 8



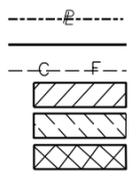
SEE SHEET 8

SR 28/ FURYS FERRY ROAD

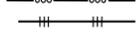
FERRY LANDING

END WORK

PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES

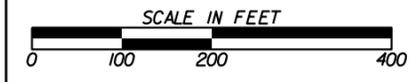


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 LIMIT OF ACCESS
 REQ'D R/W & LIMIT OF ACCESS



GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION

URS 400 NORTHPARK TOWN CENTER
 1000 ABERNATHY ROAD, N.E., SUITE 900
 ATLANTA, GEORGIA 30328
 TEL: (678) 808-8800 FAX: (678) 808-8400



REVISION DATES

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY

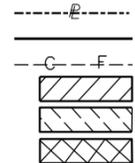
CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

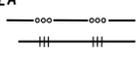
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PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA
 END LIMIT OF ACCESS.....ELA
 LIMIT OF ACCESS
 REQ'D R/W & LIMIT OF ACCESS



GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION

URS 400 NORTH PARK TOWN CENTER
 1000 ABERNATHY ROAD, N.E., SUITE 900
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 TEL: (678) 808-8800 FAX: (678) 808-8400



REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY

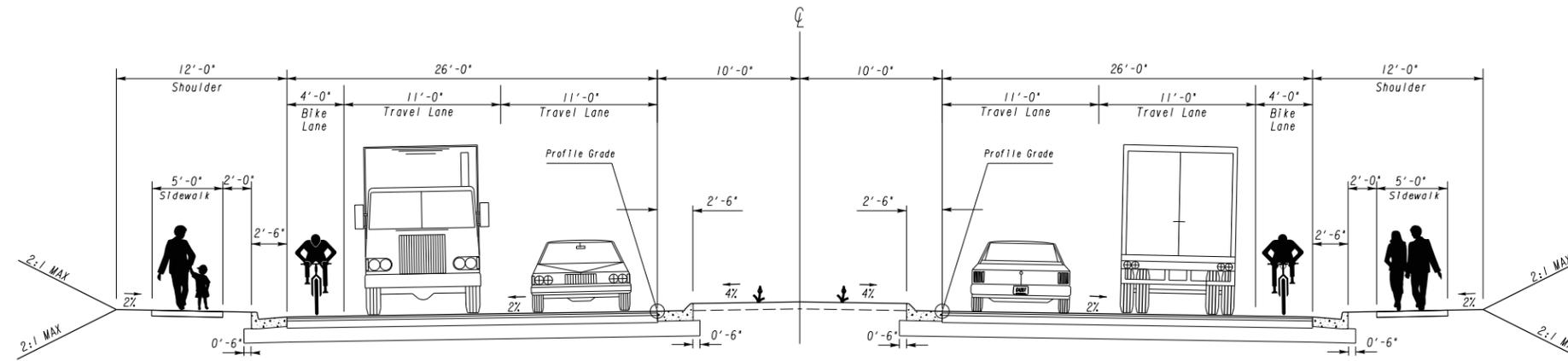
CONCEPT PLAN

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
 10

Attachment #2

SR 28 TYPICAL
Proposed Typical Section



GEORGIA
DEPARTMENT
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URS
400 NORTHPARK TOWN CENTER
1000 ABERNATHY ROAD, N.E., SUITE 900
ATLANTA, GEORGIA 30328
TEL: (678) 808-8800 FAX: (678) 808-8400

NOT TO SCALE

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

TYPICAL SECTIONS

SR 28 FROM EVANS TO LOCK ROAD
TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
1

Attachment #3

STATE HIGHWAY AGENCY

DATE : 04/03/2014
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : 0008346-CONCEPT SPEC YEAR: 01
DESCRIPTION: SR 28 WIDENING FROM EVANS TO LOCKS RD TO SC

COST GROUPS FOR JOB 0008346-CONCEPT

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
EROC	EROSION CONTROL (SY)	1.000	700000.00000	700000.00	Y
MISC	MS4 REQUIREMENTS	1.000	800000.00000	800000.00	Y
SGNL	TRAFFIC SIGNALS (LS)	1.000	100000.00000	100000.00	Y
MISC	SIGNING AND MARKING	1.000	400000.00000	400000.00	Y
MISC	LANDSCAPING	1.000	275000.00000	275000.00	Y
ACTIVE COST GROUP TOTAL				2275000.00	
INFLATED COST GROUP TOTAL				2275000.00	

ITEMS FOR JOB 0008346-CONCEPT

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - P.I. NO. 0008346	1.000	750000.00	750000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	79822.07	79822.08
0020	210-0100		LS	GRADING COMPLETE - P.I. NO. 0008346	1.000	2000000.00	2000000.00
0025	310-5120		SY	GR AGGR BS CRS 12IN INCL MATL	111850.000	20.94	2342556.20
0030	402-1812		TN	RECYL AC LEVELING, INC BM&HL	9014.000	66.84	602545.97
0035	402-3113		TN	RECYL AC 12.5MM SP, GP1/2, BM&HL	15757.000	66.10	1041641.54
0040	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2 , INC BM&HL	12437.000	61.46	764378.02
0045	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	24875.000	59.12	1470736.37
0050	441-0740		SY	CONC MEDIAN, 4 IN	5931.000	24.97	148102.94
0055	441-0104		SY	CONC SIDEWALK, 4 IN	23065.000	23.11	533143.78
0060	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	78378.000	10.23	802124.37
0065	550-1180		LF	STM DR PIPE 18", H 1-10	20000.000	29.57	591531.00
0070	550-1240		LF	STM DR PIPE 24", H 1-10	10000.000	35.21	352187.20
0075	641-1200		LF	GUARDRAIL, TP W	2000.000	16.23	32462.76
0080	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	6.000	731.16	4387.00
0085	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	6.000	1953.13	11718.80
0090	668-1100		EA	CATCH BASIN, GP 1	160.000	2162.11	345937.76
0095	163-0531		EA	CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- P.I. NO. 0008346	20.000	9447.60	188952.03
0100	441-4040		SY	CONC VALLEY GUTTER, W/CURB, 6"	855.000	47.25	40398.75
0105	441-4050		SY	CONC VALLEY GUTTER, W/CURB, 8"	145.000	37.59	5450.55
0110	413-1000		GL	BITUM TACK COAT	18557.000	2.75	51199.69
0120	668-2100		EA	DROP INLET, GP 1	25.000	1692.36	42309.23
0125	500-3201		CY	CL B CONC, RET WALL	518.000	438.07	226922.78

0130	500-3101	CY	CLASS A CONCRETE	Unti tled	443.000	452.96	200662.22
0135	511-1000	LB	BAR REINF STEEL		50978.000	0.86	44089.85
0140	446-1100	LF	PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH		24000.000	2.43	58440.72
0145	620-0100	LF	TEMP BARRIER, METHOD NO. 1		4000.000	27.44	109761.60

STATE HIGHWAY AGENCY

DATE : 04/03/2014
PAGE : 2

JOB ESTIMATE REPORT

0150	634-1200	EA	RIGHT OF WAY MARKERS		200.000	96.38	19277.33
0155	643-8200	LF	BARRIER FENCE (ORANGE), 4 FT		1000.000	1.87	1871.37
0160	150-5010	EA	TRAF CTRL, PORTABLE IMPACT ATTN		4.000	7400.90	29603.60
0165	603-2181	SY	STN DUMPED RIP RAP, TP 3, 18"		500.000	43.14	21570.79
0170	603-7000	SY	PLASTIC FILTER FABRIC		500.000	3.23	1617.88

ITEM TOTAL							12915404.17
INFLATED ITEM TOTAL							12915404.17

TOTALS FOR JOB 0008346-CONCEPT

ESTIMATED COST:							15190404.18
CONTINGENCY PERCENT (5.0):							759520.21
ESTIMATED TOTAL:							15949924.39

PROJ. NO.

CSSTP-0008-00(346)

CALL NO.

P.I. NO.

0008346

DATE

1/16/2014

INDEX (TYPE)

REG. UNLEADED

DATE

Jan-14

INDEX

\$ 3.240

DIESEL

\$ 3.828

LIQUID AC

\$ 557.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)

865694.97

\$

865,694.97

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 891.20

Monthly Asphalt Cement Price month project let (APL)

\$ 557.00

Total Monthly Tonnage of asphalt cement (TMT)

2590.35

ASPHALT	Tons	%AC	AC ton
Leveling	8845	5.0%	442.25
12.5 OGFC	0	5.0%	0
12.5 mm	13610	5.0%	680.5
9.5 mm SP	0	5.0%	0
25 mm SP	19568	5.0%	978.4
19 mm SP	9784	5.0%	489.2
	51807		2590.35

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 21,693.54

\$

21,693.54

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 891.20

Monthly Asphalt Cement Price month project let (APL)

\$ 557.00

Total Monthly Tonnage of asphalt cement (TMT)

64.91186023

Bitum Tack

Gals	gals/ton	tons
15113	232.8234	64.9118602

PROJ. NO.

CSSTP-0008-00(346)

CALL NO.

P.I. NO.

0008346

DATE

1/16/2014

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)						0	\$	-
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	60%	\$	891.20			
Monthly Asphalt Cement Price month project let (APL)				\$	557.00			
Total Monthly Tonnage of asphalt cement (TMT)						0		

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf.Trmt.	0	0.44	0	232.8234	0
Triple Surf. Trmt	0	0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT							\$	887,388.51
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GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 3/3/2014 Project: CSSTP-0008-00(346)
 Revised: County: Columbia
 PI: 0008346

Description: SR 28/Fury Ferry Road to Locks Road
 Project Termini:

Existing ROW: vaires
 Required ROW: vaires
 Parcels: 110

Land and Improvements _____ \$9,018,000.00

Proximity Damage	\$0.00
Consequential Damage	\$2,225,000.00
Cost to Cures	\$400,000.00
Trade Fixtures	\$0.00
Improvements	\$1,600,000.00

Valuation Services _____ \$258,750.00

Legal Services _____ \$711,750.00

Relocation _____ \$440,000.00

Demolition _____ \$160,000.00

Administrative _____ \$932,500.00

TOTAL ESTIMATED COSTS _____ \$11,521,000.00

TOTAL ESTIMATED COSTS (ROUNDED) _____ \$11,521,000.00

Preparation Credits	Hours	Signature

Prepared By: Dashone Alexander CG#: 286999 03/03/2014 (DATE)
 Approved By: Dashone Alexander CG#: 286999 03/03/2014 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
Land and Improvements	Agriculture	Residential	Commercial	Industrial
1 Estimate Low (ac)	\$0.00	\$30,492.00	\$39,204.00	\$0.00
2 Estimate High (ac)	\$0.00	\$39,204.00	\$70,132.00	\$0.00
3 Estimate Used (ac)	\$0.00	\$34,900.00	\$60,500.00	\$0.00
4 Fee Simple Area (ac)	0.00	20.00	18.00	0.00
5 Fee Simple Estimate	\$0.00	\$698,000.00	\$1,089,000.00	\$0.00
6 Perm Esmt Area (ac)	0.00	0.00	0.00	0.00
7 Perm Esmt Factor	0%	50%	50%	0%
8 Perm Esmt Estimate	\$0.00	\$0.00	\$0.00	\$0.00
9 Temp Esmt Area (ac)	0.00	0.00	0.00	0.00
10 Temp East Factor	0%	0%	0%	0%
11 Temp Esmt Estimate	\$0.00	\$0.00	\$0.00	\$0.00
12 Proximity Damages	\$0.00	\$0.00	\$0.00	\$0.00
13 Consequential Damages	\$0.00	\$1,100,000.00	\$1,125,000.00	\$0.00
14 Cost to Cures	\$0.00	\$300,000.00	\$100,000.00	\$0.00
15 Improvements	\$0.00	\$1,250,000.00	\$350,000.00	\$0.00
16 Trade Fixtures	\$0.00	\$0.00	\$0.00	\$0.00
17				
18 PROPERTY TYPE TOTALS	\$0.00	\$3,348,000.00	\$2,664,000.00	\$0.00
19	SUB TOTAL PROPERTY TYPES			\$6,012,000.00
20	Counter Offers and Condemnation Increases			\$3,006,000.00
21				
22	GRAND TOTAL LANDS AND IMPROVEMENTS			\$9,018,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
Valuation Services	Agriculture	Residential	Commercial	Industrial
1 Appraisals (# of Parcels)	0	68	42	0
2 Estimated Fees (per Parcel)	\$0.00	\$1,500.00	\$2,500.00	\$0.00
3 TOTAL APPRAISALS	\$0.00	\$102,000.00	\$105,000.00	\$0.00
4 Sign Estimates	0	0	0	0
5 Estimated Fees	\$0.00	\$0.00	\$1,500.00	\$0.00
6 TOTAL SIGN ESTIMATES	\$0.00	\$0.00	\$0.00	\$0.00
7 Specialty Reports	0	0	0	0
8 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
9 TOTAL SPECIALTY REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
10 Septic/Well Reports	0	0	0	0
11 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
12 TOTAL SEPTIC/WELL REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
13				
14				
15				
16 TOTAL VALUATION FEES	\$0.00	\$102,000.00	\$105,000.00	\$0.00
17	SUB TOTAL VALUATION SERVICES			\$207,000.00
18	Updates and Incidentals (Min \$2,500 or 25%)			\$51,750.00
19	GRAND TOTAL VALUATION SERVICES			\$258,750.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
	Parcels	Estimated Fees		TOTALS
1	Meeting with Attorney	110	\$125.00	\$13,750.00
2	Preliminary Titles	110	\$200.00	\$22,000.00
3	Closing and Final Title	110	\$300.00	\$33,000.00
4	Recording Fees	110	\$50.00	\$5,500.00
5	Condemnation Filing	17	\$5,000.00	\$85,000.00
6	Litigation Costs	17	\$25,000.00	\$425,000.00
7	Updates and Incidentals	17	\$7,500.00	\$127,500.00
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL LEGAL SERVICES			\$711,750.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
	Relocation	Displacements	Estimated Costs	TOTALS
1	Business Displacement	4	\$15,000.00	\$60,000.00
2	Residential Tenant		\$20,000.00	\$0.00
3	Residential Owner	4	\$40,000.00	\$160,000.00
4	Pro-Rata Taxes	110	\$1,000.00	\$110,000.00
5	Property Pin Replacement	110	\$1,000.00	\$110,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL RELOCATION			\$440,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
	Demolition	Items/Improvements	Estimated Costs	TOTALS
1	Residential Structures	4	\$15,000.00	\$60,000.00
2	Commercial Structures	4	\$25,000.00	\$100,000.00
3	Hotels/Apartments		\$60,000.00	\$0.00
4	UST's - Dispensers		\$50,000.00	\$0.00
5	Billboards		\$8,000.00	\$0.00
6	Signs - Light Standards		\$1,500.00	\$0.00
7	Water Vaults		\$15,000.00	\$0.00
8	Gas/Water Service Separation		\$2,500.00	\$0.00
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL DEMOLITION			\$160,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0008-00(346) Columbia

0008346

	A	B	C	D
	Parcels	Man hours per Parcel		TOTALS
1	Pre-Acquisition	110	40	\$220,000.00
2	Acquisition	110	100	\$550,000.00
3	Relocation	3	50	\$7,500.00
4	Administrative Appeals	28	50	\$70,000.00
5	Post-Acquisition	17	100	\$85,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL INHOUSE			\$932,500.00

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0004-00(346) Columbia County
P.I. No. 0008346
LBQA#
FROM Lynn Bean, District Utilities Engineer
OFFICE Tennille
DATE March 25, 2014
TO Albert Shelby, State Program Delivery Engineer
ATTN George Brewer, Project Manager
SUBJECT **UPDATED CONCEPT UTILITY COST ESTIMATE**

We are furnishing you with an Updated Concept Utility Cost estimate for each utility with facilities located within the project limits.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
GEORGIA POWER (POWR DIST.)	\$0.00	\$2,143,000.00
GEORGIA POWER (TRANS)	\$0.00	\$500,000.00
ATLANTA GAS LIGHT RESOURCES (GAS)	\$2,345,840.00	\$0.00
AT&T-D	\$1,200,000.00	\$500,000.00
WOW CATV	\$227,536.00	\$0.00
COMCAST	\$462,270.00	\$0.00
COLUMBIA COUNTY WATER & SEWER	\$4,206,450.00	\$906,000.00
COLUMBIA COUNTY TELECOMMUNICATIONS	\$ 342,500.00	\$ 0.00
LEVEL 3 COMMUNICATIONS	\$62,180.00	\$0.00
	<u>\$8,846,776.00</u>	<u>\$4,049,000.00</u>

Totals

Total Non-Reimbursable Cost: \$8,846,776.00
Total Reimbursable Cost: \$4,049,000.00
Total Relocations: \$12,895,776.00

This estimate was compiled using information provided by the various utility owners, past estimates and the Item Mean Summary. Please be advised this is an estimate and may be revised when project plans are developed and prior rights research is completed.

If you should have questions or need additional information, please contact Jimmy Hobby at 478-552-4633.

LB: JFH

C: Mike Bolden, State Utilities Engineer
Lee Upkins, Assistant State Utilities Engineer
Angela D. Robinson, Office of Financial Management
Rodney Way, Area Engineer

Opinion of Probable Costs
Conceptual Environmental Mitigation Cost Estimate

GDOT PI# 0008346

March 26, 2014

Project impacts

Stream impacts - 1740 Lin. Ft.

Estimated stream credits needed –12,702 credits

Estimated Cost = \$1,079,670

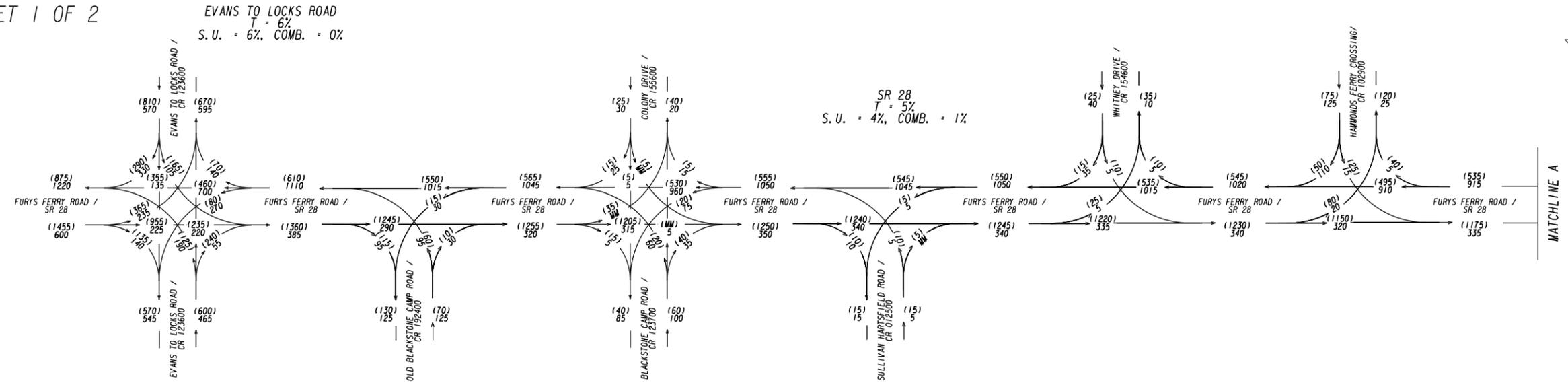
Wetland Impacts – 0.2 acres

Estimated wetland credits needed – 0.2 credits

Estimated Cost = \$3,000

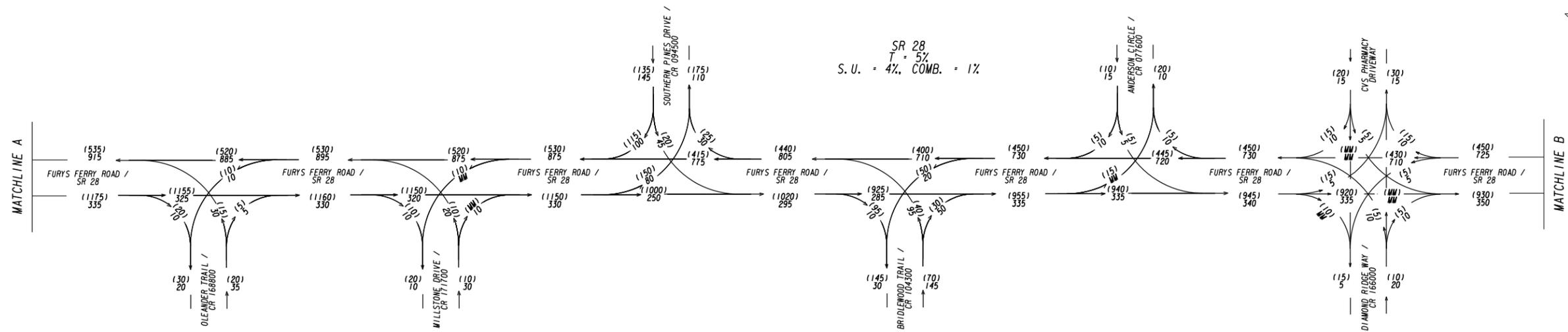
Attachment #4

SHEET 1 OF 2



EVANS TO LOCKS ROAD
T = 5%
S.U. = 5%, COMB. = 0%

CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2013 AM DHV = 000
2013 PM DHV = (000)



GRESHAM
SMITH AND
PARTNERS

GEORGIA
DEPARTMENT
OF
TRANSPORTATION

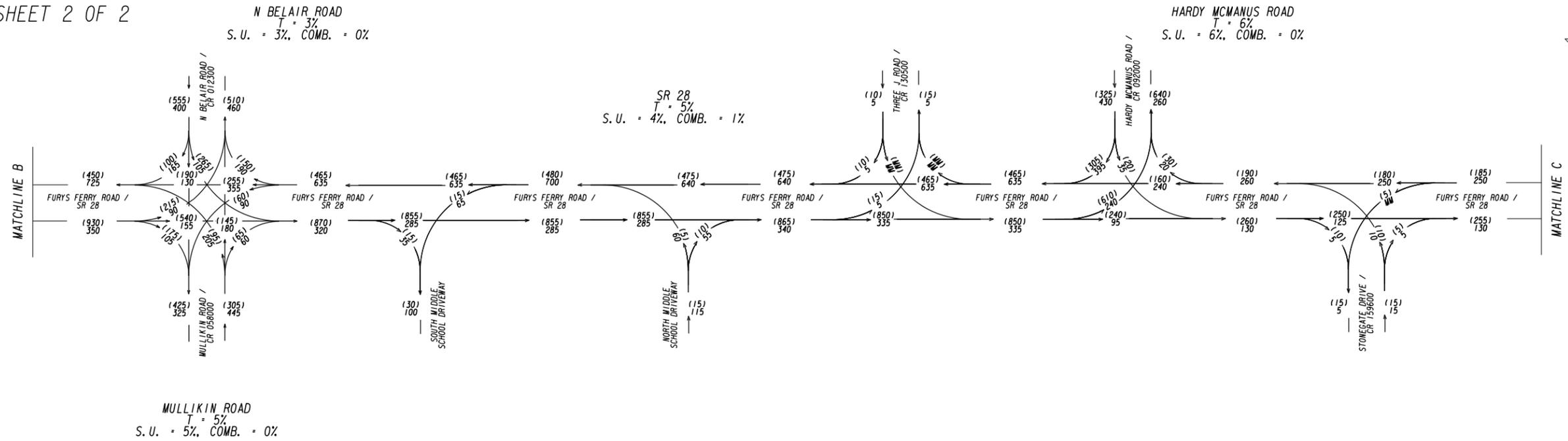
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
SR 28

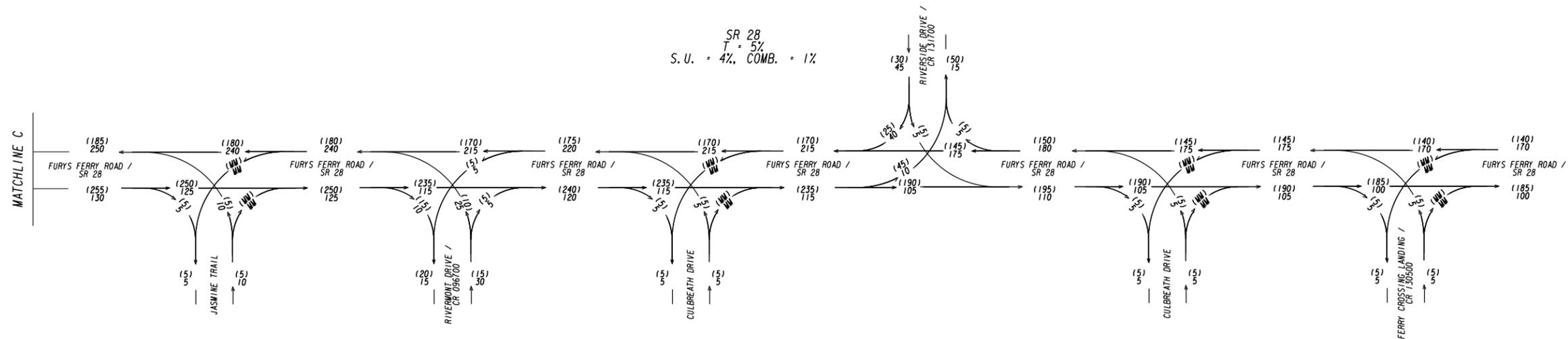
CSSTP-0008-00(346)
COLUMBIA COUNTY

DRAWING No.
10-001

SHEET 2 OF 2



CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2013 AM DHV = 000
2013 PM DHV = (000)



G R E S H A M
S M I T H A N D
P A R T N E R S

GEORGIA
DEPARTMENT
OF
TRANSPORTATION

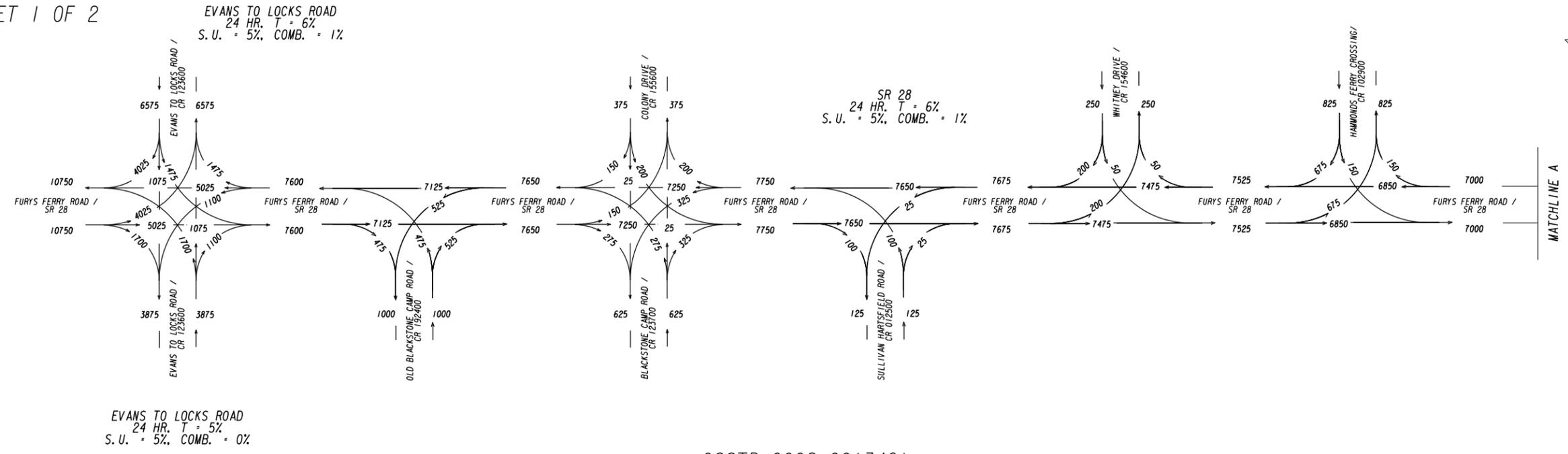
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
SR 28

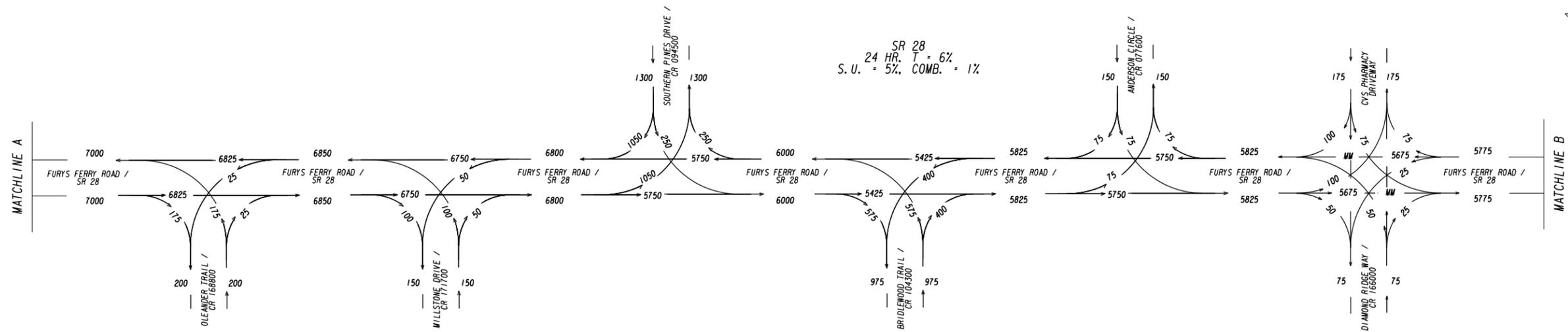
CSSTP-0008-00(346)
COLUMBIA COUNTY

DRAWING No.
10-002

SHEET 1 OF 2



CSSTP-0008-00(346)
P. I. NO: 0008346
COLUMBIA COUNTY



2013 AADT = 000



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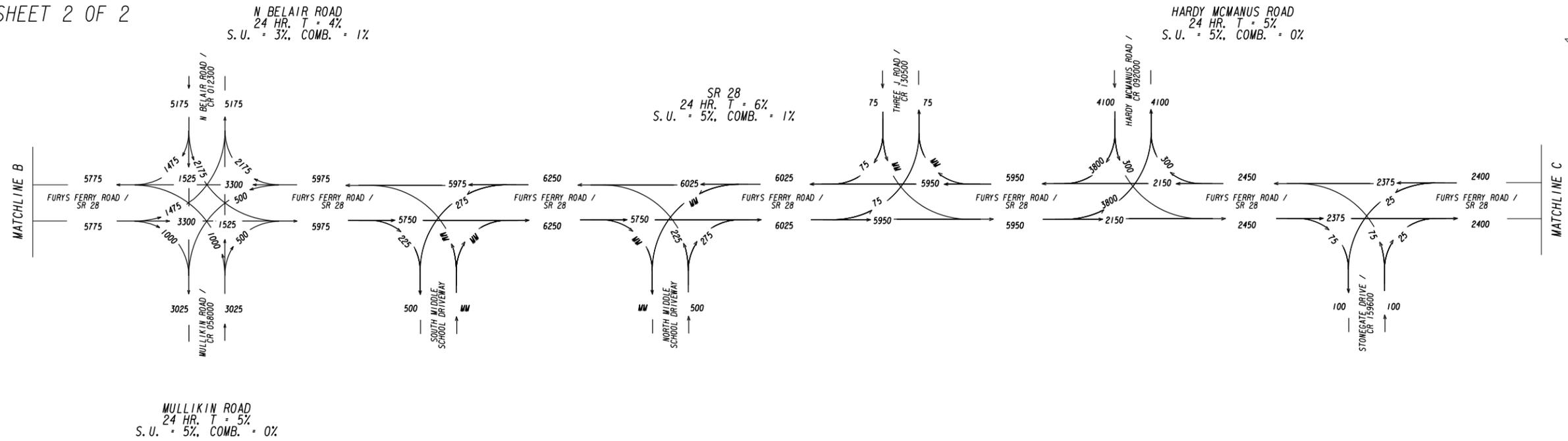
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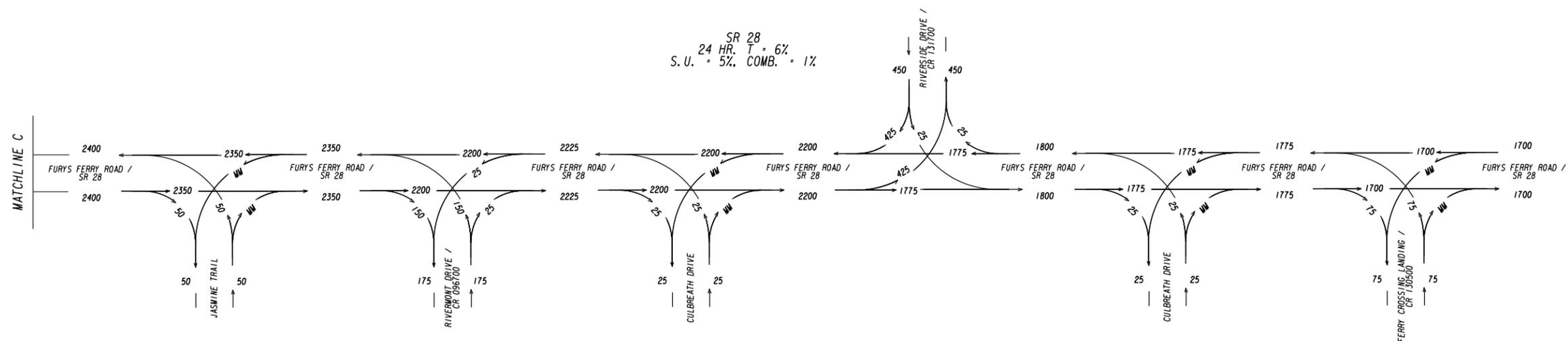
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COLUMBIA COUNTY



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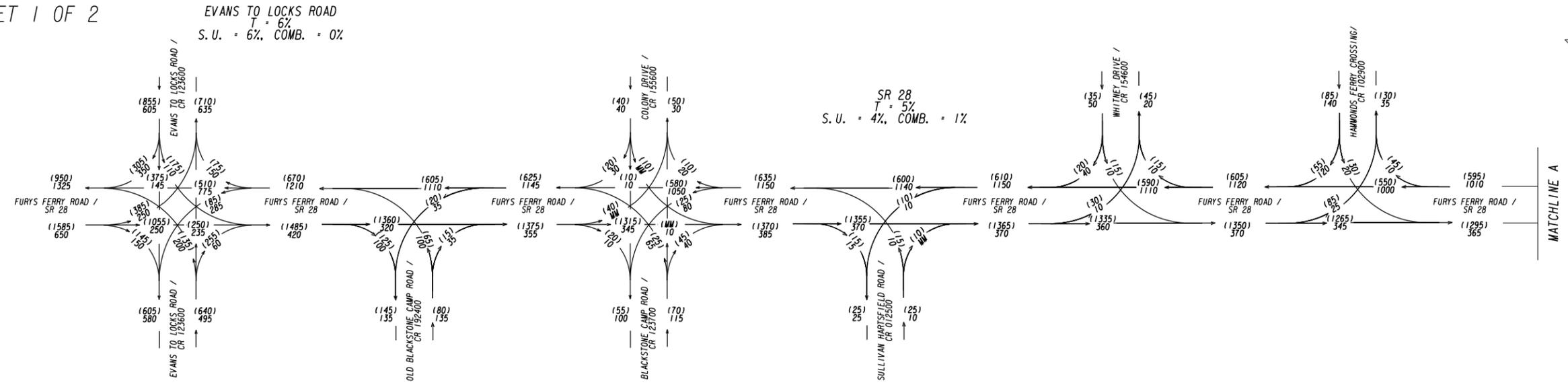
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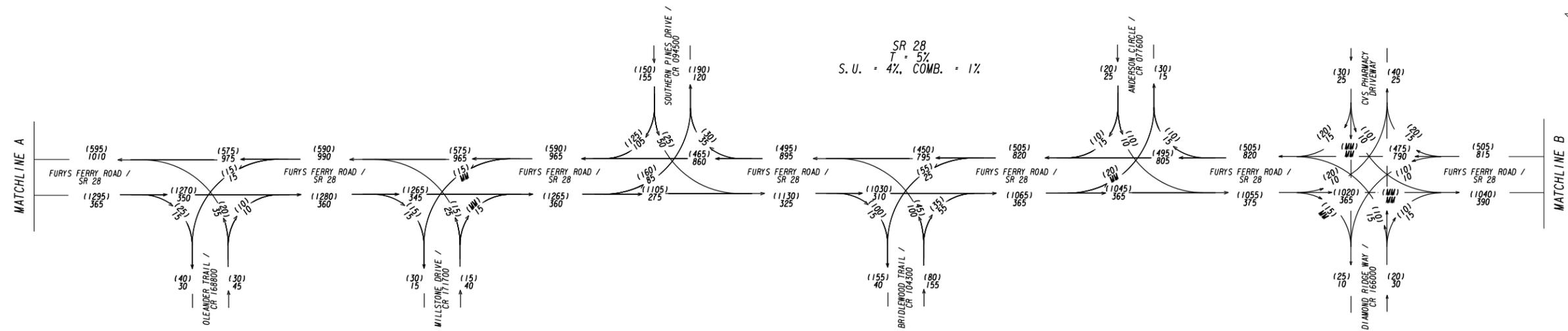
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SHEET 1 OF 2



EVANS TO LOCKS ROAD
T = 5%
S.U. = 5%, COMB. = 0%

CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2022 NO BUILD AM DHV = 000
2022 NO BUILD PM DHV = (000)



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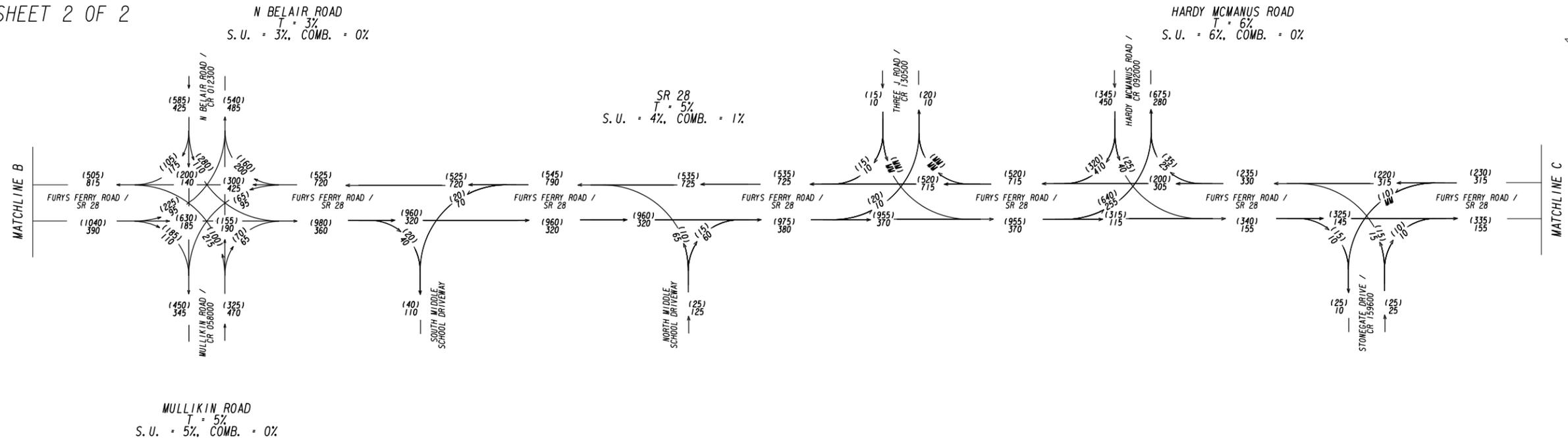
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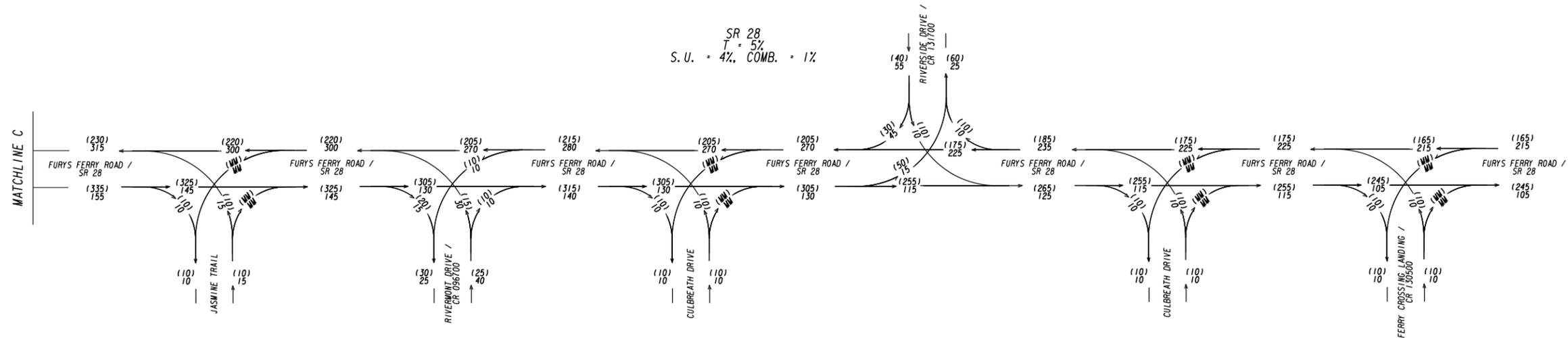
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COLUMBIA COUNTY

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SHEET 2 OF 2



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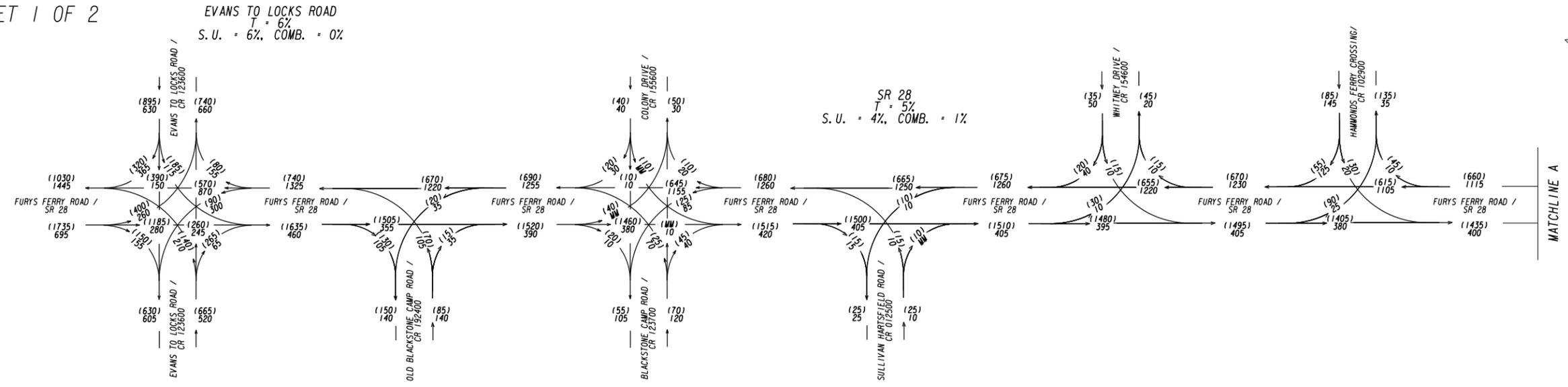
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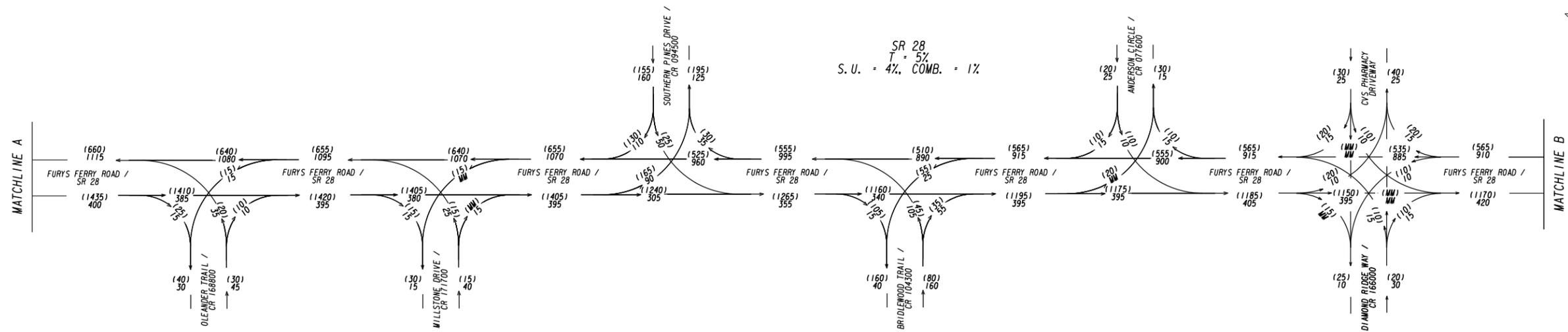
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SHEET 1 OF 2



EVANS TO LOCKS ROAD
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S.U. = 5%, COMB. = 0%

CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2022 BUILD AM DHV = 000
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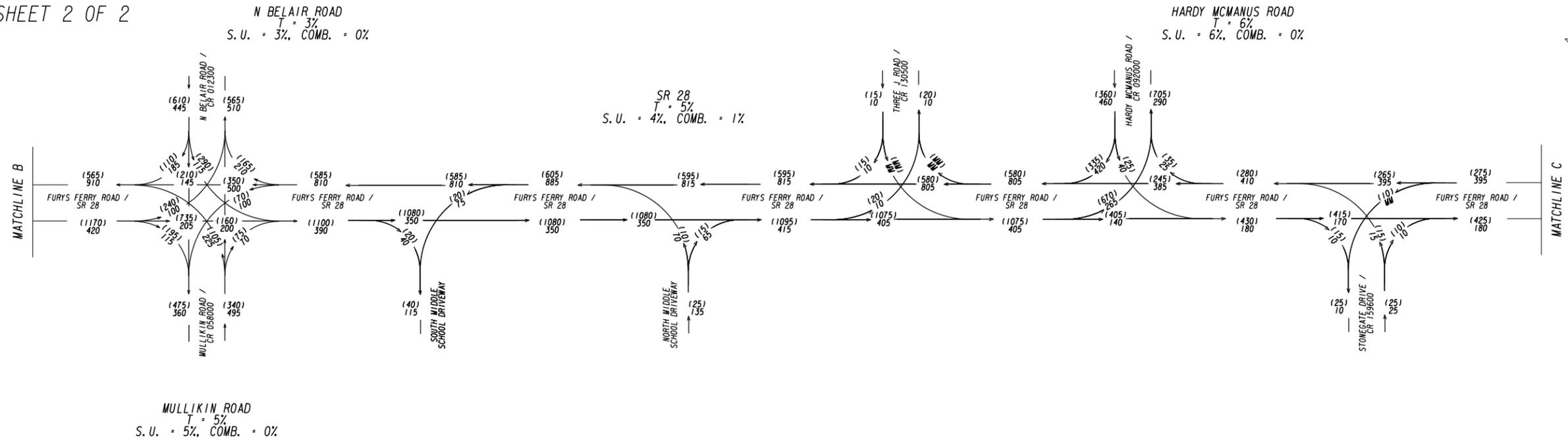
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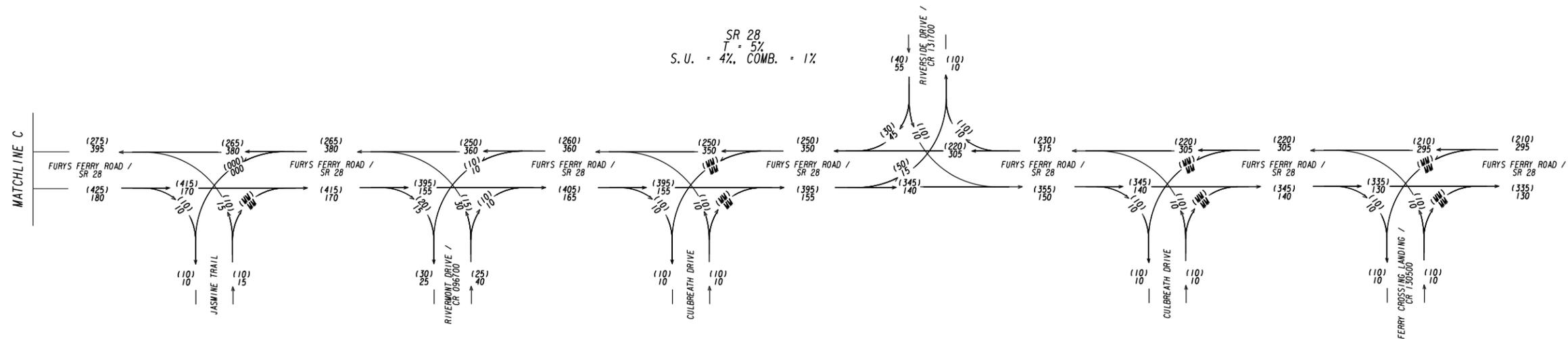
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COLUMBIA COUNTY

DRAWING No.
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SHEET 2 OF 2



CSSTP-0008-00(346)
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COLUMBIA COUNTY



2022 BUILD AM DHV = 000
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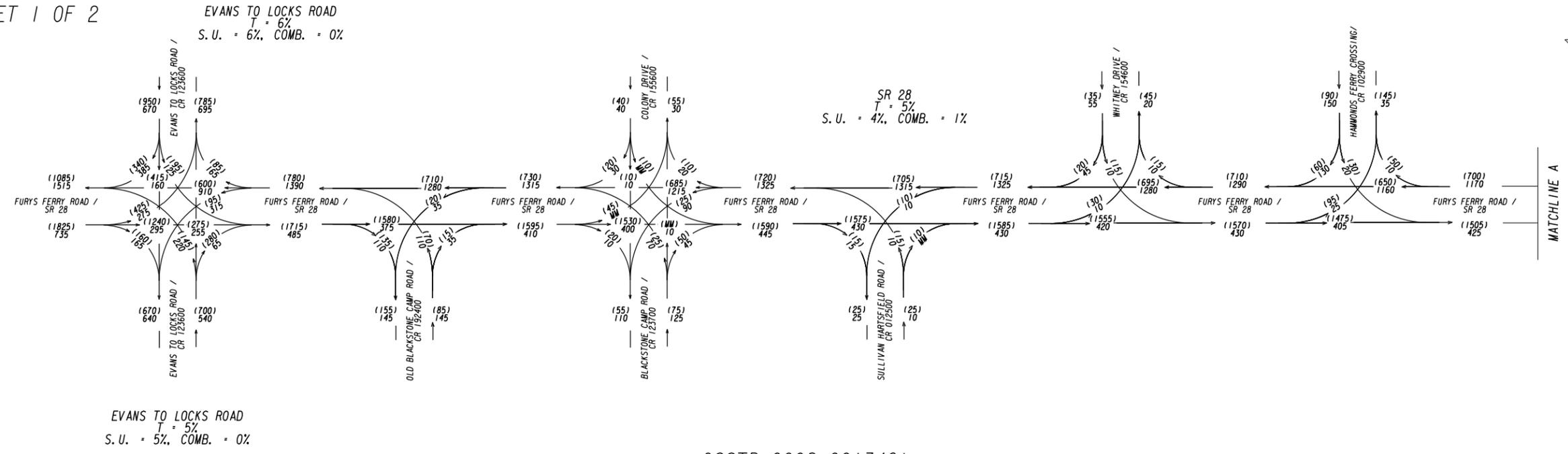
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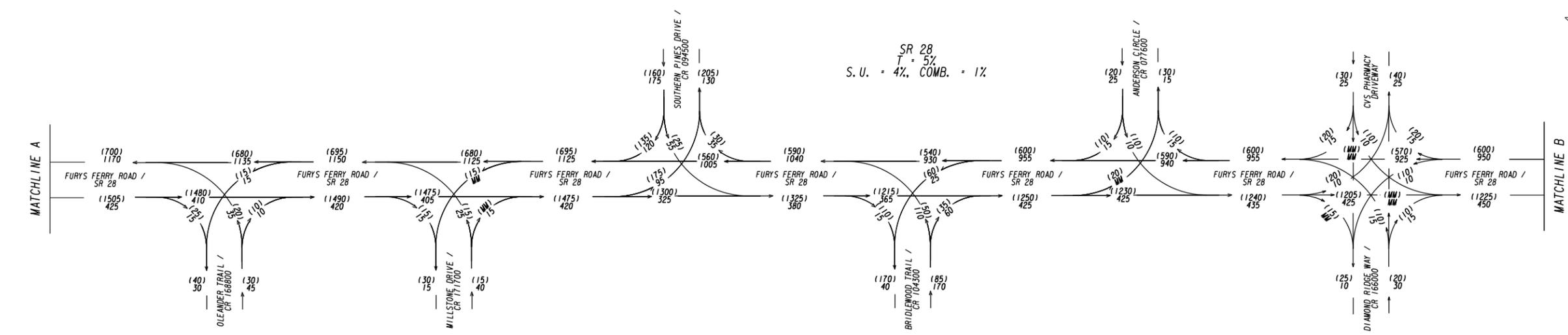
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COLUMBIA COUNTY



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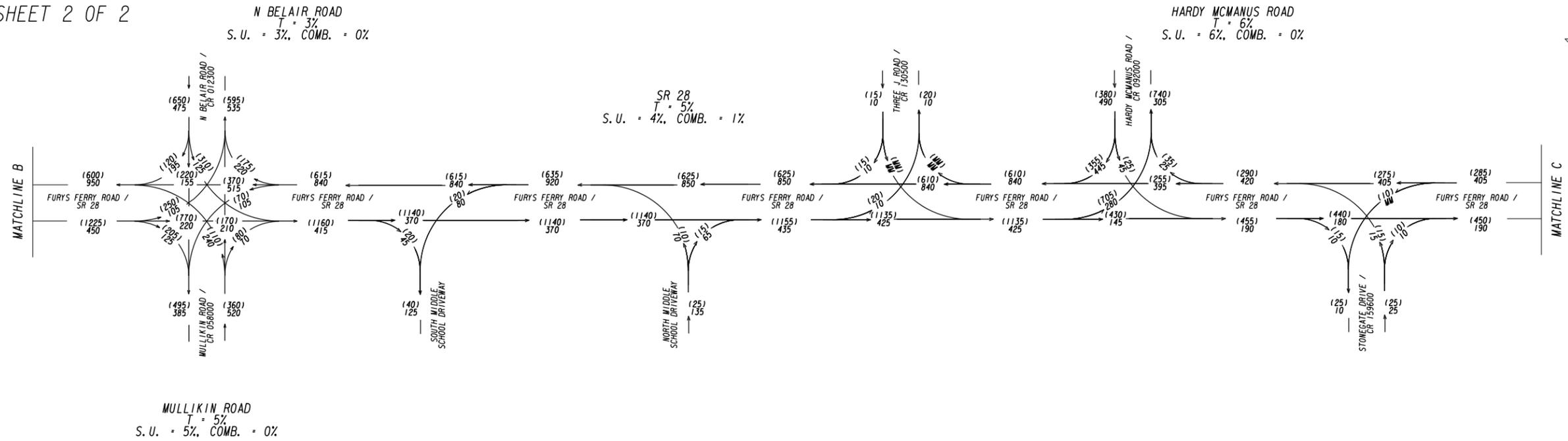
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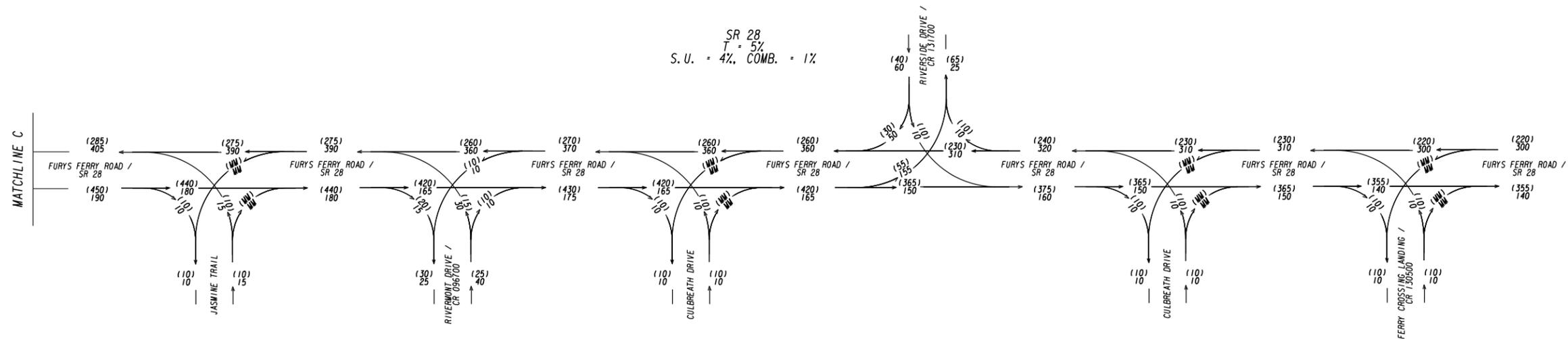
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CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2042 NO BUILD AM DHV = 000
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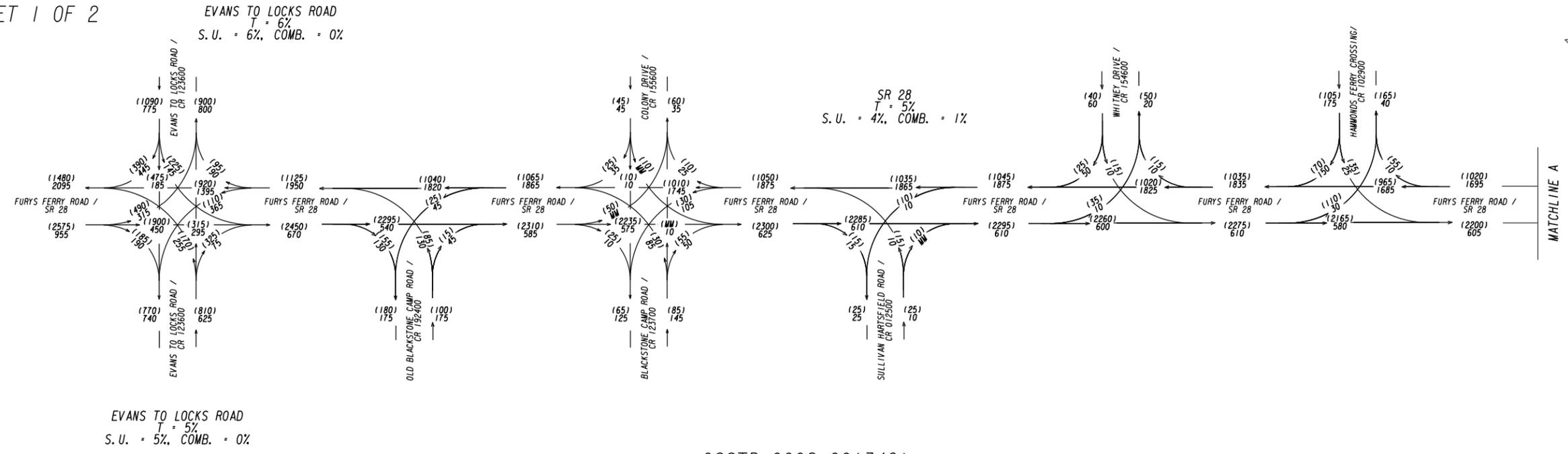
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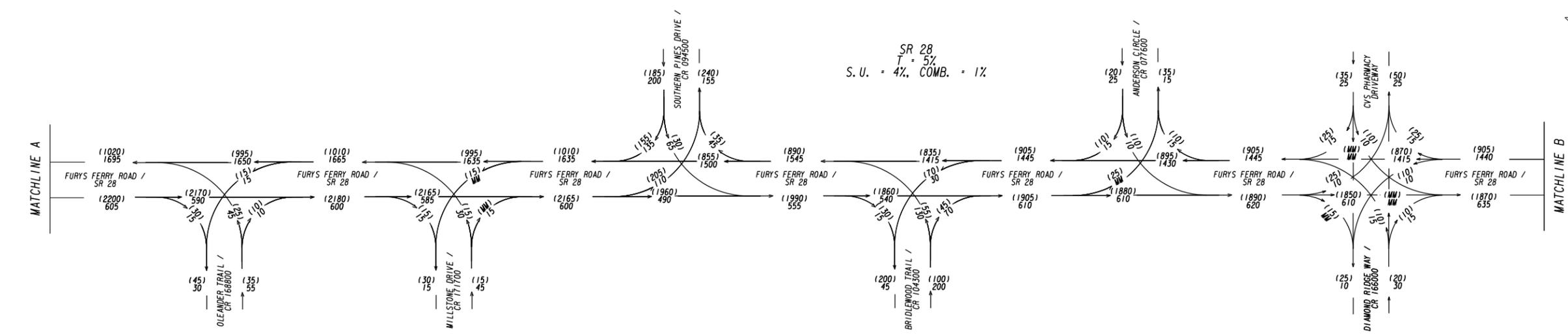
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COLUMBIA COUNTY

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10-010

SHEET 1 OF 2



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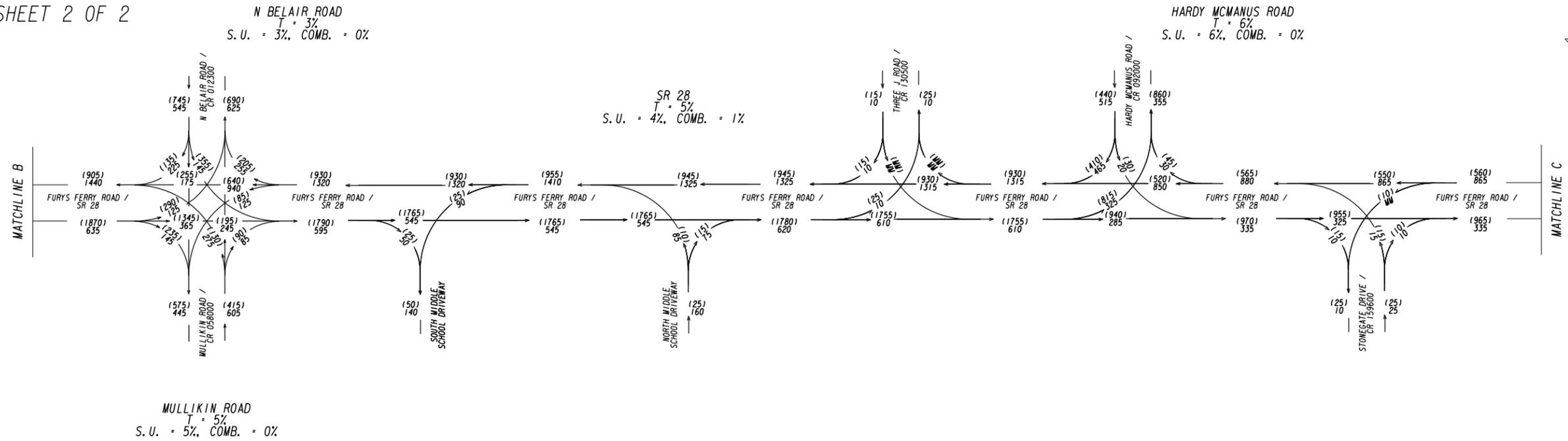
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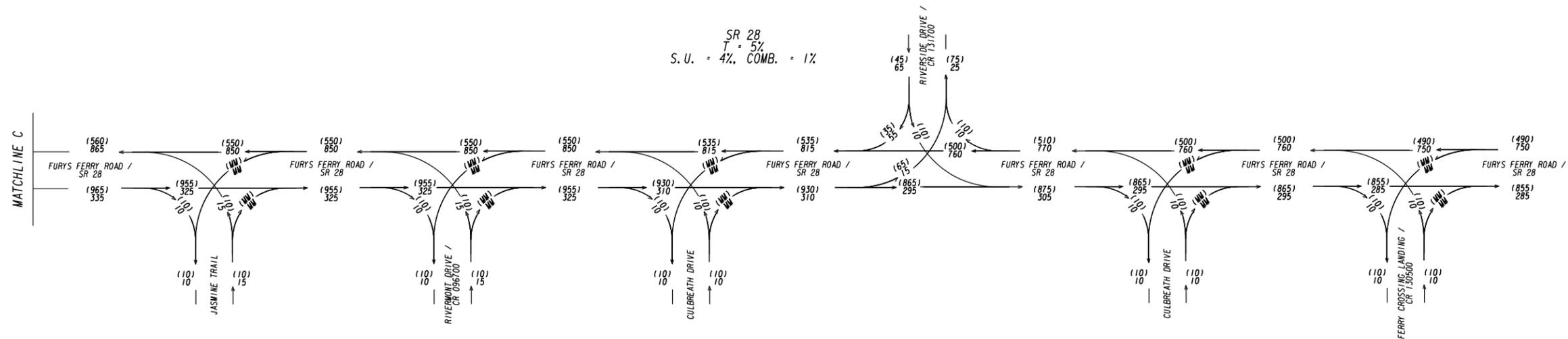
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DRAWING No.
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SHEET 2 OF 2



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P. I. NO: 0008346
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2042 BUILD AM DHV = 000
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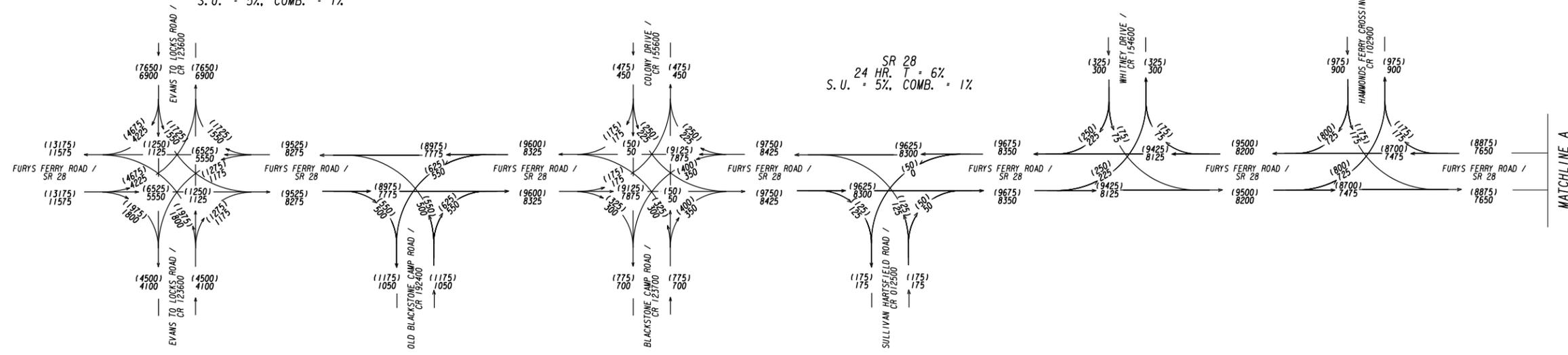
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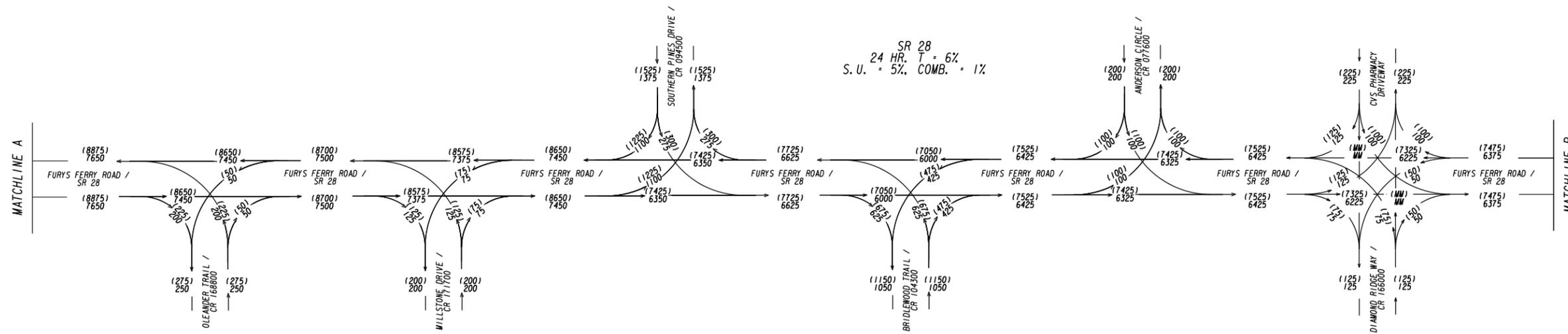
SHEET 1 OF 2

EVANS TO LOCKS ROAD
24 HR. T = 6%
S.U. = 5%, COMB. = 1%



EVANS TO LOCKS ROAD
24 HR. T = 5%
S.U. = 5%, COMB. = 0%

CSSTP-0008-00(346)
P.I. NO: 0008346
COLUMBIA COUNTY



2022 NO BUILD AADT = 000
2042 NO BUILD AADT = (000)



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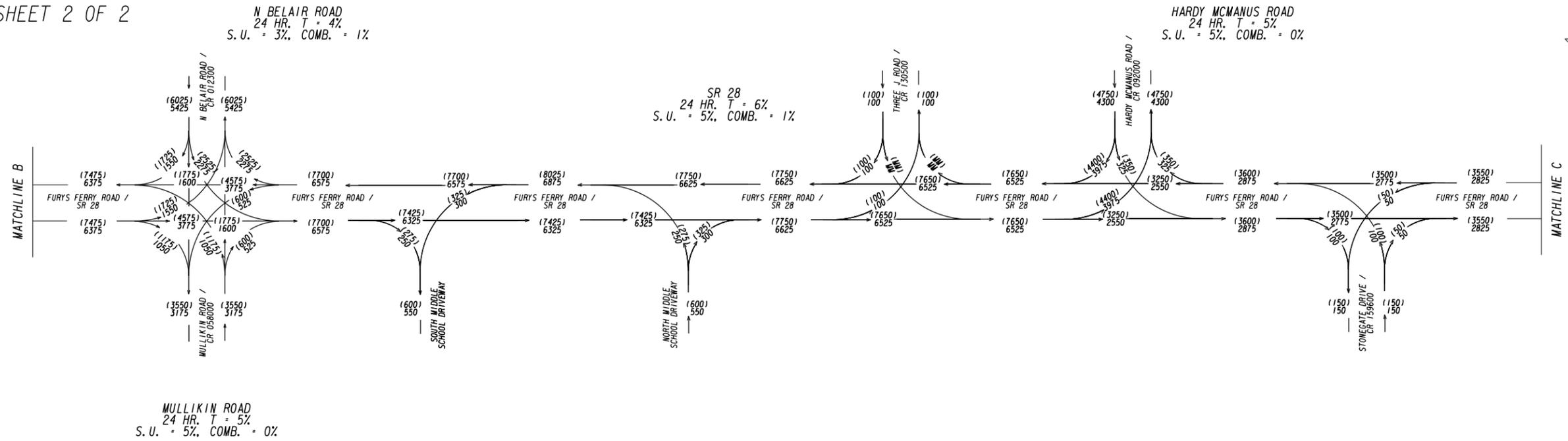
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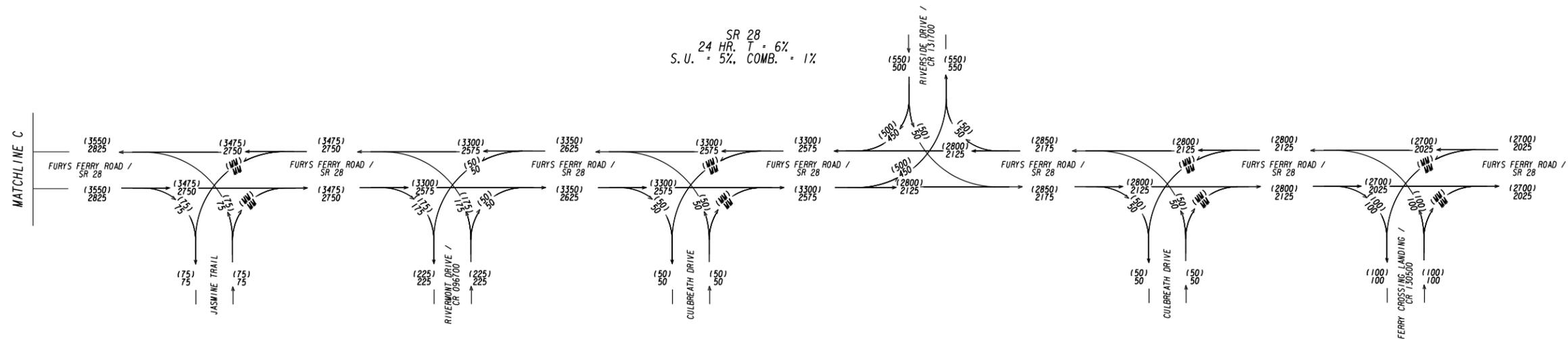
CSSTP-0008-00(346)
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DRAWING No.
10-013

SHEET 2 OF 2



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COLUMBIA COUNTY



2022 NO BUILD AADT = 000
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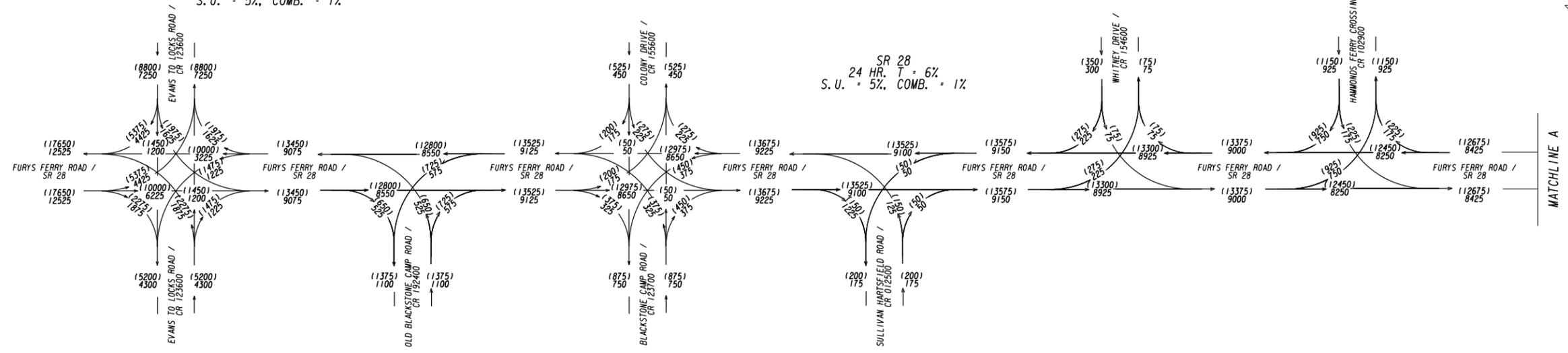
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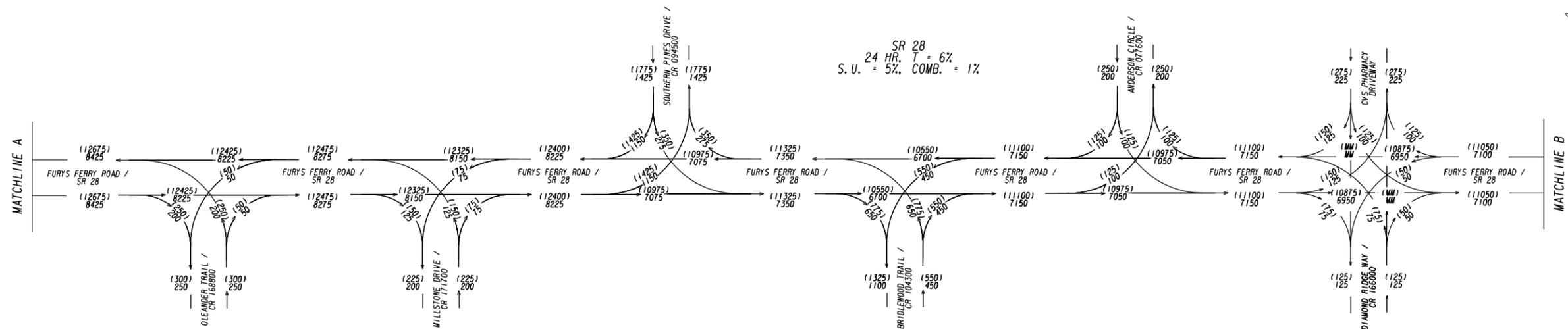
EVANS TO LOCKS ROAD
24 HR. T = 6%
S. U. = 5%, COMB. = 1%



EVANS TO LOCKS ROAD
24 HR. T = 5%
S. U. = 5%, COMB. = 0%

CSSTP-0008-00(346)
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COLUMBIA COUNTY

SR 28
24 HR. T = 6%
S. U. = 5%, COMB. = 1%



2022 BUILD AADT = 000
2042 BUILD AADT = (000)



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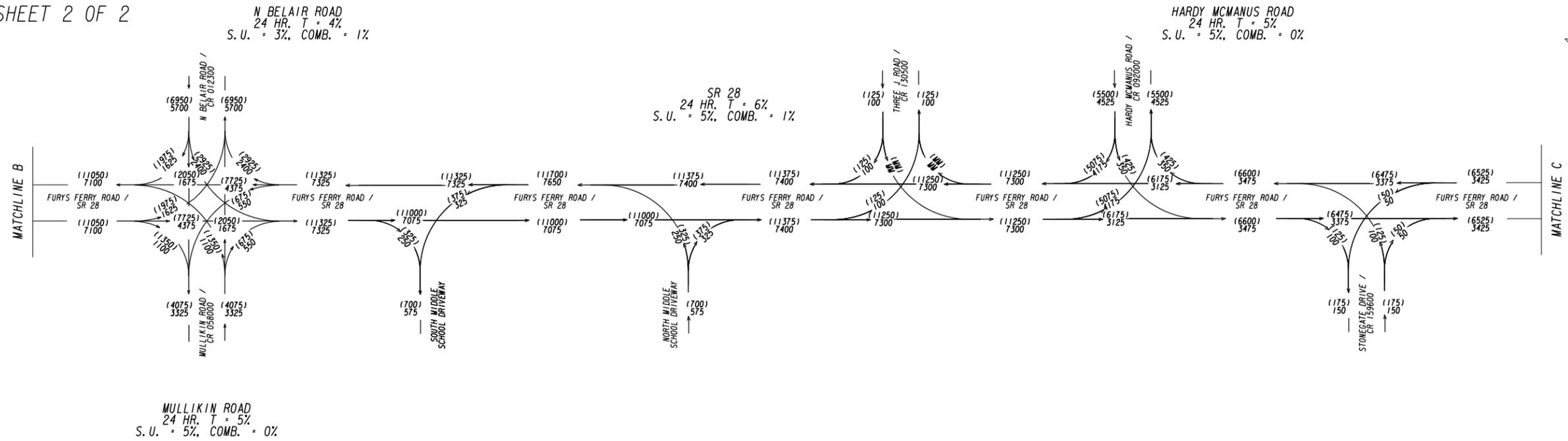
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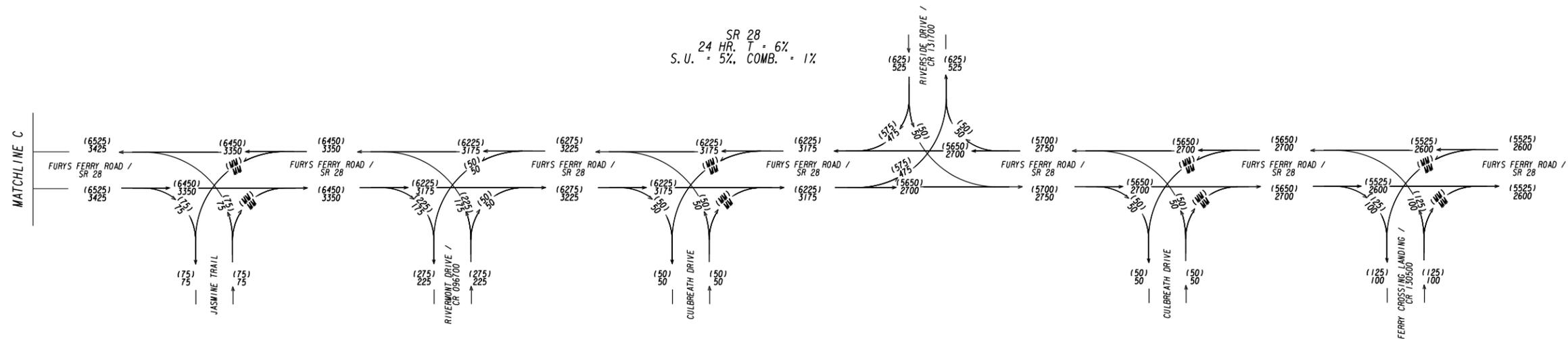
CSSTP-0008-00(346)
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SHEET 2 OF 2



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CSSTP-0008-00(346)
COLUMBIA COUNTY

DRAWING No.
10-016

Attachment #5

Department of Transportation State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0008-00(346), Columbia County **OFFICE** Planning
P.I. # 0008346
DATE December 30, 2013

FROM Cynthia L. VanDyke, State Transportation Planning Administrator

TO Genetha Rice-Singleton, State Program Delivery Engineer
Attention: George Brewer

SUBJECT **Reviewed Updated** Design Traffic for SR 28 FM SOUTH CAROLINA LINE
TO CR 1236/EVANS TO LOCKS RD

Per request, we have reviewed the consultant's design traffic data for the above project. Based on the information furnished, we find the updated design traffic projections to be satisfactory, and approve the updated design traffic volume.

If you have any questions concerning this information please contact
Andre Washington at (404) 631-1925.

CLV/AMW

Attachment #6

Concept Hydrology Study

SR28 from Evans To Locks Road to South Carolina state line

Project # CSSTP-0008-00(346)

PI # 0008346

County: Columbia

Prepared by:

URS Corporation
400 Northpark Town Center
1000 Abernathy Road, NE Suite 900
Atlanta, Georgia 30328

November 27, 2013

Introduction & Purpose

Project CSSTP-0008-00(346) is the widening and reconstruction of SR 28 from a 2-lane rural section to a 4-lane urban section with a raised median from Evans To Locks Road to South Carolina state line. The project is located in Columbia County, GA.

The purpose of this report is to present the results of a concept level hydrology study for the project corridor and to provide an assessment of post-construction stormwater Best Management Practices (BMPs) best suited to the hydrologic attributes (e.g., topography, land use, ground water levels, and soils) of the project corridor.

The SCS Curve Number Method was selected for calculating runoff from the basins within the project corridor. Using available USGS Topographic QUAD Maps and GIS contours, drainage basins were delineated for the project corridor. Impervious, grassed, and wooded areas were determined for each basin using available aerial photography. This was done for the project corridor in both the pre- and post-construction conditions.

The NRCS Web Soil Survey reveals that most of the soils within the project limits fall within hydrologic soil group B, though a few others are mixed in as well. Based upon these soil group classifications and the Runoff Curve Number Table 2.1.5-1 provided in the Georgia Stormwater Management Manual (GSMM), curve number (CN) values were assigned to the various types of ground cover on the project as follows:

Ground Cover Type	CN Value
Impervious	98
Grassed	58
Wooded	55

Using the above curve numbers, an area-weighted average composite curve number for each delineated basin was computed for both the pre- and post-construction conditions.

Please see the attached layout for the location of the drainage basins and associated outfalls.

GDOT MS4 Program

Columbia County is a designated Phase II Municipal Separate Storm Sewer System (MS4) in the State of Georgia. The GDOT MS4 Permit specifies that post-construction stormwater BMPs be implemented on GDOT projects such as this one in jurisdictions designated as MS4s.

The Permit states that, at a minimum, the post-construction BMPs must treat all stormwater runoff prior to discharge from GDOT's right-of-way or to the natural system. The treated stormwater runoff does not have to include stormwater flows that originate outside of GDOT's right-of-way or diverted flows from undisturbed areas. BMPs shall be designed to remove 80% of the average annual post-development total suspended solids (TSS) load or equivalent as defined in the Georgia Stormwater Management Manual (GSMM). Compliance with this performance standard is presumed to be met if the BMP system is sized to capture and treat the water quality treatment volume, which is defined as the runoff volume resulting from the first 1.2 inches of rainfall from a drainage area. Additional minimum post-construction standards that must be implemented include:

- Stream channel/aquatic resource protection
 - 24-hour extended detention storage of the 1-year, 24-hour storm event
 - Erosion prevention measures such as energy dissipation and velocity control
 - Preservation of applicable stream buffers
- Overbank flood protection
 - Downstream overbank flood protection shall be provided by controlling the post-development peak discharge rate to the predevelopment rate for the 25-year, 24-hour storm event.
- Extreme flood protection
 - Extreme flood protection shall be provided by controlling the 100-year, 24-hour storm event such that downstream flooding is not exacerbated.

Existing Conditions

The existing road is a 2-lane rural section and the existing right-of-way appears to range from approximately 70' to 160' based on a review of available aerial photography and GIS information from the county.

The ground cover, soils, and terrain in project area are typical of the piedmont region of Georgia, within which the project resides. The topography in the area is hilly, with slopes ranging from 0% to a maximum of about 25%. The surrounding land uses along the corridor are predominantly medium to low densities of commercial and residential developments.

Based upon a review of the Martinez, GA and Evans Ga, GA 1980 USGS Topographic QUAD Maps, available GIS data, and available aerial mapping, the project corridor can be divided into 6 drainage basins. 8 basins along SR 28 flow to Jones Creek, which ultimately flows to the Savannah River. 6 basins along SR 28 flow to unnamed tributaries, which ultimately flows to the Savannah River. All of Columbia County and this entire project are located within the Savannah River Basin.

According to the NRCS Web Soil Survey for the project area, approximately 90% of the soils on the corridor have permeability rates greater than 0.5 inches/hour, which corresponds to the GSMM recommended minimum permeability rate for soils that are suitable for infiltration BMPs. Further, based on the Web Soil Survey, it is expected that approximately 95% of the soils on the project will have ground water table depths more than 6-ft.

According to a review of the latest approved (2012) 305(b)/303(d) list of impaired waters, the project intersects Jones Creek, which is an impaired waterway. The criteria violated for this waterway is Fecal Coliform (FC). Due to the nature of their practices and activities, GDOT is not a contributor of this pollutant of concern. The Savannah River near this project is listed as being used for drinking water.

Based upon a review of the FEMA Flood Insurance Rate Map (FIRM) numbers 13073C0162D, 13073C0161D, and 13073C0153D, part of the project near Mill Branch is located within the Zone AE Special Flood Hazard Area (SFHA). This area is therefore subject to inundation by the 100-year flood.

Proposed Conditions

The proposed project will widen SR 28 from a 2-lane rural section to a 4-lane urban section with a 20-foot raised median, 12-foot urban shoulders, and 2 to 1 slopes. The proposed profile grade line (PGL) will be elevated approximately 0.5 feet above the existing PGL. It is estimated that the proposed project will approximately triple the amount of impervious area currently on the project corridor.

It is anticipated that the right-of-way will be widened to approximately 125 to 200 feet to accommodate the proposed roadway section. Given that the existing right-of-way width is 70 to 160 feet and the project segment is approximately 3.8 miles long, additional right of way must be acquired to accommodate the proposed roadway.

In order to comply with Section 4.2.5 of the GDOT MS4 Permit, stormwater management BMPs need to be installed to provide water quality treatment of runoff from the GDOT roadway.

The project design will endeavor to minimize impacts to Environmentally Sensitive Areas (ESAs) and properties to the extent practicable. In general, this will be accomplished by offsetting the roadway widening to one side of the road versus the other, widening symmetrically, and by selecting practicable locations for water quality BMP installation that minimize impacts.

We anticipate being able to divert most of the off-site water flowing to the project around the project through the use of swales and closed stormwater systems. These have been shown on the post-construction layout sheets.

Estimation of Required Stormwater Storage Volumes

The methodologies provided in the GSMM were used to compute the required water quality and channel protection volumes for each of the 14 post-construction project drainage areas. The estimated required flood control storage volumes for the 25-year and 100-year, 24-hour storm events were computed using Intelisolve's Hydraflow Hydrographs 2007, Ver. 9.02, which uses HEC-22 computation methods. The required flood control storage volumes were computed based upon the assumption that selected flood control BMPs will be capable of attenuating post-construction peak discharges to be equal to or less than the pre-construction peak discharges for the flood control storm events.

Please see Table 1 below for a listing of the 14 project drainage basins and their associated areas, curve numbers, and relevant stormwater storage volumes.

Table 1. Drainage Basin Attributes and Required Post-Construction BMP Control Volumes

Basin ID	Total Drainage Area (AC)	Pre-Dev Impervious Area (AC)	Pre-Dev % Impervious	Pre-Dev CN	Post-Dev Impervious Area (AC)	Post-Dev % Impervious	Post-Dev CN	Required BMP Control Volumes				Description of adjacent land use
								WQv (ft ³)	CPv (ft ³)	Overbank Flood Protection Volume (ft ³)	Extreme Flood Protection Volume (ft ³)	
1	4.82	2.05	43%	74	2.38	49%	77	10,380	11,471	14,417	22,317	Suburban
2	4.31	1.41	33%	71	3.32	77%	89	13,954	10,253	33,877	41,443	Suburban
3	1.44	0.58	40%	74	1.23	85%	92	5,136	3,423	11,308	13,742	Suburban
4	4.43	1.05	24%	67	2.47	56%	80	10,648	10,545	26,450	35,047	Suburban
5	6.40	2.13	33%	71	4.83	75%	88	20,329	15,227	47,350	59,604	Suburban
6	17.26	3.61	21%	66	7.31	42%	75	32,417	40,752	76,739	110,502	Suburban
7	2.45	1.20	49%	75	2.01	82%	91	8,414	5,825	16,671	20,588	Suburban
8	10.88	4.35	40%	74	6.82	63%	83	29,107	25,724	53,567	71,647	Suburban
9	0.91	0.49	54%	80	0.73	80%	90	3,060	2,164	5,082	6,351	Suburban
10	4.80	1.33	28%	69	2.91	61%	82	12,454	11,425	28,804	38,387	Suburban
11	1.61	0.41	25%	68	1.05	65%	84	4,467	3,832	11,275	14,847	Suburban
12	2.96	0.81	27%	69	2.32	78%	89	9,740	7,041	24,712	31,094	Suburban
13	6.05	2.02	33%	71	4.57	76%	88	19,234	14,394	44,769	56,349	Suburban
14	4.07	1.77	43%	75	3.43	84%	92	14,333	9,674	30,908	37,616	Suburban

Selection of Stormwater BMPs for the Project

It is anticipated that wet detention ponds, enhanced swales, and infiltration trenches will be used for this project. Basins 2, 5, and 9 will only be treated for water quality and channel protection. In basins 2 and 9 this will be achieved by using infiltration trenches. According to the Georgia Stormwater Manual, it is not practical to provide overbank flood protection or extreme flood protection volumes using infiltration trenches. In basin 5, this will be achieved by using a combination of a wet detention pond and infiltration trenches. Due to the adjacent development and stream, it is not practical to provide overbank flood protection or extreme flood protection. Basins 1, 3-4, 6-8 and 9-14 will be treated for water quality, channel protection, overbank flood protection and extreme flood protection. This will be accomplished using wet detention ponds, enhanced swales and infiltration trenches. The enhanced swales and infiltration trenches will be designed to provide water quality and channel protection for not more than 5 acres of contributing water. The overbank flood protection and extreme flood protection volumes will be detained in wet detention ponds.

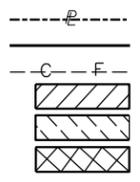
The benefits of the wet detention pond are that it can be used to achieve 80% TSS removal, as well as control the 100 year-24 hour storm event. The enhanced swales, infiltration trenches and sand filters will achieve 80% TSS removal and hold the channel protection volume. Additional ROW will be required for the wet detention ponds, enhanced swales, and infiltration trenches, but they will not result in any displacements.

Conclusion

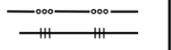
It is anticipated that wet detention ponds, enhanced swales, and infiltration trenches will be used on this project to meet MS4 requirements. Using this approach, the design will meet the required 80% TSS removal performance goal, and is expected to minimize maintenance costs.



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES



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MS4 PRE-CONSTRUCTION LAYOUT

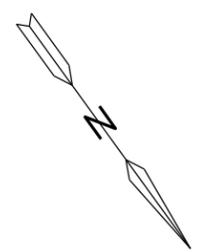
SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
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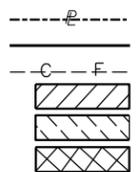


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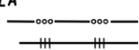
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PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
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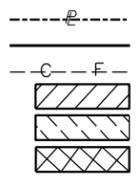
MS4 PRE-CONSTRUCTION LAYOUT

SR 28 FROM EVANS TO LOCK ROAD
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PROPERTY AND EXISTING R/W LINE
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 CONSTRUCTION LIMITS
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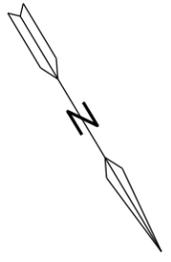
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MS4 PRE-CONSTRUCTION LAYOUT

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

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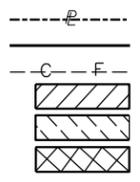
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PROPERTY AND EXISTING R/W LINE
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 CONSTRUCTION LIMITS
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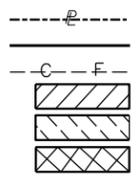
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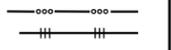
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PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
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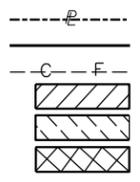
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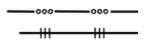
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PROPERTY AND EXISTING R/W LINE
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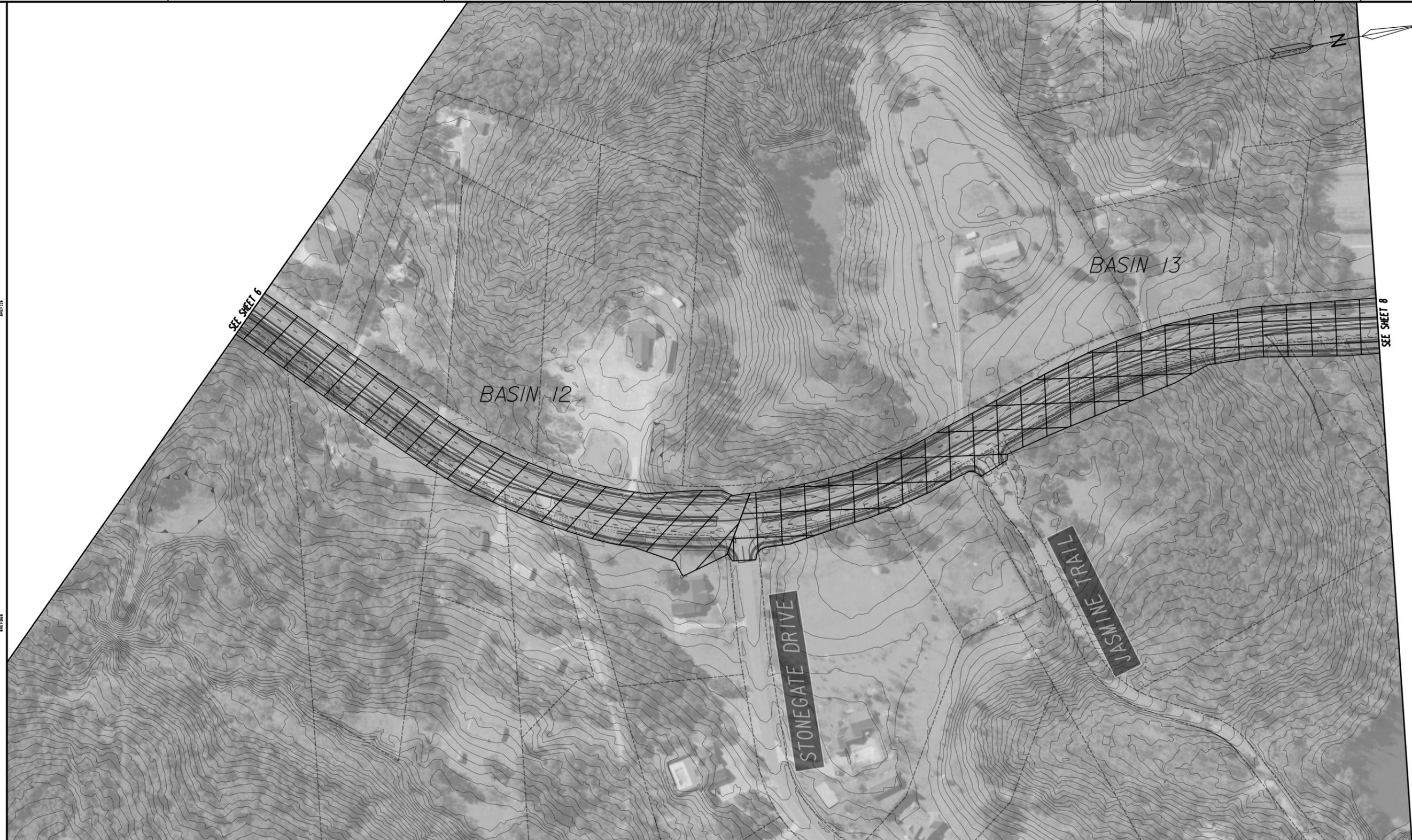
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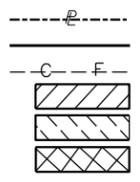
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SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

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PROPERTY AND EXISTING R/W LINE
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 SR 28 FROM EVANS TO LOCK ROAD
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DRAWING No.
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PROPERTY AND EXISTING R/W LINE
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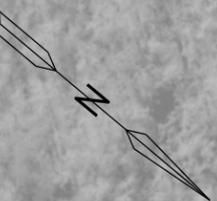
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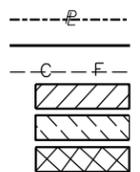
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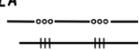


SEE SHEET 8

PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
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SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

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PROPERTY AND EXISTING R/W LINE
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SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

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PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
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SR 28 FROM EVANS TO LOCK ROAD
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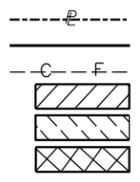
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SEE SHEET 1

SEE SHEET 3

PROPERTY AND EXISTING R/W LINE
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DRAWING No. 2



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
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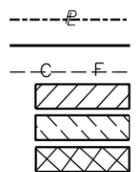
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PROPERTY AND EXISTING R/W LINE
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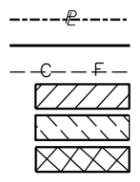
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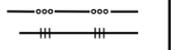
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PROPERTY AND EXISTING R/W LINE
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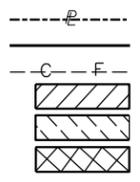
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MS4 POST-CONSTRUCTION LAYOUT
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DRAWING No.
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PROPERTY AND EXISTING R/W LINE
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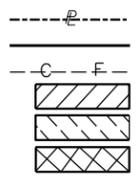
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DRAWING No.
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PROPERTY AND EXISTING R/W LINE
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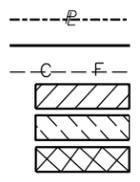
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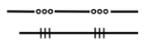
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PROPERTY AND EXISTING R/W LINE
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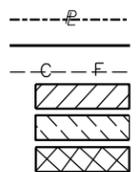
OFFICE: PROGRAM DELIVERY

MS4 POST-CONSTRUCTION LAYOUT
 SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
 8



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA
 END LIMIT OF ACCESS.....ELA
 LIMIT OF ACCESS
 REQ'D R/W & LIMIT OF ACCESS

GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION

URS 400 NORTHPARK TOWN CENTER
 1000 ABERNATHY ROAD, N.E., SUITE 900
 ATLANTA, GEORGIA 30328
 TEL: (678) 808-8800 FAX: (678) 808-8400

SCALE IN FEET
 0 100 200 400

REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION

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MS4 POST-CONSTRUCTION LAYOUT

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
9



100' 200' 300' 400' 500' 600' 700' 800' 900' 1000' 1100' 1200' 1300' 1400' 1500' 1600' 1700' 1800' 1900' 2000' 2100' 2200' 2300' 2400' 2500' 2600' 2700' 2800' 2900' 3000' 3100' 3200' 3300' 3400' 3500' 3600' 3700' 3800' 3900' 4000' 4100' 4200' 4300' 4400' 4500' 4600' 4700' 4800' 4900' 5000' 5100' 5200' 5300' 5400' 5500' 5600' 5700' 5800' 5900' 6000' 6100' 6200' 6300' 6400' 6500' 6600' 6700' 6800' 6900' 7000' 7100' 7200' 7300' 7400' 7500' 7600' 7700' 7800' 7900' 8000' 8100' 8200' 8300' 8400' 8500' 8600' 8700' 8800' 8900' 9000' 9100' 9200' 9300' 9400' 9500' 9600' 9700' 9800' 9900' 10000'

PROPERTY AND EXISTING R/W LINE
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SCALE IN FEET

REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
MS4 POST-CONSTRUCTION LAYOUT

SR 28 FROM EVANS TO LOCK ROAD
 TO THE SOUTH CAROLINA STATE LINE

DRAWING No.
 10

Attachment #7

HISTORIC RESOURCES SURVEY REPORT
GDOT PROJECT CSSTP-0008-00(346), COLUMBIA COUNTY

P.I. No. 0008346

HP No. 131115-003

Prepared For:

Georgia Department of Transportation
Office of Environmental Services
600 West Peachtree Street, NW
Atlanta, Georgia 30308
(404) 631-1100

Prepared By:

Edwards-Pitman Environmental, Inc.
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Under Contract With:

URS Corporation
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Suite 900
Atlanta, Georgia 30328
(678) 808-8800

March 14, 2014

This document has been prepared by Edwards-Pitman Environmental, Inc. for use in compliance with Section 106 of the National Historic Preservation Act of 1966 and subsequent amendments.

HISTORIC RESOURCES SURVEY REPORT

GDOT PROJECT CSSTP-0008-00(346), COLUMBIA COUNTY

P.I. No. 0008346

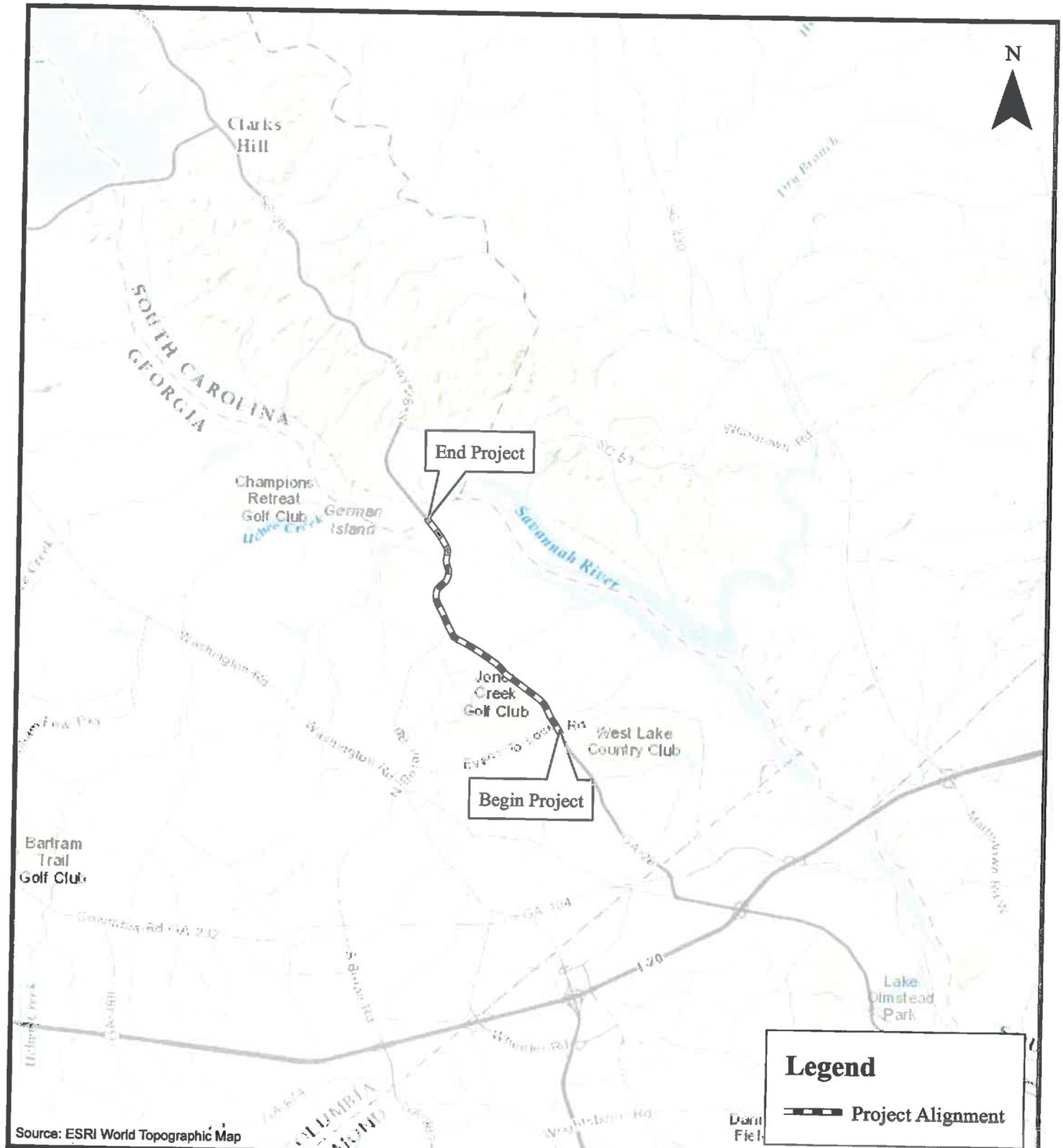
HP No. 131115-003

The proposed project was field surveyed for historic properties in compliance with Section 106 of the National Historic Preservation Act of 1966 and amendments thereto. The survey boundary and methodology were established using the *GDOT/FHWA Cultural Resources Survey Guidelines*. These guidelines were established as a result of past interaction with the Georgia State Historic Preservation Officer (SHPO) and his staff and were agreed upon by the Federal Highway Administration (FHWA) and the SHPO.

The proposed project would consist of the widening and reconstruction of State Route (SR) 28 (Furys Ferry Road) from County Road (CR) 1236 (Evans to Locks Road) northward to the South Carolina state line in Columbia County (see attached Figure 1 and Figures 2A – 2G). It is proposed to widen the existing two-lane section to a four-lane urban section divided by a raised median with median breaks at designated locations. The proposed project would also include the addition of sidewalks and bike lanes. The existing right-of-way (ROW) varies from approximately 90 feet to 160 feet. The proposed ROW would vary from approximately 90 feet to 180 feet. The total project length is approximately 3.8 miles.

The area of potential effects (APE), as defined in 36 CFR 800.16(d), is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on the nature and the scope of the undertaking, the guidance in the *GDOT/FHWA Cultural Resources Survey Guidelines* and past experience with similar projects, the Department has evaluated and defined the APE for this proposed project. Because of the nature and scope of the undertaking, the area of potential direct effects consists of the proposed ROW of the proposed project, within which all construction and ground disturbing activity would be confined, and all properties within the view shed of the proposed project (refer to attached Figure 1 and Figures 2A – 2G). No potential for indirect effects is anticipated by implementation of the proposed project. No change in traffic patterns would result from project implementation. No additional access to the existing facility would be provided and no existing access to the facility would be removed. The project would only increase the capacity of the existing roadway to meet anticipated future demand.

The review of existing information on previously identified historic properties revealed that no National Register of Historic Places (NRHP) listed properties, proposed NRHP nominations, National Historic Landmarks, or bridges determined eligible for inclusion in the NRHP in the updated Georgia Historic Bridge Survey (GHBS) were identified within the proposed project's APE.



Legend

 Project Alignment

Source: ESRI World Topographic Map

Figure 1 - Project Location

GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003





Legend

- Not Eligible



Figure 2A - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

0 125 250 375 500 Feet





Legend

- Not Eligible
- NRHP Eligible

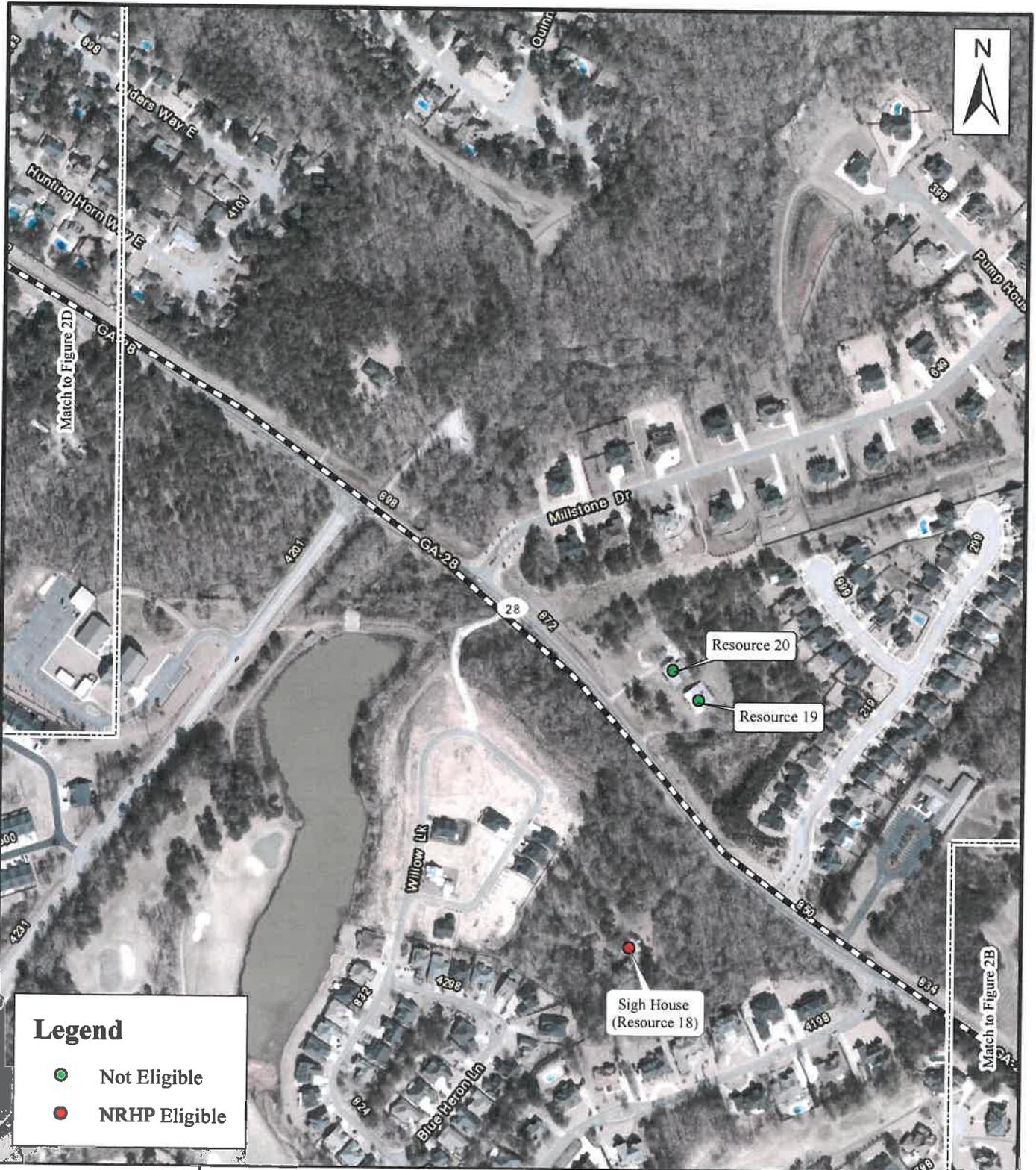


Figure 2B - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

0 125 250 375 500
 Feet





Legend

- Not Eligible
- NRHP Eligible



Figure 2C - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

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 Feet



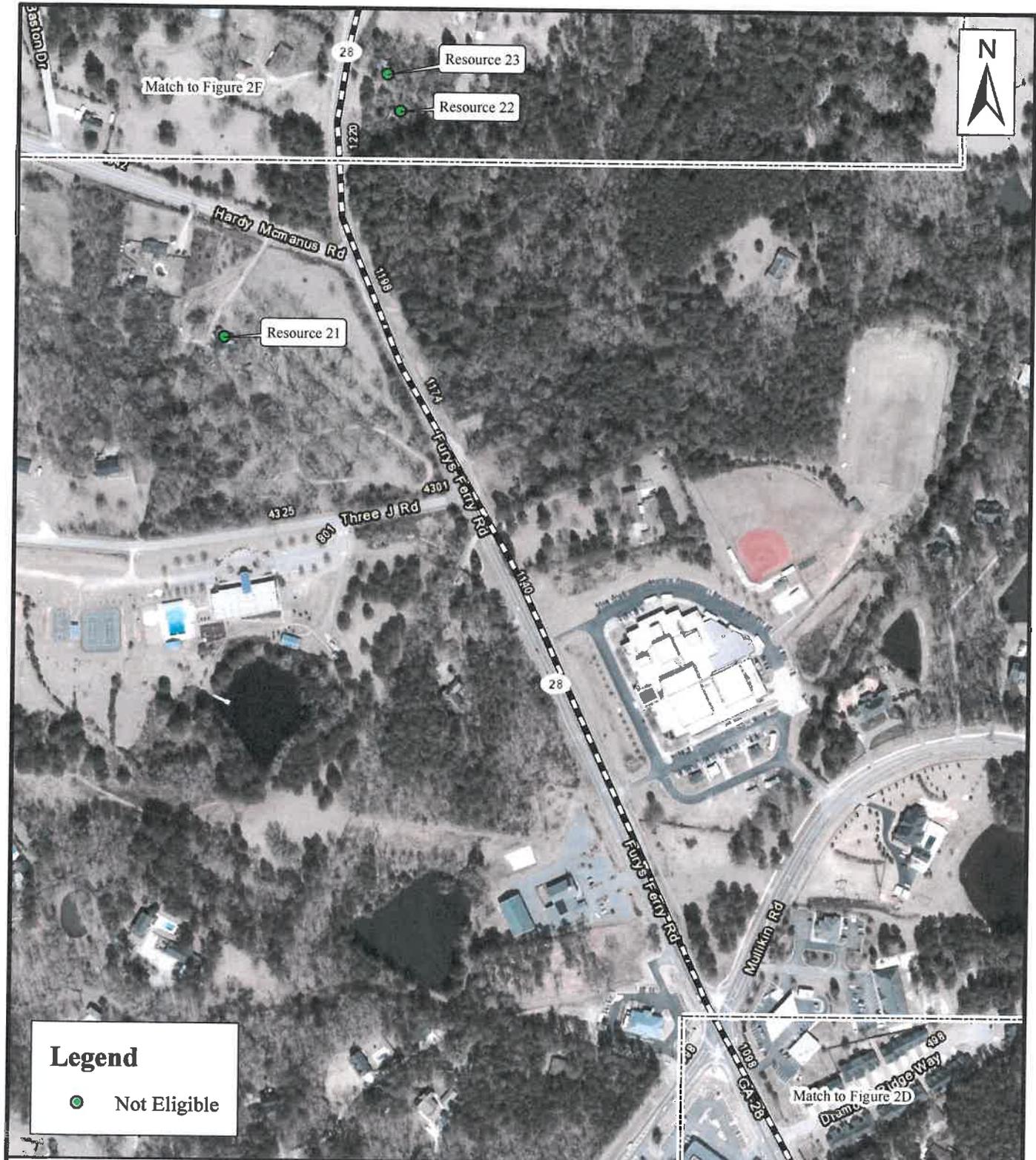


Figure 2D - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003



Source: ESRI Aerial Imagery





Legend

- Not Eligible



Figure 2E - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

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 Feet



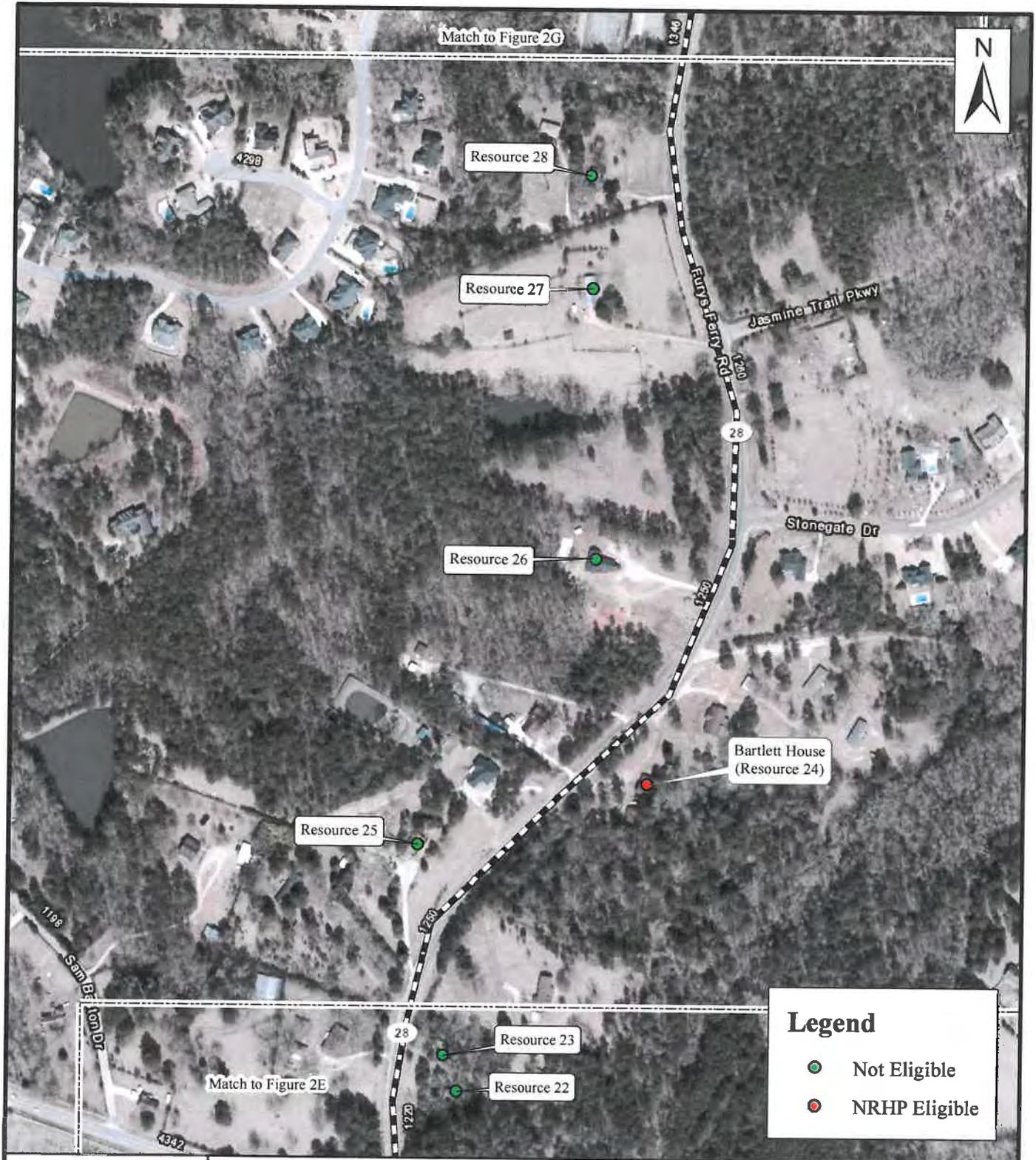


Figure 2F - Resource Location Map
 GDOT Project CSSTP-0008-00(346), Columbia County
 P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

0 125 250 375 500
 Feet





Legend

- Not Eligible
- NRHP Eligible



Figure 2G - Resource Location Map
GDOT Project CSSTP-0008-00(346), Columbia County
P.I. No. 0008346 and HP No. 131115-003

Source: ESRI Aerial Imagery

0 125 250 375 500 Feet



Six (6) properties 50 years old or older were identified within the proposed project's APE in the 1990 Georgia Department of Natural Resources (DNR) Columbia County survey that is included in Georgia's Natural, Archaeological, and Historic Resources GIS database available on the <https://www.gnahrgis.org/gnahrgis/index.do> website. These survey sites are Cb-17 (GNAHRGIS 4760), Cb-21 (GNAHRGIS 4764), Cb-22 (GNAHRGIS 4765), Cb-23 (GNAHRGIS 4766), Cb-24 (GNAHRGIS 4767), and Cb-25 (GNAHRGIS 4768). These sites were field surveyed by an Edwards-Pitman Environmental, Inc. historian in October 2013. Of those six (6) survey sites identified on the 1990 Georgia DNR Columbia County survey, three (3) no longer exist. The sites that no longer exist are Cb-17, Cb-22, and Cb-24.

A total of thirty-two (32) additional properties 50 years of age or older not identified in the 1990 Georgia DNR Columbia County survey were identified within the proposed project's APE during the field survey. These properties are described in Table 1 below.

Table 1. Resources Identified Within the APE of the Proposed Project

Name of Resource	Date of Construction	Type and/or Style	Location	National Register Recommendation
Resource 1	c. 1955	No Academic Type or Style	654 Furys Ferry Road	Not Eligible
Resource 2	1950	Front-Gabled Bungalow	664 Furys Ferry Road	Not Eligible
Resource 3	1950	No Academic Type or Style	645 Furys Ferry Road	Not Eligible
Resource 4	1948	Grave	703 Furys Ferry Road	Not Eligible
Resource 5	1960	No Academic Type or Style	210 Old Blackstone Camp Road	Not Eligible
Resource 6 GNAHRGIS 4764 and Georgia DNR Cb-21	1920	No Academic Type or Style	212 Old Blackstone Camp Road	Not Eligible
Resource 7	1946	No Academic Type or Style	710 Furys Ferry Road	Not Eligible
Resource 8	1964	No Academic Type or Style	707 Furys Ferry Road	Not Eligible
Resource 9	1962	No Academic Type or Style	747 Furys Ferry Road	Not Eligible
Resource 10	c. 1950	No Academic Type or Style	753 Furys Ferry Road	Not Eligible
Resource 11	1935	Front-Gabled Bungalow	757 Furys Ferry Road	Not Eligible
Resource 12	c. 1920	Two-Door Saddlebag	759 Furys Ferry Road	Not Eligible
Resource 13	c. 1935	Cross-Gabled Bungalow	793 Furys Ferry Road	Not Eligible
Resource 14	c. 1955	No Academic Type or Style	799 Furys Ferry Road	Not Eligible
Resource 15 GNAHRGIS 4766 and Georgia DNR Cb-23	c. 1910	Two-Door Saddlebag	801 Furys Ferry Road	Not Eligible

Name of Resource	Date of Construction	Type and/or Style	Location	National Register Recommendation
Avery House (Resource 16)	1954	Front-Gabled Bungalow	820 Furys Ferry Road	ELIGIBLE
Resource 17	c. 1950	No Academic Type or Style	825 Furys Ferry Road	Not Eligible
Sligh House (Resource 18)	1954	English Cottage with English Vernacular Revival elements	852 Furys Ferry Road	ELIGIBLE
Resource 19	1963	No Academic Type or Style	871 Furys Ferry Road	Not Eligible
Resource 20	1960	No Academic Type or Style	873 Furys Ferry Road	Not Eligible
Resource 21	1951	No Academic Type or Style	4308 Hardy McManus Road	Not Eligible
Resource 22	c. 1948	No Academic Type or Style	1199 Furys Ferry Road	Not Eligible
Resource 23	c. 1948	No Academic Type or Style	1219 Furys Ferry Road	Not Eligible
Bartlett House (Resource 24)	c. 1920	Side-Gabled Cottage	1251 Furys Ferry Road	ELIGIBLE
Resource 25	c. 1950	No Academic Type or Style	1232 Furys Ferry Road	Not Eligible
Resource 26	1949	Central Tower Church	1244 Furys Ferry Road	Not Eligible
Resource 27	1957	No Academic Type or Style	1262 Furys Ferry Road	Not Eligible
Resource 28	1963	No Academic Type or Style	1288 Furys Ferry Road	Not Eligible
Resource 29	c. 1963	Southwell Oil Group (SOG) Service Station	1353 Furys Ferry Road	Not Eligible
Jackson House (Resource 30) GNAHRGIS 4768 and Georgia DNR Cb-25	c. 1830	Sand Hills Cottage	1355 Furys Ferry Road	ELIGIBLE
Resource 31	c. 1960	No Academic Type or Style	1359 Furys Ferry Road	Not Eligible
Resource 32	1954	No Academic Type or Style	1365 Furys Ferry Road	Not Eligible
Resource 33	c. 1955	Front-Gabled Bungalow	1373 Furys Ferry Road	Not Eligible
Resource 34	1957 and 1920.	No Academic Type or Style and Hall-Parlor	1385 Furys Ferry Road	Not Eligible

Name of Resource	Date of Construction	Type and/or Style	Location	National Register Recommendation
SR 28 Georgia State Line Marker (Resource 35)	c. 1933	State Line Marker	West side of south approach to Furys Ferry Road bridge over the Savannah River	ELIGIBLE

In addition to the Georgia SHPO, other potential consulting parties were identified based on the nature of the undertaking and the guidance in the *GDOT/FHWA Cultural Resources Survey Guidelines*. The other potential consulting parties invited to participate in the Section 106 process were the Columbia County Historical Society, the Columbia County Commission, and the Central Savannah River Area Regional Commission. The consulting parties were informed of our efforts to identify historic properties by consulting existing information and the results of those efforts and were asked to provide information on any unidentified NRHP listed or eligible properties within the project's APE by a Notification dated November 13, 2013 (see Notification in Appendix). Responses to the Department's invitation to become a consulting party in the Section 106 process were received from the Georgia SHPO by a memorandum dated November 18, 2013 and from the Central Savannah River Area Regional Commission by a letter dated December 12, 2013 (see correspondence in Appendix).

For each property 50 years old or older identified within the APE, a Property Information Form with attached photographs has been prepared. The Criteria for Evaluation were applied to each property and a recommendation regarding NRHP eligibility has been made. For those properties recommended eligible for listing in the NRHP, a site plan sketch, floor plan sketch and proposed boundary depiction have also been attached to the Property Information Form.

Of the thirty-five (35) properties 50 years old or older that were surveyed and to which the Criteria for Evaluation were applied, five (5) have been recommended eligible for inclusion in the NRHP. The properties recommended eligible for inclusion in the NRHP are the Avery House (Resource 16), the Sligh House (Resource 18), the Bartlett House (Resource 24), the Jackson House (Resource 30), and the SR 28 Georgia State Line Marker (Resource 35).

Property Information Forms and Pictures
Provided Upon Request

Attachment #8

Ecology Resource Survey Report

**GDOT Project CSSTP-0008-00(346)
GDOT PI No. 0008346
Columbia County**

**State Route 28 Widening from the South Carolina State
Line to County Route 1236**

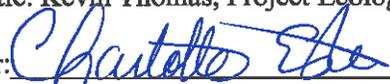
March 2014

Prepared by:
Edwards-Pitman Environmental, Inc.
1250 Winchester Parkway, Suite 200
Smyrna, Georgia 30080

Under Contract with:
URS Corporation
400 Northpark Town Center
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Prepared for:
Georgia Department of Transportation
Office of Environmental Services
600 W. Peachtree Street, NW
Atlanta, Georgia 30308

Report Author: 
Name & Title: Kevin Thomas, Project Ecologist

Consultant Reviewer: 
Name & Title: Charlotte Estes, Senior Ecologist

GDOT Reviewer: _____
Name & Title:

Ecology Resource Survey Report Overview
PI No. 0008346, Columbia County

Streams, Wetlands, and Open Waters			
Resource #	Resource Type	Buffer Required	Protected Species Habitat Present
IS1	Intermittent Stream	Yes	No
WL2	Palustrine Forested Wetland	No	No
IS3	Intermittent Stream	Yes	No
IS4	Intermittent Stream	Yes	No
IS5	Intermittent Stream	Yes	No
OW6	Open Water	Yes	No
WL7	Palustrine Forested Wetland	No	No
PS8	Perennial Stream	Yes	Yes
IS9	Intermittent Stream	Yes	No
WL10	Palustrine Forested Wetland	No	No
IS11	Intermittent Stream	Yes	No
PS12	Perennial Stream	Yes	Yes

Common Name	Scientific Name	Federal Rank	State Rank	Habitat Presence
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	E	Yes
Little amphianthus	<i>Amphianthus pusillus</i>	T	T	No
Atlantic pigtoe	<i>Fusconaia masoni</i>	NS	E	Yes
Mat-forming Quillwort	<i>Isoetes tegetiformans</i>	E	E	No
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	E	No
Ocmulgee skullcap	<i>Scutellaria ocmulgee</i>	NS	T	No
Georgia aster	<i>Symphotrichum georgianum</i>	C	T	Yes
Relict trillium	<i>Trillium reliquum</i>	E	E	Yes

Present within the Project Area	(Y/N)
Invasive Species	<u>Y</u>
Bald Eagle Nest, Habitat	<u>Y</u>
Critical Habitat	<u>N</u>
Essential Fish Habitat	<u>N</u>
Bat Roosting Habitat	<u>Y</u>
Migratory Bird Habitat	<u>Y</u>

*Key: E = endangered, T = threatened, C = candidate, U = unusual NS = no status

EXECUTIVE SUMMARY

Georgia Department of Transportation (GDOT) Project CSSTP-0008-00(346), PI No. 0008346 would involve widening State Route (SR) 28 from the South Carolina state line to County Route (CR) 1236 in Columbia County, Georgia. The proposed project is currently in its concept phase. Topographic maps, National Wetland Inventory (NWI) maps, soil maps, and protected species lists on the US Fish and Wildlife Service (USFWS) and Georgia Department of Natural Resource (GADNR) websites were reviewed prior to conducting the field surveys. The project area is comprised of four vegetative/land use communities: hardwood/pine forest, commercial/residential, old field, and maintained right-of-way. Three invasive plant species were observed along the project corridor: Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), and Chinese wisteria (*Wisteria sinensis*). The proposed project does not contain essential fish habitat or critical habitat. The proposed project area contains bald eagle (*Haliaeetus leucocephalus*) foraging habitat; however, there are no bald eagle nests present within the project area. The forested areas within the project area could provide bat roosting habitat. USFWS's Information, Planning, and Conservation System (IPaC) lists the shortnose sturgeon (*Acipenser brevirostrum*), little amphianthus (*Amphianthus pusillus*), mat-forming quillwort (*Isoetes tegetiformans*), and relict trillium (*Trillium reliquum*) as a species that may be affected by the project in Columbia County. Suitable habitat for the federally endangered relict trillium and shortnose sturgeon is present within the project area. Suitable habitat for the federal candidate species Georgia aster (*Symphyotrichum georgianum*) is also present within the project area. The Georgia aster was observed within the project area.

A total of two jurisdictional perennial stream, six jurisdictional intermittent streams, one jurisdictional open water, and three jurisdictional wetlands are located within or near the proposed project corridor. The proposed project is located in the Middle Savannah River Watershed Hydrologic Unit Code (HUC) 03060106. One stream [PS8 (Jones Creek)] within the project area is listed on the Final 2012 303(d) list. There are no streams on the final 2012 303(d) list for impaired biota within one-mile of the identified streams. Migratory bird nests occur within the culvert of one stream within the project area [PS8 (Jones Creek)]; forested areas along the project corridor do provide migratory bird habitat.

GADNR Nongame Conservation Section (NCS) has two documented occurrences of state protected species within a three mile radius of the project area. The two species are Atlantic pigtoe (*Fusconaia*

masoni) and Ocmulgee skullcap (*Scutellaria ocmulgee*). Suitable habitat is present within the project area for the Atlantic pigtoe. There is no suitable habitat present for the Ocmulgee skullcap.

Sixteen non-buffered state waters are located within or adjacent to the proposed project corridor. Georgia Environmental Protection Division (GAEPD) conducted a site visit on December 4, 2013. The GAEPD sent a letter with buffer determination on resources on December 16, 2013. The proposed project does not occur within a designated trout stream watershed. The two perennial streams, one open water, and six intermittent streams described in the Federal section of the report will receive 25-foot state mandated buffers.

Attachment #9

Ranger Consulting, Inc.

Geotechnical, Environmental, Drilling, Construction

3147 Martha Berry Highway, Rome, Georgia 30165; Phone: 706-290-1782; Fax: 706-290-1701

November 15, 2013

Mr. Nick Castronova
URS Corporation
400 Northpark Town Center
1000 Abernathy Road, NE
Suite 900
Atlanta, Georgia 30328

RE: Limited Phase I Environmental Site Assessment Report
SR 28 from South Carolina Line to Evans to Locks Road
Project No. CSSTP-0008-00(346)
PI No. 0008346
Columbia County, Georgia

Dear Mr. Castronova:

Ranger Consulting, Inc. is pleased to submit the attached revised Limited Phase I Environmental Site Assessment Report. In summation, the report provides documentation of six *Recognized Environmental Concerns (RECs)*.

Two of the properties Ranger consider to be RECs are Circle K #5375, located at 695 Furys Ferry Road, and Circle K #3182, located at 1045 Furys Ferry Road. Both facilities are currently operating as convenience stores and retail fueling facilities. Based upon Environmental Protection Division (EPD) file reviews, it appears that the facilities are operating in compliance with Georgia's Rules for Underground Storage Tank Management.

Although the compliance records for Circle K #5375 are in order and there are no records of any confirmed releases at the facilities, it does not negate the possibility that the UST systems could have developed an as yet undetected release of petroleum products to the subsurface. Given the proximity of the UST system to the proposed corridor, this property is considered a REC.

Circle K #3182, which formerly operated as Pump N Shop #19, experienced a confirmed petroleum release for which No Further Action (NFA) status was awarded in 2007. However, fairly large concentrations of dissolved benzene were detected in monitoring wells installed in the proximity of assumed proposed right-of-way for SR 28. Given this finding coupled with the length of time since the NFA was awarded, it's possible that the facility could have experienced another release, which could exacerbate the groundwater contamination that was allowed to remain on site and potentially impact the proposed SR 28 project.

Mr. Castronova

November 15, 2013

Page 2

Bull Grocery, which previously occupied the current Circle K #3182 property, formerly operated as a fueling station. The tanks were installed in 1961, and according to regulatory files available online, the tanks were removed from the ground in 1986. However, notification provided by the owner indicated that the tanks were permanently out of use. According to the USTMP duty officer, there are no other files available for review for this facility, as the USTMP was just being formed during that time. No other records or personal accountings of the tanks being removed from the property were found; therefore, it is possible the tanks are still in place. Depending on the limits of the proposed right-of-way and if the tanks are still in place, the tanks could be encountered during construction. Due to the lengthy history of USTs and groundwater contamination allowed to remain on site at this location, this property is considered a REC.

Former gas stations were discovered on three additional properties, all of which were located on the Site, and therefore, are considered RECs to the project.

Hicks Grocery, formerly located at 1100 Furys Ferry Road, (currently WifeSaver restaurant) also operated as a fueling station. There are no records for this property. The status of the tanks is unknown. It is presumed that they were removed prior to the construction of the restaurant.

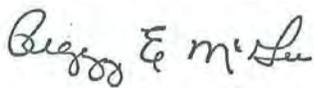
Standard Oil Company, located at 1353 Furys Ferry Road, (currently Custom Furniture) operated as a fueling station and performed oil changes and various other automobile services. Observations during the site reconnaissance indicate the USTs are still present on the property.

Pardue's, formerly located at 1135 Furys Ferry Road, (currently a vacant lot) operated as a fueling station. The USTs are reportedly still present on the property.

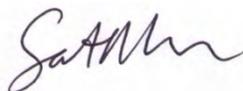
A garage/mechanic shop, formerly located in the southeast quadrant of SR 28 and Evans to Locks Road, perhaps operated as a full mechanic shop from possibly as far back as the 1940s to the late 1980s. The site is currently a vacant lot. This property is considered a REC.

We appreciate the opportunity to provide you with our services. If you develop any questions regarding the content of the report, please call us at (706) 290-1782.

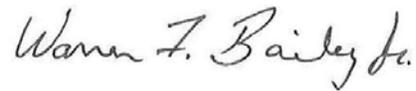
Respectfully,



Peggy McGee
Senior Engineer



Sandra A. Miller, P.E.
Project Engineer
Georgia P.E. No. 36138



Warren F. Bailey, Jr., P.E.
Principal Engineer
Georgia P.E. No. 11462

SR 28 from South Carolina Line to Evans to Locks Road
Project No. CSSTP-0008-00(346)
PI No. 0008346
Columbia County, Georgia

Limited Phase I
Environmental Site Assessment

Prepared For:
URS Corporation
400 Northpark Town Center
1000 Abernathy Road, NE
Suite 900
Atlanta, Georgia 30328

Prepared By:
Ranger Consulting, Inc.
3147 Martha Berry Highway
Rome, GA 30165

November 15, 2013

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1.0 SUMMARY

Ranger Consulting, Inc. (Ranger) has performed a *Phase I Environmental Site Assessment* (ESA) in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-05 for the widening of SR 28/Furys Ferry Road from the South Carolina line to CR 1236/Evans to Locks Road in Evans, Columbia County, Georgia, hereafter referred to as the Site. The ESA included a site reconnaissance, interviews, historical research, file reviews and database searches for the Site. Any exceptions to, or deletions from this practice are described in Section 10.0 of this report. The Summary should not be considered a stand-alone document. The complete report including support documentation and limitations should be evaluated in its entirety.

The Site is comprised of multiple properties located immediately adjacent to and/or proximal to the proposed roadway project. A site vicinity map, topographic map and site plan depicting the location of the subject Site, its surrounding topography and properties of interest are included in Appendix A, Figures 1 through 3b, respectively. During the course of the ESA the following properties were evaluated for potential environmental concerns:

- CVS Pharmacy #0945, 1044 Furys Ferry Road, Parcel No. 077 128
- Pump N Shop #19, 1045 Furys Ferry Road, Parcel No. 077 041U
- Circle K #3182, 1045 Furys Ferry Road, Parcel No. 077 041U
- Circle K #3182, 1041 Furys Ferry Road, Parcel No. 077 058
- Bull Grocery, regulatory records indicate 1047 Furys Ferry Road, Parcel No. 077 041; aerial photography and interviews indicate 1045 Furys Ferry Road, Parcel No. 077 128
- Circle K #5375, 695 Furys Ferry Road, Parcel No. 078 060B
- WH Reeves Company, 3860 Sullivan Hartfield Road, Parcel No. 077 089
- Augusta RV, 801 Industrial Park Drive, Parcel No. 077 131B
- Aces Auto Service, 786 Industrial Park Drive, Parcel No. 077 133G
- Specialty Auto Services, 4236 Anderson Circle, Parcel No. 077 144
- Superior Carpet Cleaning, 4285/4385 Colony Square, Parcel No. 078 304
- Hicks Grocery, 1100 Furys Ferry Road, Parcel No. 077 002
- Pardue's, 1135 Furys Ferry Road, Parcel No. 077 038
- Standard Oil Company, 1353 Furys Ferry Road, Parcel No. 076 019
- Garage/mechanic shop, (no street number provided) Furys Ferry Road (southeast quadrant of SR 28/Furys Ferry Road and Evans to Locks Road), Parcel No. 081A027

This assessment has revealed evidence of *recognized environmental conditions* (RECs) in connection with the Site.

On September 10, 2013, Ranger made a reconnaissance of the Site, which is comprised of numerous properties proximal to the roadway that will be used for right-of-way associated with the proposed road widening project. The Site currently consists predominantly of forested land and private residences with several commercial properties primarily located at or near the intersections of SR 28/Furys Ferry Road and Evans to Locks Road and North Belair Road. The Project Site is bordered by forested land, private residences and an industrial park at Southern Pines Drive. Based upon a review of historical records and interviews, the Project Site appeared to be undeveloped in the 1950s, with the exception of a few private residences and a couple of gas stations and churches. Select photographs of the Site taken by Ranger during the site reconnaissance are included in Appendix B.

The investigation revealed evidence of six properties that would be considered RECs.

- Circle K Store #3182, located at 1045 Furys Ferry Road, formerly operated as Pump N Shop #19 and is currently operating as a convenience store and retail fueling facility with one 10,000-gallon and one 15,000-gallon gasoline underground storage tank (UST). Pump & Shop #19 reported a confirmed release due to the findings of a Limited Phase II Environmental Assessment conducted in 2004. A Corrective Action Plan was submitted proposing Monitoring Only as the remedial action for dissolved groundwater contamination. Pump & Shop #19 was awarded No Further Action (NFA) status in 2007. Groundwater flow was determined to be generally to the northeast, away from the Site. However, fairly large concentrations of dissolved benzene were detected in monitoring wells installed in the proximity of assumed proposed right-of-way for SR 28/Furys Ferry Road. Given this finding coupled with the length of time since the NFA was awarded, it's possible that the facility could have experienced another release, which could exacerbate the groundwater contamination that was allowed to remain on site and potentially impact the proposed SR 28/Furys Ferry Road project.

Bull Grocery, according to regulatory records, was formerly located at 1047 Furys Ferry Road. However, aerial photography clearly indicates that the facility was located immediately adjacent to the roadway at the current-day address of 1045 Furys Ferry Road. This assessment was confirmed by a representative of the Columbia County Tax Assessors office. According to the Tax Assessors office, portions of the original property owned by Mr. Millard Bull were sold separately through the years, which led to current-day address discrepancies. Bull Grocery operated as a fueling station with two 500-gallon USTs classified as an 'other' petroleum product, presumably gasoline. The tanks were installed in 1961. Based on tank data retrieved from the Georgia Environmental Protection Division (EPD) Underground Storage Tank Management Program (USTMP) website, the tanks were removed from the ground in 1986. However, according to a 'Notification for Underground Storage Tanks' form submitted by Millard E. Bull on April 23, 1991, the two USTs were marked as permanently out of use at that time. According to the USTMP duty officer, there are no other files available for review for this facility, as the USTMP was just being formed during that time. No other records or personal accountings of the tanks being removed from

the property were found; therefore, it is possible the tanks are still in place. Depending on the limits of the proposed right-of-way and if the tanks are still in place, the tanks could be encountered during construction. Due to the lengthy history of USTs and groundwater contamination allowed to remain on site at this location, this property is considered a REC.

- Circle K #5375, located at 695 Furys Ferry Road, is currently operating as a convenience store and retail fueling facility with one 10,000-gallon diesel, one 10,000-gallon UST classified as 'other' and three 12,000-gallon gasoline USTs. Although there is no record of a confirmed release at the facility, it does not negate the possibility that the UST system could have developed an as yet undetected release of petroleum to the subsurface. Consequently, the property is considered a REC.
- Hicks Grocery, formerly located at 1100 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. The status of the USTs is unknown. The site is currently occupied by WifeSaver restaurant. This property is considered a REC.
- Pardue's, formerly located at 1135 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. Reportedly the USTs have not been removed. The property is currently a vacant lot. This property is considered a REC.
- Standard Oil Company, formerly located at 1353 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. Visual observations indicate that the tank fill ports remain onsite suggesting that the USTs have not been removed. Custom Furniture currently occupies the building. This property is considered a REC.
- A garage/mechanic shop, formerly located in the southeast quadrant of SR 28/Furys Ferry Road and Evans to Locks Road, perhaps operated as a full mechanic shop from possibly as far back as the 1940s to the late 1980s. The site is currently a vacant lot. This property is considered a REC.

This summary is provided for convenience and should not be substituted for review of the full report, including all attachments as provided herein.

2.0 INTRODUCTION

2.1 PURPOSE

The Phase I ESA was performed in an attempt to identify, to the extent feasible, RECs associated with the proposed widening project of SR 28/Furys Ferry Road from the South Carolina line to CR 1236/Evans to Locks Road in Evans, Columbia County, Georgia, the Site. The ESA is intended to constitute “all appropriate inquiry” into the previous ownership and uses of the Site consistent with good commercial and customary practices as defined by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 USC § 9601). In addition, the ESA is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability.

Phase I ESAs address existing and past uses and conditions relative to the Site. Ranger makes no representation regarding the future or potential use of the Site except for those items explicitly stated in this report.

This assessment was conducted in general accordance with the scope and limitations of the generally accepted *ASTM Standard Practice for Site Assessments: Phase I Environmental Site Assessment Process, Designation: E 1527-05* unless otherwise stated herein. Our assessment, conclusions and recommendations are based on site conditions, observations, interviews, and a review of readily available information, as they existed at the time of our review.

2.2 SCOPE OF SERVICES

Phase I ESAs are described as general characterizations of environmentally sensitive activities and conditions that are identifiable through readily available information and visual, non-invasive observations for the purpose of identifying RECs. ATSM E 1527-05 defines a REC as the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products, even under conditions in compliance with laws.

ASTM E-1527-05 also defines an HREC as an environmental condition which in the past would have been considered a REC, but which may or may not be considered an environmental condition currently.

These terms are not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Services performed for this project include a process involving and/or considering the following:

- Review of available environmental lists published by federal and state agencies (i.e., regulatory database report) in an attempt to identify environmentally sensitive activities (past or present) on the subject and adjoining properties.
- Review of physical characteristics of the Site through field observations and a review of readily available documents including topographic maps, aerial photographs, and historic maps.
- Reconnaissance of reasonably accessible portions of the Site and surrounding areas to visually identify obvious present or past conditions or activities that may pose an environmental threat to the Site.
- Interview of local regulatory agency personnel and others knowledgeable about the history of the Site.
- A qualitative hydrogeologic evaluation of the Site and vicinity using both published topographic maps and field observations.
- Preparation of this report summarizing our services, findings, and conclusions.

A Site vicinity map, topographic map, aerial photograph, Site photograph, regulatory database report, regulatory and/or government agency correspondence, and other supporting documents and information may be included as appendices to this report.

The sampling and testing of soil, air and/or other materials is beyond the scope of this study. The identification of asbestos containing materials (ACM), radon, lead based paint (LBP), lead in drinking water, wetlands, Waters of the United States, Waters of the State, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, rare or endangered species, air quality (including but not limited to vapor intrusion), noise impacts, biological agents and mold are also beyond the ASTM E1527-05 defined scope of this Phase I ESA. No implication is intended as to the relative importance of these additional environmental items, and this list of items is not intended to be all inclusive.

2.3 SIGNIFICANT ASSUMPTIONS

The information gathered during this assessment was information that was available at the time of the assessment and “practically reviewable.” This is, by definition, information that is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. The form of the information is such that the environmental professional can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located (such as records that are sorted chronologically) are not considered practically reviewable.

In addition, for large databases with numerous records it is common for an unmanageable number of sites to be identified, even within a smaller geographic area such as a zip code. In these cases when so much data is generated that it cannot be feasibly reviewed for its impact on the property, it is considered not practically reviewable.

The information provided herein is that which is publicly available. Information that is publicly available means that the source of the information allows access to the information by anyone upon request at a reasonable time and cost. Additionally, it is possible that unreported disposal of waste or other activities impairing the environmental condition of the Site may have occurred which could not be identified.

2.4 LIMITATIONS AND EXCEPTIONS

2.4.1 Limitations

Ranger has performed this Phase I ESA in general accordance with ASTM E1527-05, which is a limited inquiry into a property's environmental status and is not sufficient to discover every potential source of environmental liability or environmental impact, if any, of the property to be evaluated. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a property, and this practice recognizes reasonable limits of time and cost.

Ranger's assessment represents a review of certain information relating to the Site that was obtained by methods described above and does not include sampling or monitoring activities at the Site. While Ranger has used reasonable care to avoid reliance upon data and information that is inaccurate, Ranger is not able to verify the accuracy or completeness of all data and information available during the investigation. Some of the conclusions in this report would be different if the information upon which they are based is determined to be false, inaccurate or incomplete. Ranger shall not be held responsible

for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed by interviewees at the time this investigation was performed.

Ranger makes no legal representations whatsoever concerning any matter including, but not limited to, ownership of any property or the interpretation of any law. Ranger further disclaims any obligations to update the report for events taking place after the time during which the assessment was conducted. This report is not a comprehensive site characterization and should not be construed as such. The opinions presented in this report are based upon the findings derived from a site reconnaissance, a limited review of specified regulatory records and historical sources, and comments made by the interviewees.

Phase I ESAs, by their nature, are limited. Ranger has endeavored to meet what it believes is the applicable standard of care, and, in doing so, is obliged to advise the Client of Phase I ESA limitations. Ranger believes that providing information about limitations is essential to help the Client identify and thereby manage its risks. Through additional research, these risks can be mitigated, but they cannot be eliminated.

The level of inquiry is variable. Not every property will warrant the same level of assessment. Consistent with good commercial or customary practices, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the User, and the information developed in the course of the inquiry.

Ranger's findings, opinions, and conclusions are based on information which is reasonably ascertainable from standard sources at the time of the assessment through site reconnaissance, visual assessment of surficial conditions, records review, interviews and other standard investigative techniques used in the industry at this time. It is possible that other information exists or may subsequently become known that may impact or change the site assessment after Ranger's services are complete.

In conducting this Phase I ESA and preparing the ESA report, Ranger reviewed, interpreted, and relied upon information provided by others, including, but not limited to, Mr. Nick Castronova, Project Manager for URS Corporation (Client or User), individuals, government authorities, and other entities. Ranger has not performed an independent evaluation of the accuracy or completeness of such information.

Ranger's assessment represents our professional opinion only. Therefore, Ranger cannot, under any circumstances, make a statement of warranty or guarantee, expressed or implied, that RECs, environmental impairment, or environmental impacts are limited to those that are discovered while we are performing the Phase I ESA.

2.4.2 Exceptions/Data Gaps

Data gaps are the lack or inability to obtain information required by ASTM Standard E 1527-05 despite good faith professional efforts to gather such information, such as, but not limited to, the inability to conduct a site visit, inability to conduct interviews, and the inability to establish historical uses of the Site or surrounding properties. Not all data gaps are significant, and a data gap will only be discussed in this section if: 1) a data gap occurs during investigation, and/or 2) the data gap impairs Ranger's ability to meet the objectives of ASTM Standard E 1527-05.

Multiple data gaps were encountered during the site evaluation: The use of the Site was not identified back to the Site's first developed use, chain-of-title was not provided by the Client to Ranger for review, Sanborn maps were not available, the aerial photographs were not consistently available at five year intervals, the City Directories were only available from 1997 to 2012, and regulatory files do not exist for several facilities reportedly located along the project corridor, including the garage/mechanic shop, Bull Grocery, Standard Oil Company, Hicks Grocery and Pardue's. Multiple attempts made to locate knowledgeable parties relative to these sites were unsuccessful. Therefore, the Site and surrounding area could not be fully investigated in this regard for the historical records research and interviews. However, the data gaps are not considered significant because the apparent past history and current use of the Site were able to be determined by a site reconnaissance, current owner/manager interviews and by using the available historical records and database reports from the following sources: Environmental Data Resources, Inc. (EDR), United States Geological Survey (USGS) EarthExplorer, U.S. Environmental Protection Agency (EPA) Enforcement and Compliance History Only (ECHO), Georgia EPD Leaking Underground Storage Tank (LUST), UST, Solid Waste, and Hazardous Waste – Response and Remediation Programs.

2.5 SPECIAL TERMS AND CONDITIONS

None.

2.6 USER RELIANCE

This Phase I ESA report, along with the findings and conclusions contained in the report, either in completed form, summary form, or by extraction, is prepared, and intended, for the sole use of Mr. Nick Castronova, Project Manager for URS Corporation (Client or User), and therefore may not contain sufficient information for other purposes or parties. The Client (URS and Georgia Department of Transportation) is the only intended beneficiary of this report. The contents of Ranger's report will continue to be the property of Ranger. Ranger's report may not be disclosed to, used by, or relied upon by, any person or entity other than the Client without the express written consent of Ranger.

The passage of time may result in changes in technology, economic conditions, site variations, or regulatory provisions which would render the report inaccurate. Reliance on the report after the date of issuance as an accurate representation of current site conditions shall be at the client's sole risk. Should Ranger be required to review the report after six months from its date of submission, Ranger shall be entitled to additional compensation at the existing rates or other such terms as may be agreed between Ranger and the Client.

Authorization for disclosure to a third party or authorization for third-party reliance on any report will be considered by Ranger upon the written request of the Client. Ranger reserves the right to deny authorization to allow disclosure or reliance of Ranger's report to third parties.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The Site is a corridor located along SR 28/Furys Ferry Road from just south of the South Carolina line to just north of the Evans to Locks Road intersection in Evans, Columbia County, Georgia. The Site measures approximately four miles in length.

A Site location map and a topographic map depicting the location of the subject Site and its surrounding topography are included in Appendix A (Figures 1 and 2). The approximate latitude and longitude coordinates of the subject Site are between 33°33'01" north and 82°05'24" west, and 33°35'30" north and 82°07'20" west, respectively.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Site is located within the Grovetown, Georgia USGS, 7.5-minute series topographic quadrangle map. This map indicates that the Site slopes from a topographic high of approximately 350 feet above mean sea level (msl) in the southern portion to a low of approximately 200 feet msl in the northern portion of the Site. Select photographs of the Site taken by Ranger during the site reconnaissance are included in Appendix B.

3.3 CURRENT USE(S) OF THE PROPERTIES

At the time of the site reconnaissance, the majority of the Site is residential. Portions of the Site are being utilized as commercial areas consisting of gas stations, a grocery store, various retail stores, a restaurant, private businesses, several churches, a fire department, and a middle school. Planted fields were also noted on the Site. During the site reconnaissance, evidence of the use and storage of petroleum products was observed at the Site and in the surrounding area. Observations made during the site reconnaissance are further discussed in Section 6 of this report.

The Columbia County Tax Assessor website provided information on the properties being evaluated for environmental concerns that are located along the Site corridor (<http://gis.columbiacountyga.gov/>). Table 1 below summarizes each property. Please refer to Appendix C for a copy of the tax assessor records for individual properties.

Table 1: Summary of Investigated Properties

Parcel Number	Owner	Current / (Former) Occupant	Address	Site Acreage	Current / (Former) Use
077 128	Sep 2007-C27-018 LLC	CVS Pharmacy #0945	1044 Furys Ferry Road	1.86	Pharmacy and retail store
077 041U and 077 058	Nirovest LLC c/o Property Tax Dc 17	Circle K #3182 / (Pump N Shop #19) (Bull Grocery)	1045 and 1041 Furys Ferry Road	1.23	Commercial fueling facility / (same)
078 060B	Eastmoor Acres Realty Company, Inc.	Circle K #5375	695 Furys Ferry Road	0.90	Convenience store with fuel sales
077 089	Harrison, AJ	WH Reeves Co. / (Columbia County)	3860 Sullivan Hartfield Road	18.68	Towing and hauling company / (C&D landfill)
077 002	Christopher A. Cunningham	WifeSaver / (Hicks Grocery)	1100 Furys Ferry Road	1.21	Restaurant / (gas station)
077 038	Smith, Walter E. & Smith, Lisa	Vacant lot / (Pardue's)	1135 Furys Ferry Road	1.54	Vacant lot / (gas station)
076 019	Danilovich, James W	Custom Furniture / (Standard Oil Company)	1353 Furys Ferry Road	4.50	Custom furniture / (gas station)
081A027	Hull James M & Mhm Family Enterprises Lllp & Etal	Vacant lot / (garage/mechanic shop – name unknown)	SE quadrant Furys Ferry Road and Evans to Locks Road	0.74	Vacant Lot / (garage/mechanic shop)

3.4 DESCRIPTIONS OF STRUCTURES, ROADS, OTHER IMPROVEMENTS

The Site is predominantly residential with several commercial buildings including retail and convenience stores, located mainly at or near the intersections of SR 28/Furys Ferry Road with Evans to Locks Road and North Belair Road. Several churches are located along the corridor. A middle school is located just north of North Belair Road. Several private residences fronting SR 28/Furys Ferry Road and residential developments on small side roads are evident along the project corridor.

Columbia County operates a municipally-owned water and sewer utility serving the entire SR 28/Furys Ferry Road corridor. Sewer service terminates at 1116 Furys Ferry Road, just north of Mullikin Road. Water service terminates at 1421 – 1433 Furys Ferry Road, just before crossing the South Carolina border. Electricity is provided by Georgia Power. Natural gas is provided by Georgia Natural Gas and Scana. Telephone, including fiber optics, is provided by AT&T. Columbia County water and sewer lift stations at Jones Creek are present on the east side of SR 28/Furys Ferry Road just south of its intersection with Southern Pines Drive.

3.5 CURRENT USE(S) OF THE ADJOINING PROPERTIES

Properties with reported environmental concerns were observed individually. All other properties, including those in the immediate vicinity of the Site were examined from the roadway or by a physical walk-around of the property. Adjoining properties in all directions are predominantly private residences, undeveloped forested land, and minor commercial development near the intersections of Evans to Locks Road and North Belair Road.

A Georgia Power substation is located on the east side of SR 28/Furys Ferry Road just south of Evans to Locks Road. The high voltage transmission lines associated with the substation run east and west across SR 28/Furys Ferry Road.

Another Georgia Power substation is located to the southwest of SR 28/Furys Ferry Road and southeast of North Belair Road, just south of CVS Pharmacy #0945. The high voltage transmission lines associated with the substation run northwest across North Belair Road.

4.0 USER PROVIDED INFORMATION

Interviews were conducted with Mr. Nick Castronova of URS Corporation (Client representative).

4.1 TITLE RECORDS

A chain of title report for the Site was not provided by the Client.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

The Client has stated that they are not aware of any environmental liens or activity or use limitations for the Site.

4.3 SPECIALIZED KNOWLEDGE

The Client has stated that they are not aware of any specialized knowledge or experience of the Client that is material to RECs in connection for the Site.

4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The Client has stated that they are not aware of any commonly known or reasonably ascertainable information that is material to RECs in connection with the Site.

4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No valuation reduction or environmental issues were identified by the Client.

4.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The Client has stated that they are not aware of any owner, property manager or occupant information that is material to RECs in connection with the Site.

4.7 REASON FOR PERFORMING PHASE I ESA

The Phase I ESA is being performed as a requirement for the SR 28/Furys Ferry Road widening project from the South Carolina line to CR 1236/Evans to Locks Road (GDOT Project No. CSSTP-0008-00(346), Columbia County, PI No. 0008346) in Evans, Columbia County, Georgia.

5.0 RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Environmental Data Resources, Inc. (EDR) of Milford, Connecticut conducted a commercial database search of regulatory databases. This is a review of published governmental records from federal and state environmental regulatory agencies. It was conducted to identify use, generation, storage, treatment or disposal of hazardous substances and petroleum products, and/or release incidents of such materials that may have the potential to impact the Site or nearby sites. The federal and state environmental databases obtained from EDR and reviewed by Ranger were generated in general accordance with the ASTM E-1527-05 guidelines for standard environmental record sources for this assessment. Such reports are typically used to review the potential environmental impact of activities at the Site or nearby sites. The full EDR database search report for this project is included in Appendix D.

Standard Environmental Record Sources

Federal NPL site list	1.0 mile
Federal Delisted NPL site list	1.0 mile
Federal CERCLIS list	0.5 mile
Federal CERCLIS NFRAP site list	0.5 mile
Federal RCRA CORRACTS facilities list	1.0 mile
Federal RCRA non-CORRACTS TSD facilities list	0.5 mile
Federal RCRA generators list	Property and adjoining properties
Federal Institutional control/engineering control registries	Property only
Federal ERNS List	Property only
State and tribal lists of hazardous waste sites identified for investigation for remediation:	
• State and tribal equivalent NPL	1.0 mile
• State and tribal equivalent CERCLIS	0.5 mile
State and tribal landfill and/or solid waste disposal site lists	0.5 mile
State and tribal equivalent leaking storage tank lists	0.5 mile
State and tribal registered storage tank lists	Property and adjoining properties
State and tribal Institutional control/engineering control registries	Property only
State and tribal voluntary cleanup sites	0.5 mile
State and tribal Brownfield sites	0.5 mile

The EDR Report includes searches for State and Tribal lists for Indian Reservations, UST and LUST sites. According to the EDR Report, there were no Indian Reservations, Tribal USTs or Tribal LUST sites within the recommended search distances.

Since Tribal lands are not present within the search radii, it can be concluded that there will be no Tribal hazardous waste sites, landfills or solid waste disposal sites, institutional control/engineering control, voluntary cleanup sites and/or Brownfield sites within the recommended search distances.

5.1.1 Site

A total of 13 different regulated facilities were identified within a one-mile radius of the Site from the EDR report. Some of the regulated facilities are listed on multiple regulatory databases; and some of the facilities were combined in the Phase I ESA because they share the same location/business classification information. In addition, 11 EDR orphan facilities were not mapped in relation to the Site because of inadequate address information. None of the orphan facilities were identified within a 0.25 mile radius of the Site during the reconnaissance or in an office review.

Five locations were incorrectly attributed to this search by EDR.

- Augusta RV, 801 Industrial Park Drive, is actually located approximately 0.7 miles west of the project corridor.
- Aces Auto Service, 786 Industrial Park Road, is actually located approximately 0.76 miles west of the project corridor.
- Specialty Auto Service, 4236 Anderson Circle, is located in a private residential property.
- Superior Carpet Cleaning, 4285 Colony Square, was a carpet cleaning business which never operated from this private residence.
- Superior Carpet Cleaning, 4385 Colony Square, is assumed to be a repeat of the Superior Carpet Cleaning, 4285 Colony Square listing with an erroneous address as 4385 Colony Square is not a valid address.

Therefore, these locations are not considered germane to this Phase I ESA.

A file review of the facilities on the LUST and the UST regulatory compliance databases was performed on August 22, 2013 at the USTMP Office. Information retained from the file review is included in Appendix D. A summary of the information regarding each identified facility located on the Site is listed below.

- Circle K Store #3182, located at 1045 Furys Ferry Road, formerly operated as Pump N Shop #19 and is currently operating as a convenience store and retail fueling facility with one 10,000-gallon and one 15,000-gallon gasoline UST. Pump & Shop #19 reported a confirmed release due to the findings of a Limited Phase II Environmental Site Assessment conducted in 2004. A Corrective Action Plan was submitted proposing Monitoring Only as the remedial action for dissolved groundwater contamination. Pump & Shop #19 was awarded No Further Action status in 2007. Groundwater flow was determined to be generally to the northeast, away from the Site. However, fairly large concentrations of dissolved benzene were detected in monitoring wells installed in the proximity of assumed proposed right-of-way for SR 28/Furys Ferry Road. Given this finding coupled with the length of time since the NFA was awarded, it's possible that the facility could have experienced another release, which could exacerbate the groundwater contamination that was allowed to remain on site and potentially impact the proposed SR 28/Furys Ferry Road project.

Bull Grocery, formerly located on the current 1045 Furys Ferry Road parcel, formerly operated as a fueling station with two 500-gallon USTs classified as an 'other' petroleum product, presumably gasoline. The tanks were installed in 1961. Based on tank data retrieved from the Georgia EPD USTMP website, the tanks were removed from the ground in 1986. However, according to a 'Notification for Underground Storage Tanks' form submitted by Millard E. Bull on April 23, 1991, the two USTs were marked as permanently out of use at that time. According to the USTMP duty officer, there are no other files available for review for this facility, as the USTMP was just being formed during that time. No other records or personal accountings of the tanks being removed from the property were found; therefore, it is possible the tanks are still in place. Depending on the limits of the proposed right-of-way and if the tanks are still in place, the tanks could be encountered during construction. Due to the lengthy history of USTs and groundwater contamination allowed to remain on site at this location, this property is considered a REC.

- Circle K #5375, located at 695 Furys Ferry Road, is currently operating as a convenience store and retail fueling facility with one 10,000-gallon diesel, one 10,000-gallon UST classified as 'other' and three 12,000-gallon gasoline USTs. According to the EDR and based on a review of the sales information available on the Columbia County Tax Assessors website, this facility was previously operated as Smile Gas. Based upon EPD file reviews, it appears that the facility is operating in compliance with Georgia's Rules for Underground Storage Tank Management. Although there is no record of a confirmed release at the facility, it does not negate the possibility that the UST system could have developed an as yet undetected release of petroleum to the subsurface. Consequently, the property is considered a REC.

One site was listed in the EPA's federal records for Resource Conservation and Recovery Act Small Quantity Generators (RCRA-SQGs):

- CVS Pharmacy #0945, located at 1044 Furys Ferry Road, is listed as a RCRA-SQG for photofinishing, pharmacies and drug stores. CVS Pharmacy has a national hazardous waste management program which uses a national, licensed vendor to dispose of all hazardous waste streams. The hazardous waste streams generated include photo processing waste and retail and pharmaceutical products in consumer quantities. CVS Pharmacy #0945 is not considered a REC to the Site.

5.1.2 Adjoining Properties

Adjoining sites were not listed on the regulatory databases included in the EDR Report.

5.1.3 Surrounding Area

One facility in the area surrounding the Site was identified in the EDR Report within the specified search distances relative to the Site.

A file review of the facilities on Georgia's Solid Waste Management Program's regulatory database was performed on October 15, 2013 at the Solid Waste Management Program office. Additional files were reviewed on October 24, 2013 at the EPD East Central District office. Information retained from these file reviews is included in Appendix D. The following is a summary of the information regarding the identified facility which is located in the area surrounding the Site.

- WH Reeves Company, located at 3860 Sullivan Hartfield Road, is a hauling, towing and recovery service business. The EDR report indicates the site is listed on the Georgia Permitted Landfills list under permit number PBR-121-077 COL. Based on the file review, the permit is for solid waste collection. A portion of the property was formerly utilized by Columbia County as a permitted construction and demolition (C&D) waste landfill.

According to the Georgia USTMP, this facility currently operates a 12,000-gallon diesel UST. There is no record of a confirmed release from the UST. Based upon the file review it appears that the UST is operated in compliance with Georgia's Rules for Underground Storage Tank Management. Given the distance to the Site, this property is not considered a REC.

5.1.4 Orphan Sites

Eleven additional facilities were listed as "unmappable" or "orphan" sites in the EDR database report. These facilities were determined to be located beyond the applicable

search distance from the Site based on the information provided and are not considered RECs to the Site.

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

A review of the facilities listed on EPA's Enforcement & Compliance History Only database was performed. One facility that is located within the search distance from the Site was listed on the ECHO database, the CVS Pharmacy #0945. The CVS Pharmacy #0945 is listed on the ECHO database as a RCRA conditionally exempt small quantity generator for one-hour photofinishing and as a pharmacy and drug store. No violations were recorded. Therefore, this property is not considered a REC. Copies of the database listing and the data sheet are provided in Appendix D.

5.3 PHYSICAL SETTING SOURCES

The Grovetown, Georgia USGS Topographic Quadrangle Map, the USGS Mineral Resources website, the United States Department of Agriculture (USDA) Natural Resources Conservation Service Soil Survey website, the Geologic Map of Georgia, and the EDR report were reviewed as sources for ascertaining information relative to the physical setting of the Site and surrounding area.

5.3.1 Site And Area Geology

The Site is located in the Piedmont Geologic Province, a broad plateau region underlain by crystalline rocks up to 600 million years old. The Piedmont trends to the northeast from Alabama to New Jersey. In Georgia, the Piedmont is bounded by the Blue Ridge Range of the Appalachian Mountains to the northwest, and to the southeast, it is bounded by the leading edge of Coastal Plain sediments, commonly referred to as the "Fall Line". Numerous episodes of crystal deformation have produced varying degrees of metamorphism, folding and shearing in the underlying rock. The resulting metamorphic rock types in this area of the Piedmont are predominantly a series of Precambrian age schists and gneisses, with scattered granitic or quartzite intrusions.

Residual soils in the Piedmont region are primarily the product of in-situ chemical decomposition of the parent rock. The extent of the weathering is influenced by the mineral composition of the rock and defects such as fissures, faults and fractures. Boundaries between zones of soil, partially weathered rock and bedrock are erratic and poorly defined. Weathering is often more advanced next to fractures and joints that transmit water, and in mineral bands that are more susceptible to decomposition. Boulders and rock lenses are sometimes encountered within the overlying partially weathered rock or soil matrix.

According to the Geologic Map of Georgia, 1976, the site is generally underlain by a formation of granitic gneiss undifferentiated. Based on a soil survey conducted by the USDA Soil Conservation Service, soil types common along the project corridor include Cecil clay loam, Cecil coarse sandy loam, and Appling coarse sandy loam.

5.3.2 Groundwater

Groundwater in the Piedmont typically occurs as an unconfined or semi-confined aquifer condition. Recharge is provided by the infiltration of rainfall and surface water through the soil overburden. More permeable zones in the soil matrix, as well as fractures, joints and discontinuities in the underlying bedrock can affect groundwater conditions. The groundwater table in the Piedmont is expected to be a subdued replica of the original surface topography. Based on a review of the topographic maps and visual observations, the project Site slopes toward two main water features, Jones Creek and the Savannah River. Groundwater is assumed to generally flow to the north or south toward Jones Creek between Evans to Locks Road and North Belair Road or to the north toward the Savannah River north of North Belair Road. Local groundwater flow will likely vary along the project corridor.

No drinking water wells were identified within the applicable radii of the Site during the site reconnaissance nor were any identified by EDR; however, private drinking water wells may exist. The majority of the residences along the Site corridor are quite a distance from the roadway and evidence of drinking water wells wasn't obvious during the visual survey.

5.4 HISTORICAL USE INFORMATION

Ranger attempted to conduct a review of dated reasonably ascertainable environmental reports, historical maps and aerial photographs to gain an understanding of the development history of the Site. Available historical records reviewed by Ranger were used to review the potential environmental impact of activities on the integrity of the Site.

5.4.1 Topographical Maps

The 7.5-minute topographic map of the Grovetown, Georgia (1980) depicted the Site as being a roadway surrounded by wooded and cleared land with numerous structures and intersecting roadways throughout. Copies of historical topographic maps from the years 1892, 1921, 1946, 1964, 1971, and 1980 were obtained by Ranger from EDR. The maps reviewed did not show any nearby pipelines, landfills or surface mines. Copies of the topographical maps are included in Appendix E.

5.4.2 Historical Aerial Photographs

To evaluate the previous land uses of the Site and surrounding area, a series of aerial photographs were reviewed. The aerial photographs provide a progressive overview of properties pertaining to this Phase I ESA.

Copies of USGS historical aerial photographs taken in the years 1951, 1962, 1964, 1971, 1977, 1981, 1982, 1988 and 1989 were obtained by Ranger from EarthExplorer. A copy of a USGS historical aerial photograph taken in 2000 was also obtained by Ranger from Microsoft Research Maps. Additionally, photographs taken in 1993, 1999, 2000, 2002, 2004, 2005, 2006, 2007, 2009, 2010, 2011 and 2013 by Google Earth were reviewed. These photographs were reviewed in an attempt to identify changes in land use and areas of potential environmental concern. Copies of the aerial photographs are included in Appendix E. Descriptions and interpretations from the aerial photograph reviews are described below.

1951, 1962, 1964, 1971 and 1977 Aerial Photographs: The aerial photographs indicate that the Site is predominantly residentially developed or wooded and agricultural land. A roadway in a configuration similar to the existing SR 28/Furys Ferry Road alignment is present. Beginning in the 1951 photograph, a small structure appears evident in the southeast quadrant of SR 28/Furys Ferry Road and Evans to Locks Road, presumably the garage/mechanic shop referenced in Section 7.4. In the 1962 photograph, a structure is present in the east quadrant of the intersection of SR 28/Furys Ferry Road and Mullikin Road, presumably Bull Grocery. Although regulatory records indicate Bull Grocery was located behind the current-day Circle K #3182 at 1047 Furys Ferry Road, currently Appletree Academy, aerial photographs clearly indicate the facility was located immediately adjacent to the roadway at the present-day address of 1045 Furys Ferry Road. A small structure, presumably Hicks Grocery, is evident in the west quadrant of SR 28/Furys Ferry Road and North Belair Road. Pardue's appears to be visible on the east side of SR/28 Furys Ferry Road just south of Hardy McManus Road. Also in the 1962 photograph, a structure, presumably Standard Oil Company, is visible on the east side of SR/28 Furys Ferry Road where Custom Furniture is currently located. In the 1964 photograph, what appears to be a cleared area is present on the portion of the property occupied at that time by the Columbia County C&D landfill on Sullivan Hartfield Road. The landfill appears covered in the 1971 photograph. Surrounding land appears to be primarily residentially developed or wooded and agricultural land.

1981, 1982, 1988 and 1989 Aerial Photographs: The aerial photographs indicate that the Site remains predominantly residentially developed or wooded and agricultural land. Bull Grocery, Hicks Grocery, Pardue's, Standard Oil Company and the garage/mechanic shop remain evident. Columbia County C&D landfill remains evident on Sullivan Hartfield Road. Surrounding land appears to be increasingly residentially developed or wooded and agricultural land.

1993, 1999 and 2000 Aerial Photographs: In the 1993 aerial photograph, the Evans to Locks Road configuration on the west side of the intersection with SR 28/Furys Ferry Road has changed from the configuration visible in the 1989 aerial photograph. In the new configuration, similar to how it looks currently, Evans to Locks Road changes direction and curves farther south approximately 700 feet west of where it intersects with SR 28/Furys Ferry Road. The substation has been constructed just south of Evans to Locks Road, and the fire department building is apparent. The garage/mechanic shop building is no longer evident. WH Reeves Company appears to be operational where the former C&D landfill was previously located on Sullivan Hartfield Road. The small structure, presumably Hicks Grocery, is still evident in the west quadrant of SR 28/Furys Ferry Road and North Belair Road. Bull Grocery is no longer apparent in the east quadrant of the same intersection. Several residential subdivisions have developed along the corridor, as well as the middle school just north of Mullikin Road. The gas station, Pardue's, is still evident on the east side of SR 28/Furys Ferry Road just north of Three J Drive. Standard Oil Company is visible in the 1993 photograph on the east side of SR 28/Furys Ferry Road between Rivermont Drive and Culbreath Drive. In the 1999 photograph, a structure similar to the current Circle K #5375 is present in the northeast quadrant of the intersection of SR 28/Furys Ferry Road and Evans to Locks Road. Pardue's is no longer evident. A substation has been constructed in the south quadrant of SR 28/Furys Ferry Road and North Belair Road. Surrounding land remains residentially developed or wooded and agricultural land.

2002, 2004, 2005, 2006 and 2007 Aerial Photographs: The aerial photographs indicate increasing residential and commercial development along the project corridor and the surrounding areas with decreasing wooded and agricultural land. Circle K #3182 has been constructed in the 2005 photograph in the east quadrant of the intersection of SR 28/Furys Ferry Road and Evans to Locks Road. Hicks Grocery and Standard Oil Company remain evident in the 2002, 2004, 2005 and 2006 photographs. CVS is evident in the 2007 photograph in the west quadrant of the intersection of SR 28/Furys Ferry Road and Evans to Locks Road. The apartment complex on Diamond Ridge Way, just south of North Belair Road, is visible as well. In the 2007 photograph, Hicks Grocery has been replaced by the WifeSaver restaurant.

2009, 2010 and 2011 Aerial Photograph: The aerial photographs indicate increasing residential development along the project corridor and on surrounding land. Commercial developments appear to have subsided in later years.

Recent Aerial Photograph: A color aerial photograph of the Site is included in Figure 3 Site Plan (Appendix A). The photograph was obtained from Google Earth. The aerial photograph depicts the Site and surrounding land generally as it appears presently.

5.4.3 Historical City Directories

Copies of historical city directories were obtained for the years between 1997 and 2012 in approximate five-year intervals. The City Directory is provided in Appendix D. The following facilities of concern were noted on the Site during our review of the City Directories.

2012

- 695 Furrys Ferry Rd; Circle K; convenience stores
- 1045 Furrys Ferry Rd; Circle K; convenience stores

2007

- 695 Furrys Ferry Rd; Circle K; convenience stores
- 1045 Furrys Ferry Rd; Circle K; convenience stores

2002

- 695 Furrys Ferry Rd; Smile Gas Inc; convenience stores

5.4.4 Previous Environmental Reports – Site

Previous environmental reports for the Site were not provided to Ranger for review.

5.4.5 Previous Environmental Reports – Surrounding Sites

Previous environmental reports for surrounding sites were not provided to Ranger for review.

6.0 SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

Ms. Sandra Miller, P.E. and Ms. Peggy McGee conducted a site visit on September 10, 2013. The site visit consisted of an initial site reconnaissance, a walk-through of individual properties perceived to show evidence of environmental concerns and a thorough drive-through of the remaining project corridor. Additionally, an area reconnaissance was conducted as a driving tour to identify facilities within specified regulatory search distances listed within the previously referenced EDR report. This visual and physical reconnaissance of the Site focused primarily on its surface features.

The site reconnaissance was performed in an attempt to identify observed obvious indications of present or past activities that may have caused a significant environmental impact(s) to the Site. Select photographs of the Site taken by Ranger during the site reconnaissance are included in Appendix B.

6.2 GENERAL SITE SETTING

Current Use(s) of the Site

The proposed road widening Site is approximately four miles in length and is located in Evans, Columbia County, Georgia. The Site is developed with a few commercial buildings including retail and convenience stores, and private businesses, located mainly at or near the intersections of SR 28/Furys Ferry Road and Evans to Locks Road and North Belair Road. Several churches are located along the project corridor. A middle school is located on SR 28/Furys Ferry Road just north of North Belair Road. Several private residences, forested land and planted fields are evident along SR 28/Furys Ferry Road between the aforementioned intersections. Surrounding sites in all directions are predominantly private residences and forested land.

Past Use(s) of the Site

Bull Grocery, Pardue's, Hicks Grocery and Standard Oil Company all operated as former gas stations. Pardue's, located at 1135 Furys Ferry Road, is currently a vacant lot. The paved pull-off area and old stone columns are the only remaining evidence of the former facility. A WifeSaver restaurant is currently located on the former Hicks Grocery site at 1100 Furys Ferry Road. Standard Oil Company, located at 1353 Furys Ferry Road, is currently a Custom Furniture Store. The Standard Oil Company building, sign and filler ports for the USTs remain on site. Pump & Shop #19, located at 1045 Furys Ferry Road, is currently operating as Circle K #3182. The existing building and UST configuration

appear to be unchanged. Prior to Pump & Shop #19, Bull Grocery occupied the property and was located immediately adjacent to the roadway.

Current Use(s) of Adjoining Properties

Adjoining properties in all directions are predominantly private residences and undeveloped forested land, with the exception of a few commercial properties located at the intersections of SR 28/Furys Ferry Road and Evans to Locks Road and North Belair Road. Two Georgia Power substations adjoin the Site. One is located just south and east of the SR 28/Furys Ferry Road and Evans to Locks Road intersection. The second substation is located just south and west of the SR 28/Furys Ferry Road and North Belair Road intersection.

Past Use(s) of Adjoining Properties

A closed permitted C&D landfill is located just east of the Site at 3860 Sullivan Hartfield Road. It was operated by Columbia County from the early 1960s till the early 1980s.

A garage/mechanic shop was formerly located in the southeast quadrant of SR 28/Evans to Locks Road. The nature of the work conducted at the garage is unknown.

6.3 OBSERVATIONS

Site observations and conditions identified during Ranger's site reconnaissance are summarized as follows:

6.3.1 Structures, Roads and Other Improvements on the Site

Existing Structures: At the time of the reconnaissance, the Site was developed with several commercial buildings including retail and convenience stores, a restaurant and private businesses, located mainly at or near the intersections of SR 28/Furys Ferry Road and Evans to Locks Road and North Belair Road. Several churches are located along the project corridor. A middle school is located on SR 28/Furys Ferry Road just north of North Belair Road. Several private residences are evident along SR 28/Furys Ferry Road between the aforementioned intersections.

Existing Roads: Several roads are located on the Site including the intersections of SR 28/Furys Ferry Road with the following roads: Evans to Locks Road, Old Blackstone Camp Road, Blackstone Camp Road, Sullivan Hartfield Road, Southern Pines Drive, North Belair Road, Hardy McManus Road and multiple residential side roads.

Utilities (Including Sewage Disposal): Based upon observations during the site reconnaissance and interviews with local government personnel, the utilities service providers along the Site are as follows: Columbia County operates a municipally-owned water and sewer utility serving the entire SR 28/Furys Ferry Road corridor. Sewer service terminates at 1116 Furys Ferry Road, just north of Mullikin Road. Residences north of 1116 Furys Ferry Road utilize individual septic systems. Water service terminates at 1421 – 1433 Furys Ferry Road, just before crossing the South Carolina border. Columbia County water and sewer lift stations at Jones Creek are present on the east side of SR 28/Furys Ferry Road just south of its intersection with Southern Pines Drive. Electricity is provided by Georgia Power. Natural gas is provided by Georgia Natural Gas and Scana. Telephone, including fiber optics, is provided by AT&T.

Pad-mounted utility boxes were observed in the right-of-way in the northeast quadrant of the intersection of SR 28/Furys Ferry Road and Evans to Locks Road. In addition, large pad-mounted power utility boxes were observed in the right-of-way on the west side of the intersection of SR 28/Furys Ferry Road and North Belair Road. Numerous communication posts were observed along the corridor. A gas pipeline was observed in the Hardy McManus Road right-of-way just west of its intersection with SR 28/Furys Ferry Road.

Hazardous Substances and Petroleum Products in Connection with Identified Uses:

Two facilities are currently operating as a convenience store with petroleum sales – Circle K #3182 and Circle K #5375. All systems appear to be operating in compliance with Georgia’s Rules for Underground Storage Tank Management. Current tank registrations were posted at both facilities.

The tank basin for Circle K #3182 is located in the northwest portion of the property and holds one 10,000-gallon and one 15,000-gallon gasoline UST.

The tank basin for Circle K #5375 is located in the southeast portion of the property and holds one 10,000-gallon diesel, one 10,000-gallon UST classified as ‘other’ and three 12,000-gallon gasoline USTs.

Storage Tanks: One carbon dioxide above ground storage tank (AST) was observed on the south side of the Circle K #5375 building. Propane ASTs for on-site use and individual containers for retail sales were observed at locations as follows:

- Circle K #5375, 695 Furys Ferry Road
- Circle K #3182, 1045 Furys Ferry Road
- CVS Pharmacy #0945, 1044 Furys Ferry Road
- Private Residences

Odors: None observed.

Pools of Liquid: None observed.

Drums: None observed.

Hazardous Substances and Petroleum Products Containers (Not in Connection with Identified Uses): None observed.

Unidentified Substance Containers: None observed.

PCBs (Electrical Transformers): Pole-mounted transformers were observed throughout the project corridor. The transformers appeared to be in good condition and no stains or leaks were noted. Based on our past conversations, electrical utility companies generally accept responsibility for their equipment and any releases or spills associated with their intended use.

Pits, Ponds and Lagoons: None observed.

Stained Soil or Pavement: None observed.

Stressed Vegetation: None observed.

Solid Waste: Dumpsters were observed at all of the commercial properties along the project corridor.

Waste Water (including Storm Water): Storm water drop inlets were noted in the curbed area along SR 28/Furys Ferry Road from the intersection with Evans to Locks Road to the intersection with Blackstone Camp Road. Storm water drop inlets were also observed in front of the middle school and the curbed area along SR 28/Furys Ferry Road around its intersection with Diamond Ridge Way.

Wells: Drinking water wells were not observed on any of the properties; however, private drinking water wells may exist. The majority of the residences along the Site corridor are quite a distance from the roadway, and evidence of drinking water wells was not obvious during the visual survey. Groundwater monitoring wells, which appear to have been abandoned and filled with concrete, were observed proximal to the UST system at the Circle K #3182. Columbia County water service is available the entire length of the project corridor.

Septic Systems: Residences north of 1116 Furys Ferry Road utilize individual septic systems.

Surface Water: Jones Creek runs southwest to northeast crossing the project corridor through a culvert just south of Southern Pines Drive. The Savannah River flows southwest to northeast at the end of the project corridor. No other surface water features were observed along the project corridor.

6.3.2 Other Observations

Two large manholes associated with the onsite septic system were observed in the grassed area adjacent to the south parking lot of the Martinez Fire Department, located at 704 Furrys Ferry Road.

7.0 INTERVIEWS

As part of the Phase I ESA, interviews were conducted with select persons familiar with the Site to provide insight into past activities or conditions material to RECs in connection with the Site.

7.1 INTERVIEWS WITH OWNER

AJ (Sonny) Harrison, president of WH Reeves Company, stated that they acquired the property from Columbia County. During grading for construction of the existing facility they utilized their own equipment and pushed the remnants of the C&D landfill to the rear of the property and covered it over. Mr. Harrison was not aware that the property was listed as a Georgia permitted landfill. He also confirmed the presence of an onsite diesel UST and produced a current registration for the tank.

Mark Fernandez, owner of Superior Carpet Cleaning, stated that he applied for a business license for his carpet cleaning business and utilized his home address at 4285 Colony Square. He never operated the business from his residence and moved from this address at least 14 years ago. Mr. Fernandez has no idea why his address would be on any environmental list unless it was captured from his business license application.

7.2 INTERVIEWS WITH SITE MANAGER

Lt. Evans with the Martinez Fire Department stated that there are no underground storage tank features at this location other than the two manholes associated with the station septic system. The manholes are located in the grassed area immediately south of the south parking lot.

Lula Sweat, store manager for Circle K #3182, stated that during her five years with the store there have not been any reportable spills or releases that she is aware of. Ms. Sweat also confirmed that the store used to be Pump N Shop #19.

7.3 INTERVIEWS WITH OCCUPANTS

There were no occupants of investigated facilities to be interviewed.

7.4 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Don Bartles, Landfill Manager for Columbia County, confirmed that a closed C&D waste landfill is located at 3860 Sullivan Hartfield Road. Columbia County operated the landfill from the early 1970s till the early 1980s. The landfill was considered a 'dry fill' landfill and only accepted 'dry' debris from the Martinez/Evans area. The landfill caught

fire and burned for several days before the National Guard extinguished the fire with foam. The property was sold to WH Reeves Company in the mid-1990s.

Mr. Bartles also stated that there were multiple old gas stations formerly located along the project corridor. The following summaries are to the best of his recollection.

- An old station was located at 1044 Furys Ferry Road where the current CVS is located. He remembers that the tanks were removed in the late 1970s. Evidence of an old gas station at this location could not be confirmed.
- An old garage was located at Evans to Locks Road next to the Georgia Power Substation.
- A Standard Oil Company gas station was located at 1353 Furys Ferry Road. The station was commonly referred to as the 'SOC' station. The building still remains.
- An old gas station was formerly located at 1135 Furys Ferry Road. There is only a vacant lot there now.

For more information, he suggested that I contact Royce Newsome, a Columbia County employee that is more familiar with that area.

Royce Newsome, Utilities Permits Officer for Columbia County, confirmed that there were multiple old gas stations formerly located along the project corridor. The following summaries are to the best of his recollection.

- An old gas station, formerly operated as Hicks Grocery, was located at 1100 Furys Ferry Road where the current WifeSaver restaurant is located. He's fairly certain that the facility operated approximately 60 years ago.
- He did not recall an old gas station located at 1044 Furys Ferry Road where the current CVS is located.
- He recalled the old garage located at Evans to Locks Road next to the Georgia Power Substation. However, he was unsure of the services provided.
- He confirmed that a Standard Oil Company gas station was located at 1353 Furys Ferry Road. He's fairly certain the tanks are still in the ground. He remembers that they used to change tires, perform oil changes and various other automobile services.
- An old gas station, formerly operated as Pardue's, was located at 1135 Furys Ferry Road. There is only a vacant lot there now. He's fairly certain the tanks are still in the ground.
- He recalled that Bull Grocery was located where the current Circle K #3182 is located.

Della Kirkendohl, a representative of the Columbia County Tax Assessors office, reviewed old tax records and provided the following ownership information:

- Bull Grocery: 1936 - Mrs. P.L. Bull; 1982 - Millard Edward Bull; 1994 - Susan and Jerry Porterfield; 1997 - Appletree Academy
- Hicks Grocery: 1940 - J.O. Hicks Estate; 1973 - Edward O. Hicks; 1974 - Phillip J Phillips and Theodora C. Economos; 1976 - Frank E. and Elizabeth B. Wise; current - Christopher A. Cunningham
- Pardue's: 1948 - Mrs. Otis W. Bartlett; 1989 - Mary E. McManus; current - Walter E. Smith

Ms. Kirkendahl provided additional information relative to the address discrepancy with Bull Grocery and Circle K #3182. According to the old paper tax records, Mr. Bull sold portions of his property over the years. The residence was located some distance behind Bull Grocery, which was located at the intersection immediately adjacent to the roadway. It seems that the store and the residence utilized the same address of 1047 Furys Ferry Road. When a portion of the property was sold to what is now Circle K #3182, the address for the new parcel became 1045 Furys Ferry Road.

Chad Hall, Environmental Specialist with Georgia's Solid Waste Management Program, stated that once executed, solid waste collection permits are not monitored, renewable nor do they expire. The permit dated July 9, 1998, allowing WH Reeves Company to haul any type of trash or debris to a permitted collection site, was the only document in the file.

7.5 INTERVIEWS WITH OTHERS

Joshua Jones, store clerk at Circle K #5375, who has been employed with the store for two months, stated that he is not aware of any spills or releases at the facility.

Karlie Clemons Webb, an attorney in the Troutman Sanders Environmental and Natural Resources group, provides environmental legal work to CVS Pharmacy nationally. According to Ms. Webb, CVS Pharmacy has a national hazardous waste management program which uses a national, licensed vendor to dispose of all hazardous waste streams. The hazardous waste streams generated include photo processing waste and retail and pharmaceutical products in consumer quantities.

8.0 FINDINGS AND OPINIONS

Ranger has performed a Phase I ESA in general conformance with the scope and limitations of ASTM Practice E 1527-05 for the SR 28/Furys Ferry Road widening project from the South Carolina line to CR 1236/Evans to Locks Road in Evans, Columbia County, Georgia.

Findings, opinions, and conclusions reported herein are based on information obtained during the course of our studies and upon our experience. Information provided in this report is relevant to the dates of our site work and should not be relied on to represent conditions at substantially later dates or locations not investigated.

8.1 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

8.1.1 On-Site

No on-site HRECs were identified during the site reconnaissance, interviews, file reviews and/or review of regulatory databases performed by Ranger personnel.

8.1.2 Off-Site

No off-site HRECs were identified during the site reconnaissance, review of regulatory databases, interviews and/or file reviews performed by Ranger personnel.

8.2 RECOGNIZED ENVIRONMENTAL CONDITIONS

8.2.1 On-Site

Five on-site RECs were identified during the site reconnaissance, review of regulatory databases, interviews and/or file reviews performed by Ranger personnel.

- Circle K Store #3182, located at 1045 Furys Ferry Road, formerly operated as Pump N Shop #19 and is currently operating as a convenience store and retail fueling facility with one 10,000-gallon and one 15,000-gallon gasoline UST. A confirmed release was reported due to the findings of a Limited Phase II Environmental Assessment conducted in 2004. A Corrective Action Plan was submitted proposing Monitoring Only as the remedial action for dissolved groundwater contamination. The site was awarded No Further Action status in 2007. Groundwater flow was determined to be generally to the northeast, away from the Site. However, fairly large concentrations of dissolved benzene were detected in monitoring wells installed in the proximity of assumed proposed right-of-way for SR 28/Furys Ferry Road. Given this finding coupled with the length of time since the NFA was awarded, it's possible that the facility could have experienced another release, which could

exacerbate the groundwater contamination that was allowed to remain on site and potentially impact the proposed SR 28/Furys Ferry Road project.

Bull Grocery, according to regulatory records, was formerly located at 1047 Furys Ferry Road. However, aerial photography clearly indicates that the facility was located immediately adjacent to the roadway at the current-day address of 1045 Furys Ferry Road. This assessment was confirmed by a representative of the Columbia County Tax Assessors office. According to the Tax Assessors office, portions of the original property owned by Mr. Millard Bull were sold separately through the years, which led to current-day address discrepancies. Bull Grocery formerly operated as a fueling station with two 500-gallon USTs classified as an 'other' petroleum product, presumably gasoline. The tanks were installed in 1961. Based on tank data retrieved from the Georgia EPD USTMP website, the tanks were removed from the ground in 1986. However, according to a 'Notification for Underground Storage Tanks' form submitted by Millard E. Bull on April 23, 1991, the two USTs were marked as permanently out of use at that time. According to the USTMP duty officer, there are no other files available for review for this facility, as the USTMP was just being formed during that time. No other records or personal accountings of the tanks being removed from the property were found; therefore, it is possible the tanks are still in place. Depending on the limits of the proposed right-of-way and if the tanks are still in place, the tanks could be encountered during construction. Due to the lengthy history of USTs and groundwater contamination allowed to remain on site at this location, this property is considered a REC.

- Circle K #5375, located at 695 Furys Ferry Road, is currently operating as a convenience store and retail fueling facility with one 10,000-gallon diesel, one 10,000-gallon UST classified as 'other' and three 12,000-gallon gasoline USTs. Although there is no record of a confirmed release at the facility, it does not negate the possibility that the UST system could have developed an as yet undetected release of petroleum to the subsurface. Consequently, the property is considered a REC.
- Pardue's, formerly located at 1135 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. Reportedly the USTs have not been removed. The property is currently a vacant lot. This property is considered a REC.
- Standard Oil Company, formerly located at 1353 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. Visual observations indicate that the tank fill ports remain onsite suggesting that the USTs have not been removed. Custom Furniture currently occupies the building. This property is considered a REC.
- Hicks Grocery, formerly located at 1100 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. The status of the USTs is unknown. The site is currently occupied by WifeSaver restaurant. This property is considered a REC.

8.2.2 Off-Site

One off-site REC was identified during the site reconnaissance, review of regulatory databases, interviews and/or file reviews performed by Ranger personnel.

- A garage/mechanic shop, formerly located in the southeast quadrant of SR 28/Furys Ferry Road and Evans to Locks Road perhaps operated as a full mechanic shop from possibly as far back as the 1940s to the late 1980s. The site is currently a vacant lot. This property is considered a REC.

8.3 DE MINIMIS CONDITIONS

None observed.

9.0 CONCLUSIONS

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E 1527 for the SR 28/Furys Ferry Road widening project from the South Carolina line to CR 1236/Evans to Locks Road in Evans, Columbia County, Georgia. Any exceptions to, or deletions from, this practice are described in Section 10.0 of this report.

This assessment has revealed the following evidence of RECs in connection with the Site. Six RECs were identified during the site reconnaissance, review of regulatory databases, interviews and/or file reviews performed by Ranger personnel.

- Circle K Store #3182, located at 1045 Furys Ferry Road, formerly operated as Pump N Shop #19 and is currently operating as a convenience store and retail fueling facility with one 10,000-gallon and one 15,000-gallon gasoline UST. A confirmed release was reported due to the findings of a Limited Phase II Environmental Assessment conducted in 2004. A Corrective Action Plan was submitted proposing Monitoring Only as the remedial action for dissolved groundwater contamination. The site was awarded NFA status in 2007. Groundwater flow was determined to be generally to the northeast, away from the Site. However, fairly large concentrations of dissolved benzene were detected in monitoring wells installed in the proximity of assumed proposed right-of-way for SR 28/Furys Ferry Road. Given this finding coupled with the length of time since the NFA was awarded, it's possible that the facility could have experienced another release, which could exacerbate the groundwater contamination that was allowed to remain on site and potentially impact the proposed SR 28/Furys Ferry Road project.

Bull Grocery, according to regulatory records, was formerly located at 1047 Furys Ferry Road. However, aerial photography clearly indicates that the facility was located immediately adjacent to the roadway at the current-day address of 1045 Furys Ferry Road. This assessment was confirmed by a representative of the Columbia County Tax Assessors office. According to the Tax Assessors office, portions of the original property owned by Mr. Millard Bull were sold separately through the years, which led to current-day address discrepancies. Bull Grocery formerly operated as a fueling station with two 500-gallon USTs classified as an 'other' petroleum product, presumably gasoline. The tanks were installed in 1961. Based on tank data retrieved from the Georgia EPD USTMP website, the tanks were removed from the ground in 1986. However, according to a 'Notification for Underground Storage Tanks' form submitted by Millard E. Bull on April 23, 1991, the two USTs were marked as permanently out of use at that time. According to the USTMP duty officer, there are no other files available for review for this facility, as the USTMP was just being formed during that time. No other records or personal accountings of the tanks being removed from the property were found; therefore, it is possible the tanks are still in place. Depending on the limits of the proposed right-of-way and if the tanks are still in place, the tanks could be

encountered during construction. Due to the lengthy history of USTs and groundwater contamination allowed to remain on site at this location, this property is considered a REC.

- Circle K #5375, located at 695 Furys Ferry Road, is currently operating as a convenience store and retail fueling facility with one 10,000-gallon diesel, one 10,000-gallon UST classified as 'other' and three 12,000-gallon gasoline USTs. Although there is no record of a confirmed release at the facility, it does not negate the possibility that the UST system could have developed an as yet undetected release of petroleum to the subsurface. Consequently, the property is considered a REC.
- Pardue's, formerly located at 1135 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. Reportedly the USTs have not been removed. The property is currently a vacant lot. This property is considered a REC.
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- Hicks Grocery, formerly located at 1100 Furys Ferry Road, operated as a gas station possibly as far back as the 1950s. The status of the USTs is unknown. The site is currently occupied by WifeSaver restaurant. This property is considered a REC.
- A garage/mechanic shop, formerly located in the southeast quadrant of SR 28/Furys Ferry Road and Evans to Locks Road, perhaps operated as a full mechanic shop from possibly as far back as the 1940s to the late 1980s. The site is currently a vacant lot. This property is considered a REC.

10.0 DEVIATIONS

Deletions or substantial deviations from the ASTM E-1527-05 standard practice are:

Multiple data gaps were encountered during the site evaluation: The use of the Site was not identified back to the Site's first developed use, chain-of-title was not provided by the Client to Ranger for review, Sanborn maps were not available, the aerial photographs were not consistently available at five year intervals, the City Directories were only available from 1997 to 2012, and regulatory files do not exist for several facilities reportedly located along the project corridor, including the garage/mechanic shop, Bull Grocery, Standard Oil Company, Hicks Grocery and Pardue's. Multiple attempts made to locate knowledgeable parties relative to these sites were unsuccessful. Therefore, the Site and surrounding area could not be fully investigated in this regard for the historical records research and interviews. However, the data gaps are not considered significant because the apparent past history and current use of the Site were able to be determined by a site reconnaissance, current owner/manager interviews and by using the available historical records and database reports from the following sources: EDR, U.S. EPA ECHO, USGS EarthExplorer, Georgia EPD LUST, UST, Solid Waste, and Hazardous Waste – Response and Remediation Programs.

11.0 ADDITIONAL SERVICES

None provided.

12.0 REFERENCES

Environmental Data Resources, Inc.

- EDR DataMap Corridor Study, Inquiry Number: 3688071.1s, August 08, 2013
- EDR DataMap Well Search Report, Inquiry Number: 3688071.1w, August 08, 2013
- EDR Historical Topographic Map Report, Inquiry Number: 3688071.2, August 06, 2013
- EDR City Directory Image Report, Inquiry Number: 3766057.1, October 30, 2013

Environmental Protection Agency, Facility Registry Services

- Facility Detail Report (<http://epa-echo.gov/>)

Georgia Environmental Protection Division, Underground Storage Tank, Solid Waste, and Hazardous Waste Management Programs

- Underground Storage Tank Compliance Files
- Leaking Underground Storage Tank Files
- Solid Waste Management Files
- Hazardous Waste Management Files

Columbia County Tax Assessor

- <http://gis.columbiacountyga.gov/>

Microsoft Research Maps (maps courtesy of USGS)

- <http://msrmaps.com/>

USGS EarthExplorer)

- <http://earthexplorer.usgs.gov>

Google Earth Maps

U.S. Geological Survey

- Mineral Resources On-Line Spatial Data (<http://mrddata.usgs.gov/>)

Geologic Map of Georgia: Georgia Geological Survey, 1976

Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture (USDA)

- Georgia Online Soil Survey Manuscripts:
Soil Survey of Columbia, McDuffie and Warren Counties, USDA Soil Conservation Service and the University of Georgia College of Agriculture, Agricultural Experiment Stations, April 1981 (http://soils.usda.gov/survey/online_surveys/georgia/index.html)

13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

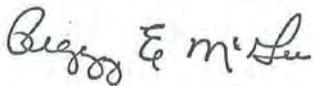
Signatures of the Environmental Professionals are included on the cover letter of this Phase I Environmental Site Assessment.

14.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

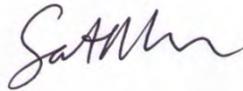
The qualifications of Ranger's Environmental Professional are summarized in Appendix G.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 321.10 of 40 CFR 312.

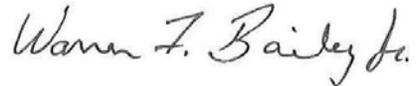
I have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the Site. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Peggy McGee
Senior Engineer



Sandra A. Miller, P.E.
Project Engineer
Georgia P.E. No. 36138



Warren F. Bailey, Jr., P.E.
Principal Engineer
Georgia P.E. No. 11462

Appendices Provided Upon Request

Attachment #10

MEETING MINUTES

SR 28 Concept Team Meeting

Project No: CSSTP-0008-00(346)
PI No: 0008346
County: Columbia

Meeting Date: February 20, 2014 (10:00 AM – 11:30 AM)

Location: Columbia County – Evans, GA

Attendees:	Organization & Title:
<i>Matt Schlachter</i>	<i>Columbia County, Construction and Maintenance Director</i>
<i>Steve Exley</i>	<i>Columbia County, Engineering Manager</i>
<i>Glen Bollinger</i>	<i>Columbia County, Traffic Engineer</i>
<i>Bobby Cato</i>	<i>Columbia County, Traffic Ops</i>
<i>Bart Smalley</i>	<i>Columbia County Water Utility, Assistant Manager</i>
<i>Lewis Foster</i>	<i>Columbia County Broadband Utility, Broadband Manger</i>
<i>Eric Hinds</i>	<i>Columbia County Water Utility, Engineer Manager</i>
<i>Jamie Lindsey</i>	<i>GDOT, Utility Liasion</i>
<i>Joey Shurling</i>	<i>GDOT/District 2, District Signal Engineer</i>
<i>Tim Matthews</i>	<i>GDOT/Office of TIA, TIA Regional Coordinator</i>
<i>Steve Tiedemann</i>	<i>GDOT/Office of TIA, Project Manager</i>
<i>George Brewer</i>	<i>GDOT/Office of Program Delivery, Project Manager</i>
<i>Michael D. Thomas</i>	<i>GDOT/Office of Utilities, ADUE</i>
<i>Neal O'Brien</i>	<i>GDOT/District 2, District Preconstruction Engineer</i>
<i>Nick Castronova</i>	<i>URS Corporation, Project Manager</i>
<i>Travis McClam</i>	<i>URS Corporation, Roadway Designer</i>
<i>James Faulks</i>	<i>Level 3 Communication, Field Tech</i>

SUBJECT:

A concept meeting was held on February 20, 2014 with members of GDOT, Columbia County, Utility Companies, and URS in attendance. The purpose of the meeting was to discuss the conceptual design and concept report for SR 28/Furys Ferry Road from Evans To Locks Road to the South Carolina state line. The meeting began at 10:00 AM with introductions of participants and passing around the sign in sheet. A conceptual roll plot of the design was displayed on the meeting table during the meeting for reference. The following summarizes the meeting:

- Nick began the meeting with a brief description of the project. He also stated that this was a TIA project but has Federal money for the scoping/concept phase. He then briefly explained the proposed typical section.
- George asked about the property displacements. Nick claimed that the GIS information came from Columbia County and once we have a survey the information will be more accurate.
- Nick then stated that this project was located in the MS4 area so there will be ponds and other post construction BMPs along the project.
- Matt asked if it were a possibility to provide a median break to allow access to the fire house near the beginning of the project. George stated maybe providing an angled break so only the fire trucks can enter and exit. Nick stated that is a possibility and will look into giving the trucks access.
- Matt then asked about a possible signal at SR 28 and Southern Pines. Nick stated that we will look into it and see if the traffic warrants a signal.
- Nick then discussed the widening of the road and stated that the design did its best to avoid widening to the side of the subdivisions. He also stated that the design meets the 45 mph speed design criteria.
- Matt stated the need for right turn lanes from Belair Road on SR 28 and also Mullikin Road onto SR 28 given the current traffic conditions and the pavement erosion due to cars creating their own turn lanes. Nick stated that could be incorporated into the design.

MEETING MINUTES

SR 28 Concept Team Meeting

Project No: CSSTP-0008-00(346)

PI No: 0008346

County: Columbia

- Nick then began discussing the access to the school noting that at this time we did not know the flow of traffic around the school so once the project got to the preliminary design phase the school could be more involved in what kind of access they need. He then discussed the median break at the newly constructed Hardy Mcmanus Road intersection. He stated SR 28 would taper back down to two lanes after the last median opening at Riverside Drive but still provide the bike lane all the way to the bridge.
- Nick stated that the process of completing the environmental special studies is still going on.
- The discussion of the layout was complete and Nick moved onto discussing the concept report. He asked if the mainline had any pavement distress. Matt stated that it had been overlaid recently and the pavement was in good condition.
- George asked to have the cross sections run at 4% instead of 6% superelevation rate. Nick stated that we will adjust that and also the 4% outside shoulder to 2% outside shoulder in the concept report.
- Steve stated that a VE study is not needed for this project since it is TIA and it won't meet the new threshold.
- Next a discussion about the high utility cost took place. Mike stated there was a typo for one of the prices and it would have to be adjusted. The current utility cost was inaccurate.
- Nick stated that the letting of SR 28 was in Band 2 of the TIA projects. He also stated that all special studies would be included in the concept report once they have been completed. All studies will be to GEPA standards. He then claimed that URS has requested a SUE but does not think he has gotten it yet.
- Bart stated that there was a 30" water line under the intersection at Mullikin Road and that maybe a slight realignment could save a lot of money from having to move the pipe.
- George stated that the cost estimate had a few items missing that would increase the cost of construction.
- Tim stated that the utility is reimbursable even if it is on public right of way. Matt asked if even fiber was reimbursable. Tim stated utilities in general. He stated there was a lot of room in the budget for this project. He also stated that the project wanted to stay within GEPA criteria and not go to NEPA
- Glen asked if there was any option to look at the possibility of putting a roundabout at Mullikin Road. He also stated he thought it was federal requirement to consider roundabouts at intersections for new construction. Tim stated that he is not sure the state has done any multilane roundabouts at this time.
- Matt then asked if URS had come across any environmental or historical issues. He stated there were a few old filling stations along this corridor. Nick stated he didn't think there were any issues running into any old filling stations but URS will look into the Phase I report to review potentially hazardous locations.
- Neal asked if there was any potential for noise issues. Steve stated that GEPA only requires air analysis not noise. Nick stated that he thought URS was scoped to analyze both. Tim stated that URS needed to verify which needs to be done. He also stated that URS needed to include a small section in the concept report identifying how we will maximize benefits on this project.
- A question was asked about possible sound barrier along this corridor. George stated he didn't know if there would be a need for a sound barrier. Bart stated that if there were to be a sound barrier along this project, it would push the utilities 6-7 feet closer to the road.

Action Items

1. Review and revise Cost Estimate
2. Rerun cross section with correct slopes
3. Add new section to Concept Report about maximizing benefit
4. Complete special studies per task order
5. Attain Right of Way cost estimate
6. Add right turn lanes at the Belair/Mulikins and SR 28 intersection
7. Receive and incorporate final Utility Cost Estimate.

The meeting was then concluded.

CONCEPT TEAM MEETING - SIGN-IN SHEET

Project: TIA- SR 28/Furys Ferry Road from Evans to Locks Road to the South Carolina state line
Meeting Date: February 20, 2014
PI: 0008346, Columbia County
Place/Room: Columbia County Engineering Office

Name	Title	Company/Office	Phone	E-Mail
James Faulks	Field Tech	Level 3 Communications	803-331-9832	James.faulksjr@level3.com
George Brewer	P.M.	GDOT	473-538-3604	gbrewer@dot.ga.gov
JAMIE LINDSEY	UTIL. LIAISON	GDOT	478-232-9037	j.lindsey@dot.ga.gov
Mike Thomas	A.D.U.E.	GDOT	478-232-3325	david.thomas@dot.ga.gov
Joey Shurling	Dist. Signal Eng.	GDOT	478-552-4625	jshurling@dot.ga.gov
Bart Smalley	Assist. Manager	C.C. Water	706-868-4248	Bsmalley@ColumbiaCountyGA.gov
Lewis Foster	Broadband MCA	CC Broadband Marketing	706 312 7325	lfoster@ColumbiaCountyGA.gov
TRAVIS McCLAM	DESIGNER	URS	678 808 8800	travis.mccclam@URS.com
NICK ASPHARAN	PM	URS	678 808 8821	nick.aspharan@URS.com
Neal O'Brien	Dist Precum Eng.	GDOT	478-552-4629	no'brien@dot.ga.gov
FILEN BOLLINGER	TRAFFIC ENGINEER	Columbia County	706-444-7613	gbollinger@columbiacountyga.gov
BRIAN CATO	TRAFFIC OPS ANALYST	Columbia County	(706) 447-7612	bcato@columbiacountyga.gov
ERIC HINDS	ENGR MANAGER	CCNU	706 051 0433	ehinds@columbiacountyga.gov

Attachment #11

Project Sheet

Project Number: RC07-000024 **Project Name:** SR 28 from South Carolina Line to CR 1236/Evans to Locks Road Widening

GDOT ID: 0008346

Project Description: Widening SR 28 from 2 to 4 lanes South Carolina Line to CR 1236/Evans to Locks Road.

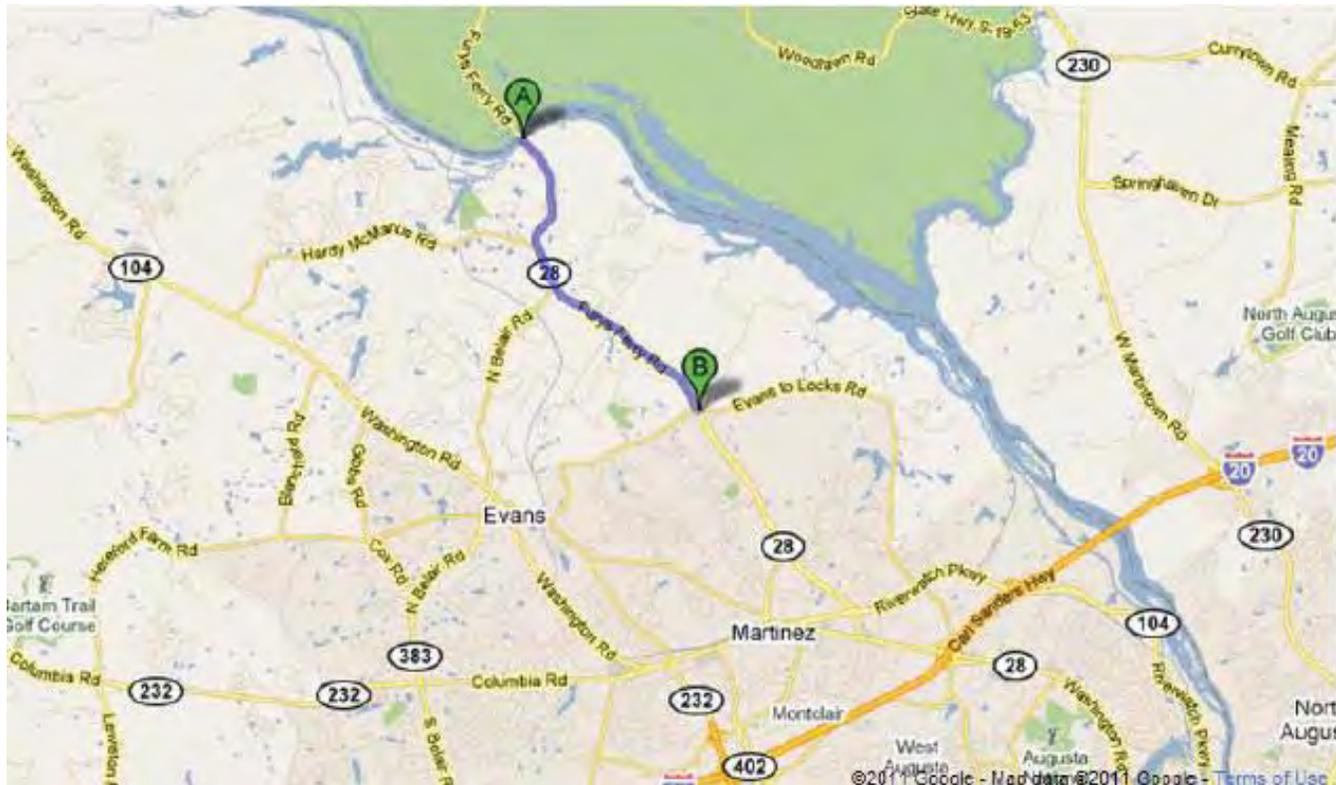
Regional Commission: Central Savannah River Area

County: Columbia County

Phase	Total Project Cost	Total TIA Amount	Comments (Please note all cost estimates are in 2011 dollars and actual costs for all phases at year of expenditure will be higher):
PE	\$648,269	\$648,269	
ROW	\$9,478,963	\$9,478,963	
CST	\$34,113,365	\$34,113,365	
UTL	\$5,970,387	\$5,970,387	
Total	\$50,210,984	\$50,210,984	

Public Benefit	Notes
Maximizing the value of Georgia's Assets	This project could potentially maximize the full utility of an existing transportation facility(s). In some cases, bypasses will be necessary. Example benefits could be: mitigating congestion (e.g. operational improvements) and optimizing capital asset management (e.g. resurfacing, rehabilitation). The impacts would apply to this roadway segment, corridor, and/or intersection.
Supporting Economic Growth/Competitiveness	This project could assist in having a positive impact on the economic vitality for this region, and in some cases possibly for the entire state. Its impact could also be observed along the roadway segment, corridor, and/or intersection. Example benefits could be: improved access to jobs; improved travel times for drivers; increased lane capacity; improved efficiency and reliability for freight cargo/goods movement; providing border to border and inter-regional connectivity; and improve local connectivity to statewide transportation network.
Ensuring Safety and Security	This project would benefit the public by potentially reducing the incidence of crashes along this roadway segment, corridor, and/or intersection.
Additional Benefits	This project would benefit the public by widening the road in order to provide congestion relief by improving the level of service for this major commuter route (daily traffic volumes range from 10,630 to 19,730). This project will provide an improved corridor to move freight between Georgia and South Carolina.

Project Location



Attachment #12

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:073-0002-0

Columbia

SUFF. RATING: 89.42

Location & Geography

Structure ID: 073-0002-0
 200 Brgde Information: 06
 *6A Feature Int: JONES CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR00028
 *7B Facility Carried: SR 28
 9 Location: 3.6 MI NW OF MARTINEZ
 2 Dot District: 2
 207 Year Photo: 2013
 *91 Inspection Frequency: 24 Date: 06/11/2013
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 0 Date: 02/01/1901
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901
 * 4 Place Code: 00000
 *5 Inventory Route(O/U): 1
 Type: 3
 Designation: 1
 Number: 00028
 Direction: 0
 *16 Latitude: 33 - 33.7588 HMMS Prefix:SR
 *17 Longitude: 82 - 06.3143 HMMS Suffix:00
 MP: 3.86
 98 Border Bridge: 000 % Shared:00
 99 ID Number: 0000000000000000
 *100 STRAHNET: 0
 12 Base Highway Network: 1
 13A LRS Inventory Route: 731002800
 13B Sub Inventory Route: 0
 *101 Parallel Structure: N
 *102 Direction of Traffic: 2
 *264 Road Inventory Mile Post: 003.80
 *208 Inspection Area: 02 Initials: VTT
 Engineer's Initials: JTB
 * Location ID No: 073-00028D-003.86N

*104 Highway System: 0
 *26 Functional Classification: 16
 *204 Federal Route Type: F No: 00481
 105 Federal Lands Highway: 0
 *110 Truck Route: 0
 206 School Bus Route: 1
 217 Benchmark Elevation: 0000.00
 218 Datum: 0
 *19 Bypass Length: 03
 *20 Toll: 3
 *21 Maintanance: 01
 *22 Owner: 01
 *31 Design Load: 2
 37 Historical Significance: 5
 205 Congressional District: 12
 27 Year Constructed: 1935
 106 Year Reconstructed: 1950
 33 Bridge Median: 0
 34 Skew: 00
 35 Structure Flared: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 0
 *42 Type of Service On: 1
 Type of Service Under: 5
 214 Movable Bridge: 0
 203 Type Bridge: Q - - -
 259 Pile Encasement: 3
 *43 Structure Type Main: 1 19
 45 No.Spans Main: 002
 44 Structure Type Appr: 0 00
 46 No Spans Appr: 0000
 226 Bridge Curve Horz: 0 Vert: 0.00
 111 Pier Protection: 0
 107 Deck Structure Type: N
 108 Wearing Structure Type: N
 Membrane Type: N
 Deck Protection: N

Signs & Attachments

225 Expansion Joint Type: 00
 242 Deck Drains: 0
 243 Parapet Location: 0
 Height: 0.00
 Width: 0.00
 238 Curb Height: 0
 Curb Material: 0
 239 Handrail: 0 0
 *240 Median Barrier Rail: 0
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 6
 Fwr: 6
 Oppo. Dir. Rear: 0
 Oppo. Fwr: 0
 244 Aproach Slab: 0
 224 Retaining Wall: 0
 233Posted Speed Limit: 55
 236 Warning Sign: 0.00
 234 Delineator: 1.00
 235 Hazard Boards: 1
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00

