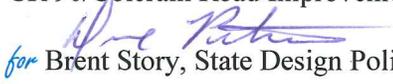


**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. #0007414 **OFFICE** Design Policy & Support
CSSTP-0007-00(414)
GDOT District 5 - Jesup
Camden County **DATE** January 27, 2012
CR 90/Colerain Road Improvements

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED CONCEPT REPORT

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

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
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Brad Saxon, District Preconstruction Engineer
Stephen Thomas, Acting District Utilities Engineer
Matt Bennett, Project Manager
Rodney Barry, Federal Highway Administration
BOARD MEMBER - 1st Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

REVISED PROJECT CONCEPT REPORT

Project Number: CSSTP-0007-00 (414)

County: Camden

P.I. Number: 0007414

The proposed Colerain Road/ CR 90 typical section is two 12-foot lanes in each direction separated by a 20-foot raised median. The purpose of this Revised Concept Report is to change the urban shoulder section from 4-foot bike lanes and 5-foot sidewalks on both sides to a 10-foot multi-use path on the north side and a 5-foot sidewalk on the south side of proposed Colerain Road as a cost savings measure while meeting Camden County's bike route system requirements for Colerain Road. The rural shoulder section from 2664 feet west of I-95 to relocated Brazell Road is changed to an urban section to eliminate the need for barrier separation between the travel lanes and the multi-use path on the proposed bridge over I-95. The rural shoulder section from 3800 feet west of Winding Road to Winding Road is changed to an urban section. The substantial residential development planned for this area would use the sidewalks to the nearby county high school. The rural shoulder section from Winding Road to 1496 feet east of Kings Bay Road would remain but the Value Engineering Implementation Revision Request changed the typical section from 4-foot bike lanes and 10-foot shoulders (6'-6" paved and 3'-6" grass) to 10-foot shoulders consisting of 3-foot, 6-inch grass shoulders and 6-foot, 6-inch paved shoulders including 4-foot bike lanes and 16-inch rumble strips and in each direction.

Submitted for approval:

DATE 11/26/2011

Maurice J. Sheehan
Consultant Project Manager - Moreland Altobelli Associates

DATE 2-1-11

David J. Ransom
Camden County - Local Government

DATE 5/10/11

Michael H. [Signature]
GDOT Office Head - Program Delivery

DATE 5/10/11

David G. [Signature]
GDOT Project Manager - Program Delivery

Recommendation for Approval:

DATE 2/25/11

GLENN BONNOM*/EKP
State Environmental Administrator

DATE 4/26/11

BEN ROBUN*/EKP
State Bridge Design Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE 3/2/11

CYNTHIA VANDYKE*/EKP
State Transportation Planning Administrator

* - RECOMMENDATION ON FILE

REVISED PROJECT CONCEPT REPORT

Need and Purpose: The need and purpose of this project would be to serve as an alternate route to relieve traffic congestion on SR 40 from I-95 to Kings Bay Road, to provide regional economic benefits by facilitating access to area development, to provide the necessary infrastructure for future economic development and to provide additional capacity to handle future year 2037 traffic volumes.

In addition to providing traffic relief to SR 40 and economic benefits, this project would also provide additional capacity for westbound coastal evacuation to I-95 in Camden County.

Colerain Road is shown on the Camden County bike route system; therefore, bike lanes or a multi-use path would be provided for this project.

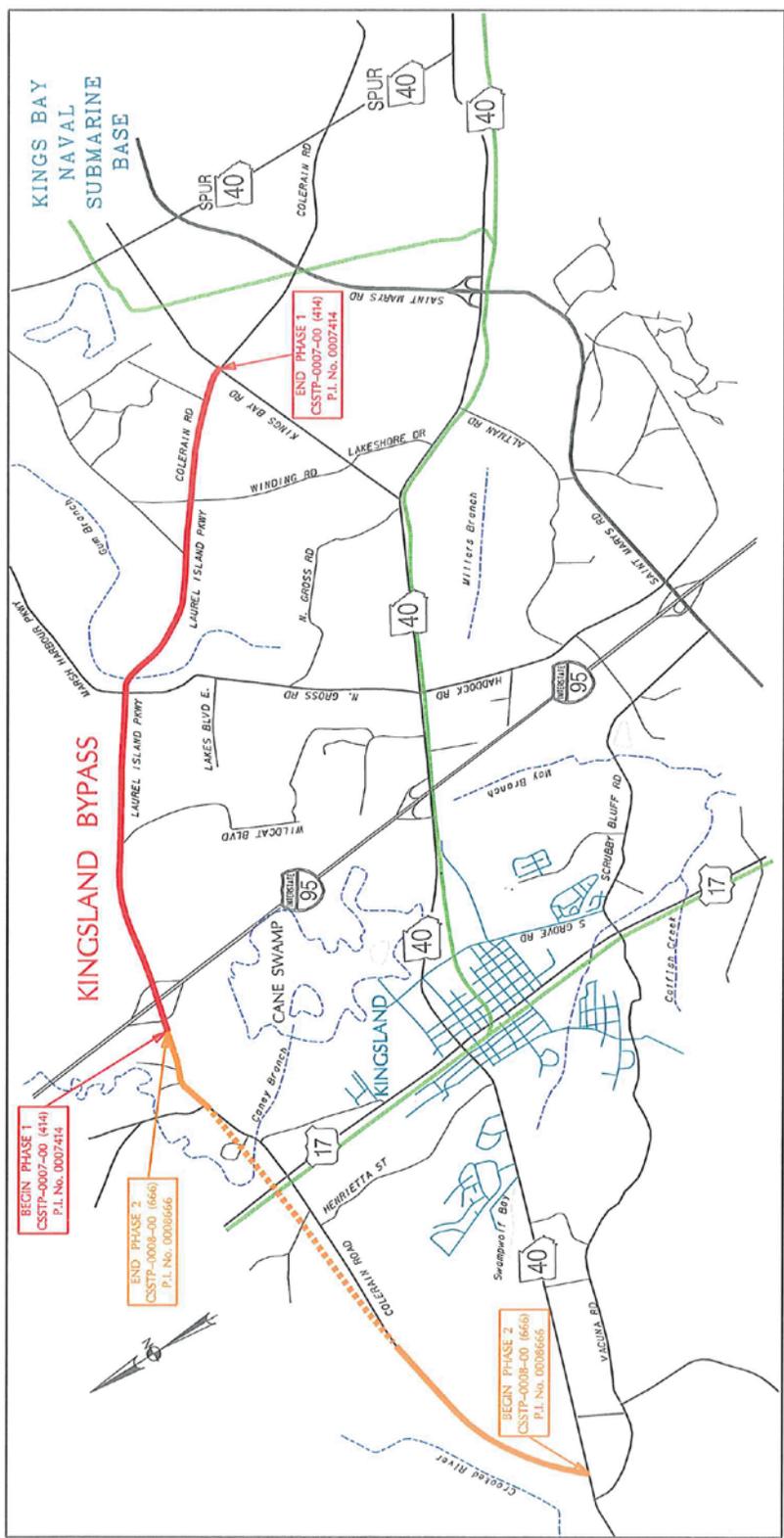
Planning Background and Project History

The initial planning of this project began as a project to solve an evacuation route problem. There are approximately 30,000 people who live south of the Satilla River and east of US 17 in Camden County. In the event of a mandatory hurricane evacuation, all of these citizens would have to utilize SR 40 west to I-95 and beyond to Folkston as an evacuation route.

Several studies have recommended projects to improve the capacity of SR 40 to Folkston for evacuation purposes. The major obstacle to this improvement is the section of SR 40 through the City of Kingsland, including the intersection of SR 40 and US 17. This intersection is bordered by part of the Kingsland Commercial Historic District, which is listed on the National Register of Historic Places. An additional obstacle is that major utility lines, both overhead and underground, are within required right-of-way.

After considering the impacts associated with widening SR 40 through Kingsland, the cities of St. Marys, Kingsland, and the Camden County Board of Commissioners determined that the only practical alternative would be to construct a bypass route around Kingsland. A preliminary route was identified along Colerain Road from SR 40 west of Kingsland to SR 40 Spur east of Kingsland. The planning of this project has been modified to include only the sections of Colerain Road from SR 40 west of Kingsland to Kings Bay Road. It was determined that the section of Colerain Road from Kings Bay Road to SR 40 Spur would not be pursued and does not require capacity-type improvements. The Kingsland Bypass was programmed into two phases. The first phase is the widening of Colerain Road from I-95 to Kings Bay Road, Project CCSTP-0007-00 (414), P.I. Number 0007414 and the second phase is the widening and relocation of Colerain Road west of Kingsland to I-95, Project CCSTP-0008-00 (666), P.I. Number 0008666. (See Figure 1: Kingsland Bypass Project Phasing.)

Figure 1: Kingsland Bypass Project Phasing



Additional to the concern about coastal evacuation, by the year 2037 SR 40 between Kings Bay Road and I-95 will be at capacity. SR 40 between Kings Bay Road and I-95 is already a 4-lane divided roadway with a two-way center turn lane and has a 6-lane section at its intersection with I-95. The primary civilian employee gate for the Kings Bay Naval Submarine Base is located on Kings Bay Road. The Kings Bay Naval Base is anticipated to expand employment on the base, which would add traffic to SR 40. Project CSSTP-0007-00 (414), P.I. Number 0007414, the widening of Colerain Road from I-95 to Kings Bay Road would provide an improved connection from the Kings Bay Naval Submarine Base to I-95, thereby reducing traffic volumes on the existing section of SR 40 from I-95 to Kings Bay Road.

Colerain Road was formerly classified as a rural minor collector. However, because this proposed route is projected to serve the needs of regional commercial and commuter traffic, it was reclassified as an urban minor arterial.

Currently, the only public high school of Camden County, serving 3,000 students, is located on Colerain Road, 1.2 miles east of I-95. Additionally, 420,000 square feet of commercial, 300,000 square feet of light industrial and 1,952 homes have been permitted for construction along Colerain Road. To facilitate this economic development, the existing two-lane roadway (Colerain Road) needs improvement to four-lanes divided.

The widening of Colerain Road is included in the State Transportation Improvement Program (STIP) as Project CSSTP-0007-00(414). The proposed project has locally funded right-of-way and programmed for construction in 2014.

Deficiencies in the System

The current deficiencies in the system are future traffic congestion on SR 40, frequency and severity of traffic crashes on SR 40, necessary infrastructure for future economic development and the need for an evacuation route. The numerous commercial properties and other land uses adjacent to the roadway contribute to the current traffic volumes on SR 40 and Colerain Road. The 2009 Average Daily Traffic (ADT) on SR 40 is 26,780 vehicles per day (vpd), which is projected to increase to 29,000 by the opening year 2017 and 44,500 vpd by the design year 2037. The 2009 ADT on Colerain Road within the project area is 10,200 vpd, which is projected to increase to 16,900 by the opening year 2017 and 28,200 vpd by the design year 2037. The widening and improvement of Colerain Road would reduce the traffic volumes on SR 40 to 36,150 vpd and would facilitate future traffic on Colerain Road.

The existing and future projected ADT volumes for the sections of Colerain Road proposed for improvement were evaluated to determine their Level of Service (LOS) using the Highway Capacity Software (HCS+). Level of Service is a qualitative measure of the operational efficiency of a roadway under peak hour conditions as they are seen from the driver's perspective. There are a total of six different LOS designations, from A to F, with LOS A representing the best case operational conditions with no delays in traffic and LOS F indicating forced flow, extreme congestion, and long delays, i.e., a complete breakdown in traffic flow. The LOS for this project was examined for three time frames and for two conditions. The LOS was evaluated for the 2009 existing conditions, the 2017 opening year under the build and no-build condition, and the 2037

design year under the build and no-build condition (see Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits).

Two-lane highways are categorized into three classes when conducting LOS analysis. Class I highways are two-lane highways on which motorists expect to travel at relatively high speeds. Class I highways include major intercity routes, daily commuter routes or a connecting link between facilities that serve long distance routes. Class II highways are two-lane highways on which motorists do not necessarily expect to travel at high speeds. Class II highways function as local access routes to Class I facilities and serve relatively short trips. Class III highways serve moderately developed areas, such as portions of a Class I or Class II highway that pass through small towns or developed recreational areas.

Colerain Road from I-95 to Kings Bay Road was analyzed as a Class I highway with 6.4% trucks and a 45 mph design speed. Colerain Road roadway segments from US 17 to I-95 and from Kings Bay Road to SR 40 Spur were analyzed as Class II highways with 6.4% trucks and speed designs that range from 25 mph to 45 mph.

All roadway segments along Colerain Road within the project limits would operate at LOS E in the opening year 2017 and in the design year 2037. With the widening of Colerain Road the roadway segments within the project limits would operate at LOS A and LOS B for the 2017 and 2037 years, respectively.

Intersection capacity analysis was also performed under existing and future traffic conditions with and without the proposed project. A summary of the intersection capacity analyses in terms of LOS for existing, No-Build and Build conditions are shown below in Table 2.

As shown in Table 2, many of the existing intersections are operating at levels of service “E” or “F” during the peak hours. All the intersections with Colerain Road are unsignalized except at North Gross Road and Kings Bay Road.

The year 2037 levels of service without the project would decline to LOS F at all of the intersections with the exception of North Gross Road, which has been widened to four lanes. However, with the proposed project, the intersections would operate at LOS C or above throughout the project corridor.

One intersection on the SR 40 corridor was analyzed to illustrate that by the year 2037, the intersection of SR 40 and North Gross Road would operate at a failing level of service during the PM peak hour under the no-build condition. Traffic queues would result on SR 40 between North Gross Road and Kings Bay Road.

Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits

Roadway Sections Within the Project Limits	Year 2009			2017 Opening Year						2037 Design Year					
	Existing Condition			No-Build Condition			Build Condition			No-Build Condition			Build Condition		
	ADT	N	LOS	ADT	N	LOS	ADT	N	LOS	ADT	N	LOS	ADT	N	LOS
Class I – Intercity major city roadway segments, daily commuter routes, travel speeds of 45 mph or greater, truck percentage 6.4%															
Colerain Road from I-95 to Brazell Road	10,200	2	E	16,900	2	E	16,900	4	A	28,200	2	E	28,200	4	B
Colerain Road from Brazell Road to Wildcat Drive	9,100	2	E	13,950	2	E	13,950	4	A	23,000	2	E	23,000	4	B
Colerain Road from Wildcat Drive to North Gross Road	8,200	2	E	13,900	2	E	13,900	4	A	23,650	2	E	23,650	4	B
Colerain Road from North Gross Road to Kings Bay Road	8,100	2	E	14,100	2	E	14,100	4	A	23,300	2	E	23,300	4	B
Roadway Sections Beyond the Project Limits	Year 2009			2017 Opening Year						2037 Design Year					
	Existing Condition			No-Build Condition			Build Condition			No-Build Condition			Build Condition		
	ADT	N	LOS	ADT	N	LOS ¹	ADT	N	LOS ¹	ADT	N	LOS ¹	ADT	N	LOS ¹
Class II – Intercity roadway segments, access routes, travel speeds of 45-25 mph, truck percentage 6.4%															
Colerain Road from US 17 to I-95	5,200	2	C	10,000	2	D	10,000	2	D	16,800	2	D	16,800	2	D
Colerain Road from Kings Bay Road to SR 40 Spur	8,600	2	C	11,500	2	D	11,500	2	D	18,800	2	D	18,800	2	D
Class I – Intercity major city roadway segments, daily commuter routes, travel speeds of 45 mph or greater, truck percentage 6.4%															
Kings Bay Road from Charlie Smith Sr. Hwy to Colerain Road	10,300	4	A	14,500	4	A	14,500	4	A	24,600	4	B	24,600	4	B
Kings Bay Road from Colerain Road to SR 40	12,300	4	A	16,000	4	A	16,000	4	A	26,700	4	B	26,700	4	B

¹LOS D is permissible in heavily developed areas. *GDOT Design Policy Manual, 2009.*

**Table 2: Summary of HCS Level of Service Analysis Results
 for Intersections on the Project Corridor**

Intersection	Existing 2009 Condition		Year 2017 Condition				Year 2037 Condition			
			No-Build		Build		No-Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Colerain Road @ I-95 Southbound Ramps	F*	F*	F*	F*	B	B	F	F	B	B
Colerain Road @ I-95 Northbound Ramps	F*	F*	F*	F*	B	B	F	F	B	B
Colerain Road @ Brazell Road	D*	F*	F*	F*	B	B	F	F	B	C
Colerain Road @ Bristol Hammock Road	F*	C*	F*	F*	B	B	F	F	B	B
Colerain Road @ Wildcat Drive	E*	F*	F*	F*	B	B	F	F	C	C
Colerain Road @ Shopping Center/Local Street	-	-	-	-	B	B	F	F	C	C
Colerain Road @ N. Gross Rd/Marsh Harbor Pkwy	D	D	C	C	B	B	C	C	C	C
Colerain Road @ New Subdivision – Local Streets	-	-	-	-	B	B	F	F	C	C
Colerain Road @ Winding Road	C*	C*	F*	F*	B	B	F	F	C	C
Colerain Road @ Kings Bay Road	C	C	F	F	C	C	F	F	C	C
SR 40 @ North Gross Road**	B	C	C	D	B	C	D	F	C	D

* For unsignalized intersections, LOS is given for the minor street approach.

** Not on the Project Corridor.

Crash Data

Because the proposed bypass would serve as an alternative to SR 40, crash data on SR 40 from I-95 to Kings Bay Road was considered.

A summary of the crash data for SR 40 from I-95 to Kings Bay Road is provided in Table 3. The table lists the total number of crashes and injuries on this section of SR 40 for the three most recent years that data was available (2006, 2007 and 2008). There were no fatalities reported. The crash and injury rates were calculated and shown beside the statewide rates for urban principal arterials. The crash and injury rates provided are in units of 100 million vehicle miles.

Table 3: Summary of Traffic Crashes on SR 40 From I-95 to Kings Bay Road

Year	No. of Crashes	Crash Rate*	Statewide Average Crash Rate*	No. of Injuries	Injury Rate*	Statewide Average Injury Rate*
2006	101	411	494	34	138	120
2007	122	491	495	36	145	119
2008	93	390	473	39	164	113

*Values for rate of crashes and injuries are per 100 million vehicles-miles.

The results of the crash analysis indicate that the injury rates for SR 40 are above the statewide averages for urban principal arterials for all three years. The proposed widening of Colerain Road would serve to reduce traffic volumes on SR 40 and would help to reduce the frequency and severity of various common crashes, specifically rear-end and angle collisions at intersections. Table 4 indicates the types of crashes that are occurring on SR 40. Of the 316 crashes reported from 2006 to 2008, 63% of the crashes were rear-end collisions. Rear-end collisions are an indicator of traffic congestion. The second highest type of crash is angle collisions, which makes up 19% of the crashes reported.

Table 4: Summary of Type of Crashes on SR 40 from I-95 to Kings Bay Road

	Angle	Rear-End	Head-on	Sideswipe	Hit an Object	Totals
2006	14	68	1	15	3	101
2007	25	71	3	11	12	122
2008	21	60	1	9	2	93
Totals	60	199	5	35	17	316
% of Total	19%	63%	2%	11%	5%	100%

In summary, the proposed project would increase the capacity of the roadway to facilitate the projected traffic growth generated by new development, reduce traffic volumes and traffic congestion on SR 40, potentially reduce the frequency and severity of traffic crashes on SR 40, and provide a safe hurricane evacuation route to the Interstate system in Camden County.

Logical Termini

Logical termini are defined as rational end points for a transportation improvement and rational end points for a review of the environmental impacts. The most common termini are points of major traffic generation, especially intersecting roadways. In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated shall (1) connect logical termini and be of sufficient length to address environmental matters on a broad scope; (2) have independent utility or independent significance, i.e. be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and (3) not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The logical western terminus of the proposed project would be the I-95 interchange because 61% of projected traffic from Colerain Road (east of I-95) travels onto I-95. Only 39% continue on Colerain Road west of I-95. For this reason, the I-95 interchange was chosen as the western terminus for the proposed project.

Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits shows that Colerain Road from US 17 to I-95 carries approximately 5,200 vpd in 2009. Under these conditions, this portion of the roadway is operating at LOS C. The ADT for this portion of Colerain Road is projected to be 10,000 vpd by the 2017 opening year and 16,800 vpd by the 2037 design year. Under the no-build and build conditions, this portion would operate at LOS D for both the 2017 and 2037 years. Therefore, it was concluded that this section of Colerain Road would not require any additional improvements and the I-95 interchange would be the appropriate location for the logical western terminus of the proposed project.

The logical eastern terminus is at the intersection of Kings Bay Road. Kings Bay Road is a 4-lane divided roadway. Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits shows that Kings Bay Road from Charlie Smith Sr. Hwy (at the Naval Base Gate) to Colerain Road carries approximately 10,300 vpd in 2009. Under these conditions, this portion of the roadway is operating at LOS A. The ADT for this portion of Kings Bay Road is projected to be 14,500 vpd by the 2017 opening year and 24,600 vpd by the 2037 design year. Under the no-build and build conditions, this portion would operate at LOS A and LOS B for 2017 and 2037 years, respectively.

Additionally, Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits show that Kings Bay Road from Colerain Road to SR 40 carries approximately 12,300 vpd in 2009. Under these conditions, this portion of the roadway is operating at LOS A. The ADT for this portion of Kings Bay Road is projected to be 16,000 vpd by the 2017 opening year and 26,700 vpd by the 2037 design year. Under the no-build and build conditions, this portion would operate at LOS A and LOS B for 2017 and 2037 years, respectively.

Kings Bay Road would capture commercial and regional traffic from its southern terminus at SR 40 that have I-95 as a destination. Also, the main gate to the Kings Bay Naval Submarine Base is located at the northern terminus of Kings Bay Road. The Base generates a high volume of traffic to and from I-95 via Colerain Road. Fifty-five percent of the projected 2037 design year traffic on the Colerain Road travels onto Kings Bay Road with 45% continuing on Colerain Road.

As shown in Table 1: ADT and LOS for Roadway Segments Within and Beyond the Project Limits, Colerain Road from Kings Bay Road to SR 40 Spur carries approximately 8,600 vpd in 2009. Under these conditions, this portion of the roadway is operating at LOS C. The ADT for this portion of Colerain Road is projected to be 11,500 vpd by the 2017 opening year and 18,800 vpd by the 2037 design year. Under both the no-build and build conditions, this portion would operate at LOS D for the 2017 and 2037 years. Although, Colerain Road from Kings Bay Road to SR 40 Spur is classified as an urban minor arterial, this section primarily facilitates local traffic between the three major 4-lane divided highways: Kings Bay Road, St. Marys Road and SR 40 Spur. Colerain Road on the eastern side of Kings Bay Road is the northern most city limit of St. Marys. Colerain Road from Kings Bay Road to SR 40 Spur currently has an average of 19 access points per mile on this short section of roadway. Therefore, Colerain Road from Kings

Bay Road to SR 40 Spur is considered a Class II roadway which has more local access and slower speeds. This two-lane roadway segment is developed with small commercial properties and residential subdivisions. According to the *GDOT Design Policy Manual, 2009*, projected LOS D would be an acceptable level of service for heavily developed roadway segments with local access priority. Therefore, it was concluded that the intersection of Kings Bay Road would be the appropriate location for the eastern logical terminus of the proposed project.

The termini allows for a full evaluation of the environmental impacts of the widening of Colerain Road. Colerain Road serves as a parallel route to SR 40 and would relieve future traffic congestion along that route. The widening of Colerain Road has independent utility because it provides additional capacity to the east-west travel movement that is projected to operate at LOS F under the 2017 and 2037 No-Build conditions.

The widening of Colerain Road from I-95 to Kings Bay Road would not restrict consideration of alternatives for other reasonable foreseeable transportation improvements. The sections of Colerain Road beyond the project termini were evaluated for environmental constraints, which would limit the ability of those sections from connecting to the termini of this project. That evaluation did not identify any environmental issues that would act as a fatal flaw to the future widening of Colerain Road beyond I-95 and Kings Bay Road. The proposed improvements associated with this project would not force future improvements or have a significant adverse impact upon environmental resources located along Colerain Road beyond the project termini.

Other Projects in the Area

Other projects in the area include:

- Project NHIM0-0095-01(130); P.I. Number: 511072. This project would widen I-95 from the Florida Line to Harrietts Bluff Road – 8 lanes including bridges. The project is in long range right-of-way and long range construction.
- Project NH000-0095-01(167), P.I. Number 511430. This project is building a new interchange at I-95 and Horse Stamp Church Road. It was Let in 2010.
- Project CSSTP-0008-00(666), P.I. Number 0008666. This project would widen/ reconstruct Colerain Road (2 to 4 lanes) from SR 40 (west of the City of Kingsland) to I-95, where it will tie to P.I. Number 0007414. A section of Colerain Road is proposed to be relocated on new alignment to avoid residential displacements. The project is scheduled for ROW in 2014 and Construction is Long-Range.
- Project STP00-0000-00 (820), P.I. Number 0000820. The project would widen SR 40 (2 to 4 lanes from Colerain Road/CR 61 to milepost 5.0 in Charlton County. The project is scheduled for ROW in 2012-2013 and Construction in 2018.

Project Location: Project CSSTP-0007-00 (414) is the widening of Colerain Road (CR 140, CR 90) in Camden County including its interchange (Exit 6) with Interstate 95. The project begins approximately 2300 feet west of Interstate 95 and ends approximately 1000 feet east of Kings Bay Road.

Description of the Approved Concept: The proposed project would widen the existing two-lane roadway to four 12-foot lanes with a 20-foot raised median and turn lanes at major intersections. The proposed roadway would have 4-foot bike lanes and 10-foot rural shoulders (6'-6" paved, 3'-6" grass) from 2,300 feet west of I-95 to Brazell Road and from 3,800 feet west of Winding Road to 1000 feet east of Kings Bay Road. The proposed roadway would have 4-foot bike lanes and 16-foot urban shoulders with 5-foot concrete sidewalks from Brazell Road to 3800 feet west of Winding Road.

The project includes a new four span bridge over I-95 approximately 95.25-foot wide by 273-foot long. The I-95 ramps would be reconstructed with concrete pavement. The I-95 southbound off-ramp would be widened from one lane to one right and two left turn lanes approaching the Colerain Road intersection. The I-95 northbound off-ramp would be widened from one lane to one right and one left turn lane approaching the Colerain Road intersection.

The Project Description section of the approved concept report incorrectly stated the project length as approximately 4.9 miles. The correct length is approximately 5.67 miles.

PDP Classification: Major (X), Minor (),

Federal Oversight: Full Oversight (X), Exempt (), State Funded (), or Other ()

Functional Classification: Urban Minor Arterial Street

U.S. Route Number(s): N/A

State Route Number(s): N/A

Traffic (AADT) as shown in the approved concept:

Base Year: 18,100 (2010)

Design Year: 30,200 (2030)

Updated traffic data (AADT):

Base Year: 16,900 (2017)

Design Year: 28,200 (2037)

Approved Programmed/Schedule:

P.E. FY 2007

R/W: Local

Construction: FY 2014

VE Study Required

Yes (X)

No ()

VE completed June 11, 2009

Benefit/Cost Ratio 6.90

Is the project located in an Ozone Non-attainment area? Yes () No (X)

Is the project in a PM2.5 Non-attainment area? Yes () No (X)

Approved Features:	Proposed Features:
<ul style="list-style-type: none"> • Gross Length of Project 5.67 miles 2300 feet west of I-95 to 1000 feet east of Kings Bay Rd • Rural Typical Section- 4 lane divided with 24-foot raised median and 4-foot bike lane and 10-foot rural outside shoulder (6'-6" paved) both directions Colerain Rd from 2300 feet west of I-95 to relocated Brazell Rd. • Urban Typical Section - 4 lane divided with 20-foot raised median and 4-foot bike lane and 16-foot urban shoulder with 5-foot sidewalks both directions Colerain Rd from relocated Brazell Rd. to 3800 feet west of Winding Rd. • Rural Typical Section-- 4 lane divided with 24-foot raised median and 4-foot bike lane and 10-foot rural outside shoulder (6'-6" paved) both directions Colerain Rd from 3800 feet west of Winding Rd to 1000 feet east of Kings Bay Rd. • Rural slopes- 6:1 in fill and 6:1 front ditch slopes • Urban shoulder slopes draining into roadway. • Proposed Colerain Rd bridge over I-95- 95.25 feet wide by 273' foot long, 4-lane divided with 20' raised median and 12-foot rural shoulders • I-95 ramps reconstructed and widened with concrete pavement. • Proposed right in/ right out driveway on left (north) side Colerain Road between median openings at existing subdivision road and North Gross Rd/ Marsh Harbour Pkwy. 	<ul style="list-style-type: none"> • Gross Length of Project 5.85 miles 2714 feet west of I-95 to 1546 feet east of Kings Bay Rd (M.P. 0.42 to M.P. 6.27.) • Urban Typical Section- 4 lane divided with 20-foot raised median and 20-foot urban shoulder with 10-foot multi-use path on left (north) side and 16-foot urban shoulder with 5-foot sidewalk on right (south) side Colerain Rd from 2664 feet west of I-95 to relocated Brazell Rd. • Urban Typical Section- 4 lane divided with 20-foot raised median and 20-foot urban shoulder with 10-foot multi-use path on left (north) side and 16-foot urban shoulder with 5-foot sidewalk on right (south) side Colerain Rd from relocated Brazell Rd. to Winding Rd. • Rural Typical Section – 4 lane divided with 20-foot raised median and 10-foot rural outside shoulder consisting of 3-foot, 6-inch grass shoulders and 6-foot, 6-inch paved shoulders including 4-foot bike lanes and 16-inch rumble strips and both directions Colerain Rd from Winding Rd to 1496 feet east of Kings Bay Rd. • Rural slopes- 4:1 in fill and 4:1 front ditch slopes • Urban shoulder slopes in fill draining away from roadway. • Proposed Colerain Rd Bridge over I-95- 96.92 feet wide by 293' foot long, 4-lane divided with 20' raised median and urban shoulders with 16.50-foot multi-use path on left (north) side and 6-foot sidewalk on right (south) side. • I-95 ramps reconstructed and/or widened in kind with asphalt. • Proposed median opening for driveways on left (north) & right (south) side Colerain Road between median openings at existing subdivision road and North Gross Rd/ Marsh Harbour Pkwy. A Design Variance for median opening spacing may be required.

Reason for Change:

- The project would relocate a local service road approximately 606 feet west of the intersection of the I-95 southbound ramps to accommodate the construction of a 400-foot right turn lane with 100-foot taper on Colerain Road to the I-95 southbound on-ramp. The additional 414 feet is required to transition the existing two-lane Colerain Road to the proposed four-lane divided roadway. The project would construct turn lanes on Colerain Road at the intersection of Kings Bay Road. The additional 546 feet is required to transition the proposed four-lane divided roadway to the existing two-lane Colerain Road.
- The Colerain Road rural section from west of I-95 to relocated Brazell Road, see Attachment No. 2, is changed to an urban section to eliminate the need for barrier separation between the travel lanes and the multi-use path on the proposed bridge over I-95. The raised median is changed from 24-foot to 20-foot to reduce the proposed roadway footprint and match the approved urban typical section.
- The Colerain Road urban typical section from relocated Brazell Road to 3800 feet west of Winding Road consisting of 4-foot bike lanes and 5-foot sidewalks on both sides is changed to a 10-foot multi-use path on the north side and a 5-foot sidewalk on the south side, see Attachment No. 2. This would result in an estimated savings of \$220,679 in construction while meeting the bike lane requirements on Colerain Road, which is shown as being on the Camden County bike route system. The multi-use path scenario also encompasses comment number one in GDOT's April 20, 2009 Public Information Open House response letter, see Attachment No 5. The proposed urban typical is extended from 3,800 feet west of Winding Road to Winding Road. The additional 3,800 feet of an urban versus rural typical section would provide sidewalks to the nearby county high school, which would be used by the substantial residential development planned for this area. The use of an urban shoulder would also minimize impacts to the tree canopy on the south side of Colerain Road approximately 1,090 feet to 470 west of Winding Road by eliminating the roadside ditch.
- Implementation of Value Engineering Study alternative RD-2 dated September 29, 2009 changed the rural typical section from 4-foot bike lanes and 10-foot shoulders (6'-6" paved and 3'-6" grass) to 10-foot shoulders consisting of 4-foot paved bike lanes and 6-foot grass in each direction. The January 23, 2012 Value Engineering Implementation Revision Request for alternative RD-2 would change the rural typical section from 10-foot shoulders consisting of 4-foot paved bike lanes and 6-foot grass to 10-foot shoulders consisting of 3-foot, 6-inch grass shoulders and 6-foot, 6-inch paved shoulders including 4-foot bike lanes and 16-inch rumble strips in each direction. The revised typical shoulder section would meet GDOT Design Policy Manual Section 9.5.2 Bicycle Facility Design 1. On-street Bicycle Facility page 9-11 revised March 1, 2011. The VE Reversal of Recommendation RD-2 to reduce the paved shoulder width from 6-foot, 6-inches to 4-foot would negate the estimated \$126,328 savings outlined in the Value Engineering Study Report. However an estimated savings of \$258,716 not outlined in the VE Study Report would result by including the 4-foot bike lane as apart of rather than in addition to the 6-foot, 6-inch paved shoulder as shown in the approved concept report. The raised median is changed from 24-foot to 20-foot to reduce the proposed roadway footprint and match the approved urban typical section. See Attachments No 2 & 6.
- The change in roadway fill slopes and front ditch slopes from 6:1 to 4:1 would reduce the proposed roadway footprint while meeting design criteria outlined in the GDOT Design Policy Manual version 2.0 Table 6.6 Design Criteria for Arterial Roadways, see Attachments No 2 & 7.

Reason for Change:

- Implementation of Value Engineering Study alternative DR-3 dated September 29, 2009, see Attachments No. 2 & 6, changed the proposed urban shoulders in fill to slope to drain away from the proposed roadway. This would preserve the existing sheet flow conditions while reducing the flow at the proposed storm drain outfalls.
- The proposed Colerain Road bridge over I-95, see Attachment No. 2, is changed from 95.25 feet to 96.92 feet wide to accommodate the urban typical section with the multi-use path and sidewalk versus 12-foot rural shoulders. The total and maximum span lengths are changed from 273 feet and 94 feet to 293 feet and 98.50 feet respectively per the approved preliminary bridge layout.
- Implementation of Value Engineering Study alternative RD-19 dated September 29, 2009, see Attachments No. 2 & 6, changed the I-95 ramp reconstruction from concrete to reconstruction and/or widening in kind with asphalt. In addition to cost savings this alternative minimizes ramp reconstruction and resulting impacts to the traveling public.
- The approved concept plan showed a proposed right in/ right out driveway on the left (north) side of Colerain Road approximately 1050 feet east of the proposed median opening at the existing subdivision road and 750 feet west of the proposed median opening at North Gross Road/ Marsh Harbour Parkway. GDOT District Five provided a Colerain Road Access Plan by P & A Engineering dated 5/05/09 on behalf of the City of Kingland's request for a median opening to serve driveways on the left (north) and right (south) sides of Colerain Road approximately 804 feet east of the proposed median opening at the existing subdivision road and 1000 feet west of the proposed median opening at North Gross Road/ Marsh Harbour Parkway. See Attachment No. 8. This median opening would provide access to the future development in the northwest and southwest quadrants of the Colerain Road/North Gross Road/ Marsh Harbour Parkway intersection and eliminate westbound and eastbound u-turn movements at the Colerain Road/Subdivision Road and Colerain Road/North Gross Road/Marsh Harbour Parkway intersections respectively. A Design Variance for GDOT Design Policy Manual- Version 2.0 Section 7.3 Median Openings may be required for the proposed 804-foot versus the required 1000-foot (660-foot minimum for minimal left turn volumes) median opening spacing on Colerain Road.

Potential Environmental Impacts of Proposed Revision: The potential environmental impacts from revising the rural to an urban typical section on Colerain Road would be significantly reduced in cut areas by eliminating the longitudinal ditch and associated slopes. The potential environmental impacts would be slightly increased in fill areas by using 16-foot urban versus 10-foot rural shoulders. However 2:1 fill slopes could be used with urban shoulders where acceptable whereas rural shoulders require minimum 4:1 fill slopes.

The potential environmental impacts from the approved 16-foot urban shoulder widths and 4-foot bike lanes would be reduced by the eliminating the 4-foot bike lane on the right (south) side and remain the same by replacing the 4-foot bike lane with a 20-foot urban shoulder which includes a 10-foot multi-use path on the left (north) side of the proposed Colerain Road.

Utilizing a 20-foot raised median while matching the urban section would reduce the potential environmental impacts from the approved Colerain Road rural typical section with a 24-foot raised median.

The potential environmental impacts from the approved 10-foot rural shoulder widths (6-foot, 6-inch paved and 3-foot 6-inch grass) and 4-foot bike lanes would be reduced by including the 4-foot bike lane as apart of the proposed 6-foot, 6-inch paved shoulder in each direction on Colerain Road.

The potential environmental impacts from the approved 6:1 fill slopes and 6:1 front ditch slopes would be reduced by utilizing 4:1 fill slopes and 4:1 front ditch slopes on Colerain Road.

The shoulder slope draining away from the roadway in fill sections would reduce the potential environmental impacts from the approved shoulder slope draining into the roadway. This would preserve the existing sheet flow conditions while reducing the flow at the proposed storm drain outfalls.

The potential environmental impacts from the approved reconstruction of the I-95 ramps with concrete pavement would be reduced by reconstructing and/or widening in kind with asphalt, which eliminates the need to reconstruct the ramps to the existing gores.

Have Proposed Revisions Been Reviewed by Environmental Staff? Yes No
 All of the potential environmental impacts described above will be reviewed in the Draft Environmental Assessment that is currently under review.

Environmental Responsibilities (Studies/Documents/Permits): Consultant

Updated Cost Estimate	
Base Construction Cost	\$20,609,337.34
Engineering and Inspection	\$1,030,466.87
Asphalt Adjustment	\$1,347,836.52
<u>Total Construction Cost</u>	<u>\$22,987,640.73</u>
Right-of-way Cost LOCAL	\$5,334,000.00
Utilities (reimbursable) LOCAL	\$160,000.00
Environmental Mitigation	\$62,917.00

Recommendation: Recommend that the proposed revision to the concept be approved for implementation.

- Attachments:
1. Sketch Map
 2. Typical Sections
 3. Cost Estimate
 4. Traffic Flow Diagrams
 5. PIOH Summary/ Response Letter
 6. VE Study Implementation Letter
 7. GDOT Design Policy Manual Version 2.0, Design Criteria for Arterial Roadways

*E. Laurel Island Pkwy. (Cokerain Ro.) Access Plan
9.1/23/12 V.E. Implementation Revision Request*

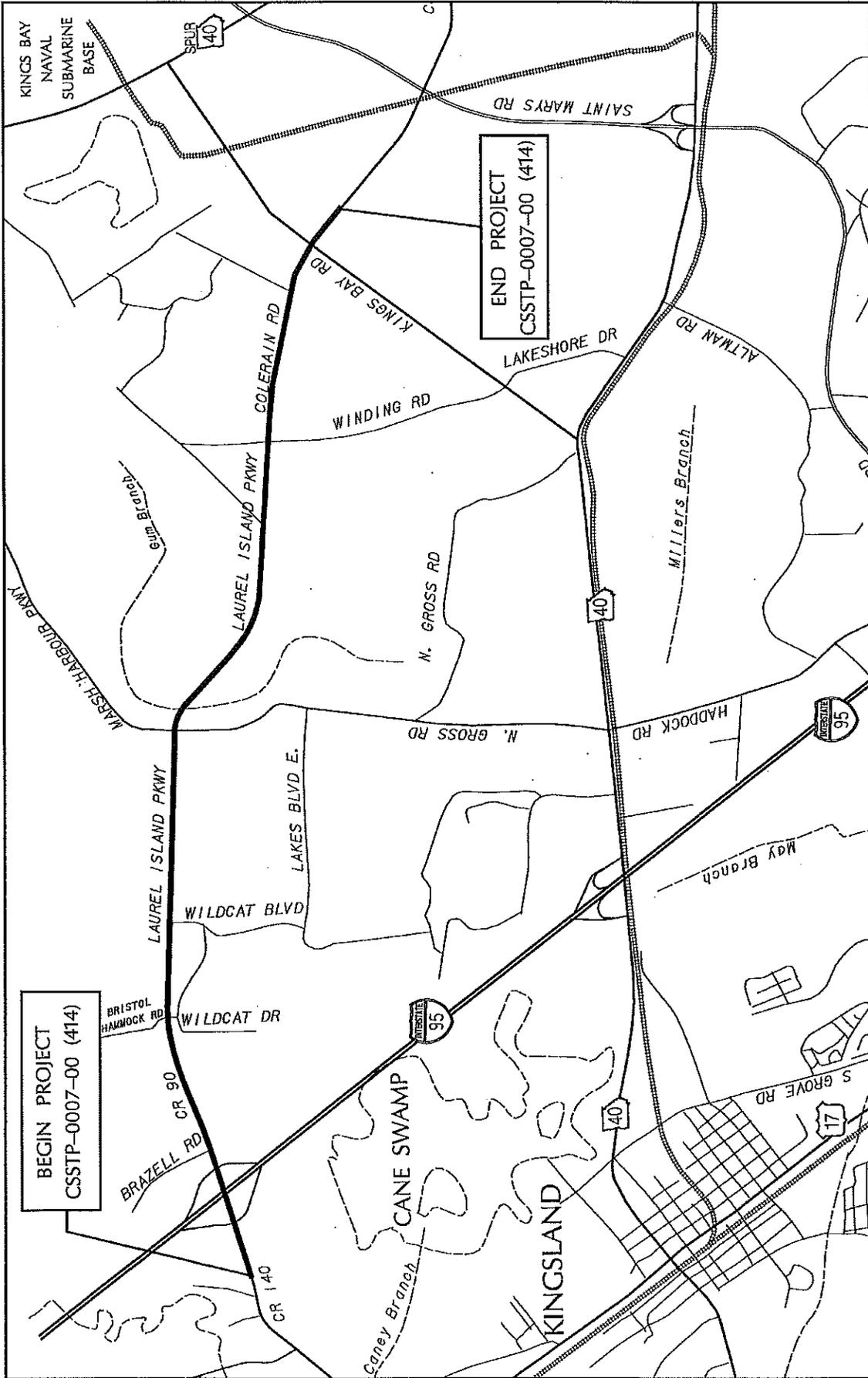
Concur: *James B. Bell*
Director of Engineering

Approve: *Dana Robbins*
for Division Administrator, FHWA

Approve: *Dee M. Ross* Date: *1/26/2012*
Chief Engineer

ATTACHMENT NO. 1
PROJECT LOCATION MAP

Project Location Map



ATTACHMENT NO. 2

TYPICAL SECTIONS

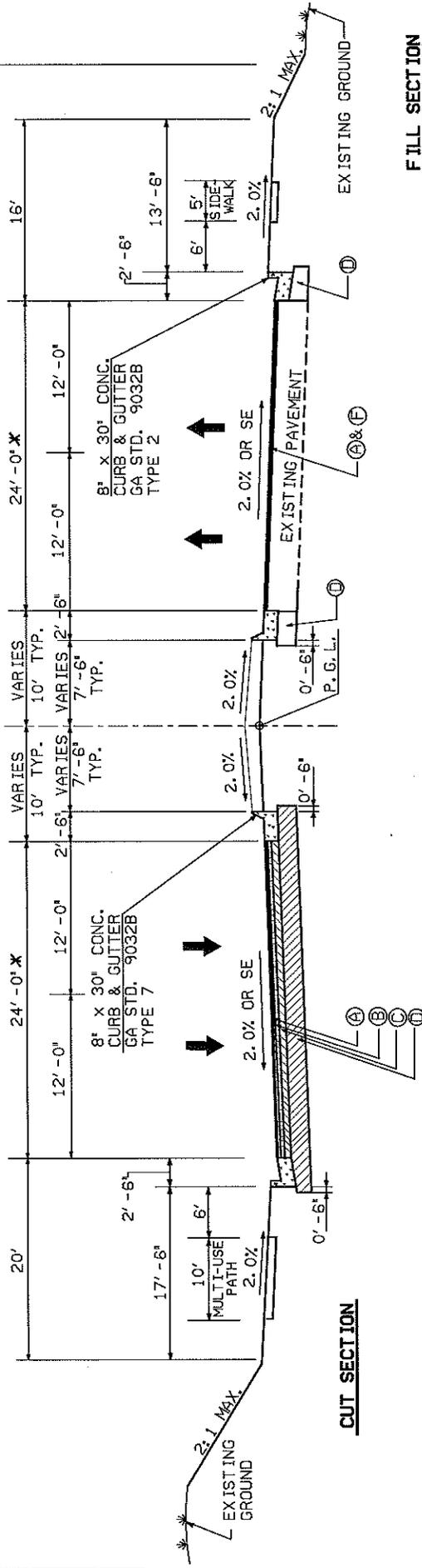
COLERAIN ROAD / LAUREL ISLAND PKWY

Reconstruction in Urban Section

CONSTR. & F

REQ'D. R/W VARIES
SEE PLANS

REQ'D. R/W VARIES
SEE PLANS



TYPICAL SECTION

FILL SECTION

2864 FEET TO 1124 FEET WEST OF I-95
 877 FEET EAST OF I-95 TO 286 FEET WEST OF N GROSS RD/MARSH HARBOUR PKWY
 1421 FEET TO 1800 FEET EAST OF N GROSS RD/MARSH HARBOUR PKWY
 3200 FEET EAST OF N GROSS RD/MARSH HARBOUR PKWY TO WINDING RD
 NOT TO SCALE

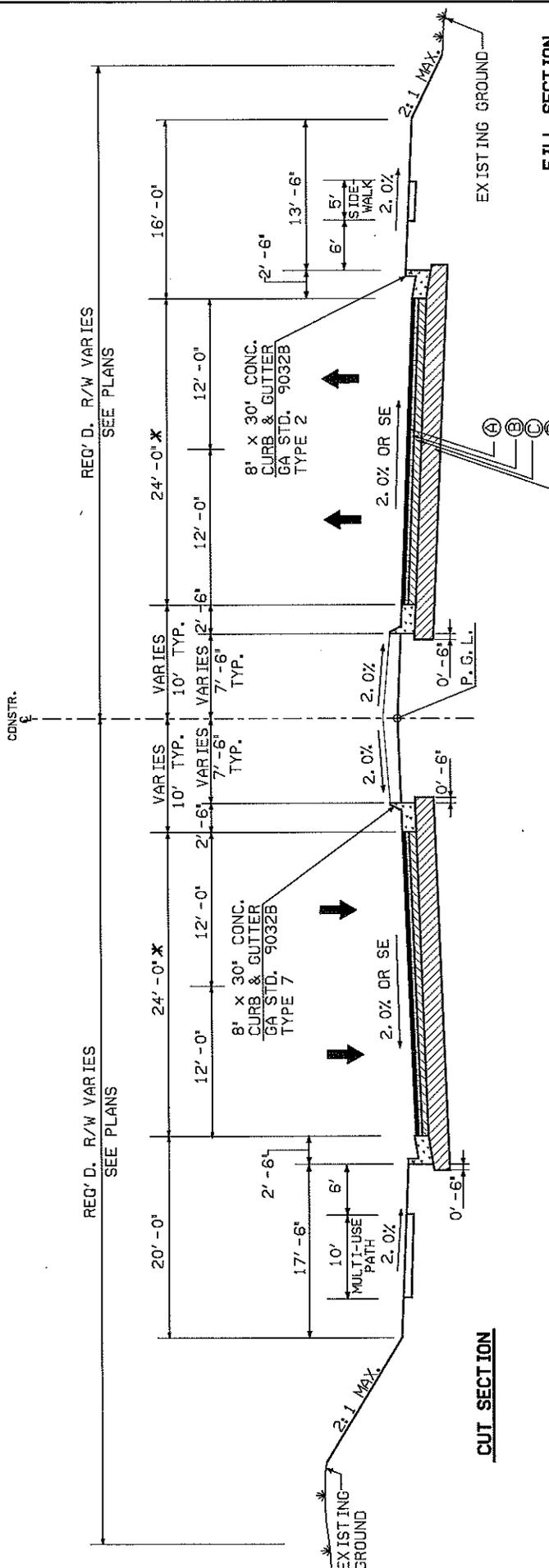
* ADDITIONAL 12' LANES WHERE REQUIRED.

PROPOSED PAVEMENT

- Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY)
- Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY)
- Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY)
- Ⓓ GRADED AGGREGATE BASE (10")
- Ⓔ LEVELING AS REQ'D - DEPTH VARIES

COLERAIN ROAD / LAUREL ISLAND PKWY

Urban Section



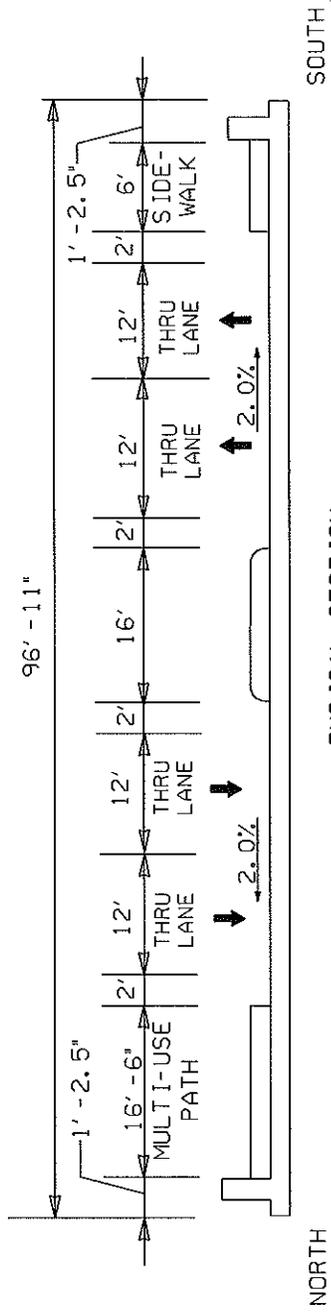
TYPICAL SECTION

1124 FEET TO 147 FEET (BEGIN BRIDGE) WEST OF I-95
 147 FEET (END BRIDGE) TO 877 FEET EAST OF I-95
 1800 FEET TO 3200 FEET EAST OF N CROSS RD/MARSH HARBOUR PKWY
 NOT TO SCALE

- PROPOSED PAVEMENT**
- Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY)
 - Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY)
 - Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY)
 - Ⓓ GRADED AGGREGATE BASE (10')

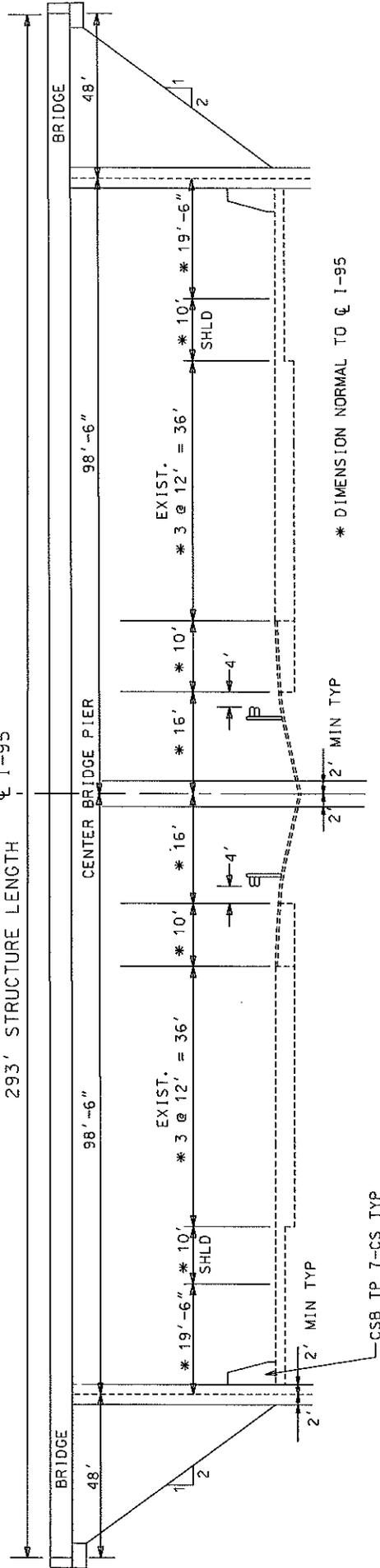
* ADDITIONAL 12' LANES WHERE REQUIRED.

COLERA IN RD / LAUREL ISLAND PKWY BRIDGE OVER I-95



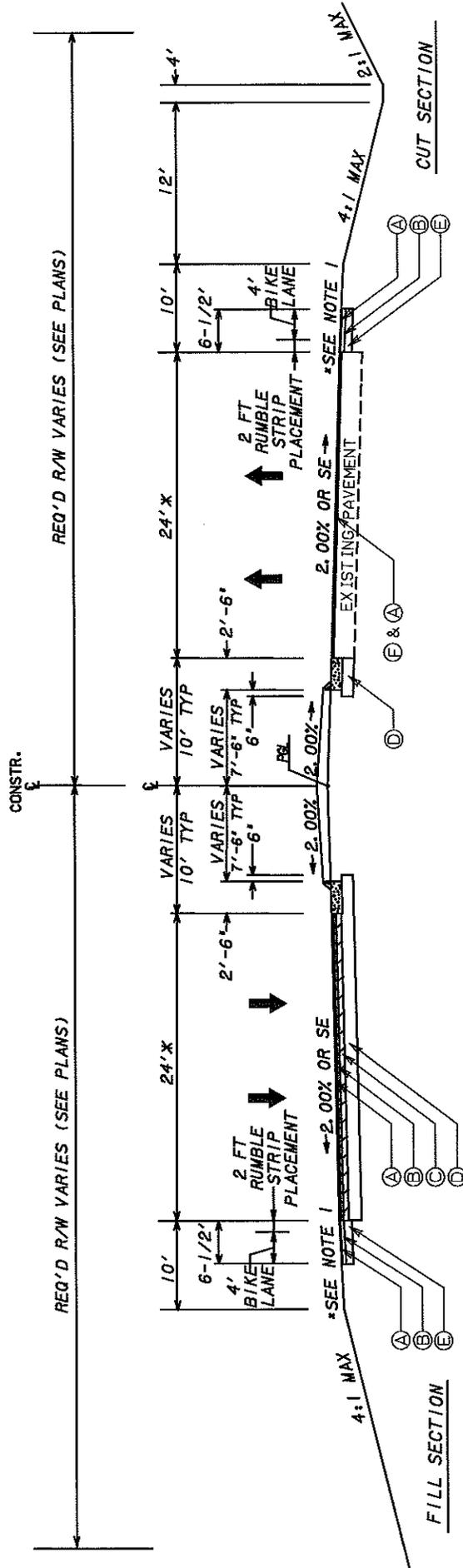
TYPICAL SECTION

147 FEET (BEGIN BRIDGE) WEST TO 147 FEET (END BRIDGE) EAST OF I-95
NOT TO SCALE



COLERAIN ROAD / LAUREL ISLAND PKWY

Reconstruction in Rural Section



PROPOSED PAVEMENT

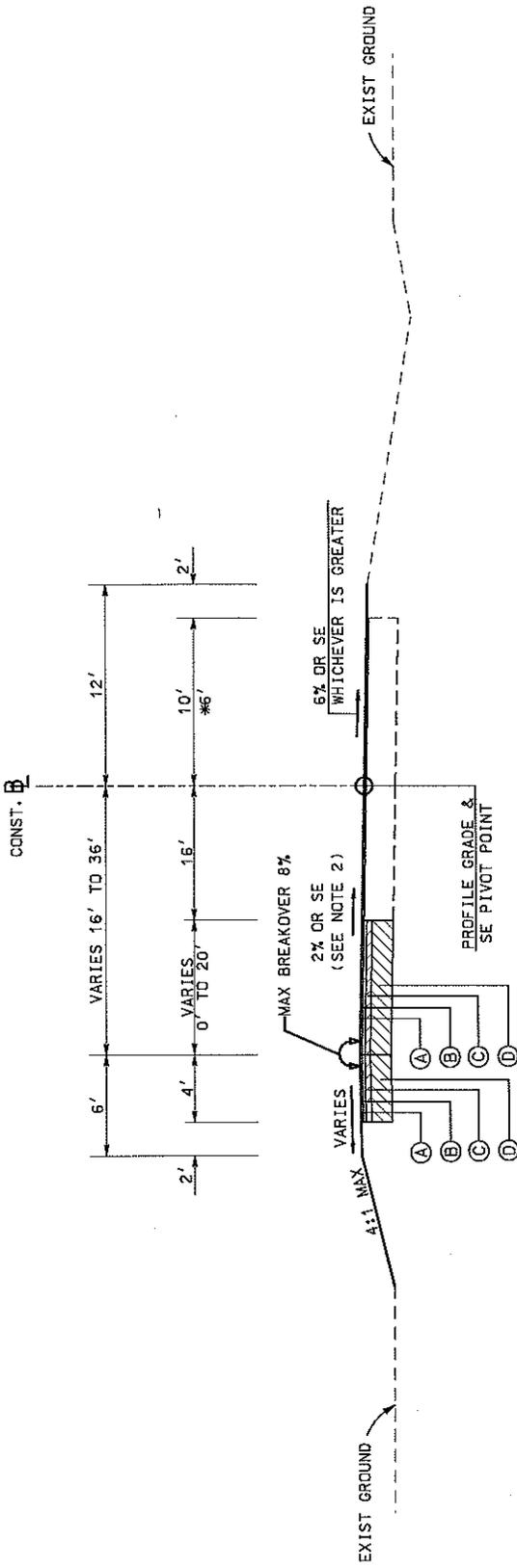
- Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY)
- Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY)
- Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY)
- Ⓓ GRADED AGGREGATE BASE (10')
- Ⓔ GRADED AGGREGATE BASE (16')
- Ⓕ LEVELING AS REQ'D - DEPTH VARIES

NOTE: 1. SHOULDER ON HIGH SIDE SUPERELEVATION
 MAXIMUM BREAKOVER BY
 SHOULDER ON LOW SIDE SUPERELEVATION
 6% OR SUPERELEVATION WHICHEVER GREATER

TYPICAL SECTION

WINDING RD TO 1496 FEET EAST OF KINGS BAY RD
 NOT TO SCALE

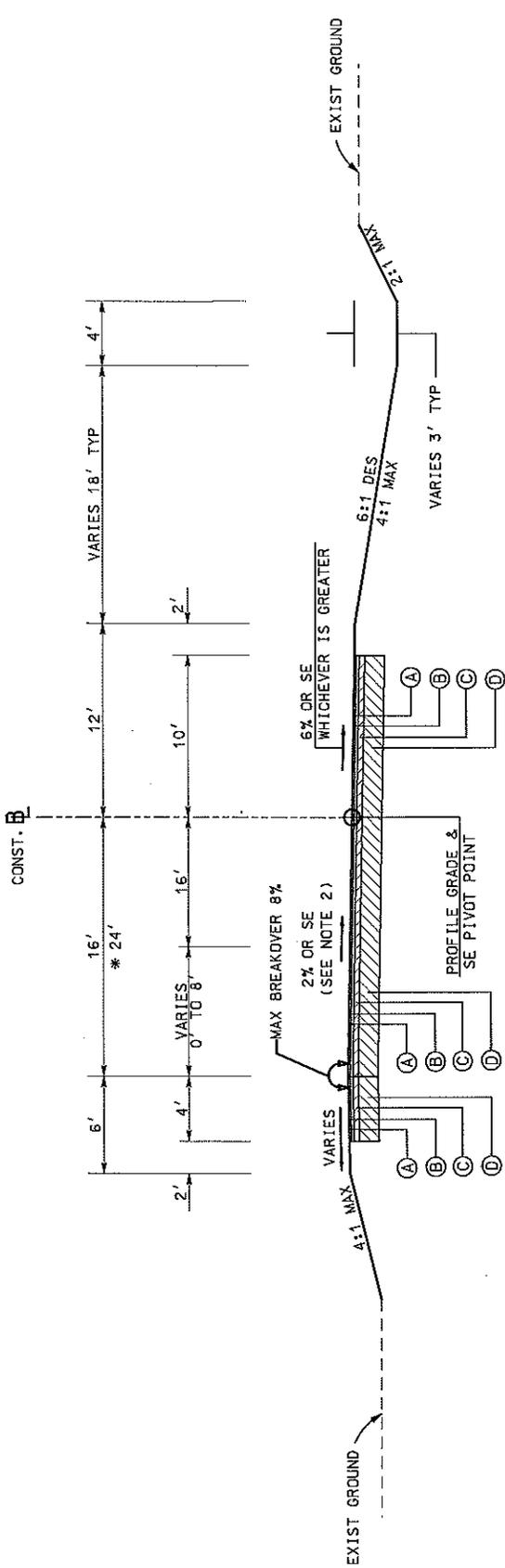
x ADDITIONAL 12' LANES WHERE REQUIRED.



TYPICAL SECTION

I-95 RAMPS WIDENING & OVERLAY

* SOUTHBOUND OFF-RAMP - 850 FEET NORTH OF TO COLERAIN RD
 * NORTHBOUND OFF-RAMP - 661 FEET TO 136 FEET SOUTH OF COLERAIN RD
 NOT TO SCALE



TYPICAL SECTION

I-95 RAMPS

SOUTHBOUND ON-RAMP - COLERAIN RD TO 450 FEET SOUTH
 * NORTHBOUND OFF-RAMP - 136 FEET SOUTH OF TO COLERAIN RD
 * NORTHBOUND ON-RAMP - COLERAIN RD TO 341 FEET NORTH
 NOT TO SCALE

PROPOSED PAVEMENT

- (A) RECYCLED ASPHALT CONCRETE 12.5 MM SUPERPAVE (165 LBS/SY)
- (B) RECYCLED ASPHALT CONCRETE 19 MM SUPERPAVE (220 LBS/SY)
- (C) RECYCLED ASPHALT CONCRETE 25 MM SUPERPAVE (440 LBS/SY)
- (D) GRADED AGGREGATE BASE COURSE 10"

ATTACHMENT NO. 3

COST ESTIMATE

PROJ. NO.: CSSTP-0007-00(414)

P.I. NO. 0007414

DATE: 10/18/2011

Base Construction Cost	\$	20,609,337.34
E & I	5% \$	1,030,466.87
Construction Contingency	\$	-
Subtotal Construction Cost	\$	<u>21,639,804.21</u>
Liquid AC Adjustment (50 % cap)	\$	<u>1,347,836.52</u>
Total Construction Cost	\$	<u>22,987,640.73</u>

CSSTP-0007-00(414)	CALL NO.
0007414	
10/18/2011	

PROJ. NO.
P.I. NO.
DATE

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA) \$ 0
 Monthly Asphalt Cement Price month placed (APM) \$ 900.80
 Monthly Asphalt Cement Price month project let (APL) \$ 563.00
 Total Monthly Tonnage of asphalt cement (TMT) 0

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

TOTAL LIQUID/AC ADJUSTMENT

\$ 1,347,836.52

JOB DETAIL ESTIMATE

JOB NUMBER : 0007414
SPEC YEAR: 01
DESCRIPTION: WIDENING OF COLERAIN ROAD FROM I-95 TO KINGS BAY ROAD

ITEMS FOR JOB 0007414

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - PROJECT	1.000	1900000.00	1900000.00
0010	153-1300		EA	CSSTP-0007-00(414)	1.000	63835.52	63835.53
0015	201-1500		LS	FIELD ENGINEERS OFFICE TP 3 CLEARING & GRUBBING - PROJECT	1.000	1120000.00	1120000.00
0020	207-0203		CY	CSSTP-0007-00(414)	86.000	40.65	3496.56
0025	208-0100		CY	FOUND BK FILL MATL, TP II	216600.000	5.55	1203847.64
0030	310-1101		TN	IN PLACE EMBANKMENT	106800.000	13.87	1481361.92
0035	402-1812		TN	GR AGGR BASE CRS, INCL MATL	8100.000	68.45	554446.30
0040	402-3121		TN	RECYL AC LEVELING, INC BM&HL	34700.000	56.22	1951025.89
0045	402-3130		TN	RECYL AC 25MM SP, GP1/2, BM&HL	17900.000	63.69	1140178.45
0050	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	17400.000	64.13	1115914.20
0055	413-1000		GL	BITUM TACK COAT	19800.000	2.24	44493.17
0060	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	14600.000	1.97	28779.52
0065	433-1100		SY	REF CONC APPR SL/INCL CURB	490.000	136.67	66971.84
0070	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	120.000	33.21	3986.20
0075	441-0018		SY	DRIVEWAY CONCRETE, 8 IN TK	91.000	39.26	3572.74
0080	441-0104		SY	CONC SIDEWALK, 4 IN	36900.000	28.63	1056554.38
0085	441-0748		SY	CONC MEDIAN, 6 IN	34200.000	33.12	1132964.95
0090	441-0754		SY	CONC MEDIAN, 7 1/2 IN	660.000	43.57	28756.47
0095	441-4020		SY	CONC VALLEY GUTTER, 6 IN	590.000	35.32	20843.84
0100	441-4030		SY	CONC VALLEY GUTTER, 8 IN	170.000	41.61	7075.20
0105	441-6222		LF	CONC CURB & GUTTER/ 8"x30"TP2	43100.000	12.02	518467.14
0110	441-6740		LF	CONC CURB & GUTTER/ 8"x30" TP7	51600.000	9.79	505440.58
0115	500-3101		CY	CLASS A CONCRETE	73.000	463.53	33838.22
0120	500-3110		LF	CLASS A CONCRETE, TYPE P1, RETAINING WAL	640.000	306.45	196130.09
0125	500-3115		LF	CLASS A CONCRETE, TYPE P2, RETAINING WAL	600.000	350.09	210058.17
0130	500-3120		LF	CLASS A CONCRETE, TYPE P3, RETAINING WAL	300.000	468.47	140542.81
0135	500-3800		CY	CL A CONC, INCL REINF STEEL	116.000	575.04	66705.80
0140	511-1000		LB	BAR REINF STEEL	7700.000	0.68	5262.57
0145	550-1180		LF	STM DR PIPE 18", H 1-10	25500.000	25.59	652794.39
0150	550-1240		LF	STM DR PIPE 24", H 1-10	8800.000	31.16	274245.84
0155	550-1300		LF	STM DR PIPE 30", H 1-10	2700.000	38.17	103073.53
0160	550-1360		LF	STM DR PIPE 36", H 1-10	360.000	57.18	20585.17
0165	550-1480		LF	STM DR PIPE 48", H 1-10	100.000	83.11	8311.06
0170	550-1540		LF	STM DR PIPE 54", H 1-10	60.000	99.89	5993.77
0175	550-2180		LF	SIDE DR PIPE 18", H 1-10	160.000	27.00	4320.49
0180	550-2240		LF	SIDE DR PIPE 24", H 1-10	320.000	35.69	11422.10
0185	550-3418		EA	SAFETY END SECTION 18", SD, 4:1	3.000	488.54	1465.62
0190	550-3424		EA	SAFETY END SECTION 24", SD, 4:1	8.000	5141.87	41135.00
0195	550-3518		EA	SAFETY END SECTION 18", STD, 6:1	3.000	602.40	1807.21
0200	550-3524		EA	SAFETY END SECTION 24", STD, 6:1	8.000	863.62	6908.98

DATE : 10/19/2011
PAGE : 2

JOB DETAIL ESTIMATE

QTY	UNIT	DESCRIPTION	AMOUNT	AMOUNT	AMOUNT
0205	EA	FLARED END SECT 18 IN, ST DR	4.000	470.45	1881.81
0210	EA	FLARED END SECT 24 IN, ST DR	5.000	561.06	2805.33
0215	EA	FLARED END SECT 30 IN, ST DR	4.000	676.04	2704.17
0220	EA	FLARED END SECT 18 IN, SLP DR	4.000	441.96	1767.84
0225	LF	SLOPE DRAIN PIPE, 18 IN	180.000	29.73	5351.93
0230	CY	MSE WALL BACKFILL MATERIAL	250.000		
0235	SF	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 1	820.000	36.33	29793.17
0240	SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 1	40.000	72.58	2903.54
0245	LF	COPING B, WALL NO - 1	100.000	200.87	20087.19
0250	EA	RIGHT OF WAY MARKERS	230.000	80.24	18455.71
0255	LF	GUARDRAIL, TP T	84.000	58.00	4872.40
0260	LF	GUARDRAIL, TP W	7500.000	11.79	88451.40
0265	EA	GUARDRAIL ANCHORAGE, SPCL DES	1.000	2083.07	2083.07
0270	EA	GUARDRAIL ANCHORAGE, TP 1	17.000	606.01	10302.21
0275	EA	GUARDRAIL ANCHORAGE, TP 12	16.000	1905.48	30487.79
0280	EA	CATCH BASIN, GP 1	343.000	2106.46	722517.63
0285	EA	DROP INLET, GP 1	30.000	2050.94	61528.42
0290	SF	SAFETY GRATE, TP 1	316.000	46.81	14794.85
0295	SF	SAFETY GRATE, TP 2	311.000	26.96	8385.32
0300	SF	SAFETY GRATE, TP 3	49.000	41.82	2049.52
0305	SF	SAFETY GRATE, TP 4	162.000	32.00	5184.00
0310	CY	CLASS A CONCRETE	10.000	666.11	6661.13
0315	SF	HWY SGN, TP1MAT, REFL SH TP3	13.10	13.10	3078.57
0320	SF	HWY SGN, TP2 MATL, REFL SH TP 3	235.000	14.85	3713.10
0325	SF	HWY SIGNS, TP1MAT, REFL SH TP 9	250.000	18.55	7328.75
0330	SF	HWY SIGNS, TP 2MAT, REFL SH TP 9	395.000	31.79	1589.53
0335	SF	HWY SIGNS, ALUM EXTRD PNLS, RS TP 3	50.000	20.67	28943.12
0340	LF	GALV STEEL POSTS, TP 7	1400.000	7.14	5000.28
0345	LF	GALV STEEL POSTS, TP 8	700.000	10.29	8541.10
0350	LB	GALV STEEL STR SHAPE POST	830.000	3.96	15851.92
0355	EA	DELINEATOR, TP 1	4000.000	32.52	1626.02
0360	LF	P-IN-PL, SIGNS, STL H, HP 12 X 53	50.000	68.04	1633.18
0365	LF	STEEL WIRE STRAND CABLE, 3/8"	24.000	3.35	2684.78
0370	EA	STRAIN POLE, TP III	800.000	5232.03	41856.24
0375	EA	STRAIN POLE, TP IV	8.000	5620.18	179845.82
0380	LS	TRAF SIGNAL INSTALLATION NO - 1 (I-95 SB ON / OFF RAMPS)	32.000	75000.00	75000.00
0385	LS	TRAF SIGNAL INSTALLATION NO - 2 (I-95 NB ON / OFF RAMPS)	1.000	75000.00	75000.00
0390	LS	TRAF SIGNAL INSTALLATION NO - 3 (RELOC BRAZELL LN / ACCESS RD A)	1.000	100000.00	100000.00
0395	LS	TRAF SIGNAL INSTALLATION NO - 4 (BRISTOL HAMMOCK RD)	1.000	100000.00	100000.00
0400	LS	TRAF SIGNAL INSTALLATION NO - 5 (WILDCAT DR)	1.000	75000.00	75000.00
0405	LS	TRAF SIGNAL INSTALLATION NO - 6 (N GROSS/ MARSH HARBOUR PKWY)	1.000	5000.00	5000.00
0410	LS	TRAF SIGNAL INSTALLATION NO - 7 (MASTERS WAY)	1.000	75000.00	75000.00
0415	LS	TRAF SIGNAL INSTALLATION NO - 8 (WINDING RD)	1.000	100000.00	100000.00
0420	LS	TRAF SIGNAL INSTALLATION NO - 9 (KINGS BAY RD)	1.000	50000.00	50000.00

COLERAIN RD_10-19-11.TXT
STATE HIGHWAY AGENCY

DATE : 10/19/2011
PAGE : 4

JOB DETAIL ESTIMATE

ITEM	UNIT	DESCRIPTION	QTY	UNIT PRICE	TOTAL
0620	EA	MAINT OF TEMP SEDIMENT BASIN, STA NO - 7+00 (ACCESS RD A)	1.000	744.74	744.74
0625	EA	MAINT OF SILT CONTROL GATE, TP 3	20.000	115.10	2302.11
0630	EA	MAINT OF CONST EXIT	3.000	492.98	1478.94
0635	EA	MAINT OF INLET SEDIMENT TRAP	373.000	61.10	22793.37
0640	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	208.15	416.31
0645	MO	WATER QUALITY INSPECTIONS	30.000	979.06	29371.96
0650	LF	TEMPORARY SILT FENCE, TYPE A	27000.000	1.87	50573.43
0655	LF	TEMPORARY SILT FENCE, TYPE C	2700.000	3.50	9452.84
0660	AC	PERMANENT GRASSING	63.000	423.11	26656.12
0665	TN	AGRICULTURAL LIME	190.000	31.90	6061.09
0670	TN	FERTILIZER MIXED GRADE	57.000	466.56	26594.05
0675	LB	FERTILIZER NITROGEN CONTENT	3200.000	2.78	8903.01
0680	SY	EROSION CONTROL MATS, SLOPES	24400.000	1.13	27616.90
0685	CY	FOUND BK FILL MATL, TP II	77.000	41.02	3158.57
0690	CY	BR EXCAV, GRADE SEPARATION	603.000	31.26	18853.40
0695	SY	CONC SLOPE PAV, 4 IN	1187.000	45.99	54591.31
0700	SY	GROOVED CONCRETE	2903.000	4.09	11900.47
0705	LS	SUPERSTR CONCRETE, CL AA, BR NO - 1 (920)	920.000	708.85	652142.00
0710	CY	CL AA CONCRETE	590.000	476.92	281388.07
0715	LF	PSC BEAMS, AASHTO TP II, BR NO- 1	973.000	84.79	82508.58
0720	LF	PSC BEAMS, AASHTO, BULB TEE, 54" BR NO - 1	2479.000	150.33	372675.38
0725	LB	BAR REINF STEEL	85412.000	0.57	49303.22
0730	LS	SUPERSTR REINF STEEL, BR NO - 1	194560.000	0.77	149811.20
0735	LF	PILING, PSC, 16 IN SQ	1277.000	51.32	65536.93
0740	LF	PILING, PSC, 18 IN SQ	3230.000	60.21	194489.31
0745	LS	REM OF EX BR, STA NO - 43+24	1.000	100000.00	100000.00
0750	LF	TEMP BARRIER, METHOD NO. 1	1040.000	29.27	30444.61
ITEM TOTAL					20609337.31
INFLATED ITEM TOTAL					20609337.31

TOTALS FOR JOB 0007414

ESTIMATED COST:
CONTINGENCY PERCENT (5.0):
ESTIMATED TOTAL:

20609337.34
1030466.87
21639804.21

Department of Transportation

State of Georgia

Interdepartmental Correspondence

FILE R/W Cost Estimate **OFFICE** Atlanta
DATE October 27, 2011

FROM Phil Copeland, Right of Way Administrator
LaShone Alexander, Right of Way Cost Estimator

TO Matt Bennett, Project Manager

SUBJECT **Preliminary Right of Way Cost Estimate**
Project: CSSTP- 0007-00(414) Camden County
P.I. No.: 0007414R
Description: Colerain Road widening in Camden County

As per your request, attached is a copy of the approved Preliminary Right of Way Cost Estimates on the above referenced projects.

If you have any questions, please contact LaShone Alexander at One Georgia Center 600 West Parkway Street, NW Atlanta, GA 30308, Right of Way Office at (478) 553-1569 or (478) 232-4045.

PC:LA
Attachments
c: Ben Garland, Staff Appraiser

**GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY**

Date: 10/18/2011 Project: CSSTP-0007-00 (414)
 Revised: County: Camden
 PI: 0007414

Description: Widening Colerain Road
 Project Termini: I-95 to Kings Bay Road

Parcels: 89 Existing ROW: Varies
 Required ROW: Varies

Land and Improvements \$3,666,657.20

Proximity Damage	\$285,000.00
Consequential Damage	\$200,000.00
Cost to Cures	\$50,000.00
Trade Fixtures	\$0.00
Improvements	\$30,000.00

Valuation Services \$153,750.00

Legal Services \$585,075.00

Relocation \$178,000.00

Demolition \$0.00

Administrative \$750,500.00

TOTAL ESTIMATED COSTS \$5,333,982.20

TOTAL ESTIMATED COSTS (ROUNDED) \$5,334,000.00

Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.	4	<i>[Signature]</i> GA 270880
John G. Simshauser	1	<i>[Signature]</i>

Prepared By: *[Signature]* CG#: 2772 10/26/2011
 Approved By: *[Signature]* CG#: 286999 10/26/2011

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

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
Land and Improvements	Agriculture	Residential	Commercial	Industrial
1 Estimate Low (ac)	\$0.00	\$5,500.00	\$25,133.00	\$0.00
2 Estimate High (ac)	\$0.00	\$150,000.00	\$95,960.00	\$0.00
3 Estimate Used (ac)	\$0.00	\$31,363.00	\$94,090.00	\$0.00
4 Fee Simple Area (ac)	0.00	17.22	7.03	0.00
5 Fee Simple Estimate	\$0.00	\$540,070.86	\$661,452.70	\$0.00
6 Perm Esmt Area (ac)	0.00	23.28	6.65	0.00
7 Perm Esmt Factor	0%	50%	50%	0%
8 Perm Esmt Estimate	\$0.00	\$365,065.32	\$312,849.25	\$0.00
9 Temp Esmt Area (ac)	0.00	0.00	0.00	0.00
10 Temp Esmt Factor	0%	0%	0%	0%
11 Temp Esmt Estimate	\$0.00	\$0.00	\$0.00	\$0.00
12 Proximity Damages	\$0.00	\$285,000.00	\$0.00	\$0.00
13 Consequential Damages	\$0.00	\$0.00	\$200,000.00	\$0.00
14 Cost to Cures	\$0.00	\$0.00	\$50,000.00	\$0.00
15 Improvements	\$0.00	\$25,000.00	\$5,000.00	\$0.00
16 Trade Fixtures	\$0.00	\$0.00	\$0.00	\$0.00
17				
18 PROPERTY TYPE TOTALS	\$0.00	\$1,215,136.18	\$1,229,301.95	\$0.00
19	SUB TOTAL PROPERTY TYPES			\$2,444,438.13
20	Counter Offers and Condemnation Increases			\$1,222,219.07
21				
22	GRAND TOTAL LANDS AND IMPROVEMENTS			\$3,666,657.20

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
Valuation Services	Agriculture	Residential	Commercial	Industrial
1 Appraisals (# of Parcels)	0	55	34	0
2 Estimated Fees (per Parcel)	\$0.00	\$1,000.00	\$2,000.00	\$0.00
3 TOTAL APPRAISALS	\$0.00	\$55,000.00	\$68,000.00	\$0.00
4 Sign Estimates	0	0	0	0
5 Estimated Fees	\$0.00	\$0.00	\$0.00	\$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	\$55,000.00	\$68,000.00	\$0.00
17	SUB TOTAL VALUATION SERVICES			\$123,000.00
18	Updates and Incidentals (Min \$2,500 or 25%)			\$30,750.00
19	GRAND TOTAL VALUATION SERVICES			\$153,750.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
Legal Services	Parcels	Estimated Fees		TOTALS
1 Meeting with Attorney	89	\$125.00		\$11,125.00
2 Preliminary Titles	89	\$200.00		\$17,800.00
3 Closing and Final Title	89	\$300.00		\$26,700.00
4 Recording Fees	89	\$50.00		\$4,450.00
5 Condemnation Filing	14	\$5,000.00		\$70,000.00
6 Litigation Costs	14	\$25,000.00		\$350,000.00
7 Updates and Incidentals	14	\$7,500.00		\$105,000.00
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL LEGAL SERVICES			\$585,075.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
Relocation	Displacements	Estimated Costs		TOTALS
1 Business Displacement	0	\$15,000.00		\$0.00
2 Residential Tenant	0	\$20,000.00		\$0.00
3 Residential Owner	0	\$40,000.00		\$0.00
4 Pro-Rata Taxes	89	\$1,000.00		\$89,000.00
5 Property Pin Replacement	89	\$1,000.00		\$89,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL RELOCATION			\$178,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
	Items/Improvements	Estimated Costs		TOTALS
1	Residential Structures	0	\$15,000.00	\$0.00
2	Commercial Structures	0	\$25,000.00	\$0.00
3	Hotels/Apartments	0	\$60,000.00	\$0.00
4	UST's - Dispensers	0	\$50,000.00	\$0.00
5	Billboards	0	\$8,000.00	\$0.00
6	Signs - Light Standards	0	\$1,500.00	\$0.00
7	Water Vaults	0	\$15,000.00	\$0.00
8	Gas/Water Service Separation	0	\$2,500.00	\$0.00
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL DEMOLITION			\$0.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSTP-0007-00 (414) Camden

0007414

	A	B	C	D
Administrative	Parcels	Man hours per Parcel		TOTALS
1 Pre-Acquisition	89	40		\$178,000.00
2 Acquisition	89	100		\$445,000.00
3 Relocation	0	50		\$0.00
4 Administrative Appeals	23	50		\$57,500.00
5 Post-Acquisition	14	100		\$70,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	GRAND TOTAL INHOUSE			\$750,500.00

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0007-00(414), Camden County
P.I. # 0007414

OFFICE Jesup

DATE 12/30/2010

FROM Karon L. Ivery, District Utilities Engineer

TO David Moyer, Associate Project Manager, Office of Program Delivery

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate of each utility with facilities potentially located within the above project limits.

Facility Owner	Non-Reimbursable	Reimbursable	Comments
Atlanta Gas Light	\$777,000.00	\$ 0.00	
City of <u>Kingsland</u> :			
Water	543,000.00*		*municipality may seek utility aid
Sewer	652,000.00*		*municipality may seek utility aid
City of <u>Saint Marys</u>			
Water	484,000.00*		*municipality may seek utility aid
Sewer	831,000.00*		*municipality may seek utility aid
Comcast	186,300.00	0.00	
Kingsland Cable TV	373,000.00	0.00	
Georgia Power Distribution	210,000.00	110,000.00	
Georgia Power Transmission		50,000.00	
Okefenokee REMC	664,000.00		
TDS-Camden Telephone	466,000.00		
Totals	\$5,186,300.00	\$ 160,000.00	
Total Reimbursement		\$ 160,000.00	

*If Utility owner seeks aid and is approved by the department, the reimbursable cost would be \$2,510,000.00 in addition to the \$160,000.00 for a total of \$ ~~2,167,000.00~~ **\$ 2,670,000**

CC; Angie Robinson, Office of Financial Management;
Lee Upkins, State Utilities Preconstruction Engineer
District Office File
Utilities Office File

Table 4. Required Mitigation Credits Worksheet for Wetlands.

Factor	WL2		WL3 (Isolated)		WL4		WL5		WL8		WL10		OW12		WL13		WL14	
Dominant Effect	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0
Duration of Effect	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	2.0	0.1	2.0	2.0	0.1
Existing Condition	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Kind	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0
Preventability	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Rarity Ranking	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sum of r Factors	6.6	3.7	6.6	3.7	6.6	3.7	6.6	3.7	6.6	3.7	6.6	3.7	6.6	6.1	6.6	3.7	6.6	3.7
Impacted Area	0.02	0.13	0.02	0.2	0.04	0.5	0.05	0.001	0.05	0.07	0.12	0.19	0.09	0.09	0.02	0.1	0.06	0.05
R x AA =	0.13	0.48	0.13	0.74	0.26	1.85	0.33	0.004	0.33	0.26	0.79	0.73	0.55	0.13	0.37	0.40	0.19	0.19

Total Required Wetland Credits = 7.67

Mitigation 0.99 acres of impact @ 7.67 credits X \$3,500.00 per credit (Satilla) = \$26,845.00

Table 6. Required Mitigation Credits Worksheet for Streams.

Reach Morphology	Impacted Reaches					
	S6	S7	S11			
Simon Channel Evolution Stage	II	II	II			
Rosgen Stream Type/D50	C4	C4	C4			
Bankfull Width (ft)	5	5	4			
Bankfull Depth (in)	24	12	12			
Bankfull Indicators	Scour line	Scour line	Scour line			
Criteria for Selecting Existing Condition	Visual	Visual	Visual			
FACTORS	Impacted Reaches					
	S6 (ext)	S6 (riprap)	S7 (ext)	S7 (riprap)	S11 (ext)	S11 (riprap)
Stream Type Impacted	0.1	0.1	0.1	0.1	0.1	0.1
Priority Area	0.5	0.5	0.5	0.5	0.5	0.5
Existing Condition	0.5	0.5	0.5	0.5	0.5	0.5
Duration	0.2	0.2	0.2	0.2	0.2	0.2
Dominant Impact	1.7	0.7	1.7	0.7	1.7	0.7
Scaling Factor	0.1	0	0.1	0	0.1	0
Sum of Factors (M) =	3.1	2.0	3.1	2.0	3.1	2.0
Length of Stream Impacted (LF) =	95	15	56	27	65	24
M X LF =	294.5	30	173.6	54	201.5	48
Total Mitigation Credits Required = (M X LF) = 801.6						

Mitigation 282 LF of impact @ 801.6 credits x \$45.00 per credit (Satilla) = \$36,072.00

GDOT Benefit-Cost Calculator

enter information in green cells

Project Information

ID: 0007414
 Description: Widening and Improvement of Colerain Rd from I-95 to Kings Bay Rd

Cost Estimate

Date of estimate: 10/18/11
 PE cost: \$ 1,314,276
 ROW cost: \$ 5,334,000
 UTILITY cost: \$ 160,000
 CST cost: \$ 22,987,641
 MITIGATION cost: \$ 62,917
 Total \$ 29,858,834

Traffic in 2037

Source of traffic data: Design traffic approved by GDOT

Without project (nobuild)

Annual VMT: 41,242,500 ADT (28200) x 250 x Length of Project (5.85)
 Annual VHT: 1,656,325 ADT (28200) x 250 x Length of Project/Avg Speed (24.9 mph)*
 Average speed (mph): 25 * Average Speed obtained from HCS analysis

With project (build)

Annual VMT: 41,242,500 ADT (28200) x 250 x Length of Project (5.85)
 Annual VHT: 916,500 ADT (28200) x 250 x Length of Project/Avg Speed (45.0 mph)*
 Average speed (mph): 45 * Average Speed obtained from HCS analysis

Parameters

Parameters	Default	Override	Used
Analysis year	2035	2037	2037
Discount rate	7.0%		7%
Design life (years)	25	20	20
Base year of cost estimate	N/A	2011	2011
Current CST program year	N/A	2017	2017
Fuel price (\$/gallon)	3.22		3.22
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	6%	6%

Include GSP benefits: No

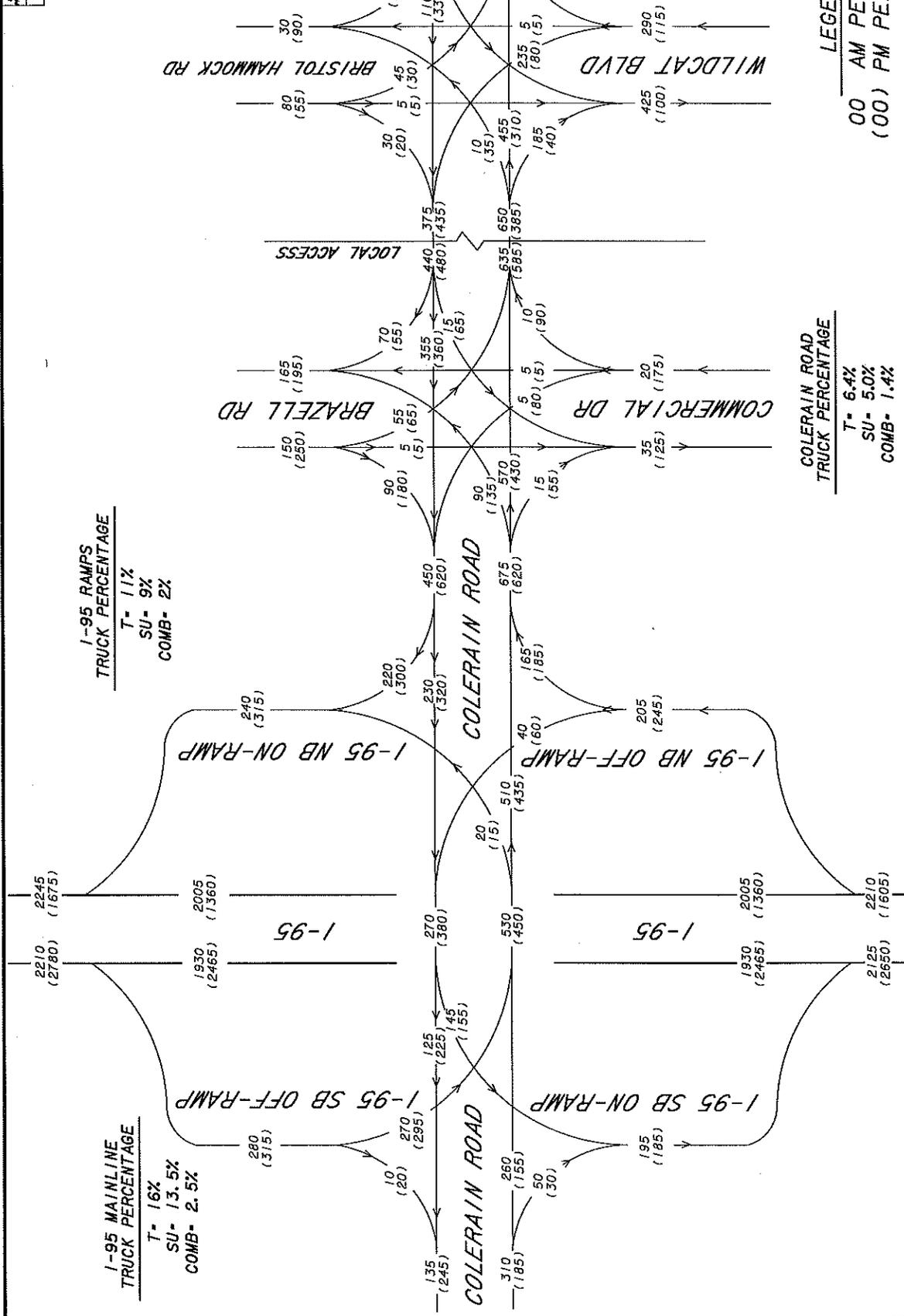
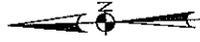
Costs		
Total cost	\$	29,858,834
Annualized cost	\$	1,879,277
Auto Delay Costs		
Nobuild	\$	21,316,903
Build	\$	11,795,355
Auto delay savings	\$	9,521,548
Truck Delay Costs		
Nobuild	\$	7,701,249
Build	\$	4,261,358
Truck delay savings	\$	3,439,890
Fuel Costs		
Nobuild	\$	7,365,549
Build	\$	7,365,549
Fuel cost savings	\$	-
Change in GSP		
Auto delay cost adjustment		NA
Truck delay cost adjustment		NA
Fuel cost adjustment		NA
Total benefit adjustment		NA
Benefits in 2037	\$	12,961,438
Benefit-Cost Ratio		6.90

Notes

Project evaluation is based on termini in proposed concept report; Cost estimate was prepared for concept report.

ATTACHMENT NO. 4
TRAFFIC FLOW DIAGRAMS

NO. 10-01	DATE	BY	CHKD
10-01	10-01	10-01	10-01



**I-95 MAINLINE
TRUCK PERCENTAGE**
T= 16%
SU= 13.5%
COMB= 2.5%

**I-95 RAMP
TRUCK PERCENTAGE**
T= 11%
SU= 9%
COMB= 2%

**COLERAIN ROAD
TRUCK PERCENTAGE**
T= 6.4%
SU= 5.0%
COMB= 1.4%

LEGEND
00 AM PEAK HOUR
(00) PM PEAK HOUR

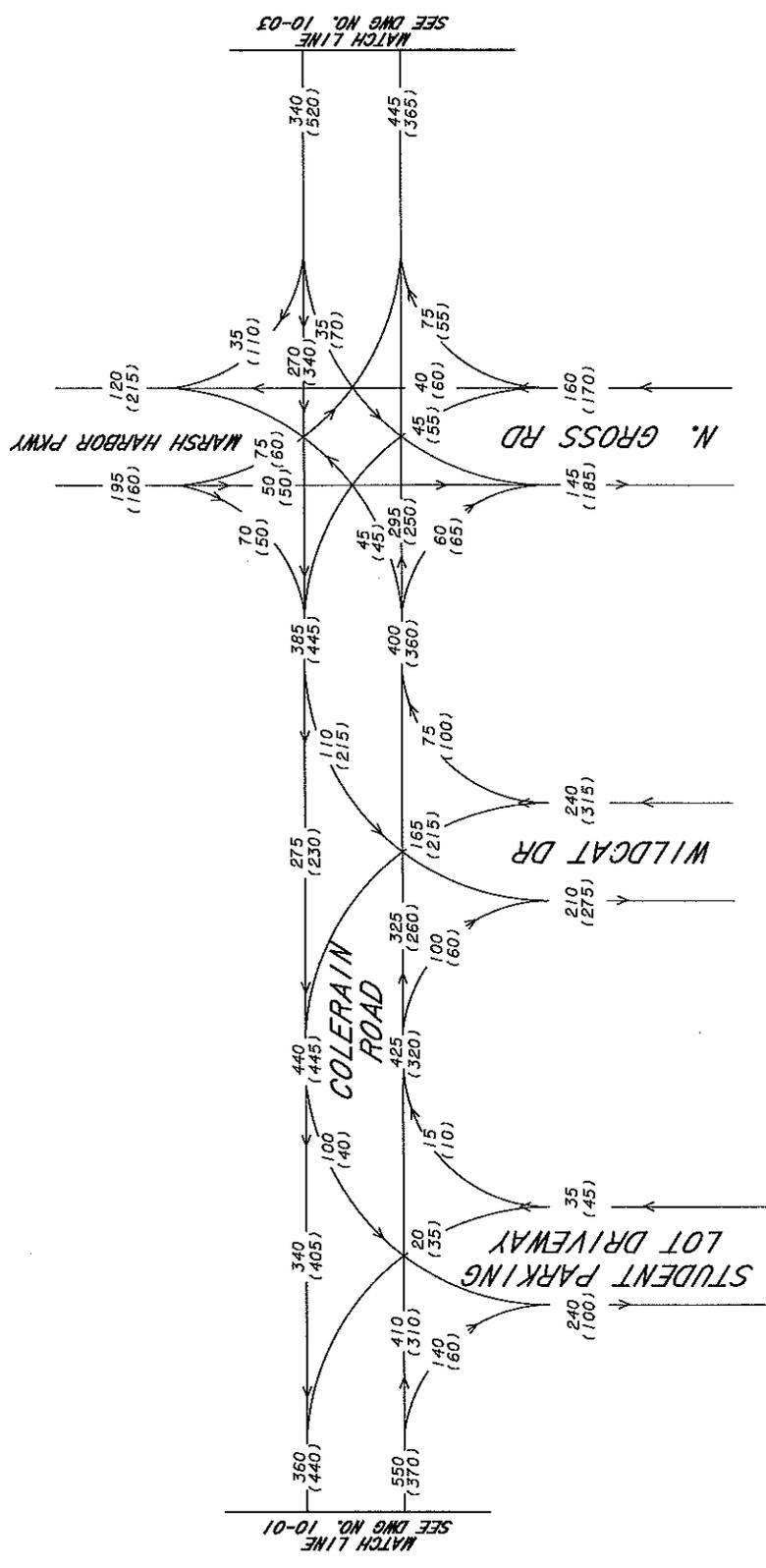
NO. 10-01	DATE	BY	CHKD
10-01	10-01	10-01	10-01

Merland A. G. G. & Associates, Inc.
2811 South Main Street
Worcester, MA 01490
Tel: (508) 853-1111
Fax: (508) 853-1112

MA

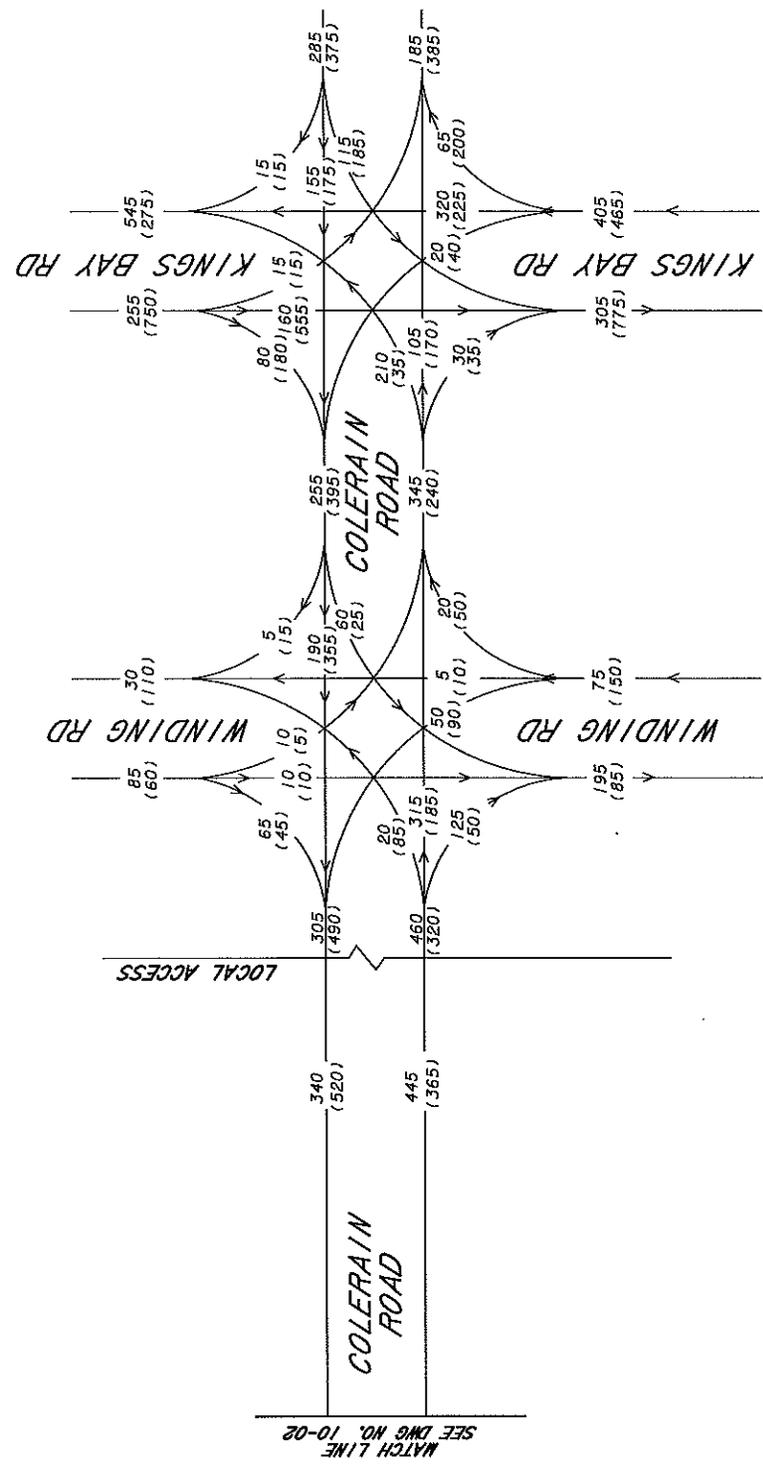
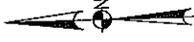
Project: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
P. I. No. 0007414 CAMDEN COUNTY - YEAR 2009 PEAK HOUR TRAFFIC

APPROVALS	DATE	PROJECT	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS



DATE	BY	REVISION	DATE	BY	REVISION
Maryland A. Isbelli Associates, Inc. 2211 Beaufort Hwy P.O. Box 10707 Norfolk, VA 23514					
DATE	DATE	DATE	DATE	DATE	DATE

NO. 10-02	NO. 10-03	NO. 10-04	NO. 10-05	NO. 10-06	NO. 10-07	NO. 10-08	NO. 10-09	NO. 10-10	NO. 10-11	NO. 10-12	NO. 10-13	NO. 10-14	NO. 10-15	NO. 10-16	NO. 10-17	NO. 10-18	NO. 10-19	NO. 10-20	NO. 10-21	NO. 10-22	NO. 10-23	NO. 10-24	NO. 10-25	NO. 10-26	NO. 10-27	NO. 10-28	NO. 10-29	NO. 10-30	NO. 10-31	NO. 10-32	NO. 10-33	NO. 10-34	NO. 10-35	NO. 10-36	NO. 10-37	NO. 10-38	NO. 10-39	NO. 10-40	NO. 10-41	NO. 10-42	NO. 10-43	NO. 10-44	NO. 10-45	NO. 10-46	NO. 10-47	NO. 10-48	NO. 10-49	NO. 10-50	NO. 10-51	NO. 10-52	NO. 10-53	NO. 10-54	NO. 10-55	NO. 10-56	NO. 10-57	NO. 10-58	NO. 10-59	NO. 10-60	NO. 10-61	NO. 10-62	NO. 10-63	NO. 10-64	NO. 10-65	NO. 10-66	NO. 10-67	NO. 10-68	NO. 10-69	NO. 10-70	NO. 10-71	NO. 10-72	NO. 10-73	NO. 10-74	NO. 10-75	NO. 10-76	NO. 10-77	NO. 10-78	NO. 10-79	NO. 10-80	NO. 10-81	NO. 10-82	NO. 10-83	NO. 10-84	NO. 10-85	NO. 10-86	NO. 10-87	NO. 10-88	NO. 10-89	NO. 10-90	NO. 10-91	NO. 10-92	NO. 10-93	NO. 10-94	NO. 10-95	NO. 10-96	NO. 10-97	NO. 10-98	NO. 10-99	NO. 10-100
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COLERAIN ROAD TRUCK PERCENTAGE

LEGEND

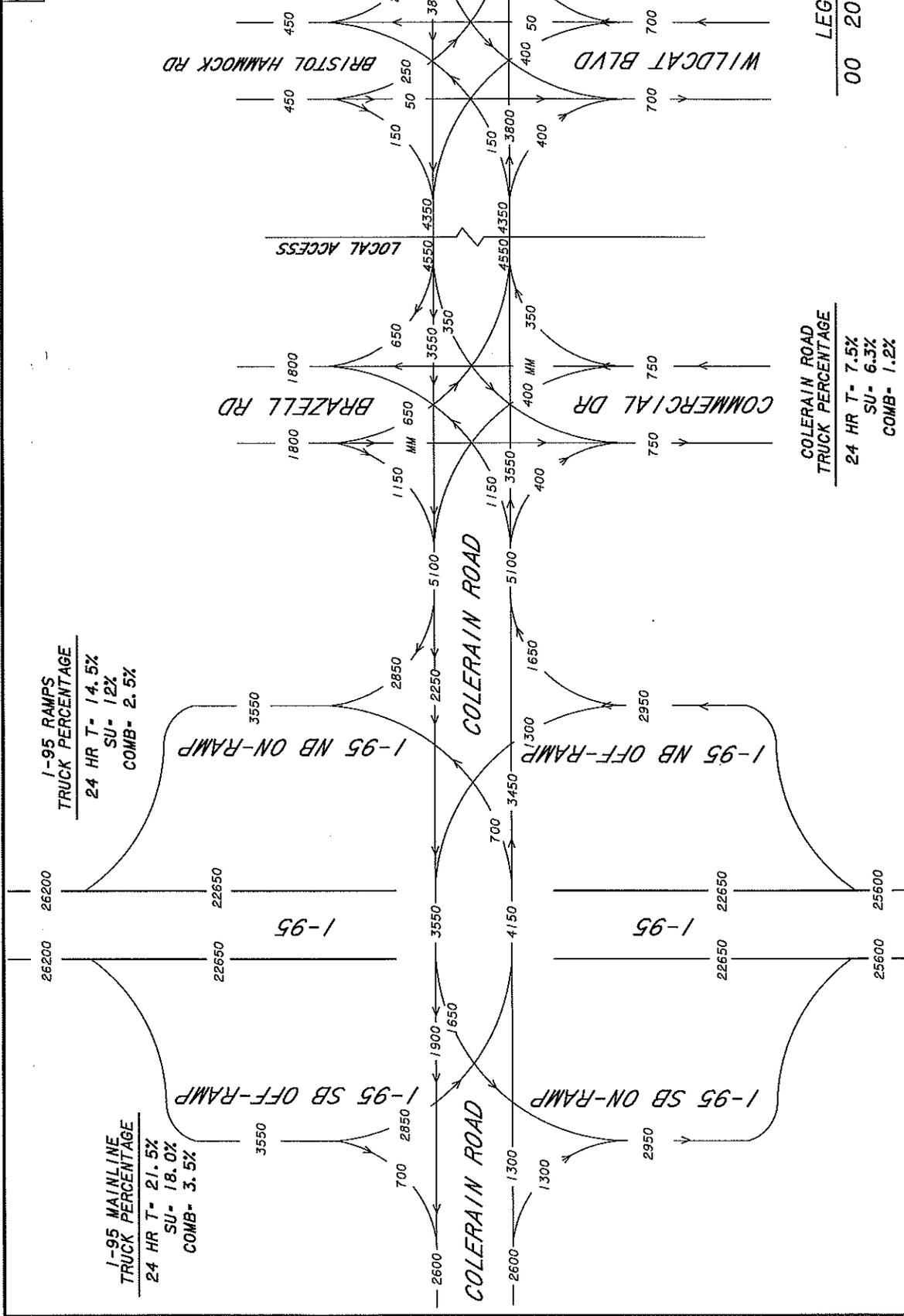
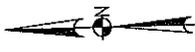
00 AM PEAK HOUR
(00) PM PEAK HOUR

T = 6.4%
SU = 5.0%
COMB = 1.4%

MATCH LINE
SEE DWG NO. 10-02

DATE	BY	DESCRIPTION	REVISION	DATE	BY	DESCRIPTION
<p>Michael A. Nicholls Associates, Inc. 221 Bagley Mill Road Burlington, MA 01803 Tel: (413) 239-1100</p>						
<p>MA</p>						
<p>COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414) P. I. No. 0007414 CAMDEN COUNTY - YEAR 2009 PEAK HOUR TRAFFIC</p>						
<p>SCALE: AS SHOWN</p>						
<p>PROJECT NO. 10-03</p>						

NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS

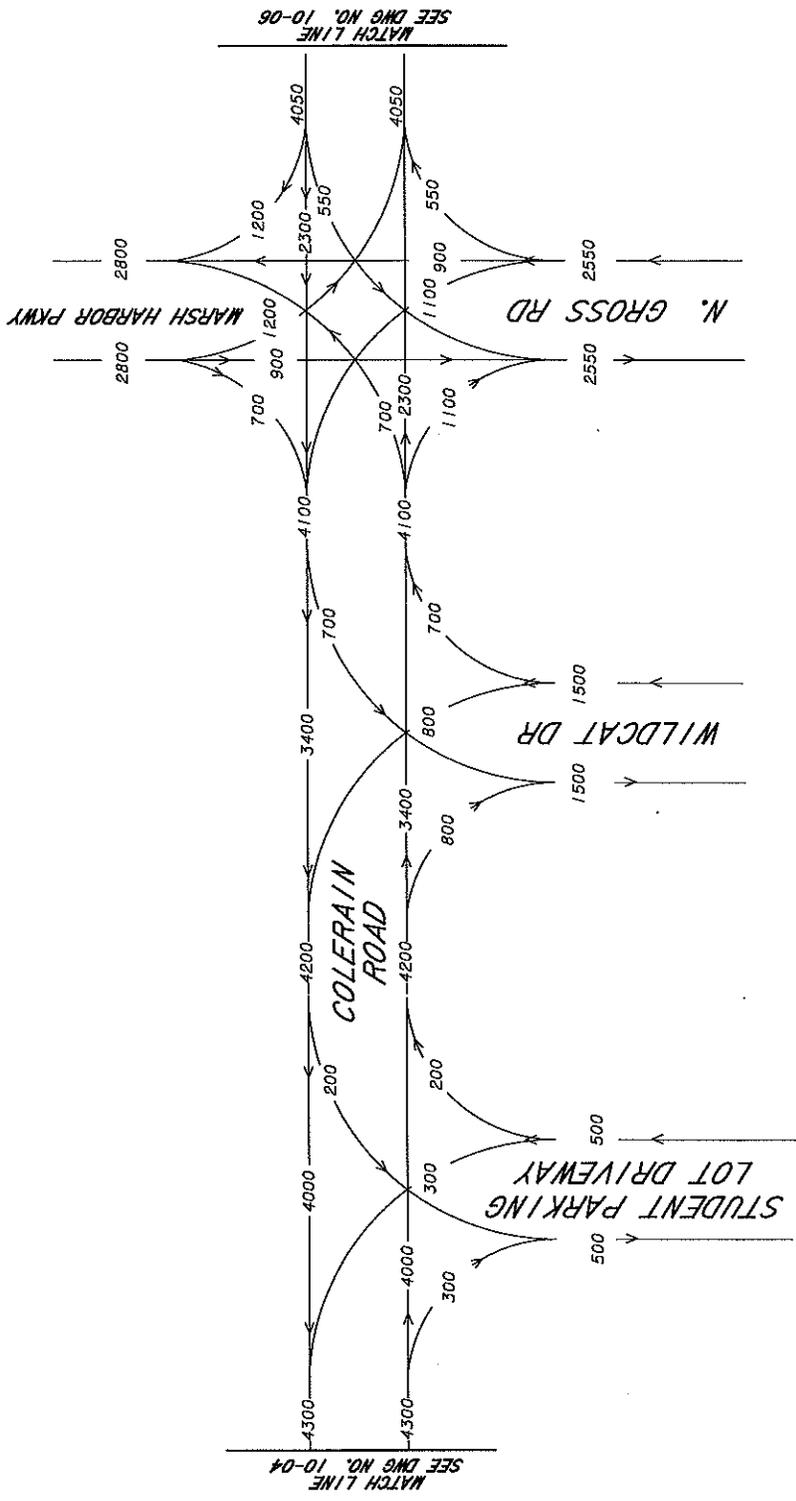


DATE	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS

Maryland A. Gebelli
 Associates, Inc.
 2511 West Hill Road
 Baltimore, MD 21227-3584
MA

PROJECT: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
 P. I. No. 0007414 CAMDEN COUNTY-YEAR 2009 AVERAGE DAILY TRAFFIC
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

NO.	DATE	BY	REVISION



COLERAIN ROAD
TRUCK PERCENTAGE

24 HR T- 7.5%
SU- 6.3%
COMB- 1.2%

LEGEND

00 2009 ADT

DATE	BY	NO.	DESCRIPTION

NAME	DATE	NO.	DESCRIPTION

DESIGNED BY	CHECKED BY

SCALE	DATE

PROJECT NO.	PROJECT NAME	PROJECT LOCATION

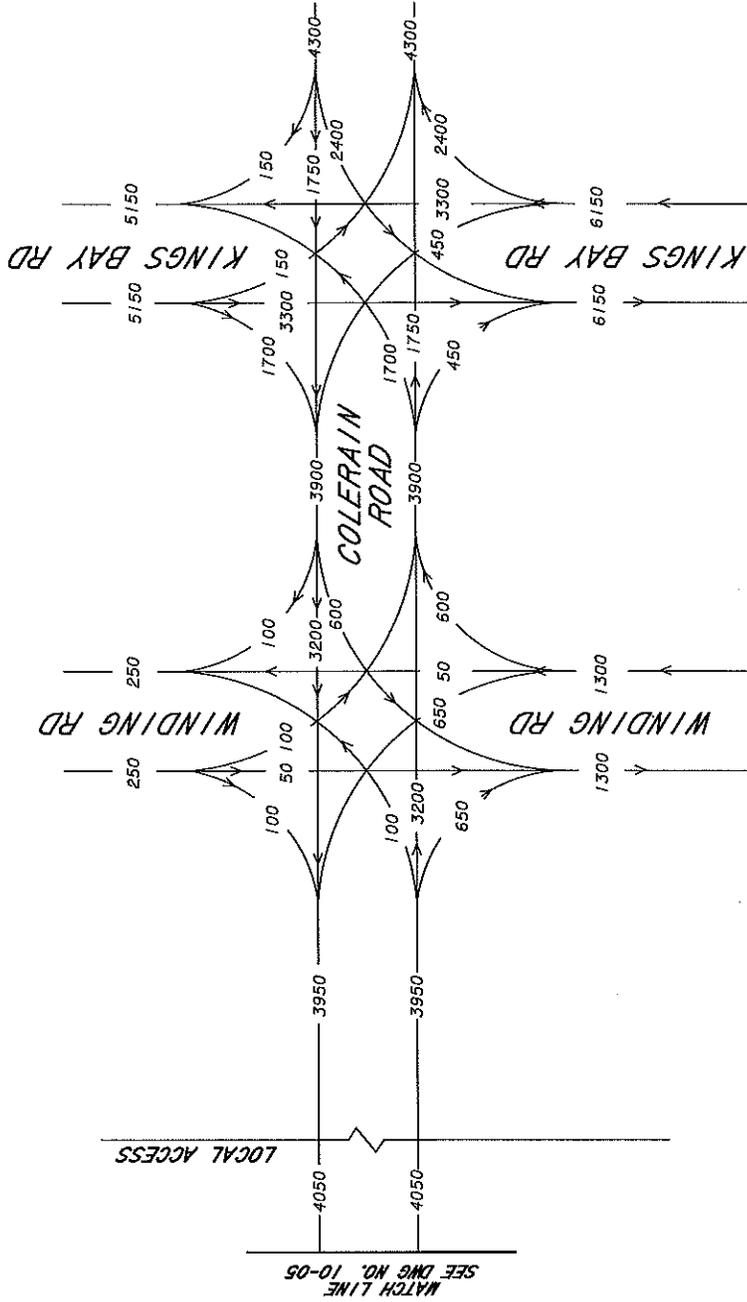
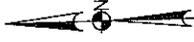
DATE	BY	NO.	DESCRIPTION

MA

Merleland Alibelli
Professional Engineer
221 S. 1st St.
P.O. Box 221
Camden, NJ 08105

COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
P. I. No. 0007414 CAMDEN COUNTY-YEAR 2009 AVERAGE DAILY TRAFFIC
10-05

APPROVAL AND	DATE	BY	PROJECT	NO.	DATE	BY



LEGEND

00 2009 ADT

DATE	BY	PROJECT	NO.	DATE	BY

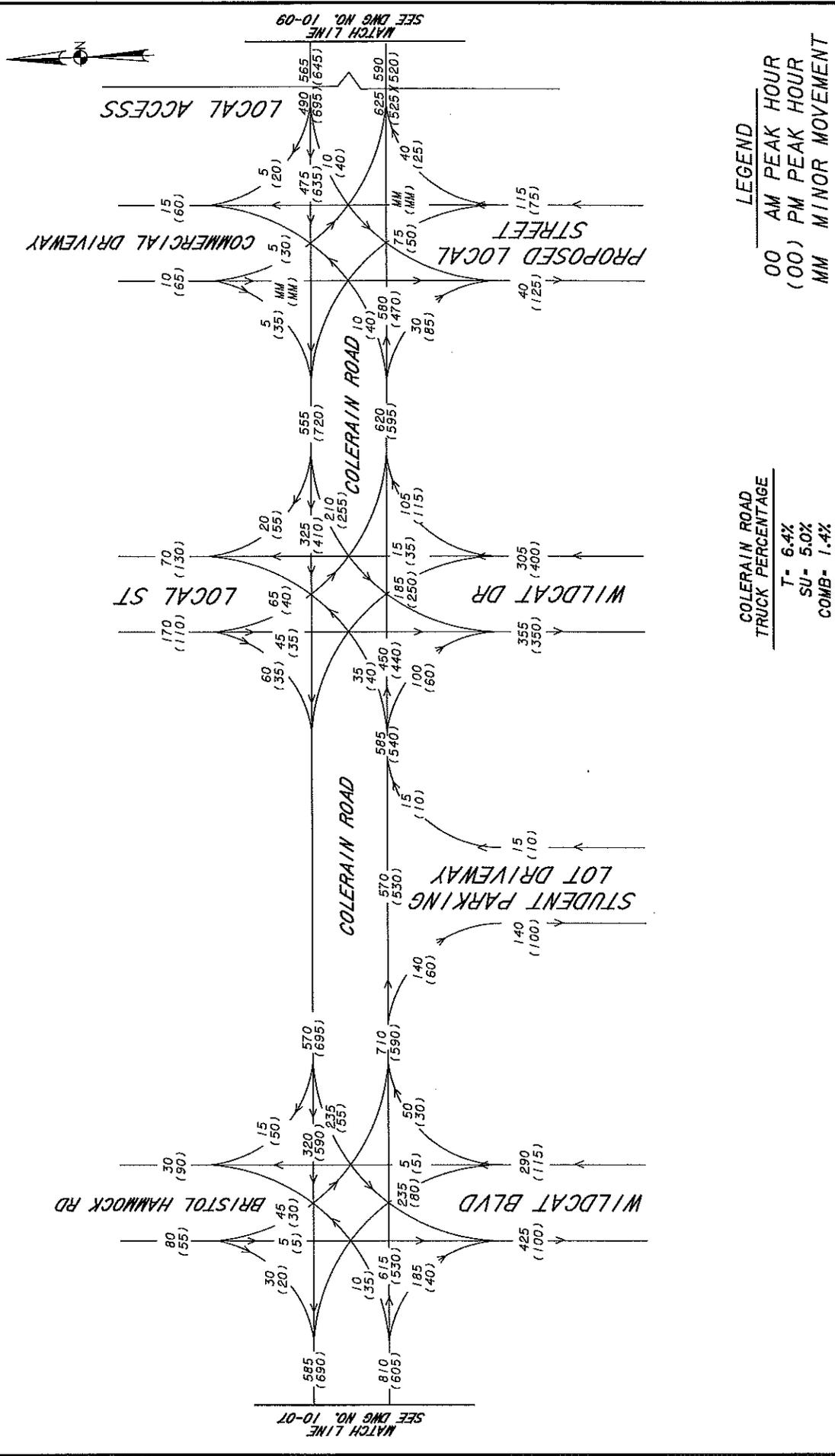
MA

MA Maryland Association of Professional Engineers, Inc.
 2511 Eggleston Road
 Baltimore, MD 21218
 TEL: 410-528-1000 FAX: 410-528-1001

COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
P. I. No. 0007414 CAMDEN COUNTY-YEAR 2009 AVERAGE DAILY TRAFFIC

DATE IN ISSUE 10-06

NO. 10-07	NO. 10-08
DATE	DATE
BY	BY
CHECKED	CHECKED
DESIGNED	DESIGNED
DRAWN	DRAWN
APPROVED	APPROVED



LEGEND

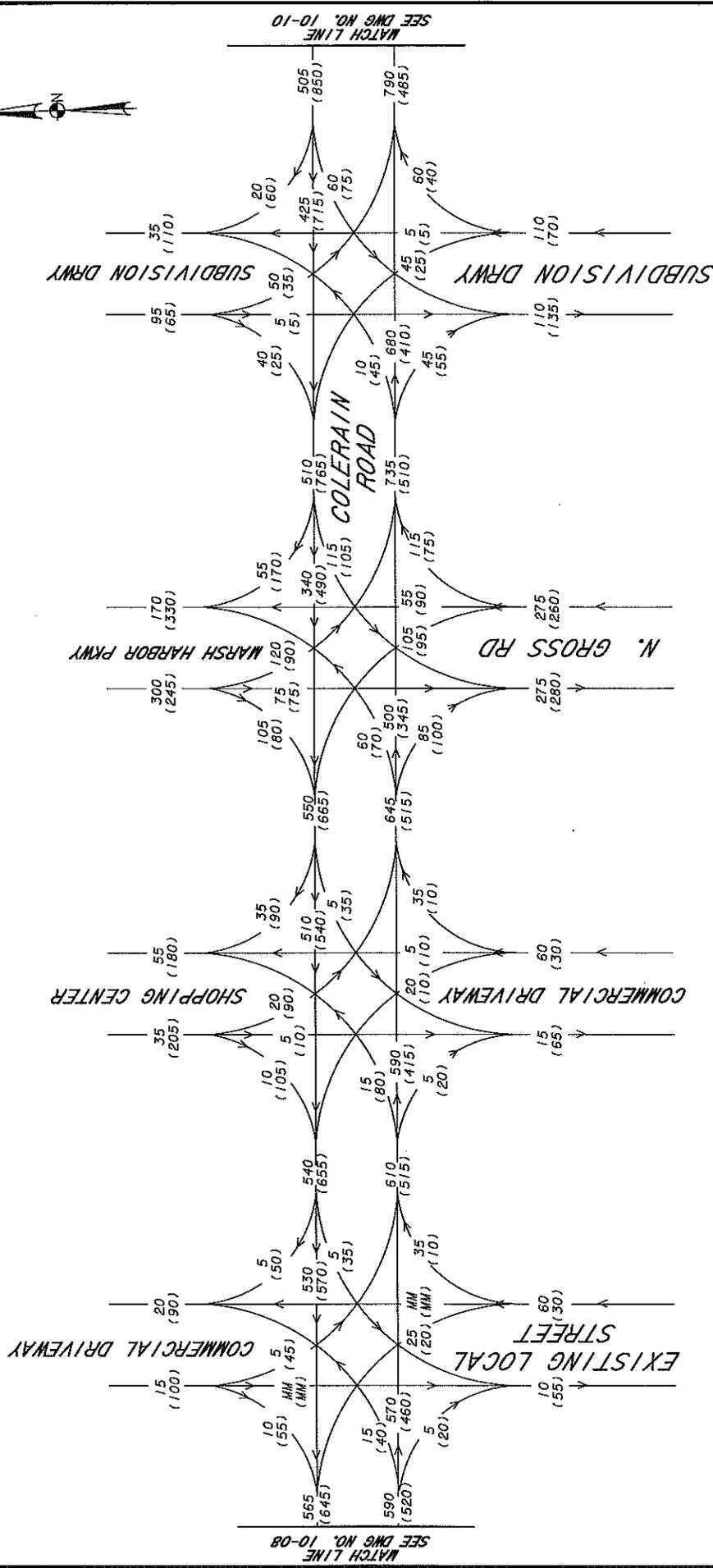
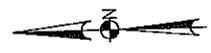
00 AM PEAK HOUR
 (00) PM PEAK HOUR
 MM MINOR MOVEMENT

COLERAIN ROAD TRUCK PERCENTAGE

T= 6.4%
 SU= 5.0%
 COMB= 1.4%

DATE		BY		CHECKED		DESIGNED		DRAWN		APPROVED	
M.A. Associates, Inc. 2871 Baggett Way, Road Raleigh, NC 27604											
PROJECT: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414) P. I. No. 0007414 CAMDEN COUNTY - YEAR 2017 BUILD DRW											
DRAWING NUMBER: 10-08											

NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS
1	1	1	1



LEGEND

COLERAIN ROAD TRUCK PERCENTAGE

T= 6.4%

SU= 5.0%

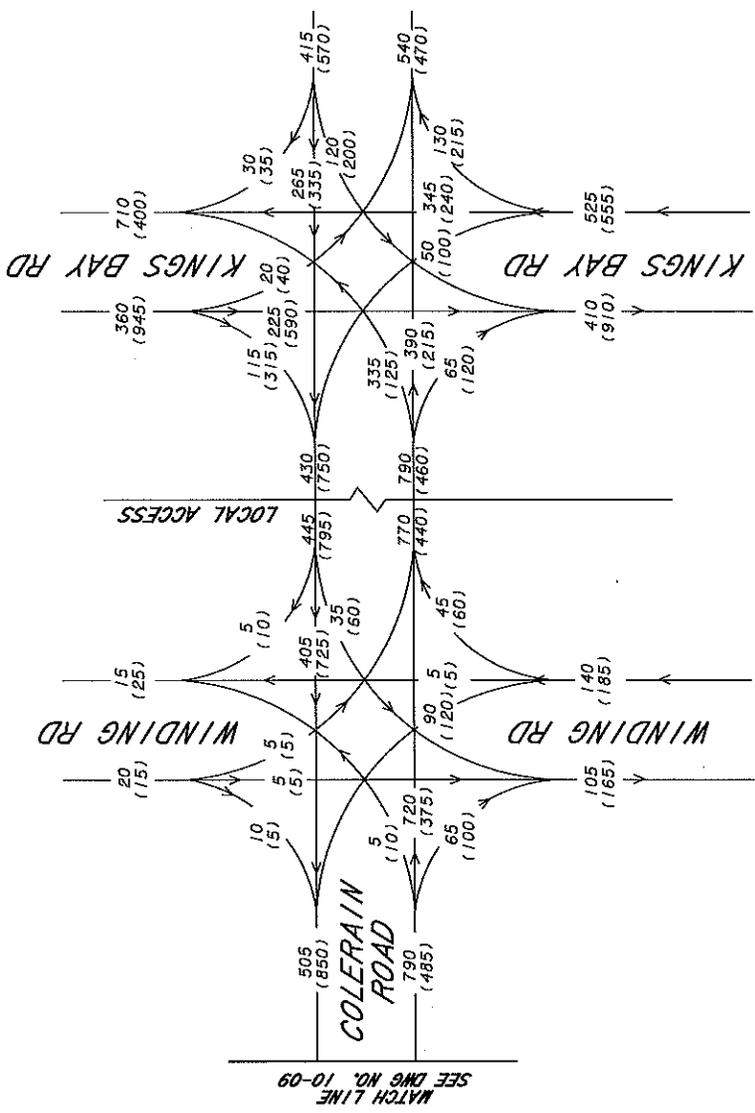
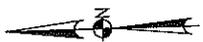
COMB= 1.4%

00 AM PEAK HOUR

(00) PM PEAK HOUR

DATE	NO.	DESCRIPTION	DATE	BY	REVISION
Michael A. Labelli Associates, Inc. 2511 State Road North Wales, PA 19381					
NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS
1	1	1	1	1	1
COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414) P. I. No. 0007414 CAMDEN COUNTY - YEAR 2017 BUILD DRY					
DRAWN BY: [] CHECKED BY: [] DATE: []					
SCALE: [] DATE: [] DRAWN BY: [] CHECKED BY: [] DATE: []					
PROJECT NO. [] SHEET NO. []					

NO. 10-09	DATE	BY	DESCRIPTION



MATCH LINE
SEE DWG NO. 10-09

NO. 10-09	DATE	BY	DESCRIPTION

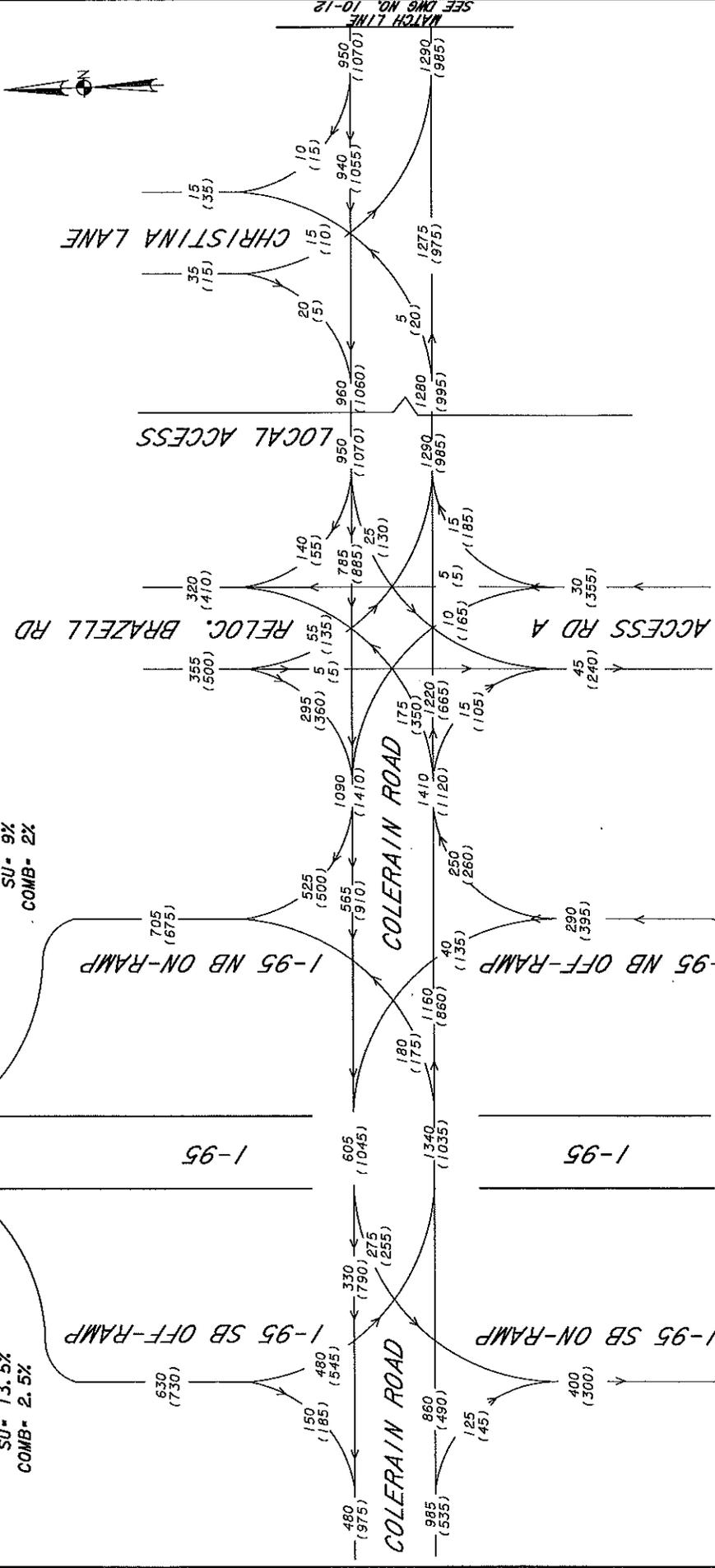
NO. 10-09	DATE	BY	DESCRIPTION

NO. 10-09	DATE	BY	DESCRIPTION

NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS

I-95 MAINLINE TRUCK PERCENTAGE
 T= 16%
 SU= 13.5%
 COMB= 2.5%

I-95 RAMP TRUCK PERCENTAGE
 T= 11%
 SU= 9%
 COMB= 2%



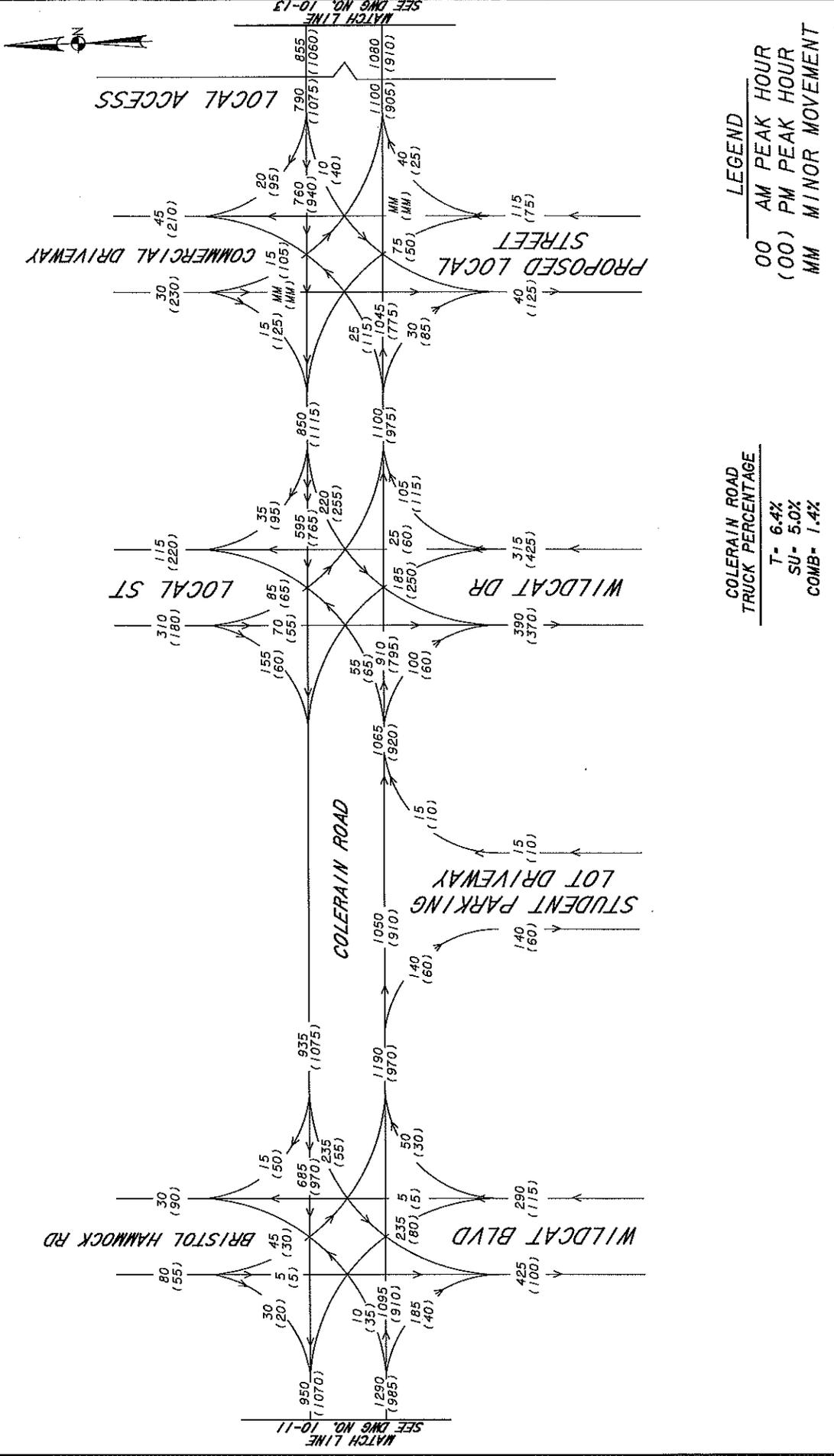
LEGEND
 00 AM PEAK
 (00) PM PEAK

COLERAIN ROAD TRUCK PERCENTAGE
 T= 6.4%
 SU= 5.0%
 COMB= 1.4%

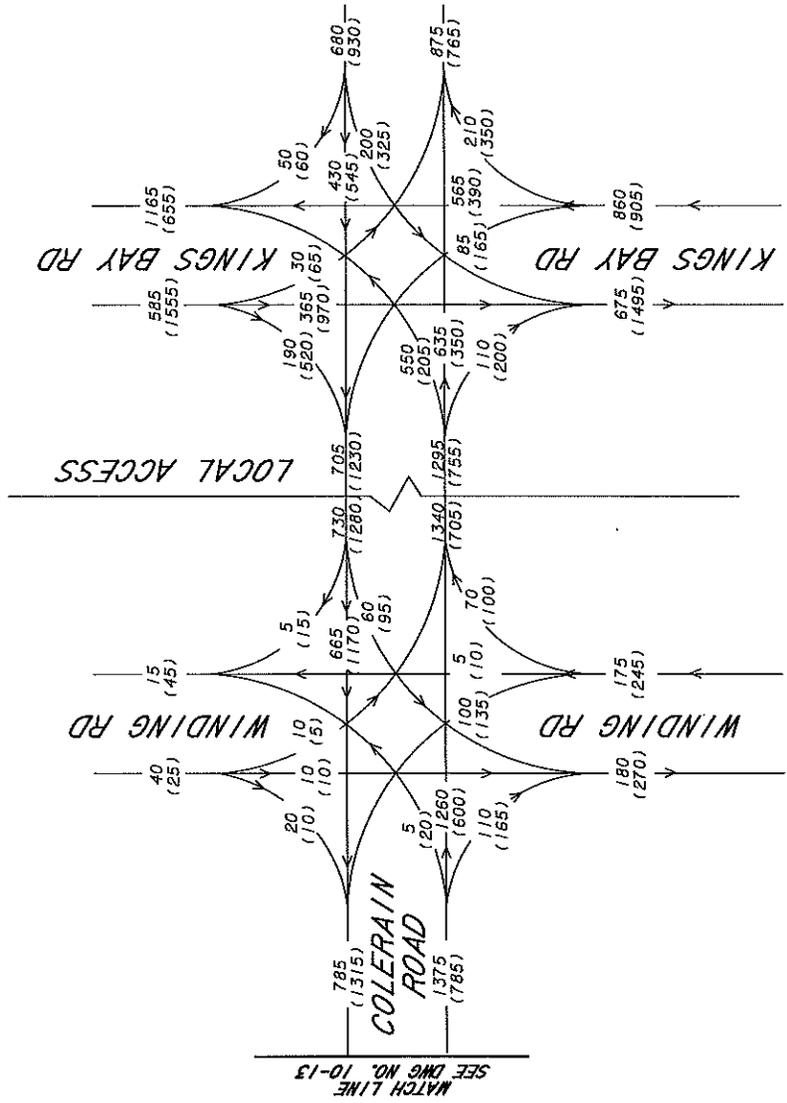
DATE	BY	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS	NO. OF TRUCKS

MICHAEL BAKER CORPORATION
 2811 WILSON BLVD
 FORT WORTH, TEXAS 76107-5800
 PROJECT NO. 0007414
 SHEET NO. 10-11

NO. 10-11	NO. 10-12	NO. 10-13
SEE DWG NO. 10-11	SEE DWG NO. 10-12	SEE DWG NO. 10-13



APPROVAL AND SIGNATURE	DATE	PROJECT NUMBER	PROJECT NAME	SCALE



LEGEND

00 AM PEAK
(00) PM PEAK

TRUCK PERCENTAGE

T- 6.4%
SU- 5.0%
COMB- 1.4%

MATCH LINE
SEE DWG NO. 10-13

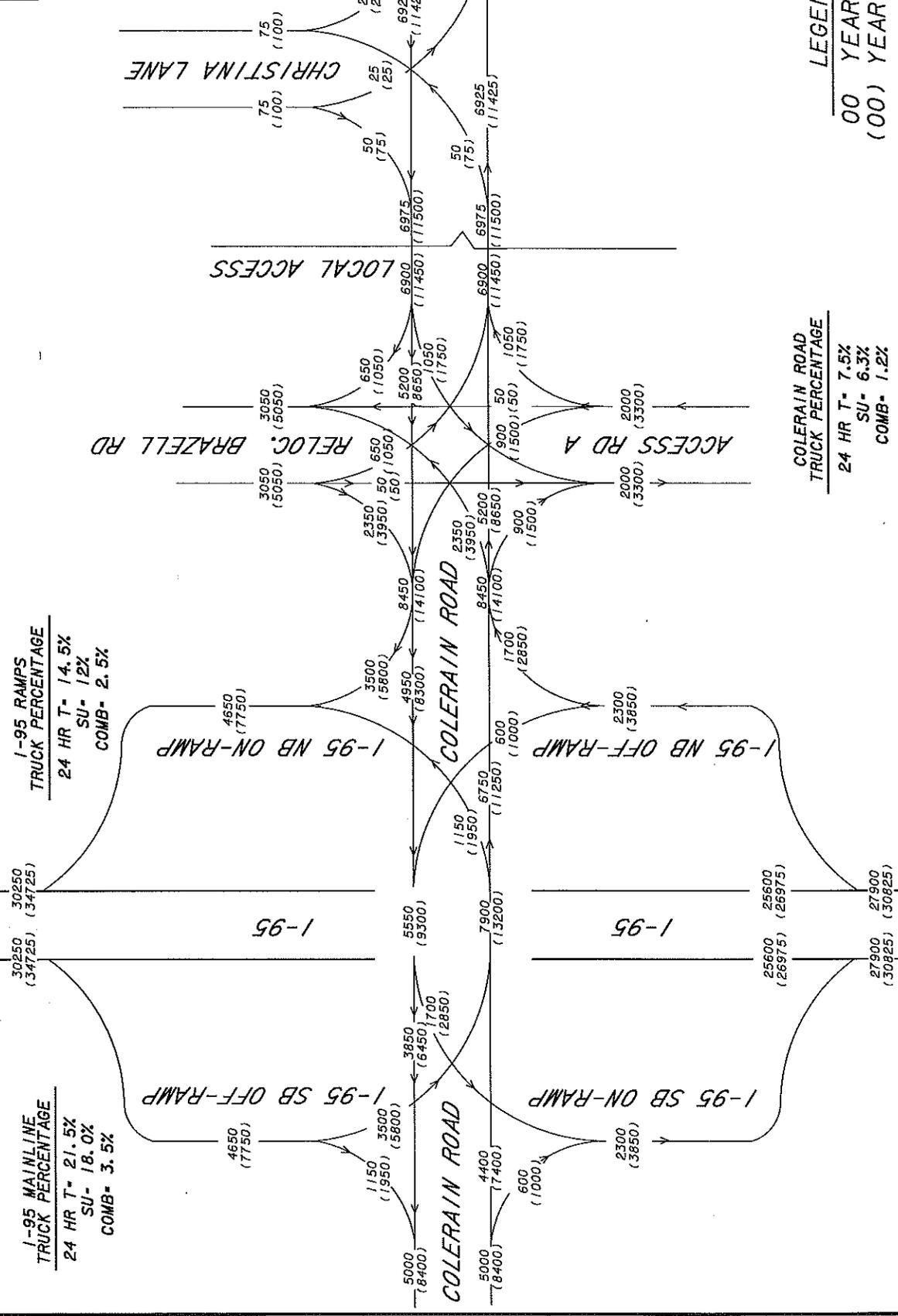
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Michael A. Ghehali
 Associates, Inc.
 2211 Berridge Rd.
 Columbus, OH 43260
 (614) 291-1100

MA
 PROJECT NO. 0007414
 PROJECT NAME: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
 P. I. No. 0007414 CAMDEN COUNTY - YEAR 2037 BUILD DRY

SHEET NUMBER: 10-14

CONTRACT NO.	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS



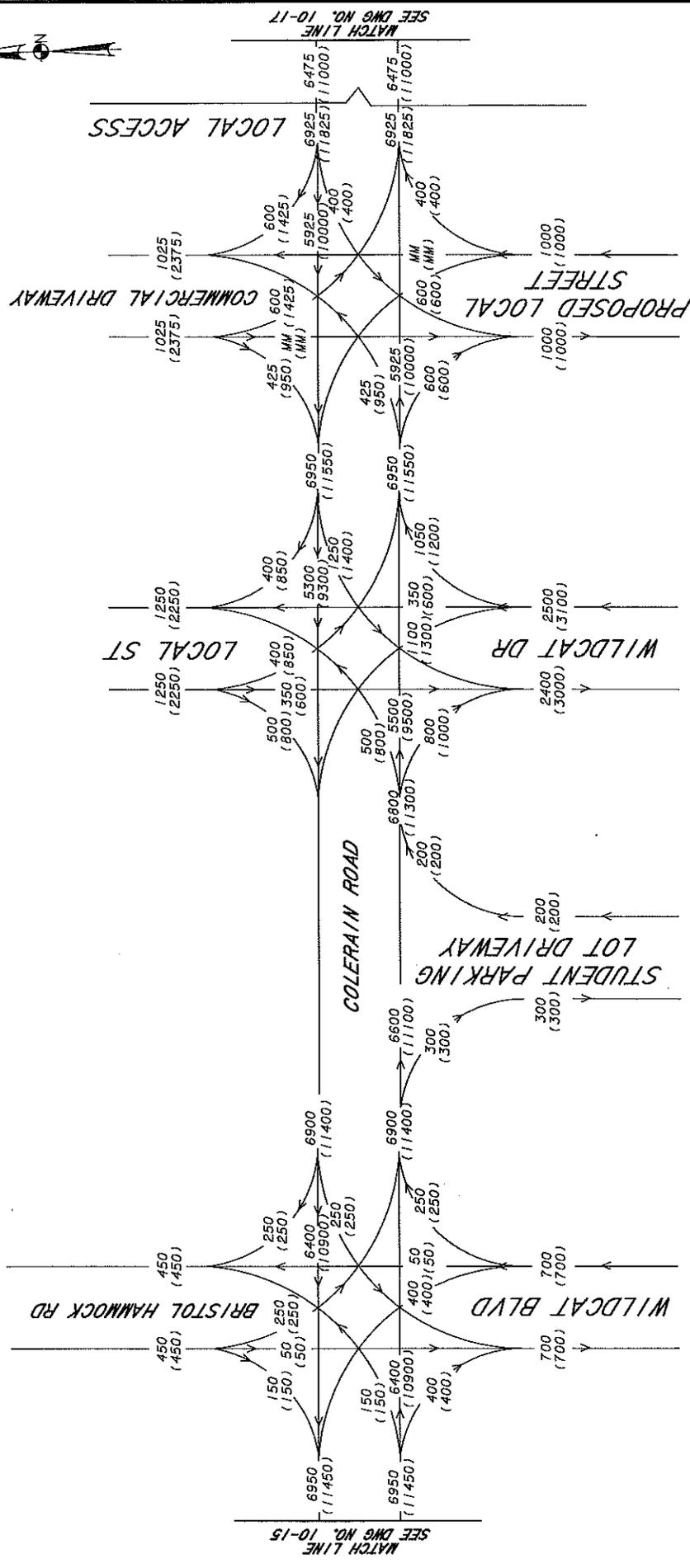
SEE DWG NO. 10-16

DATE	BY	DATE	BY	DATE	BY	DATE	BY

Maryland Association of
 Engineers, Inc.
 201 East Main Street
 Baltimore, MD 21202-3824
MA

Project: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
 P. I. No. 0007414 CAMDEN COUNTY - 2017/2037 AVERAGE DAILY TRAFFIC
 DATE: 10-15

DATE	DESCRIPTION	BY	REVISION



COLERAIN ROAD TRUCK PERCENTAGE
 24 HR T = 7.5%
 SU = 6.3%
 COMB = 1.2%

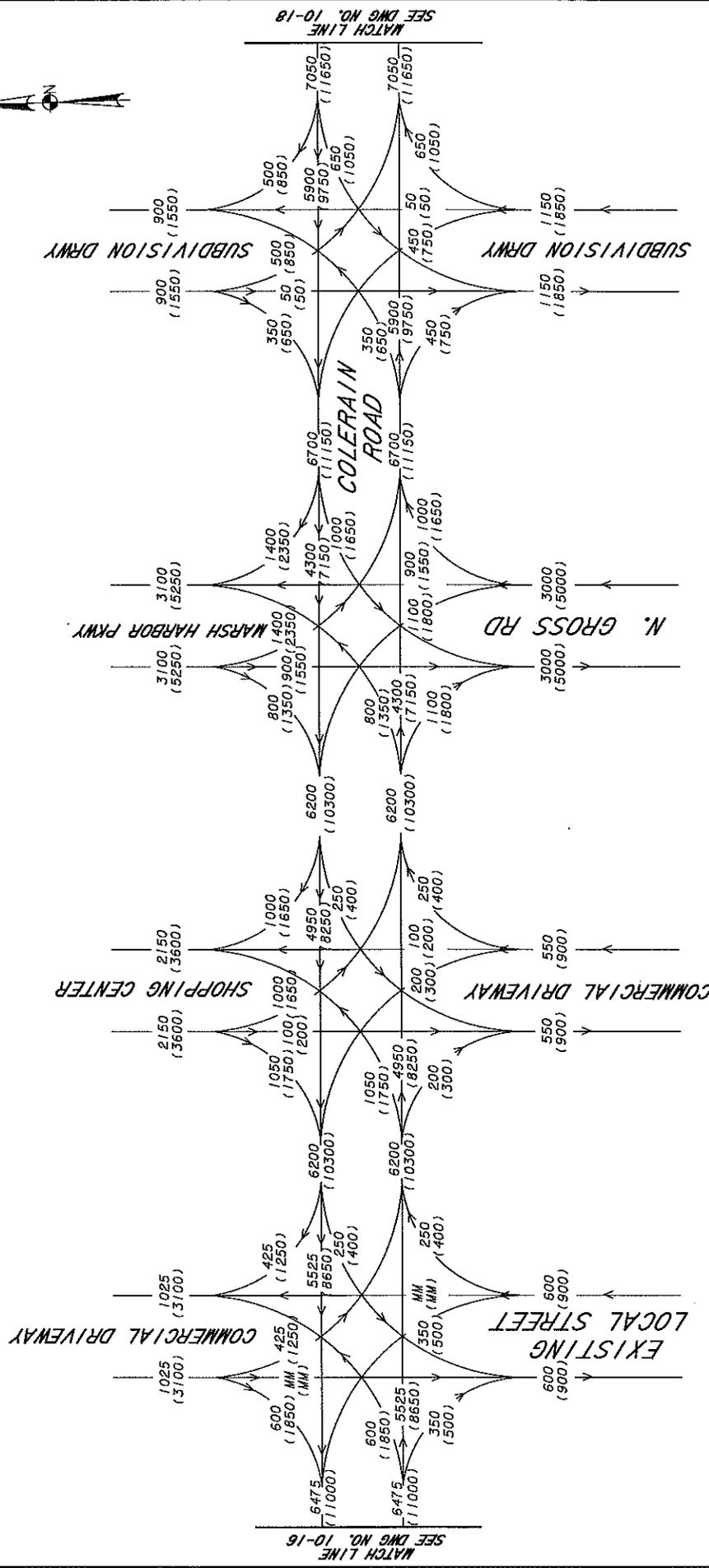
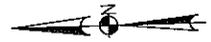
LEGEND
 OO 2017 ADT
 (OO) 2037 ADT
 MM MINOR MOVEMENT

DATE	DESCRIPTION	BY	REVISION

PROJECT NO.	007414
PROJECT NAME	COLERAIN ROAD WIDENING - PROJECT CSSTP-007-00 (414)
DATE	10-16

MA
 Marshall A. Mabello
 Associate, Inc.
 2871 Bell Blvd. 2nd Floor
 Bayside, NY 11364-2511
 Tel: 718-224-2511 Fax: 718-224-2512

DATE	BY	REVISION



COLERAIN ROAD TRUCK PERCENTAGE

24 HR T- 7.5%
 SU- 6.3%
 COMB- 1.2%

LEGEND

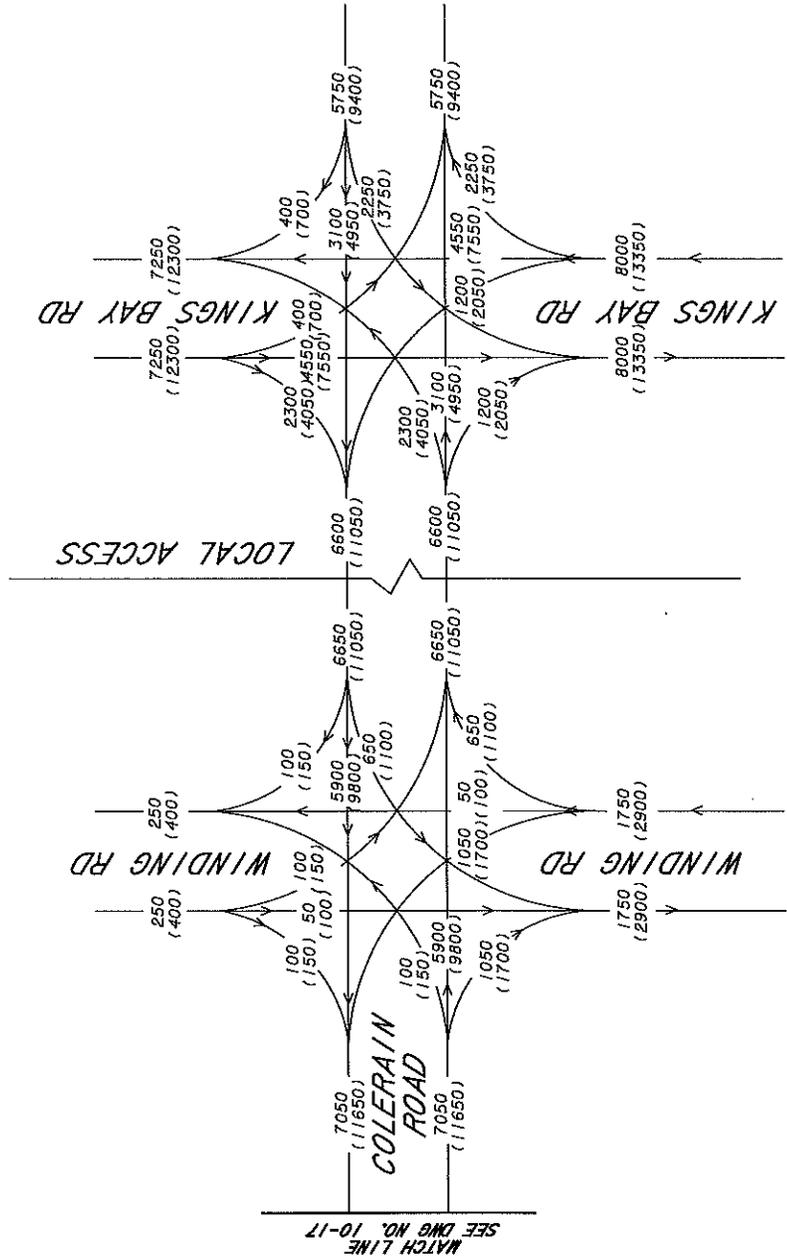
00 YEAR 2017
 (00) YEAR 2037

DATE	BY	REVISION	DATE	BY	REVISION

Maryland A. McNeill
 Associates, Inc.
 2811 Bechtel Way, Suite 200
 Baltimore, MD 21286-2506
 Tel: 410-528-1100

PROJECT: COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
 P. I. No. 0007414 CAMDEN COUNTY - 2017/2037 AVERAGE DAILY TRAFFIC
 DRAWING NO. 10-17

NO. 1	DATE	BY	REVISION



DATE	BY	REVISION	DATE	BY	REVISION

NO. 1	DATE	BY	REVISION

COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
 P. I. No. 0007414 CAMDEN COUNTY - 2017/2037 AVERAGE DAILY TRAFFIC

MA Michael A. Hebell
 Associates, Inc.
 2511 South 10th Road
 Fort Lauderdale, FL 33324

LEGEND

00 YEAR 2017
(00) YEAR 2037

COLERAIN ROAD TRUCK PERCENTAGE

24 HR T- 7.5%
SU- 6.3%
COMB- 1.2%

SEE DWG NO. 10-17
MATCH LINE

COLERAIN ROAD WIDENING - Project CSSTP-007-00 (414)
P. I. No. 0007414 CAMDEN COUNTY - 2017/2037 AVERAGE DAILY TRAFFIC

NO. 1	DATE	BY	REVISION

NO. 1	DATE	BY	REVISION

ATTACHMENT NO. 5

PIOH SUMMARY/ RESONSE LETTER



April 20, 2009

Mr. Charles Brazell
P.O. Box 2408
Kingsland, GA 31548

Dear Mr. Brazell:

Re: Project CSSTP-0007-00(414), Camden County – P.I. No. 0007414, Colerain Road Widening and Improvements

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the September 11, 2008 Public Information Open House (PIOH), and every comment will be made part of the official record of the project. On behalf of the Georgia Department of Transportation (Department), please accept our sincere apologies for the extreme delay in sending this response.

A total of forty-two (42) people attended the PIOH. Of the comments we received, twelve (12) were in support of the project, none (0) were opposed to the project, none (0) were uncommitted, and three (3) expressed conditional support for the project.

The attendees of the PIOH and those persons sending in comments afterwards raised the following questions and concerns. The Department in conjunction with Camden County has prepared one response letter that addresses all comments received so that everyone can be aware of the concerns raised and the responses given. Please find the comments summarized below (*in italics*) followed by our response.

1. Four respondents requested a multi-use path instead of a four-foot bike lane and five-foot sidewalk. Two respondents requested that this new multi-use path would continue along Colerain Road on the west side of Winding Road to the future Rails to Trails corridor. Five respondents requested that the path be extended to Kings Bay Road.

The proposed project would widen Colerain Road/Laurel Island Parkway from two lanes to a four lane divided roadway with a 20-foot raised median. The concept as shown at the PIOH calls 4-foot bike lanes adjacent to the travel way and 16-foot urban shoulders with curb and gutter and 5-foot sidewalks on Colerain Road in each direction from the I-95 interchange to approximately 3800 feet west of Winding Road. The remaining length of the project would have 10-foot rural shoulders (6'-6" paved and 3'-6" grass) to approximately 1,000 feet east of Kings Bay Road. The paved shoulder would accommodate a 4-foot bike lane in each direction.

The construction of a multi-use path on one side of the proposed Colerain Road in lieu of the proposed 4-foot bike lanes in each direction is an alternate that could be evaluated in the design phase of the project. The proposed Rails to Trails corridor beginning approximately at the south end of Bessie Lane runs southeast to and then along Lakes Boulevard to end at Winding Road. The proposed improvements

to Colerain Road would be coordinated with this and any other project in the area to achieve an integrated facility.

2. Two respondents requested that Bessie Lane remain private after the project is complete. Respondents are willing to negotiate required right of way at Colerain Road/Christina Lane intersection for property access on the southside of Colerain Road.

Please contact Mr. Brad Saxon, Pre-construction Engineer, Georgia the Department's District Five office in Jessup at 912.427.1976 regarding property access to and from the proposed Colerain Road. Existing driveways are reconstructed in accordance with the State of Georgia, Department of Transportation, Regulations for Driveway and Encroachment Control.

3. A respondent suggests that two(2) traffic signals at the Cisco Travel Plaza are unnecessary and instead requests that one (1) signal on each side of the bridge, at the on/off ramps, be considered.

Traffic signals would be installed at the intersection of Colerain Road and the I-95 ramps. The median opening spacing between the southbound and northbound ramps is 1550-feet. A proposed relocated Brazell Lane/Access Road intersection would be constructed and signalized at a median opening spacing of 1150 feet from the northbound ramps. A traffic signal warrants analysis would be completed for each of the proposed locations. All proposed traffic signals would be interconnected to maximize traffic flow. Existing Brazell Lane and the driveway opposite would be reconstructed to allow right in/right out turning movements only.

4. Respondent request that traffic signals be considered at the following locations: Colerain Road at Brazell Road, Colerain Road at Bristol Hammock Road, and Colerain Road between N. Gross Road and Winding Road. Respondent further requests that the proposed traffic signal not undermine traffic flow, but rather support the roadway's functional classification. Two other respondents were also concerned about traffic signals. One stated that seven (7) were unreasonable and that turn signals were not needed. The other respondent was particularly concerned about traffic signal actuation as it relates to motorcycles. One respondent felt that roundabouts should be used instead of turn signals.

Traffic signals are also proposed to be installed at the intersection of Colerain Road and Bristol Hammock Road/Wildcat Boulevard, Wildcat Drive, approximately midway between N Gross Road/Marsh Harbour Parkway and Winding Road and at Winding Road. The existing signal at Kings Bay Road would be modified for the proposed Colerain Road. A proposed signal is also proposed to be installed under the proposed Colerain Road/N Gross Road/Marsh Harbour intersection improvement project by others. A traffic signal warrants analysis would be completed for each of the proposed locations, and each intersection, if any, which meets the criteria of the signal warrant analysis will receive a new signal installation. All proposed traffic signals would be interconnected to maximize traffic flow. Traffic signal activation as it relates to motorcycles would be achieved by the installation of motorcycle bar loops in the pavement.

Traffic signals would be more efficient than roundabouts to move the higher volume of thru traffic on Colerain Road. Colerain Road is designated as a hurricane evacuation route and roundabouts would impede traffic flow in the event of an emergency. Large roundabouts typically require more right-of-way to construct at increased costs and environmental impacts.

5. Respondent requests noise/safety barriers be constructed along the fence line of Colerain Road extending the length of Laurel Landing properties. Suggests that the possible noise and safety impacts would decrease property value.

As part of the planning process, a noise impact assessment would be conducted using projected traffic data in accordance with state and federal guidelines. A computer analysis of the future traffic-generated noise along the subject project for the design year (2030) for both the Build and No-Build conditions would determine the potential for noise impacts, if any.

If it is determined that noise impacts exceed federal guidelines, noise abatement measures, such as walls or berms, would be evaluated for reasonableness and feasibility.

6. Respondent expresses support for extending the improvements to SR 40 Spur and including a multi-use path on both sides of the roadway.

At this time, the proposed improvements would transition and tie to the existing two lane roadway approximately 1100 feet east of Kings Bay Road. Improvements to Colerain Road from Kings Bay Road to the SR 40 Spur are included as part of the long-range Kingsland Bypass project.

7. Respondent requests that trees be preserved along Colerain Road at Winding Road. Suggests using guardrails or reducing the proposed median, in an effort to protect the trees from destruction.

The Department and its consultants make every attempt to design the project so as to minimize impacts to the community and natural environment. This would apply to the trees along Colerain Road at Winding Road. However, in addition to construction of the proposed roadway there may be overhead and /or underground utilities that may potentially impact the area. These concerns would be addressed in the preliminary design phase of the project.

Thank you again for your comments. Should you have any further questions concerning this project, please call the Department's Project Manager, Rebecca Thigpen at 912-427-5794 or Sheree Smart at 912-427-5756.

Sincerely,



Glenn Bowman, P.E.
State Environmental/Location Engineer

GB/SS/km

cc: Rebecca Thigpen, Project Manager

ATTACHMENT NO. 6

VE STUDY IMPLEMENTATION LETTER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: CSSTP-0007-00(414) Camden **OFFICE:** Engineering Services
P.I. No.: 0007414
Colerain Road Widening and Reconstruction **DATE:** September 29, 2009

FROM: Ronald E. Wishon, Project Review Engineer *REW*

TO: Glenn Durrence, District Engineer - Jesup

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held June 8-11, 2009. Responses were received on September 29, 2009. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

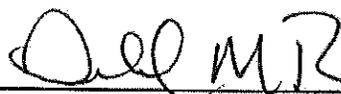
ALT #	Description	Potential Savings/LCC	Implement	Comments
DR-1	Eliminate the reverse crown	Design Suggestion	Yes	This will be done, with modifications. The proposed widening typical section uses a reverse crown to achieve minimum cover over the extended cross drain pipes. The proposed reverse crown section at the triple 30" cross drain at Sta. 218+75 will be retained. See Attachment "A". The proposed reverse crown section between Sta. 109+40 to Sta. 116+40 Lt. and Sta. 123+20 to Sta. 130+30 Lt. will be revised to a normal crown section.
DR-2	Modify or replace box culverts and utilize existing pavement from Sta. 265+00 to Sta. 295+00	\$115,371	Yes	This will be done. See Attachment "B" for details.
DR-3	Slope urban section shoulders away from roadway to reduce earthwork and drainage	\$130,310	Yes	This will be done.

BR-1	Use a two span bridge with MSE walls	Proposed = \$707,879 Actual = (-\$35,398) cost increase	No	Use of MSE walls limit the ability for future modifications that sloped embankments offer. Additionally, calculations performed by the design consultant indicate this recommendation would cause a cost increase of \$35,398. See Attachment "C" for calculations and Bridge Office concurrence.
BR-2	Reduce multi-use trail from 16 ½ ft to 12 ft	\$145,035	No	As proposed in the plans, the 10 ft multiuse path on the bridge meets the minimum clear width as indicated on page 55 of the AASHTO Guide for the Development of Bicycle Facilities. The 6'6" separation between the edge of shoulder and the shared use path eliminates the need for a physical barrier as noted on pages 35 and 36 of the above noted guide.
BR-3	Use twin bridges	\$555,968 (-\$297,260) cost increase	No	Calculations provided by the design consultant indicate that the use of twin bridges would cause a cost increase of \$274,965. Using a rural shoulder vs. urban shoulder would increase the cost by \$22,295. See Attachment "C" for calculations and Bridge Office concurrence.
RD-2	Utilize a 4 ft paved shoulder in the rural section	\$126,328	Yes	This will be done.
RD-3	Reconstruct ramps as a Tight Urban Diamond	\$1,094,467	No	The current design provides sufficient spacing (1606 ft) between the existing SB and NB ramps to allow for proposed and future left turn storage. The current ramp spacing also provides sufficient sight distances.

RD-12	Utilize the rural typical section from Sta. 186+21 to Sta. 251+00	\$785,367	No	There is substantial residential development planned for this portion of the project. The proposed sidewalks would serve the county high school. Using urban shoulders in this area also minimizes impacts to the existing tree canopy on the south side of Colerain Road by eliminating the roadside ditch.
RD-15	Add left turn lane eastbound at Wildcat Drive	Design Suggestion	Yes	This will be done.
RD-16	Reduce construction on Brazell Road	\$25,345	No	In order to comply with FHWA's limited access requirements, Brazell Road must be relocated to the proposed location.
RD-18	Make Jimmy Lane and Bessie Lane Right-in/Right-out	\$264,811	Yes	This will be done.
RD-19	Overlay existing ramps and widen to the inside	\$2,406,111	Yes	This will be done. See Attachment "D" for OMR concurrence.
RD-20	Reduce the sum of the ramp shoulders from 14 ft to 12 ft	\$249,137	No	Implementation of RD-19 will result in the overlay or short reconstruction of the existing ramp shoulders. The sum of the existing on-ramp shoulders is 14 ft (4 ft inside, 10 ft outside). The sum of the existing shoulders for the SB off-ramp is 14 ft and the sum of the existing shoulders for the NB off-ramp is 10 ft (4 ft inside, 6 ft outside).

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:


 Gerald M. Ross, PE, Chief Engineer

Date:

9/30/09

REW/LLM

Attachments

c: Genetha Rice Singleton
Paul Liles/Bill Duvall/Bill Ingalsbe/Stanley Kim
Brad Saxon/Dennis Odom/Rebecca Thigpen/Cassius Edwards/Billy Dampier
Sheree Smart
Will Murphy/Bryan Czech
Billy Smith
Nabil Raad
Lisa Myers
Matt Sanders



Thomas D. Moreland, PE
Chairman/CEO

Buddy Gratton, PE
President

Vickie E. Moreland
Executive Vice President/CFO

George M. Byrd, PE
Senior Vice President

J. Holly Moreland
Vice President

Richard C. Boullain, PE
Vice President

Henry E. Collins, Jr.
Vice President

Bradley M. Hale, PE
Vice President

Albert J. Joyner, Jr
Vice President

L.N. Manchi, P.E.
Vice President

Joe McGrew, PE
Vice President

January 23, 2012

CSSTP-0007-00(414)
Camden County
Widening Colerain Road from I-95 to Kings Bay Road
P.I. 0007414

Bobby Hilliard, P.E. State Program Delivery Engineer
Office of Program Delivery- 25th Floor
Georgia Department of Transportation
600 West Peachtree Street NW
Atlanta, Georgia 30308
Attn: Matt Bennett

Dear Mr. Hilliard:

Moreland Altobelli Associates, Inc. (MAAI) on behalf of Camden County requests a Value Engineering (VE) Study Implementation Revision for PI 0007414. The VE Implementation letter was issued by your office on September 29, 2009.

MAAI requests to revise the implementation of Alternative RD-2. This alternative recommended that the 10-foot rural outside shoulders utilize a 4-foot paved shoulder on proposed Colerain Road from Sta 251+00 (Winding Road) to Sta 324+50 (approximately 1496 feet east of Kings Bay Road). Per the March 12, 2009 approved concept report the proposed Colerain Road rural section consisted of two 12-foot travel lanes, a 4-foot bike lane and 10-foot shoulders (6-foot, 6-inch paved and 3-foot, 6-inch grass) in each direction separated by a raised median. Implementation of Alternative RD-2 reduced the paved shoulder width from 6-foot, 6-inch to 4-foot which resulted in an estimated savings of \$126,328 as outlined in the VE Study Report. Implementation of Alternative RD-2 also utilized the 4-foot paved shoulder as the proposed bike lane which resulted in an additional estimated savings of \$258,716 not shown in the VE Study Report. The total estimated saving for implementing Alternative RD-2 is \$385,044.

Review of the revised concept report determined that the proposed 10-foot rural outside shoulder consisting of 4-foot paved and 6-foot grass did not meet the requirements of a 6-foot, 6-inch paved shoulder for a 4-foot bike lane including a 16-inch rumble strip offset 12-inches from the travel way per GDOT Design Policy Manual, Section 9.5.2 Bicycle facility Design 1. On-street Bicycle Facility page 9-11 revised March 1, 2011.





MAAI requests reversing the VE recommendation RD-2 as recommended by the Office of Design Policy and Support to incorporate a proposed 10-foot rural outside shoulder consisting of 3-foot, 6-inch grass and 6-foot 6-inch paved to accommodate a 4-foot bike lane and 16-inch rumble strip offset 12-inches from the travel way in each direction.

The VE Reversal of recommendation RD-2 to reduce the paved shoulder width from 6-foot, 6-inch to 4-foot would negate the estimated \$126,328 savings outlined in the VE Study Report. However the additional estimated \$258,716 savings not outlined in the VE Study Report would result by including the 4-foot bike lane as apart of rather than in addition to the 6-foot, 6-inch paved shoulder as shown in the approved concept report.

If you have any questions about this request or need additional information, please contact Project Manager, Maurice J. Sheehan or myself at 770-263-5945.

Sincerely,

Ralph C. Ramsdell
Project Engineer

Attachments: Office of Design Policy and Support VE Reversal Request, VE Implementation Letter, VE Study Report with modifications

Cc: Scott Brazell, Camden County
M.J. Sheehan
File 10104



Ralph Ramsdell

From: Bennett, Matt [mabennett@dot.ga.gov]
Sent: Friday, January 06, 2012 3:05 PM
To: 'rramsdell@maai.net'; Story, Brent
Cc: 'sbrazell@co.camden.ga.us'; Myers, Lisa; 'mjsheehan@maai.net'
Subject: Fw: 0007414 Camden Co.

Ralph,

It appears that we will have to change the typical to show the 6.5' paved shoulder thru this section. Once we have done so, the RCR will be approved.

I assume we will have to make the changes and submit the modification to get it approved.....Brent is this correct?

Also, I think this is going to require at least a partial VE study implementation reversal.

MATT BENNETT, GDOT PM

From: Story, Brent
Sent: Friday, January 06, 2012 02:06 PM
To: Bennett, Matt; Dana.Robbins@dot.gov <Dana.Robbins@dot.gov>
Cc: Posey, Keith; Myers, Lisa; Carlos.Figueroa@dot.gov <Carlos.Figueroa@dot.gov>; Simpson, Jim; Ehrman, Bradley R.; Peters, Dave
Subject: RE: 0007414 Camden Co.

Matt,

It appears there has been some misinterpretation of policy 6.5.1. Rumble Strips, relevant to bicycle accommodations. When a "bike lane" (painted stripe and symbol) is planned for a multi-lane roadway such as this, the 6.5-ft paved shoulder with rumble strip should be provided. If this was not on a planned bike route, then the 4-ft paved shoulder without rumble strip would be an appropriate option. It's my understanding that this particular project is on the local governments bicycle plan network and has therefore been designated as a bicycle route with "On-Street Bicycle Facility", painted stripe and symbols. (see GDOT DPM 9.5.2 and Figure 9.4). It is also my understanding that the overall graded shoulder width of 10-ft will not change. We did our own calculations and we estimate the cost difference between 4-ft paved and 6.5-ft paved to be \$65,000 for this one mile section. Therefore, we recommend the 6.5-ft paved shoulder with rumble strip. The striped bike lane should terminate at an intersection with cross walk to the multi-use path. Keith Posey will hold the CR until this is settled. Let me know if you want to talk further.

Thanks,

Brent A. Story, P.E.
State Design Policy Engineer
Georgia Department of Transportation
 ☎ (404) 631-1600

From: Bennett, Matt
Sent: Wednesday, January 04, 2012 9:44 AM
To: Dana.Robbins@dot.gov
Cc: Story, Brent; sbrazell@co.camden.ga.us; Posey, Keith; Myers, Lisa; rramsdel@maai.net; Moyer,

1/24/2012

David; Carlos.Figueroa@dot.gov
Subject: RE: 0007414 Camden Co.

Dana,

Page 5 of the Revised Concept Report (RCR), in the second full paragraph, it states that "Colerain Rd. from I-95 to Kings Bay Rd. was analyzed as a Class I highway with 6.4% trucks and a 45 mph design speed. I have checked the plans as well, to make sure this was accurate and both are consistent with the 45 mph design speed. That's is why we can go without rumble strips and a 4' paved shoulder for the shared bike path.

Ralph, or anyone else, please verify that I am correct as well. Also, let us know if any of you know anything further or in addition to this explanation.

Dana – If we do not hear back from anyone, is this sufficient for you? If there's anything else we need to do to get the RCR approved, please let me know.

Thanks,

Matt Bennett, GDOT PM
912-271-7404 Cell
912-427-5737 Office

From: Dana.Robbins@dot.gov [mailto:Dana.Robbins@dot.gov]
Sent: Tuesday, January 03, 2012 5:04 PM
To: Bennett, Matt
Cc: Story, Brent; sbrazell@co.camden.ga.us; Posey, Keith; Myers, Lisa; rramsdell@maai.net; Moyer, David; Carlos.Figueroa@dot.gov
Subject: RE: 0007414 Camden Co.

All,

My comment pertained to the highlighted section of the revised concept page (attached). This highlighted section states *"The rural shoulder section from Winding Road to 1496 feet east of Kings Bay Road would remain, but implementation of the Value Engineering Study alternatives changed the typical section from 4-foot bike lanes and 10-foot shoulders (6'-6" paved and 3'-6" grass) to 10-foot shoulders consisting of a 4-foot paved shoulder to be used as a bike lane and 6-foot grass strip in each direction."*

I agree mostly with this VE alternative because it reduces the footprint of the project by 4' on each side by changing from a 4' bike lane and 10' shoulder to a 10' shoulder that includes a bike lane. That should be a fairly significant cost savings. My question was why GDOT would only pave a 4' of the shoulder instead of 6.5', given that the road is on the Camden County bike route system and given that GDOT's Design Policy Manual states "A paved 6.5-ft shoulder should be provided on all multi-lane divided roadways with rural shoulders to provide for bicycle accommodation."

Is the use of 4' paved instead of 6.5' paved because there will be no rumble strips on this section? GDOT's Design Policy Manual states that rumble strips should be used on multi-lane rural sections with a design speed of >50 mph, but I'm not sure what the design speed would be on this section.

1/24/2012

Feel free to call me to discuss this.

Thanks,
Dana

Dana Robbins
Technology Applications Team Leader
FHWA – Georgia Division
404-562-3642

From: Myers, Lisa [mailto:lm Myers@dot.ga.gov]
Sent: Tuesday, January 03, 2012 1:29 PM
To: Bennett, Matt; 'Ralph Ramsdell'; Moyer, David
Cc: Story, Brent; Robbins, Dana (FHWA); Scott Brazell; Posey, Keith
Subject: RE: 0007414 Camden Co.

The attached letter was submitted as the cover letter with the plan package for the VE Study back in May, 2009. It indicates that four foot bike lanes would be adjacent to the outside travel lanes throughout the project. After the PIOH, changes were made to incorporate a multi use path, but the rural shoulders and 4 foot bike lanes remained through a portion of the project.

If you need to reverse VE recommendation RD-2, please submit a reversal letter.

Lisa Myers, AVS ☺
Assistant State Project Review Engineer - VE Coordinator

*GA DOT - Engineering Services
One Georgia Center - 5th Floor
600 W. Peachtree Street NW
Atlanta, GA 30308*

*Voice: 404-631-1770
Fax: 404-631-1956
lm Myers@dot.ga.gov*

From: Bennett, Matt
Sent: Tuesday, January 03, 2012 1:17 PM
To: 'Ralph Ramsdell'; Moyer, David
Cc: Story, Brent; drobbins@dot.gov; Myers, Lisa; Scott Brazell; Posey, Keith
Subject: FW: 0007414 Camden Co.

Ralph & David,

Hey guys.....obviously this was before me, please help with any info you may be able to provide.

Dana, Brent and I need some help figuring this out.....It appears that the CR revision was primarily for the VE study changes and one of the VE Study implementation items was to change the rural shoulder from Winding Rd. to 1496 feet east of Kings Bay Rd. The rural shoulder was to remain rural, however, the 10' shoulder was proposed to change from 6' 6" paved and 3' 6" graded to 4' paved and 6' graded. The 4' paved was intended to

be used as a bike lane, however, it's now being questioned. It is GDOT policy that if we use a shoulder/shared bike lane, the shoulder must be 6.5' to give you the 4' clear area because of the rumble strips.

I am going to venture to say that everything is ok, we just need to change the typical and not use this one VE Study implementation item. The roadway through this section will remain rural (as agreed upon in the Oct 6th meeting with FHWA Jennifer Giersch for DEA doc) and we will just need to change the paved shoulder width back to 6.5' to stay within policy.

Again, I'm guessing so please provide us with any info you can to help us sort this out and determine what needs to happen to move on with the approval of the Concept Report Revision.

Brent/Dana – Please let me know if I've misunderstood the issue or what is in question.

Thanks,

Matt Bennett, GDOT PM
912-271-7404 Cell
912-427-5737 Office

From: Story, Brent
Sent: Tuesday, December 27, 2011 11:26 AM
To: Moyer, David; Bennett, Matt
Cc: Hilliard, Bobby; Hill, Stanley; Haithcock, Michael; Peters, Dave; Simpson, Jim; McMurry, Russell; Ross, Gerald; Myers, Lisa
Subject: 0007414 Camden Co.

Reference: Revised Concept Report

Matt,

This project was changed to FOS in December 2010. FHWA called me last Thursday concerning a VE recommendation to change the proposed paved shoulder width from 6.5-ft to 4-ft. This involves the approx 1 mile section of paved/graded shoulder between Winding Road and the end of the project at Kings Bay Road.

The VE savings is estimated to be \$126,328. FHWA's concern is that the VE recommendation is contrary to GDOT design standards for Bicycle Accommodations. Planning's comment states that the local government has this route identified on their Bicycle Plan. I also see that a 10-ft multi-use path is proposed through the urban section of the project that will accommodate bikes. With 28,200 ADT and 7% trucks, it appears to me that the 6.5-ft paved shoulder with rumble strip and designated 4-ft bike lane would be appropriate for the 1 mile section of project in question. If it can be demonstrated that bike traffic will drop at Winding Road, then the argument for the 4-ft paved shoulder could be justified. Take a look at this and get back with me. We need to call Dana Robbins with FHWA back next week on this.

Thanks,

Brent A. Story, P.E.
State Design Policy Engineer
Georgia Department of Transportation
☎ (404) 631-1600

1/24/2012

Value Analysis Design Alternative



PROJECT: Georgia Department of Transportation
 CSSTP-0007-00(414) – P.I. No. 0007414
 CR90/Colerain Road from I-95 to Kings Bay Road
 Camden County

ALTERNATIVE NO.:
RD-2

DESCRIPTION: Utilize a 4' paved shoulder in the rural section

SHEET NO.: 1 of 4

Original Design: 3/12/09 APPROVED CONCEPT REPORT: 4' BIKE LANES ADJACENT TO ETL AND 6 1/2' PAVED SHLDRS
 10/10/08 DRAFT REV CONCEPT REPORT: 6 1/2' PAVED SHLDRS INCL 4' BIKE LANE

Alternative:

The alternative design would provide a 4'-0" paved shoulder from Station 251+00 to Station 324+50

Opportunities:

- Reduces paving costs

Risks:

- Less paved area for bike and pedestrian traffic

Technical Discussion:

AASHTO Policy on Geometric Design of Highways and Streets would allow the use of a 4' shoulder. This would be the minimum to accommodate bike traffic as outlined On Page 16 of AASHTO's guide for development of bicycle facilities. Since the subject road is a "low speed" facility and classified as a Minor Rural Arterial the use of rumble strips on the shoulders would not be required.

SEE SHEET 4 OF 4 FOR REVISED SAVINGS

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	\$ 328,504	\$ 0	\$ 328,504
ALTERNATIVE	\$ 202,176	\$ 0	\$ 202,176
SAVINGS	\$ 126,328	\$ 0	\$ 126,328

Calculations



PROJECT: Georgia Department of Transportation
 CSSTP-0007-00(414) – P.I. No. 0007414
 CR90/Colerain Road from I-95 to Kings Bay Road
 Camden County

ALTERNATIVE NO.:
 RD-2

DESCRIPTION: Utilize a 4' paved shoulder in the rural section

SHEET NO.: 3 of 4

Station 251+00 to Station 324+50 = 7,350 LF

Length of the roadway = 7,350 LF,

Original 6.5' shoulders INCLUDES 4' BIKE LANES 10/10/08 DRAFT REV CONCEPT REPORT

Total Area of Paved Shoulder = (7,350 LF x 13.0') / (9 SF / SY) = 10,616.7 SY => 10,617 SY

Superpave 12.5mm = [10,617 SY * 165#/SY-IN (2000#/Ton)] => 876 TN

Superpave 19.0mm = [10,617 SY * 220#/SY-IN (2000#/Ton)] => 1,168 TN

8" GAB = 10,617 SY

Alternative 4.0' shoulders VE RECOMMENDATION 4' SHLDR = 4' BIKE LANE

Total Area of Paved Shoulder = (7,350 LF x 8.0') / (9 SF / SY) = 6533.3 SY => 6534 SY

Superpave 12.5mm = [6534 SY * 165#/SY-IN (2000#/Ton)] => 539 TN

Superpave 19.0mm = [6534 SY * 220#/SY-IN (2000#/Ton)] => 719 TN

8" GAB = 6534 SY

3/12/09 APPROVED CONCEPT REPORT 4' BIKE LANES ADJACENT TO ETL
 AND 6 1/2' PAVED SHLDRS

TOTAL AREAS: BIKE LANES $7350 \times 4 \times 2 / 9 = 6534 \text{ SY}$

PAVED SHLDR $7350 \times 6 \frac{1}{2} \times 2 / 9 = 10617 \text{ SY}$

TOTAL 17151 SY

SUPERPAVE 12.5mm	$17151 \text{ SY} \times 165 \text{ lb/sy} \div 2000 \text{ lb/TN}$	=	1415 TN
SUPERPAVE 19mm	$17151 \times 220 \div 2000$	=	1887 TN
SUPERPAVE 25mm	$6534 \times 440 \div 2000$	=	1437 TN
GAB 10"	$(7350 \times 4 \times 2) \times 10 \text{''} / 12 \text{''} \times 150 \text{ lb/cf} \div 2000 \text{ lb/TN}$	=	3675 TN
GAB 8" USED FOR COMPARISON		=	10617 SY

ATTACHMENT NO. 7

GDOT DESIGN POLICY MANUAL VERSION 2.0
DESIGN CRITERIA FOR ARTIERIAL ROADWAYS

Table 6.6. Design Criteria for Arterial Roadways

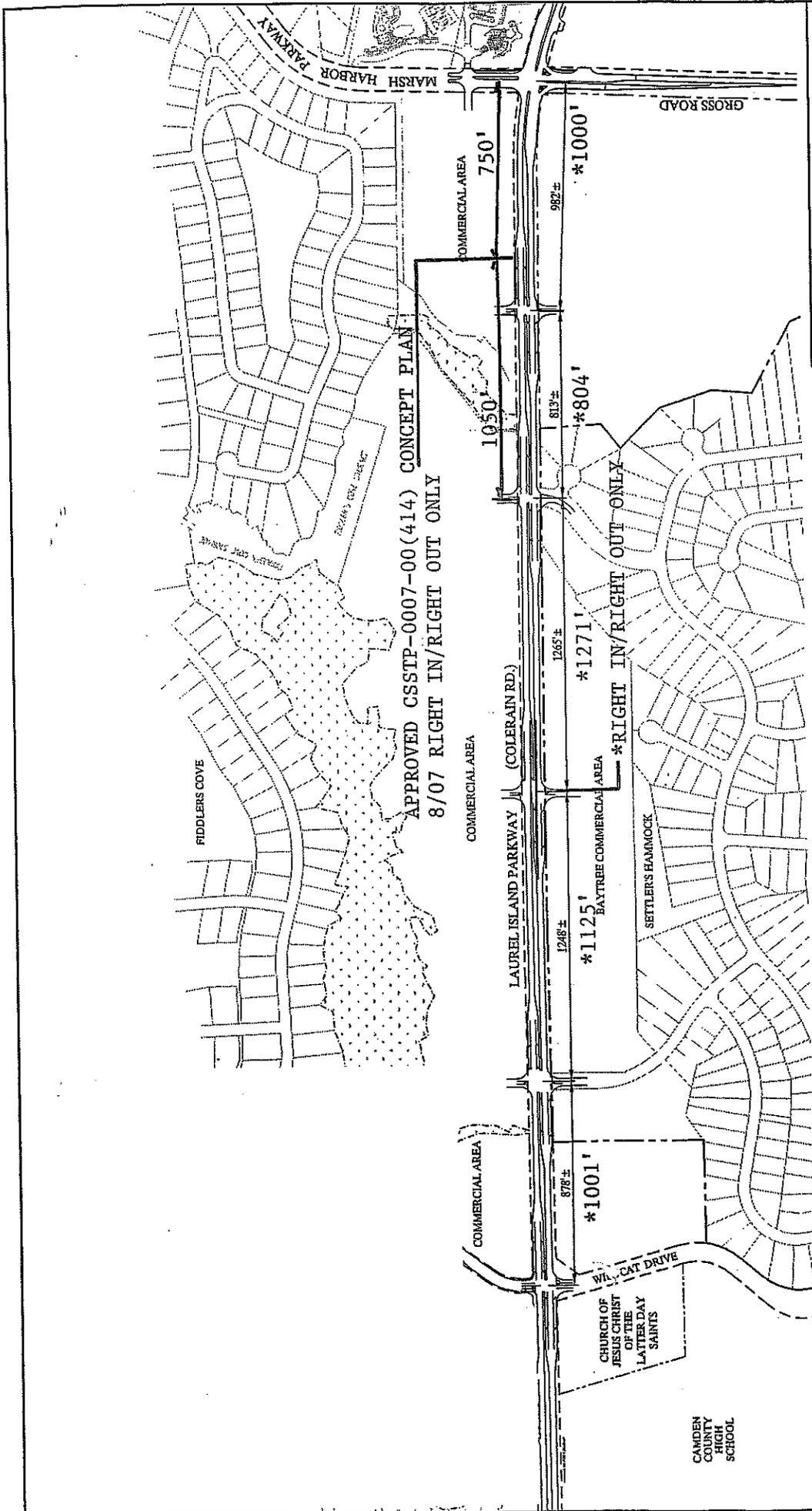
Cross Section Element	Rural (open ditch sections) (ADT > 2000) ⁽¹⁾				Urban (curbed sections) (ADT > 2000) ⁽¹⁾	
	2-Lane 45 mph	2-Lane 55 mph	4-Lane 55 mph	4-Lane 65 mph	4-Lane 45 mph	4-Lane 55 mph
Appropriate Level of Service (LOS)	B	B	B	B	C or D ⁽²⁾	C or D ⁽²⁾
Traveled – Way						
Lane width (min-desirable) ⁽³⁾	11-12-ft	11-12-ft	11-12-ft	11-12-ft	11-12-ft	11-12-ft
Cross Slope (normal)	2%	2%	2%	2%	2%	2%
Superelevation (max)	6%	6%	6%	6%	4%	4%
Shoulders (outside)						
Overall width	8-ft	10-ft	10-ft	10-ft	n/a	n/a
Paved width	4-ft /6.5-ft ⁽⁴⁾	4-ft /6.5-ft ⁽⁴⁾	6.5-ft	6.5-ft	n/a	n/a
Cross Slope (normal)	6%	6%	6%	6%	n/a	n/a
Shoulders (median)						
Overall width (cross slope)	n/a	n/a	6-ft (4%)	6-ft (4%)	n/a	n/a
Paved width (cross slope with mainline)	n/a	n/a	2-ft (2%)	2-ft (2%)	n/a	2-ft
Border Area (urban shoulder) (width)	n/a	n/a	n/a	n/a	10 -16-ft	10 -16-ft
Cross Slope (max)	n/a	n/a	n/a	n/a	2%	2%
Width of Median						
Depressed	n/a	n/a	32 - 44-ft	44-ft	n/a	n/a
Raised	n/a	n/a	24-ft	n/a	20-ft	24-ft
Flush	n/a	n/a	n/a	n/a	14-ft	n/a
Sidewalk (SW)						
Width of Sidewalk	n/a	n/a	n/a	n/a	5-ft	5-ft
Desirable buffer from back of curb to SW	n/a	n/a	n/a	n/a	6-ft	6-ft
Cross Slope (max)	n/a	n/a	n/a	n/a	2%	2%
Width of Bike Lanes	4-ft ⁽⁴⁾	4-ft ⁽⁴⁾	4-ft ⁽⁴⁾	4-ft ⁽⁴⁾	4-ft ⁽⁵⁾	4-ft ⁽⁵⁾
Foreslope (max/normal)⁽⁶⁾	2:1/4:1	2:1/4:1	2:1/4:1	2:1/6:1	2:1/4:1	2:1/4:1
Width of foreslope in cut	12-ft	12-ft	12-ft	18-ft	n/a	n/a
Ditch Bottom (width)	2-ft	4-ft	4-ft	4-ft	n/a	n/a
Backslope (max/normal)⁽⁶⁾	2:1/4:1	2:1/4:1	2:1/4:1	2:1/6:1	2:1/4:1	2:1/4:1
Vertical Clearance (min-desirable)⁽⁷⁾(ft)	16.5-16.75	16.5-16.75	16.5-16.75	16.5-16.75	16.5-16.75	16.5-16.75
Lateral Offset to Obstruction⁽⁸⁾	Ch. 5	Ch. 5	Ch. 5	Ch. 5	Ch. 5	Ch. 5
Clear Zone⁽⁹⁾	24-ft	26-ft	26-ft	32-ft	AASHTO	AASHTO

Notes:

- (1) Values shown are for roadways with ADT > 2000. Refer to the current AASHTO Green Book for design criteria on roadways with ADT < 2000, and the AASHTO "Guidelines for Geometric Design of Very Low-Volume Local Roads" for design criteria on roadways with ADT ≤ 400.
- (2) LOS D is appropriate in heavily developed urban and suburban areas.
- (3) See AASHTO Green Book, Chapter 7, Rural and Urban Arterials, for conditions to construct or retain 11-ft lanes.
- (4) Bike Lane is incorporated into the overall width of a 6.5-ft paved shoulder to include a 16-inch rumble strip and total 12-inch buffer area (refer to Ga. Construction Detail S-8). See **Section 9.4.2 Bicycle Warrants**.
- (5) Bike Lane measured from the outside edge of traveled-way outward. Does not include curb & gutter or header curb.
- (6) The use of a slope inside the "Clear Zone" that is steeper than 4:1 will require the installation of a roadside barrier (i.e. guardrail, barrier wall, crash attenuator, etc...) (See Ga.Std.Details, 4000 series).
- (7) For additional guidelines, refer to Chapter 2.3.2 of the GDOT Bridge and Structures Policy Manual.
- (8) For rural roadways, lateral offset is measured from the edge of traveled way outward. For urban roadways with curbed sections, lateral offset is measured from the face of curb outward. See Chapter 5 of this Manual for GDOT standard criteria for lateral offset to signs, light poles, utility installations, signal poles and hardware, and trees and shrubs.
- (9) AASHTO defines Clear Zone as the unobstructed, relatively flat area beyond the edge of traveled way for the recovery of errant vehicles. Clear zone recommendations are a function of design speed, traffic volumes, and embankment slope. For Clear Zone recommendations, refer to the current edition of the AASHTO Roadside Design Guide, Ch 3.

ATTACHMENT NO. 8

LAUREL ISLAND PKWY (COLERAIN ROAD) ACCESS PLAN

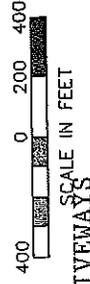


P&A ENGINEERING, INC.
 Civil Engineering - Site Planning
 308 ARROW COURT
 ST. MARYS, GEORGIA 31568
 PH (912) 673-8575 FAX (912) 673-1575

LAUREL ISLAND PARKWAY

DATE: 5/5/09 SCALE: 1"=400'
 DRAWN BY: JPM EXHIBIT: 1

ACCESS PLAN



* PROJECT CSSTP-0007-00 (414) ACTUAL DIMENSIONS PER CONSTRUCTION PLANS BY MORELAND ALTOBELLI ASSOCIATES INCORPORATE THE REQUESTED MEDIAN OPENINGS BUT WILL NOT CONSTRUCT DRIVEWAYS THAT ARE NOT ALREADY THERE.

- LAUREL ISLAND PARKWAY**
 POSTED SPEED = 45 MPH
 DESIGN SPEED = 50 MPH (URBAN)
- GDOT ACCESS CRITERIA:**
 SIGNALIZED INTERSECTION: 1,320 FEET DESIRED, 1,000 FEET MINIMUM
 MEDIAN OPENING: 1,320 FEET DESIRED, 660 FEET MINIMUM
 DRIVEWAY SPACING: 150 FEET
 RIGHT TURN LANE: 225 FEET STORAGE, 100 FOOT TAPER
 LEFT TURN LANE: 285 FEET STORAGE, 100 FOOT TAPER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0007-00(414), Camden County OFFICE Program Delivery
P.I. No. 0007414
CR 90/Colerain Rd. from I-95 to Kings Bay Rd. DATE January 25, 2012

FROM  Bobby K. Hilliard, PE, State Program Delivery Engineer

TO Lisa Myers, Acting Project Review Engineer
ATTN: Matt Sanders, Value Engineer Specialist

SUBJECT 0007414 - VE Reversal Request

Dear Mr. Hilliard:

Moreland Altobelli Associates, Inc. (MAAI) on behalf of Camden County requests a Value Engineering (VE) Study Implementation Revision for PI 0007414. The VE Implementation letter was issued by your office on September 29, 2009.

Please see attached request with all appropriate information regarding the request.

If there are any questions please contact Project Manager of this Office at (912) 271-7404.

BKH:MAH:JMB 

Attachments

Cc: General File



Thomas D. Moreland, PE
Chairman/CEO

Buddy Gratton, PE
President

Vickie E. Moreland
Executive Vice President/CFO

George M. Byrd, PE
Senior Vice President

J. Holly Moreland
Vice President

Richard C. Boullain, PE
Vice President

Henry E. Collins, Jr.
Vice President

Bradley M. Hale, PE
Vice President

Albert J. Joyner, Jr
Vice President

L.N. Manchi, P.E.
Vice President

Joe McGrew, PE
Vice President

January 23, 2012

CSSTP-0007-00(414)

Camden County

Widening Colerain Road from I-95 to Kings Bay Road

P.I. 0007414

Bobby Hilliard, P.E. State Program Delivery Engineer
Office of Program Delivery- 25th Floor
Georgia Department of Transportation
600 West Peachtree Street NW
Atlanta, Georgia 30308
Attn: Matt Bennett

Dear Mr. Hilliard:

Moreland Altobelli Associates, Inc. (MAAI) on behalf of Camden County requests a Value Engineering (VE) Study Implementation Revision for PI 0007414. The VE Implementation letter was issued by your office on September 29, 2009.

MAAI requests to revise the implementation of Alternative RD-2. This alternative recommended that the 10-foot rural outside shoulders utilize a 4-foot paved shoulder on proposed Colerain Road from Sta 251+00 (Winding Road) to Sta 324+50 (approximately 1496 feet east of Kings Bay Road). Per the March 12, 2009 approved concept report the proposed Colerain Road rural section consisted of two 12-foot travel lanes, a 4-foot bike lane and 10-foot shoulders (6-foot, 6-inch paved and 3-foot, 6-inch grass) in each direction separated by a raised median. Implementation of Alternative RD-2 reduced the paved shoulder width from 6-foot, 6-inch to 4-foot which resulted in an estimated savings of \$126,328 as outlined in the VE Study Report. Implementation of Alternative RD-2 also utilized the 4-foot paved shoulder as the proposed bike lane which resulted in an additional estimated savings of \$258,716 not shown in the VE Study Report. The total estimated saving for implementing Alternative RD-2 is \$385,044.

Review of the revised concept report determined that the proposed 10-foot rural outside shoulder consisting of 4-foot paved and 6-foot grass did not meet the requirements of a 6-foot, 6-inch paved shoulder for a 4-foot bike lane including a 16-inch rumble strip offset 12-inches from the travel way per GDOT Design Policy Manual, Section 9.5.2 Bicycle facility Design 1. On-street Bicycle Facility page 9-11 revised March 1, 2011.





MAAI requests reversing the VE recommendation RD-2 as recommended by the Office of Design Policy and Support to incorporate a proposed 10-foot rural outside shoulder consisting of 3-foot, 6-inch grass and 6-foot 6-inch paved to accommodate a 4-foot bike lane and 16-inch rumble strip offset 12-inches from the travel way in each direction.

The VE Reversal of recommendation RD-2 to reduce the paved shoulder width from 6-foot, 6-inch to 4-foot would negate the estimated \$126,328 savings outlined in the VE Study Report. However the additional estimated \$258,716 savings not outlined in the VE Study Report would result by including the 4-foot bike lane as apart of rather than in addition to the 6-foot, 6-inch paved shoulder as shown in the approved concept report.

If you have any questions about this request or need additional information, please contact Project Manager, Maurice J. Sheehan or myself at 770-263-5945.

Sincerely,

A handwritten signature in black ink that reads 'Ralph C. Ramsdell'.

Ralph C. Ramsdell
Project Engineer

Attachments: Office of Design Policy and Support VE Reversal Request, VE Implementation Letter, VE Study Report with modifications

Cc: Scott Brazell, Camden County
M.J. Sheehan
File 10104



Ralph Ramsdell

From: Bennett, Matt [mabennett@dot.ga.gov]
Sent: Friday, January 06, 2012 3:05 PM
To: 'rramsdell@maai.net'; Story, Brent
Cc: 'sbrazell@co.camden.ga.us'; Myers, Lisa; 'mjsheehan@maai.net'
Subject: Fw: 0007414 Camden Co.

Ralph,

It appears that we will have to change the typical to show the 6.5' paved shoulder thru this section. Once we have done so, the RCR will be approved.

I assume we will have to make the changes and submit the modification to get it approved.....Brent is this correct?

Also, I think this is going to require at least a partial VE study implementation reversal.

MATT BENNETT, GDOT PM

From: Story, Brent
Sent: Friday, January 06, 2012 02:06 PM
To: Bennett, Matt; Dana.Robbins@dot.gov <Dana.Robbins@dot.gov>
Cc: Posey, Keith; Myers, Lisa; Carlos.Figueroa@dot.gov <Carlos.Figueroa@dot.gov>; Simpson, Jim; Ehrman, Bradley R.; Peters, Dave
Subject: RE: 0007414 Camden Co.

Matt,

It appears there has been some misinterpretation of policy 6.5.1. Rumble Strips, relevant to bicycle accommodations. When a "bike lane" (painted stripe and symbol) is planned for a multi-lane roadway such as this, the 6.5-ft paved shoulder with rumble strip should be provided. If this was not on a planned bike route, then the 4-ft paved shoulder without rumble strip would be an appropriate option. It's my understanding that this particular project is on the local governments bicycle plan network and has therefore been designated as a bicycle route with "On-Street Bicycle Facility", painted stripe and symbols. (see GDOT DPM 9.5.2 and Figure 9.4). It is also my understanding that the overall graded shoulder width of 10-ft will not change. We did our own calculations and we estimate the cost difference between 4-ft paved and 6.5-ft paved to be \$65,000 for this one mile section. Therefore, we recommend the 6.5-ft paved shoulder with rumble strip. The striped bike lane should terminate at an intersection with cross walk to the multi-use path. Keith Posey will hold the CR until this is settled. Let me know if you want to talk further.

Thanks,

Brent A. Story, P.E.
State Design Policy Engineer
Georgia Department of Transportation
 ☎ (404) 631-1600

From: Bennett, Matt
Sent: Wednesday, January 04, 2012 9:44 AM
To: Dana.Robbins@dot.gov
Cc: Story, Brent; sbrazell@co.camden.ga.us; Posey, Keith; Myers, Lisa; rramsdel@maai.net; Moyer,

1/24/2012

David; Carlos.Figueroa@dot.gov
Subject: RE: 0007414 Camden Co.

Dana,

Page 5 of the Revised Concept Report (RCR), in the second full paragraph, it states that "Colerain Rd. from I-95 to Kings Bay Rd. was analyzed as a Class I highway with 6.4% trucks and a 45 mph design speed. I have checked the plans as well, to make sure this was accurate and both are consistent with the 45 mph design speed. That's why we can go without rumble strips and a 4' paved shoulder for the shared bike path.

Ralph, or anyone else, please verify that I am correct as well. Also, let us know if any of you know anything further or in addition to this explanation.

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Matt Bennett, GDOT PM
912-271-7404 Cell
912-427-5737 Office

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Sent: Tuesday, January 03, 2012 5:04 PM
To: Bennett, Matt
Cc: Story, Brent; sbrazell@co.camden.ga.us; Posey, Keith; Myers, Lisa; rramsdell@maai.net; Moyer, David; Carlos.Figueroa@dot.gov
Subject: RE: 0007414 Camden Co.

All,

My comment pertained to the highlighted section of the revised concept page (attached). This highlighted section states *"The rural shoulder section from Winding Road to 1496 feet east of Kings Bay Road would remain, but implementation of the Value Engineering Study alternatives changed the typical section from 4-foot bike lanes and 10-foot shoulders (6'-6" paved and 3'-6" grass) to 10-foot shoulders consisting of a 4-foot paved shoulder to be used as a bike lane and 6-foot grass strip in each direction."*

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1/24/2012

Feel free to call me to discuss this.

Thanks,
Dana

Dana Robbins
Technology Applications Team Leader
FHWA – Georgia Division
404-562-3642

From: Myers, Lisa [mailto:lmyers@dot.ga.gov]
Sent: Tuesday, January 03, 2012 1:29 PM
To: Bennett, Matt; 'Ralph Ramsdell'; Moyer, David
Cc: Story, Brent; Robbins, Dana (FHWA); Scott Brazell; Posey, Keith
Subject: RE: 0007414 Camden Co.

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If you need to reverse VE recommendation RD-2, please submit a reversal letter.

Lisa Myers, AVS ☺
Assistant State Project Review Engineer - VE Coordinator

*GA DOT - Engineering Services
One Georgia Center - 5th Floor
600 W. Peachtree Street NW
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From: Bennett, Matt
Sent: Tuesday, January 03, 2012 1:17 PM
To: 'Ralph Ramsdell'; Moyer, David
Cc: Story, Brent; drobbins@dot.gov; Myers, Lisa; Scott Brazell; Posey, Keith
Subject: FW: 0007414 Camden Co.

Ralph & David,

Hey guys.....obviously this was before me, please help with any info you may be able to provide.

Dana, Brent and I need some help figuring this out.....It appears that the CR revision was primarily for the VE study changes and one of the VE Study implementation items was to change the rural shoulder from Winding Rd. to 1496 feet east of Kings Bay Rd. The rural shoulder was to remain rural, however, the 10' shoulder was proposed to change from 6' 6" paved and 3' 6" graded to 4' paved and 6' graded. The 4' paved was intended to

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be used as a bike lane, however, it's now being questioned. It is GDOT policy that if we use a shoulder/shared bike lane, the shoulder must be 6.5' to give you the 4' clear area because of the rumble strips.

I am going to venture to say that everything is ok, we just need to change the typical and not use this one VE Study implementation item. The roadway through this section will remain rural (as agreed upon in the Oct 6th meeting with FHWA Jennifer Giersch for DEA doc) and we will just need to change the paved shoulder width back to 6.5' to stay within policy.

Again, I'm guessing so please provide us with any info you can to help us sort this out and determine what needs to happen to move on with the approval of the Concept Report Revision.

Brent/Dana – Please let me know if I've misunderstood the issue or what is in question.

Thanks,

Matt Bennett, GDOT PM
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From: Story, Brent
Sent: Tuesday, December 27, 2011 11:26 AM
To: Moyer, David; Bennett, Matt
Cc: Hilliard, Bobby; Hill, Stanley; Haithcock, Michael; Peters, Dave; Simpson, Jim; McMurry, Russell; Ross, Gerald; Myers, Lisa
Subject: 0007414 Camden Co.

Reference: Revised Concept Report

Matt,

This project was changed to FOS in December 2010. FHWA called me last Thursday concerning a VE recommendation to change the proposed paved shoulder width from 6.5-ft to 4-ft. This involves the approx 1 mile section of paved/graded shoulder between Winding Road and the end of the project at Kings Bay Road. The VE savings is estimated to be \$126,328. FHWA's concern is that the VE recommendation is contrary to GDOT design standards for Bicycle Accommodations. Planning's comment states that the local government has this route identified on their Bicycle Plan. I also see that a 10-ft multi-use path is proposed through the urban section of the project that will accommodate bikes. With 28,200 ADT and 7% trucks, it appears to me that the 6.5-ft paved shoulder with rumble strip and designated 4-ft bike lane would be appropriate for the 1 mile section of project in question. If it can be demonstrated that bike traffic will drop at Winding Road, then the argument for the 4-ft paved shoulder could be justified. Take a look at this and get back with me. We need to call Dana Robbins with FHWA back next week on this.

Thanks,

Brent A. Story, P.E.
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