

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. # 713300-
IMNH0-0285-01(352)
DeKalb County
GDOT District 7 - Metro Atlanta
I-285 @ Bouldercrest Road

OFFICE Design Policy & Support

DATE December 4, 2012

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:

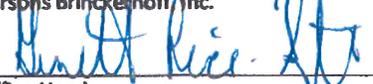
Bobby Hilliard, Program Control Administrator
Genetha Rice-Singleton, State Program Delivery Engineer
Glenn Bowman, State Environmental Administrator
Cindy VanDyke, State Transportation Planning Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Tamaya Huff, State Pedestrian and Bicycle Coordinator
Rachel Brown, District Engineer
Scott Lee, District Preconstruction Engineer
Jonathan Walker, District Utilities Engineer
Jeremy Busby, Project Manager
BOARD MEMBER - 4th Congressional District

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

Project Type: <u>Urban Interchange</u>	P.I. Number: <u>713300</u>
GDOT District: <u>7</u>	County: <u>DeKalb</u>
Federal Route Number: <u>I-285</u>	State Route Number: <u>SR 407</u>
Project Number: <u>IMNH0-0285-01(352)</u>	

This project is the reconstruction of the I-285 / Bouldercrest Road interchange and the installation of collector-distributor roads along I-285 from I-675 to Bouldercrest Road in DeKalb County.

Submitted for approval:

Robert Moses, P.E. Parsons Brinckerhoff, Inc.  _____	<u>9/28/2012</u> DATE
Office Head  _____	<u>10/18/2012</u> DATE
GDOT Project Manager  _____	<u>9/28/2012</u> DATE

Recommendation for approval:

* Glenn Bowman /UMOST State Environmental Administrator _____	<u>10/23/12</u> DATE
* Kathy Zahul /UMOST State Traffic Engineer _____	<u>11/14/12</u> DATE
* Ben Rabun /UMOST State Bridge Design Engineer _____	<u>11/16/12</u> DATE

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

 State Transportation Planning Administrator _____	<u>10-18-12</u> DATE
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* Recommendation on file. -UMOST

PLANNING, APPROVED CONCEPT, & BACKGROUND DATA

Project Justification Statement

The Bouldercrest Road interchange and I-285 interstate segments between Bouldercrest Road and I-675 have current and future operational deficiencies and high crash frequencies. These deficiencies are anticipated to become worse in the future with increased traffic volumes. The segment of Bouldercrest Road between Sugar Creek Golf Drive and Clifton Church Road (including the ramp terminal intersections at I-285) has a crash rate that is well over twice the statewide average (current average rate of 1,128 crashes per 100 million vehicles miles of travel compared to statewide average of 481 crashes per MVMT). Contributing factors to the high crash rate include:

Congestion: Currently, the ramp terminal intersections operate at LOS D in the peak periods; however, high truck traffic volumes slow traffic and degrade operations for short segments of the peak periods. Intersection operations are expected to fall to LOS E by the future design year horizon (2035)

A lack of access management along the corridor, with full movement driveways in close proximity to the ramp terminal intersections

High truck volumes along the corridor, particularly between I-285 and Continental Way, which slow intersection operations and often cause turning bay storage lengths to be exceeded.

The Bouldercrest Road interchange with I-285 is located one-mile east of the terminus of I-675 at I-285. The distance from the east-facing I-675 ramps to the west-facing ramps to Bouldercrest Road is less than 2,000 feet. This close spacing and high weaving ramp volumes results in a current breakdown of weaving operations and mainline I-285 has LOS F operations during peak periods under current conditions. Analysis of Opening Year (2015) and Design Year (2035) traffic shows further degradation that causes LOS F operations at additional upstream and downstream I-285 segments.

Based on these current and future study area operational deficiencies and high crash frequencies, the goals of the project are:

- To reduce crash frequency and severity and improve operations on Bouldercrest Road in the vicinity of the I-285 interchange, and
- To improve weaving operations on I-285 between I-675 and Bouldercrest Road.

The proposed project provides improvements to the Bouldercrest Road interchange that include the addition of a loop ramp that both provides improved access between I-285 and Continental Way and creating greater separation between the ramp terminal intersections to improve storage and management of access between the ramp terminals. The improvements include median construction to control access from Sugar Creek Golf Drive north to Continental Way. The median will manage left turns into and out of driveways and reduce the crash rate for the corridor.

The project also builds a collector-distributor (CD) system on I-285 between Bouldercrest Road and I-675 that will place the weave of traffic between I-675 and Bouldercrest Road on the CD roads and not on mainline I-285. This should reduce congestion and reduce the crash rate.

The intersection north of Continental Way (Clifton Church Road) and the intersection at Sugar Creek Golf Drive with Bouldercrest Road are forecast to operate at acceptable conditions through the design year horizon. This supports the definition of the study area to be the half-mile segment of Bouldercrest Road between Sugar Creek Golf Drive and Clifton Church Road. The interchange at Flat Shoals Road and I-285 segments west to Bouldercrest Road are forecast to operate at acceptable levels of service through the project design year. The segment of I-285 to the west of Moreland Avenue is also forecast to operate at acceptable levels of service through the design year. This supports the definition of the study area to include the segment of I-285 between the Bouldercrest Road ramps and Moreland Avenue, which includes the I-285 interchange with I-675.

The project is programmed for Preliminary Engineering (PE) and right-of-way (ROW) acquisition as project number DK-AR-207 in the adopted 2012-2017 Transportation Improvement Program (TIP) as developed by the Atlanta Regional Commission. Construction is in the Long Range Plan portion, 2018-2040. The GDOT PI number is 713300.

Description of the approved concept:

The project provided for the reconstruction of the I-285 / Bouldercrest Road interchange and included braided ramps between the I-675/I-285 Interchange and the I-285 / Bouldercrest Road Interchange. On Bouldercrest Road, the project extended north from just north of the South River (MP 4.10) to just west of the Bouldercrest Lane / Bouldercrest Road intersection (MP 5.02). On I-285, the project extended from the I-675 southbound exit ramp (MP 52.46) to just east of Sugar Creek (MP 50.45).

The reconstruction of the I-285 / Bouldercrest Road interchange would have required replacing the existing Bouldercrest Road bridge over I-285. Bouldercrest Road would have been widened to provide for two 12-foot wide travel lanes in each direction between the I-285 / Bouldercrest Road interchange and the Bouldercrest Road / Constitution Road intersection. South of the interchange, Bouldercrest Road would have transitioned to two 12-foot wide travel lanes (one lane in each direction). A new connector road (Industrial Drive Connector) would have connected Sugar Creek Golf Drive to Industrial Drive in order to allow for direct truck access to Industrial Drive from the proposed median opening on Bouldercrest Road at Sugar Creek Golf Drive. Whitehall Forest Court would have been relocated, and its current intersection with Bouldercrest Road would have been closed. A new connector road (Continental Way Connector) would have linked Continental Way to Bouldercrest Road at the Bouldercrest Road / Constitution Road intersection in order to improve and facilitate local truck access. Whitehall Forest Court would have intersected Continental Way. Turn lanes would have been provided as required.

The existing traffic signals at the ramp intersections, the Clifton Church Road / Bouldercrest Road intersection and the Bouldercrest Road / Constitution Road intersection would have been upgraded.

The termini for the Bouldercrest Road section of the project were determined as follows. The beginning of the project on the southern end was dictated by the safe taper rate to transition from a four-lane roadway to the existing two lanes. The project also overlapped and would have been coordinated with project BRSLB-9092(1) that replaced the bridge over the South River. The northern end was dictated by the proposed intersection of the Continental Way Connector with Bouldercrest Road.

The terminus along I-285 to the west of the project was determined by the proposed braided ramp connections to the existing I-675 ramps which would have eliminated weaving on I-285. The terminus along I-285 to the east was determined by the proposed lengthened entrance and exit ramps which would have improved storage, signage and acceleration/deceleration distances.

This concept would have satisfied the project Need and Purpose by improving safety and traffic operations in the I-285 interchange area and served the transportation demand generated by the increase in through and turning movements. Energy conservation would also have been improved because of the more efficient movement of traffic.

The project length in the approved concept was 0.92 miles along Bouldercrest Road and 2.01 miles along I-285.

PDP Classification: Major Minor
Federal Oversight: Full Oversight Exempt State Funded Other

Projected Traffic as shown in the approved Concept Report: AADT

Open Year (2006):	32,520 (Bouldercrest)	175,900 (I-285)
Design Year (2026):	58,450 (Bouldercrest)	268,900 (I-285)

Updated Traffic: ADT

Open Year (2015):	25,780 (Bouldercrest)	167,240 (I-285)
Design Year (2035):	36,820 (Bouldercrest)	196,200 (I-285)

Functional Classification (Mainline): Urban Interstate Principal Arterial

VE Study anticipated: No Yes Completed – Date: 2/20/2012

PROPOSED REVISIONS

Approved Features:	Proposed Features:
<p>The Bouldercrest Road Bridge over I-285 was proposed to be 136' wide and proposed to have four 12 to 15 foot wide travel lanes (two lanes in each direction), four 12-foot wide turn lanes (two lanes in each direction), 6-foot wide sidewalks on both sides, and two 4-foot wide bicycle lanes (one in each direction). The 12-15 foot wide travel lanes were proposed to accommodate turning traffic from the double left-turn lanes provided at the off-ramp approaches from I-285 to Bouldercrest Road.</p> <p>The braided ramps A through G were proposed as 16 to 48 feet wide with 8-foot wide outside shoulders and 6-foot wide inside shoulders. The proposed bridges for the ramps were 30 to 50 feet wide with 8-foot wide outside shoulders and 6-foot wide inside shoulders.</p> <p>Bridges were required for ramps C, D, E, F, G and H, with widths ranging from 30' to 52'.</p> <p>The proposed connector road connecting Sugar Creek Golf Drive and Industrial Drive would have allowed for direct truck access to Industrial Drive from the median opening on Bouldercrest Road at Sugar Creek Golf Drive.</p> <p>The Continental Way Connector was proposed to connect Continental Way to Bouldercrest Road at the Bouldercrest Road / Constitution Road intersection in order to improve and facilitate local truck access.</p>	<p>The Bouldercrest Road Bridge over I-285 is proposed to be approximately 111' wide and will have six 12 foot wide travel lanes (two southbound through lanes, two southbound turn lanes, and two northbound through lanes), 6-foot sidewalks on both sides and two 4-foot wide bicycle lanes (one in each direction). The new Bouldercrest Road bridge will be shifted east and stage-constructed to eliminate re-alignment work on Bouldercrest Road north of Continental Way and south of I-285</p> <p>The ramp braids would have impacted the South River crossing underneath I-285 and required multi-level ramp braid structures. A less expensive collector-distributor roadway configuration was evaluated and selected. The collector-distributor roadway varies from one to three lanes (16 to 36 feet) with a 10-foot wide shoulder to the right and 8-foot wide shoulder to the left with 2-foot grass widths to the shoulder break points.</p> <p>Two bridges over the South River are required with proposed widths of approximately 60'.</p> <p>The proposed connector road connecting Sugar Creek Golf Drive and Industrial Drive is not included in the revised concept. Instead, a median opening at Industrial Drive will be provided to allow truck access.</p> <p>The revised concept eliminates the proposed Continental Way Connector. A median opening and traffic signal will be provided at Continental Way to allow direct access from Continental Way to Bouldercrest Road. To maintain safe operating conditions, the median opening at the proposed I-285 Westbound ramp terminals will not be provided. Turning movements were eliminated at this location by modifying the interchange to include a partial cloverleaf (Parclo).</p>

<p>The project length is 0.92 miles along Bouldercrest Road and 2.01 miles along I-285. 35 parcels will be impacted.</p>	<p>The Parclo interchange configuration will improve operations at the Bouldercrest Road / Continental Way intersection and better serve the major trucking terminals in the area, reducing truck impacts on much of the corridor.</p> <p>The driveway to The Park at Bouldercrest apartment complex is proposed to be relocated to maintain a 300' clearance from the I-285 ramp terminals.</p> <p>The revised project length is 0.51 miles along Bouldercrest Road and 1.89 miles along I-285. Approximately 25 parcels will be impacted.</p>
<p>Reason(s) for change: The above mentioned changes were made based on findings of a VE study. The project changes increase efficiency by reducing costs, reducing environmental impacts and improving operations along the Bouldercrest Road and I-285 corridors.</p>	

Note: The existing posted speed on I-285 is 55 mph. Separate from this project, the speed limit on I-285 within the limits of the project will be raised to 65 mph.

Design Exceptions:

A design exception is required to retain the existing 6'-9" inside shoulder on I-285; however, no improvements are proposed to mainline I-285 as a part of this project.

The design exception for horizontal alignment on Bouldercrest Road proposed in the approved concept will not be required in the revised concept.

ENVIRONMENTAL

Project Air Quality:

- Is the project located in a PM 2.5 Non-attainment area? No Yes
- Is the project located in an Ozone Non-attainment area? No Yes
- Is a Carbon Monoxide hotspot analysis required? No Yes

The bridge overpass footprint has been reduced from the approved eight lanes to the proposed six lanes, (two southbound through lanes, two southbound turn lanes and two northbound through lanes). In addition, the braided ramp configuration has been revised to a collector-distributor configuration. Last, the through lanes along Interstate 285 and Bouldercrest Road will remain the same as previously approved.

All Air Quality pollutants will be addressed, including a CO analysis utilizing the Motor Vehicle Emissions Simulator (MOVES) model.

In addition, a detailed Noise analysis, utilizing the TNM model, will be required. Noise abatement measures are likely based on several residential developments along the proposed project alignment.

Potential environmental impacts of proposed revision:

Since the concept report was approved in 2001, further environmental studies have been conducted for the proposed project. These studies were conducted in 2011 and were as follows:

- Environmental Screening Report (Parsons Brinckerhoff)
- Historic Survey Report (GDOT)
- Phase I Archaeological Survey Report (Edwards-Pitman, Inc. for Parsons Brinckerhoff)
- Ecology Resource Survey Report (Parsons Brinckerhoff)

Below is a summary of the findings of the above reports:

Environmental Justice (EJ)

A low-income area exists in the northern section of the study area in the vicinity of Whitehall Forest. The population in the area is also 97 percent minority. This will trigger the requirements of Executive Order 12898 and Title VI.

Parks and Recreational Resources

No parks or recreational resources are located within the project study boundary. The study boundary does include part of the Sugar Creek Golf Course.

Ecology

During field surveys, potentially suitable migratory bird nesting and foraging habitat was observed within the project corridor. Three (3) wetlands, five (5) intermittent streams and five (5) perennial streams were identified within the project corridor. No potentially suitable habitat for the black-spored quillwort (*Isoetes melanospora*) or the Pool Sprite Snorklewort (*Amphianthus pusillus*), both federally- and state-endangered plant species, was identified during field surveys. No essential fish habitat or critical habitat was identified within the project corridor.

Cultural Resources

Three properties 50 years old or older were surveyed and none were recommended eligible for inclusion in the National Register of Historic Places.

The Phase I archaeology survey findings indicate that, unless the current design of the proposed project change, no further archaeological investigations are recommended.

Have proposed revisions been reviewed by environmental staff? No Yes

Environmental responsibilities (Studies/Documents/Permits):

The following studies/documents will be required:

- Air Quality Study – Consultant
- Noise Study - Consultant
- Ecology Assessment of Effects Report - Consultant
- Completion of Section 106-Historic Resources - GDOT
- Traffic Study -Consultant
- Land Use - Consultant
- Environmental Justice and Community Impacts - Consultant

- Socio-economic Impacts - Consultant
- Hazardous Materials - Consultant
- Conceptual Stage Relocation Study - Consultant
- Visual Impacts - Consultant
- Environmental Assessment (EA) - Consultant

The following permits/variances will be required:

- Section 404 permit
- A PAR, if a 404 Individual Permit is required
- Stream Buffer Variance

Environmental impacts by section:

NEPA: The NEPA document has not yet been prepared. The class of action is anticipated to be an Environmental Assessment (EA) due to the potential for EJ impacts.

Ecology: An Ecology Assessment of Effects Report will be required.

Archeology: No additional archaeology surveys are required unless the project design changes.

History: No additional surveys are required unless the project design changes.

Air & Noise:

Air Quality: Ozone, PM 2.5, MSAT and CO will be addressed for this project.

Noise: A detailed TNM model noise analysis will be required for this project.

Public Involvement: A Public Hearing Open House will be held as part of the NEPA process.

PROJECT COST & ADDITIONAL INFORMATION

Updated Cost Estimate		Date of Estimate
Base Construction Cost:	\$21,038,897.27	11/8/2012
Engineering and Inspection:	\$1,051,944.86	11/8/2012
Liquid AC Adjustment:	\$506,267.95	11/8/2012
<u>Total Construction Cost:</u>	\$22,597,110.08	
Right-of-Way:	\$21,474,000	9/13/2012
Utilities (reimbursable costs):	\$300,000	10/3/2012
Environmental Mitigation:	\$500,621	11/9/2012
TOTAL PROJECT COST:	\$44,871,731.08	

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

Comments:

Attachments:

1. Sketch map
2. Typical sections
3. Cost Estimate(s)
4. Traffic Diagrams
5. Conforming plan's network schematics showing thru lanes
6. Value Engineering Implementation Letter

APPROVALS

Concur: 
Director of Engineering

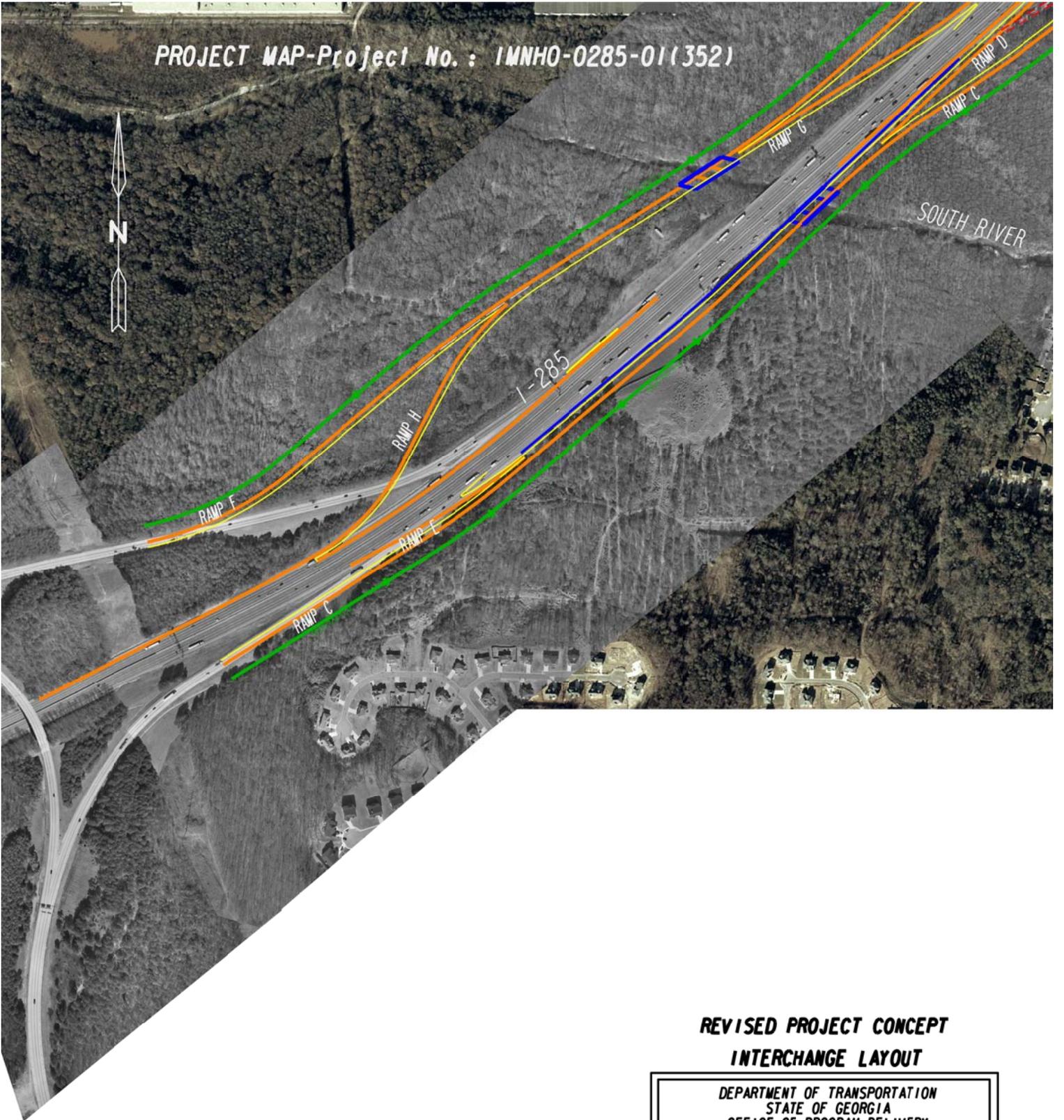
Approve: 
Chief Engineer

11/30/12
Date

Attachment 1

Sketch map

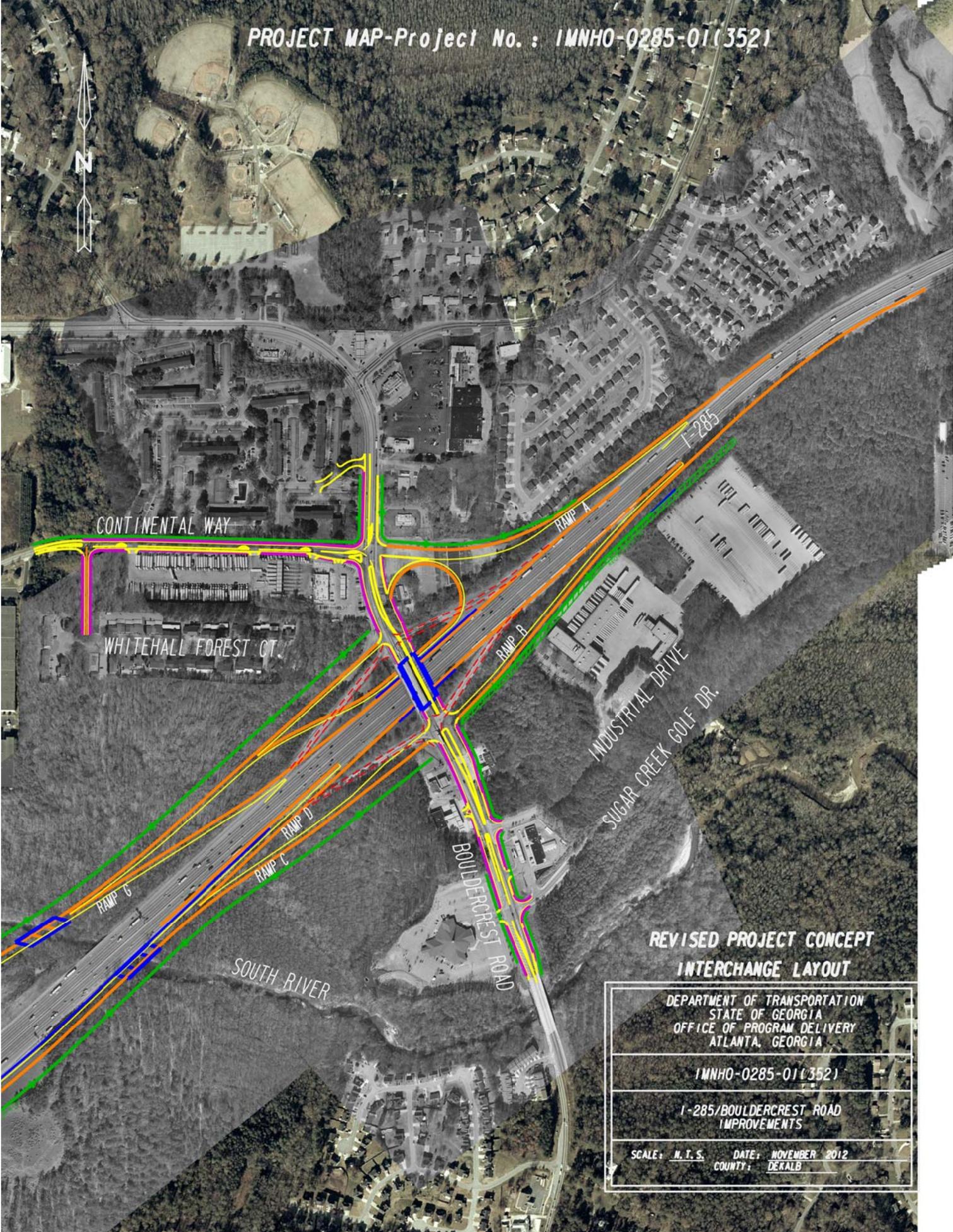
PROJECT MAP-Project No. : IMNHO-0285-01(352)



**REVISED PROJECT CONCEPT
INTERCHANGE LAYOUT**

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA OFFICE OF PROGRAM DELIVERY ATLANTA, GEORGIA	
IMNHO-0285-01(352)	
I-285/BOULDERCREST ROAD IMPROVEMENTS	
SCALE: <u>N.T.S.</u>	DATE: <u>NOVEMBER 2012</u>
	COUNTY: <u>DEKALB</u>

PROJECT MAP-Project No. : IMNHO-0285-01(352)



**REVISED PROJECT CONCEPT
INTERCHANGE LAYOUT**

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF PROGRAM DELIVERY
ATLANTA, GEORGIA

IMNHO-0285-01(352)

I-285/BOULDERCREST ROAD
IMPROVEMENTS

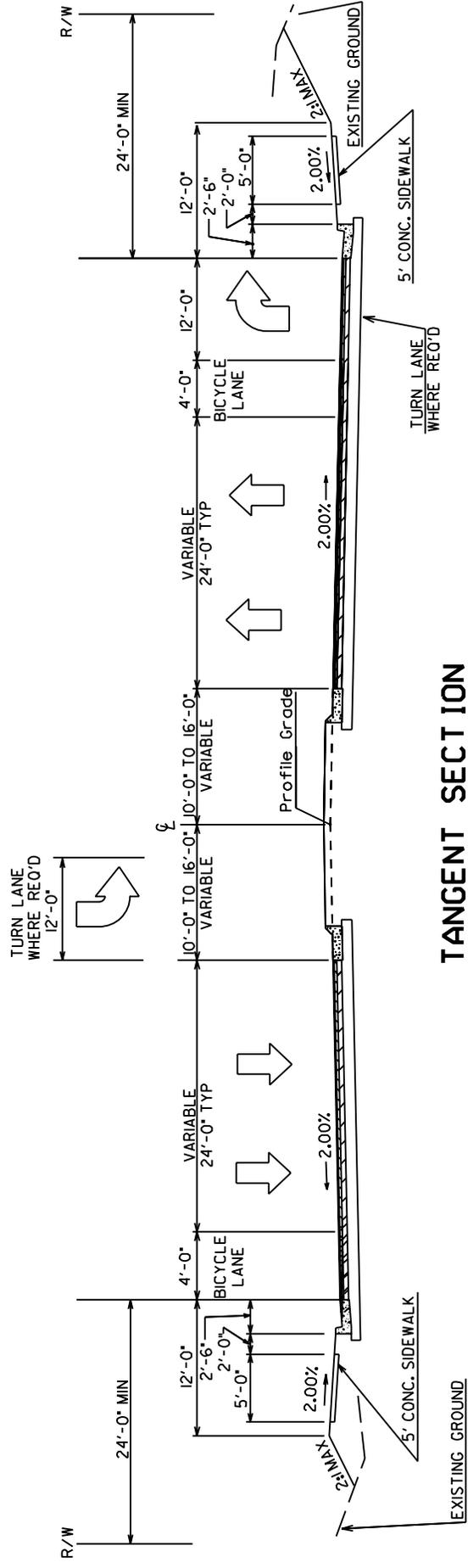
SCALE: N.T.S. DATE: NOVEMBER 2012
COUNTY: DEKALB

Attachment 2

Typical Sections

STATE	PROJECT NUMBER	DRAWING NO.
GA.	1 MH0-0285-01 (352)	1

TYPICAL SECTION NO. 1

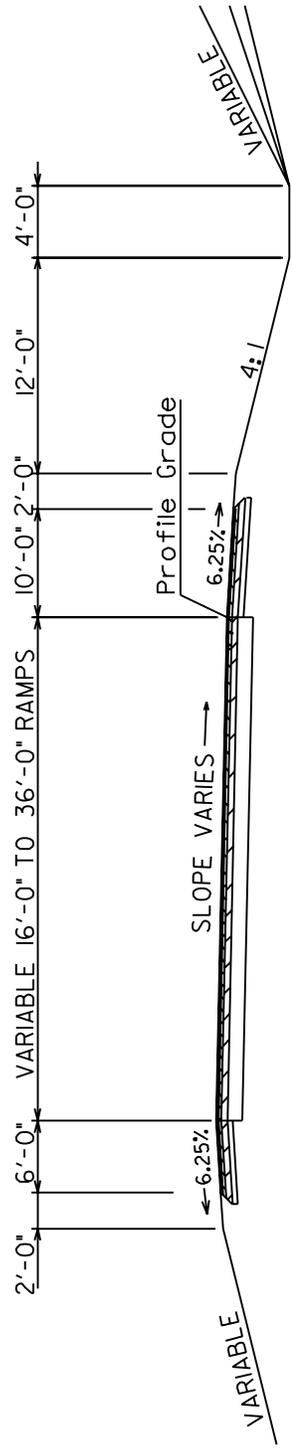


TANGENT SECTION BOULDERCREST ROAD

NOT TO SCALE

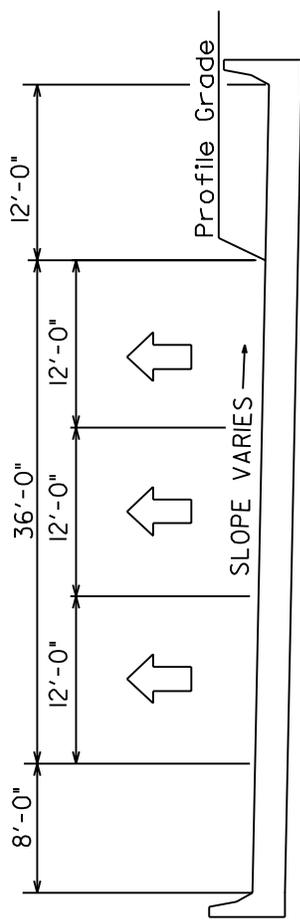
STATE	PROJECT NUMBER	DRAWING NO.	SHEET NO.
GA.	1 MH10-0285-01 (352)		

TYPICAL SECTION NO. 4



TANGENT SECTION
ENTRANCE & EXIT RAMPS

TYPICAL SECTION NO. 5

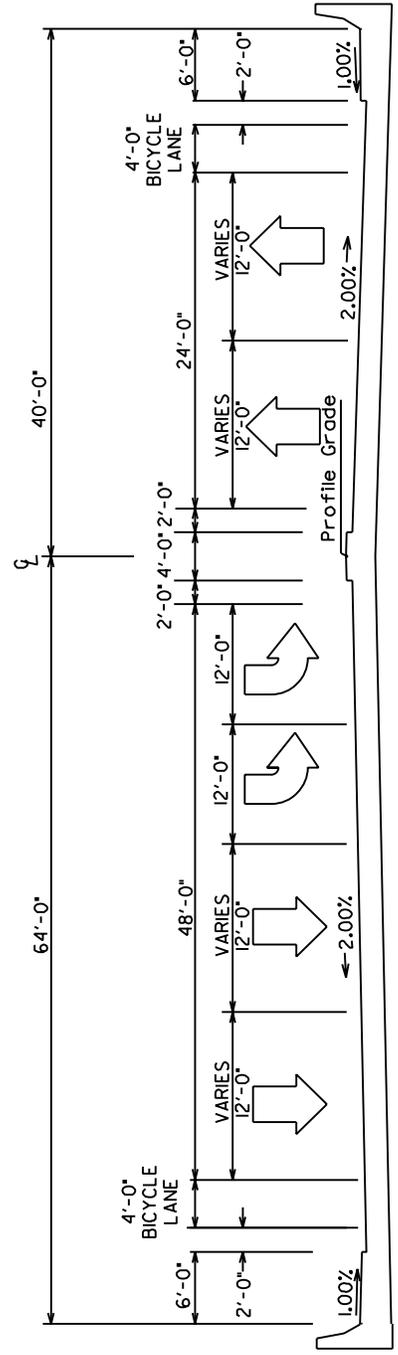


TANGENT SECTION
BRIDGES FOR
COLLECTOR-DISTRIBUTOR ROADWAYS

NOT TO SCALE

STATE	PROJECT NUMBER	DRAWING NO./SHEET
GA.	1 MH0-0285-01 (352)	

TYPICAL SECTION NO. 6



TANGENT SECTION
BOULDERCREST ROAD
BRIDGE OVER I-285

NOT TO SCALE

Attachment 3

Cost Estimate

STATE HIGHWAY AGENCY

DATE : 11/08/2012
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : PI713300 SPEC YEAR: 01
 DESCRIPTION: I-285 AT BOULDERCREST ROAD
 INTERCHANGE IMPROVEMENTS

ITEMS FOR JOB PI713300

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - IMNH0-0285-01(352)	1.000	500000.00	500000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	74666.39	74666.40
0015	201-1500		LS	CLEARING & GRUBBING - IMNH0-0285-01(352)	1.000	750000.00	750000.00
0020	205-0001		CY	UNCLASS EXCAV	187500.000	3.63	680625.00
0024	206-0002		CY	BORROW EXCAV, INCL MATL	100000.000	5.31	531439.00
0025	310-1101		TN	GR AGGR BASE CRS, INCL MATL	58559.000	14.51	849957.53
0030	318-3000		TN	AGGR SURF CRS	600.000	16.28	9770.84
0035	402-1812		TN	RECYL AC LEVELING,INC BM&HL	800.000	74.04	59238.27
0040	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	8641.000	57.35	495602.48
0045	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	2592.000	67.05	173797.62
0050	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	17402.000	56.90	990250.72
0055	413-1000		GL	BITUM TACK COAT	2600.000	2.63	6839.69
0060	432-0206		SY	MILL ASPH CONC PVMT/ 1.50" DEP	2000.000	4.54	9088.54
0065	433-1100		SY	REF CONC APPR SL/INCL CURB	900.000	167.68	150918.57
0070	439-0022		SY	PLN PC CONC PVMT CL3 10" THK	84520.000	55.00	4648600.00
0075	441-0104		SY	CONC SIDEWALK, 4 IN	10204.000	23.54	240205.22
0080	441-0204		SY	PLAIN CONC DITCH PAVING, 4 IN	3600.000	28.97	104312.77
0085	441-0748		SY	CONC MEDIAN, 6 IN	2165.000	38.84	84108.97
0090	441-3999		LF	CONCRETE V GUTTER	500.000	18.56	9281.59
0095	441-4030		SY	CONC VALLEY GUTTER, 8 IN	241.000	44.30	10678.19
0100	441-6022		LF	CONC CURB & GUTTER, 6"X30"TP2	4365.000	14.09	61508.66
0104	441-6720		LF	CONC CURB & GUTTER/ 6"X30"TP7	2800.000	13.73	38465.87
0105	500-3800		CY	CL A CONC, INCL REINF STEEL	7.000	746.49	5225.50
0110	550-1180		LF	STM DR PIPE 18",H 1-10	5790.000	29.48	170693.02
0115	550-1240		LF	STM DR PIPE 24",H 1-10	3633.000	32.88	119486.72
0120	550-1300		LF	STM DR PIPE 30",H 1-10	500.000	47.75	23879.26
0125	550-1360		LF	STM DR PIPE 36",H 1-10	180.000	57.97	10435.15
0140	550-4218		EA	FLARED END SECT 18 IN, ST DR	8.000	457.88	3663.09
0141	550-4224		EA	FLARED END SECT 24 IN, ST DR	6.000	536.67	3220.03
0142	550-4230		EA	FLARED END SECT 30 IN, ST DR	2.000	675.74	1351.49
0143	550-4236		EA	FLARED END SECT 36 IN, ST DR	2.000	1021.63	2043.27
0144	621-6001		LF	CONC BARRIER, TP S-1	2400.000	100.00	240000.00
0145	641-1100		LF	GUARDRAIL, TP T	1000.000	29.49	29495.20
0150	641-1200		LF	GUARDRAIL, TP W	2700.000	15.29	41296.74
0155	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	16.000	616.13	9858.22
0160	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	16.000	1796.89	28750.35
0164	648-1350		EA	IMPACT ATT UNIT, TP-P- 3-U-28	1.000	14953.75	14953.75
0165	668-1100		EA	CATCH BASIN, GP 1	45.000	2037.80	91701.42
0170	668-2100		EA	DROP INLET, GP 1	5.000	1711.31	8556.58
0175	668-4300		EA	STORM SEW MANHOLE, TP 1	8.000	2053.20	16425.66
0178	643-1152		LF	CH LK FEN,ZC COAT, 6', 9 GA	500.000	24.20	12103.56
0179	643-8200		LF	BARRIER FENCE (ORANGE), 4 FT	500.000	1.93	969.93

STATE HIGHWAY AGENCY

DATE : 11/08/2012
PAGE : 2

JOB ESTIMATE REPORT

0180	636-1072	SF	HWY SIGNS,ALUM EXTRD PNLS, RS TP 3	2587.000	18.65	48273.16
0185	636-1077	SF	HWY SIGN,ALUM EXT PL,REFL SHT,TP 9	356.000	28.39	10107.44
0190	636-2070	LF	GALV STEEL POSTS, TP 7	2289.000	6.95	15921.19
0195	653-0110	EA	THERM PVMT MARK, ARROW, TP 1	22.000	66.57	1464.73
0200	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	71.000	68.10	4835.17
0205	653-0170	EA	THERM PVMT MARK, ARROW, TP 7	3.000	75.79	227.39
0210	653-0210	EA	THERM PVMT MARK, WORD , TP 1	16.000	103.92	1662.77
0215	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	1937.000	3.08	5979.62
0220	653-1810	LF	THER SLD TRAF STRIPE, 10 IN, W	240.000	1.82	438.04
0225	653-2501	LM	THERMO SOLID TRAF ST, 5 IN, WH	6.800	1281.94	8717.21
0230	653-2502	LM	THERMO SOLID TRAF ST, 5 IN YE	3.600	1399.71	5038.98
0235	653-4501	GLM	THERMO SKIP TRAF ST, 5 IN, WHI	3.000	874.11	2622.34
0240	653-6004	SY	THERM TRAF STRIPING, WHITE	540.000	3.07	1660.48
0245	653-6006	SY	THERM TRAF STRIPING, YELLOW	80.000	3.21	257.55
0250	654-1001	EA	RAISED PVMT MARKERS TP 1	90.000	4.03	363.33
0255	654-1003	EA	RAISED PVMT MARKERS TP 3	300.000	3.88	1164.60
0260	615-1200	LF	DIRECTIONAL BORE - IMNH0-0285-01(352)	535.000	9.92	5309.75
0265	636-1041	SF	HWY SIGNS,TP 2MAT,REFL SH TP 9	60.000	41.41	2484.70
0266	636-5010	EA	DELINEATOR, TP 1	20.000	32.57	651.42
0269	639-2002	LF	STEEL WIRE STRAND CABLE, 3/8"	1000.000	3.37	3376.20
0270	639-4004	EA	STRAIN POLE, TP IV	6.000	5737.95	34427.71
0275	639-4014	EA	STR POLE,TP 4,INCL LUMIN. ARM	2.000	6507.49	13014.99
0280	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 1	1.000	100000.00	100000.00
0285	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 2	1.000	100000.00	100000.00
0290	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	800.000	10.00	8000.00
0309	543-9000	LS	CONSTR OF BRIDGE COMPLETE - BOULDERCREST ROAD	1.000	4325520.00	4325520.00
0310	543-9000	LS	CONSTR OF BRIDGE COMPLETE - RAMP C	1.000	1570125.00	1570125.00
0324	543-9000	LS	CONSTR OF BRIDGE COMPLETE - RAMP G	1.000	1703438.00	1703438.00
0330	540-1102	LS	REM OF EX BR, BR NO - 1	1.000	100000.00	100000.00
0335	627-1010	SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 1	24245.630	40.00	969825.20
0345	163-0232	AC	TEMPORARY GRASSING	5.000	349.40	1747.03
0350	163-0240	TN	MULCH	144.000	186.72	26888.88
0355	163-0300	EA	CONSTRUCTION EXIT	14.000	1016.98	14237.83
0360	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	45.000	672.48	30261.97
0365	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	1000.000	12.24	12244.02
0370	163-0529	LF	CNST/REM TEMP SED BAR OR BLD STRW CK DM	3700.000	2.83	10500.60
0375	163-0531	EA	CONSTR & REM SEDIMENT BASIN,TP 1,STA NO- 100+00	4.000	11367.95	45471.83
0380	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	126.000	128.79	16228.57
0385	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	7500.000	0.49	3700.20
0390	171-0020	LF	TEMPORARY SILT FENCE, TYPE B	15000.000	1.05	15888.60
0395	165-0020	LF	MAINT OF TEMP SILT FENCE, TP B	7000.000	0.63	4449.97
0399	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	1250.000	0.78	983.00
0400	165-0071	LF	MAINT OF SEDIMENT BARRIER - BALED STRAW	1850.000	0.86	1593.16
0405	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	1.000	198.58	198.58
0410	165-0101	EA	MAINT OF CONST EXIT	14.000	487.92	6830.96
0415	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	126.000	57.73	7274.76
0420	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	460.67	921.34

STATE HIGHWAY AGENCY

DATE : 11/08/2012
 PAGE : 3

JOB ESTIMATE REPORT

0425	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	15000.000	1.39	20929.80
0430	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	2500.000	2.63	6596.68
0435	716-2000	SY	EROSION CONTROL MATS, SLOPES	7500.000	0.90	6820.35
0440	603-2024	SY	STN DUMPED RIP RAP, TP 1, 24"	600.000	40.33	24203.33
0445	603-2180	SY	STN DUMPED RIP RAP, TP 3, 12"	100.000	35.94	3594.45
0450	603-7000	SY	PLASTIC FILTER FABRIC	700.000	3.80	2665.78
0455	700-6910	AC	PERMANENT GRASSING	9.000	705.47	6349.27
0460	700-7000	TN	AGRICULTURAL LIME	36.000	76.00	2736.35
0470	700-8000	TN	FERTILIZER MIXED GRADE	3.000	413.96	1241.89
0475	700-8100	LB	FERTILIZER NITROGEN CONTENT	660.000	1.67	1105.61
0480	681-4301	EA	LT STD, 30' MH, 8' ARM	90.000	2500.00	225000.00
0485	681-6246	EA	LUMINAIRE,TP 2, 250W,HP SODIUM	90.000	200.00	18000.00
0486	682-1405	LF	CABLE, TP XHHW, AWG NO 8	5000.000	1.05	5266.30
0489	682-1406	LF	CABLE, TP XHHW, AWG NO 6	2000.000	1.08	2176.32
0490	683-1101	EA	LIGHT TOW/STEL/100'MH/LW EQUIP	8.000	15304.51	122436.16
0495	683-6566	EA	HI-LEVEL LUMIN,TP 5,400W,HPSOD	40.000	799.54	31981.84

 ITEM TOTAL 21038897.24
 INFLATED ITEM TOTAL 21038897.24

TOTALS FOR JOB PI713300

 ESTIMATED COST: 21038897.27
 CONTINGENCY PERCENT (0.0): 0.00
 ESTIMATED TOTAL: 21038897.27

PROJ. NO. IMNH0-0285-01, DeKalb County
P.I. NO. 713300
DATE 11/9/2012

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Nov-12	\$ 3.337
DIESEL		\$ 3.961
LIQUID AC		\$ 569.00

Link to Fuel and AC Index:
<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

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

Asphalt

Price Adjustment (PA)				502455.45	\$	502,455.45
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	910.40		
Monthly Asphalt Cement Price month project let (APL)			\$	569.00		
Total Monthly Tonnage of asphalt cement (TMT)				1471.75		

ASPHALT	Tons	%AC	AC ton
Leveling	800	5.0%	40
12.5 OGFC	0	5.0%	0
12.5 mm	2592	5.0%	129.6
9.5 mm SP		5.0%	0
25 mm SP	8641	5.0%	432.05
19 mm SP	17402	5.0%	870.1
	29435		1471.75

BITUMINOUS TACK COAT

Price Adjustment (PA)			\$	3,812.50	\$	3,812.50
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	910.40		
Monthly Asphalt Cement Price month project let (APL)			\$	569.00		
Total Monthly Tonnage of asphalt cement (TMT)				11.1672624		

Bitum Tack

Gals	gals/ton	tons
2600	232.8234	11.1672624

PROJ. NO.
P.I. NO.
DATE

IMNH0-0285-01, DeKalb County
713300
11/9/2012

CALL NO.

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					0	\$	-
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	60%	\$	910.40		
Monthly Asphalt Cement Price month project let (APL)				\$	569.00		
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
					0

TOTAL LIQUID AC ADJUSTMENT	\$ 506,267.95
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**GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY**

Date: 9/13/2012 Project: IMNHNO-0285-01
 Revised: County: DeKalb County
 PI: 713300

Description: I-285 @ Bouldercrest Road
 Project Termini: I-285 @ Bouldercrest Road

Existing ROW: **Varies**
 Required ROW: **Varies**
 Parcels: 35

Land and Improvements _____ **\$20,541,000.00**

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$5,450,000.00

Valuation Services _____ **\$66,250.00**

Legal Services _____ **\$248,625.00**

Relocation _____ **\$210,000.00**

Demolition _____ **\$100,000.00**

Administrative _____ **\$307,500.00**

TOTAL ESTIMATED COSTS _____ **\$21,473,375.00**

TOTAL ESTIMATED COSTS (ROUNDED) _____ **\$21,474,000.00**

Preparation Credits	Hours	Signature

Prepared By: Lashore Alexander CG#: 286999 9/13/2012
 Approved By: Jordan Alexander CG#: 286999 9/13/2012

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

PARSONS BRINCKERHOFF	Parsons Brinckerhoff, Inc. 3340 Peachtree Road NE Tower Place 100, Suite 2400 Atlanta, Georgia 30326 Phone: 404-364-8193 Fax: 404-237-3015	Preliminary Environmental Mitigation Cost Estimate

Project: Bouldercrest Road Interchange Improvements
IMNH0-0285-01(352), PI No. 713300

Prepared By: Travis Garnto

Prepared On: 11/09/2012

Date:	11/09/2012
PB Project No.	173445 TO 10
Cc: Project File	

As requested for the concept cost estimate of the subject project, a preliminary mitigation cost estimate has been prepared as detailed below. The cost estimate is based on an anticipated cost of \$18,000 per wetland credit and \$34 per stream credit.

Type of Mitigation	Amount of Impacts	Required Credits	Cost per Credit	Total Cost of Credits
Wetland	1.73 acres	14.88	\$18,000.00	\$267,840.00
Stream	1,490 linear feet	6846.5	\$34.00	\$232,781.00
			Total Mitigation Cost for Project	\$500,621.00

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE IM-NH-285-1(352) DeKalb OFFICE District # 7
I-285 @ Bouldercrest Rd.
P.I. No. 713300

FROM  Jonathan Walker DATE October 3, 2012
District Utilities Engineer

TO Bobby Hilliard, State Program Delivery Engineer
ATTN Jeremy T. Busby, PE Project Manager

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

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

FACILITY OWNER	NON- EIMBURSABLE	REIMBURSABLE	Total
Georgia Power Co.		\$300,000.00	
Atlanta Gas Light Co.	\$160,000.00		
Comcast Comm.	\$50,000.00		
AT&T / BellSouth	\$60,000.00		
Clayton County Water & Sewer	\$160,000.00		
Clayton County Fire Hydrant	\$15,000.00		
Totals	\$445,000.00	\$300,000.00	\$745,000.00

If you have any questions, please contact Wade Woodard at 770-986-1117.

BRP: JW: WW
Attachments

C: Jeff Baker P.E. / Utilities (O.G.C. 10th Floor)
File

Attachment 4

Traffic Diagrams

Department of Transportation State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE IMNH0-0285-01(352), DeKalb County **OFFICE** Planning
P.I. # 713300 **DATE** September 1, 2011

FROM Cindy VanDyke, State Transportation Planning Administrator

TO Bobby Hilliard, P.E., State Program Delivery Engineer
Attention: Jeremy Busby

SUBJECT **Reviewed** Design Traffic for I-285/S.R. 407 at Bouldercrest Road.

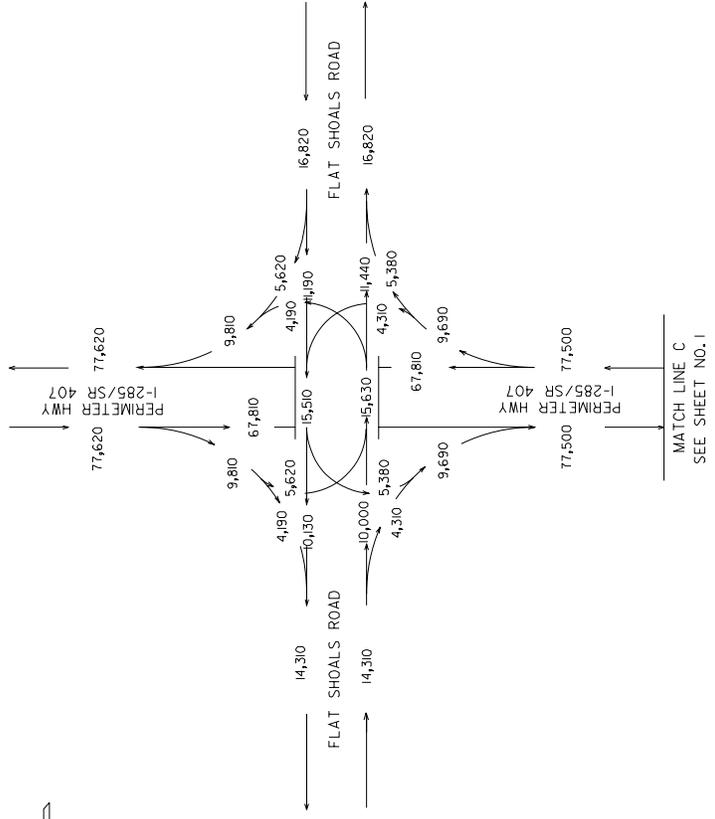
We reviewed the Design Traffic for the above project. The traffic is approved.

If you have any questions concerning this information please contact Abby Ebodaghe at (404) 631-1923.

CLV/AFE

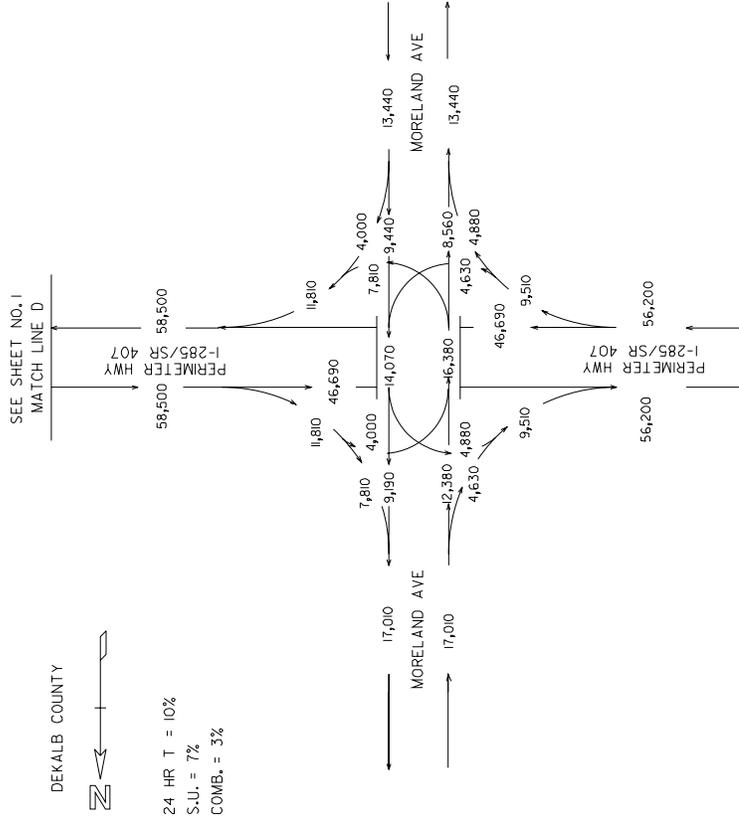


24 HR T = 4%
S.U. = 2%
COMB. = 2%



IMNH0-0285-01(352)
P. I. # 713300
DEKALB COUNTY
I-285 @
FLAT SHOALS ROAD
2011 ADT
SHEET 2 OF 15





SEE SHEET NO. 5
MATCH LINE C

SEE SHEET NO. 6
MATCH LINE D

SEE SHEET NO. 7
MATCH LINE E

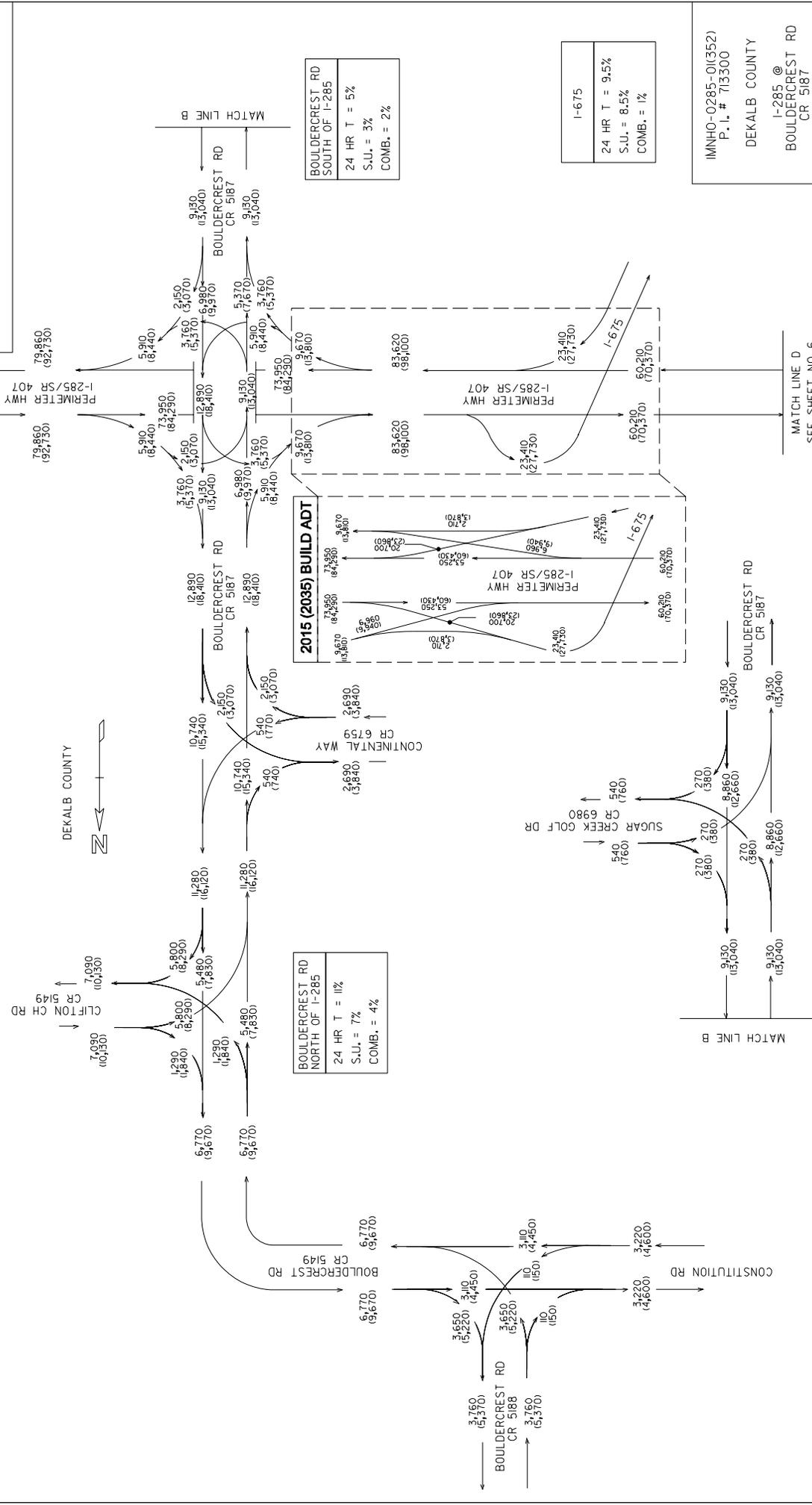
SEE SHEET NO. 8
MATCH LINE F

SEE SHEET NO. 9
MATCH LINE G

SEE SHEET NO. 10
MATCH LINE H

SEE SHEET NO. 11
MATCH LINE I

SEE SHEET NO. 12
MATCH LINE J



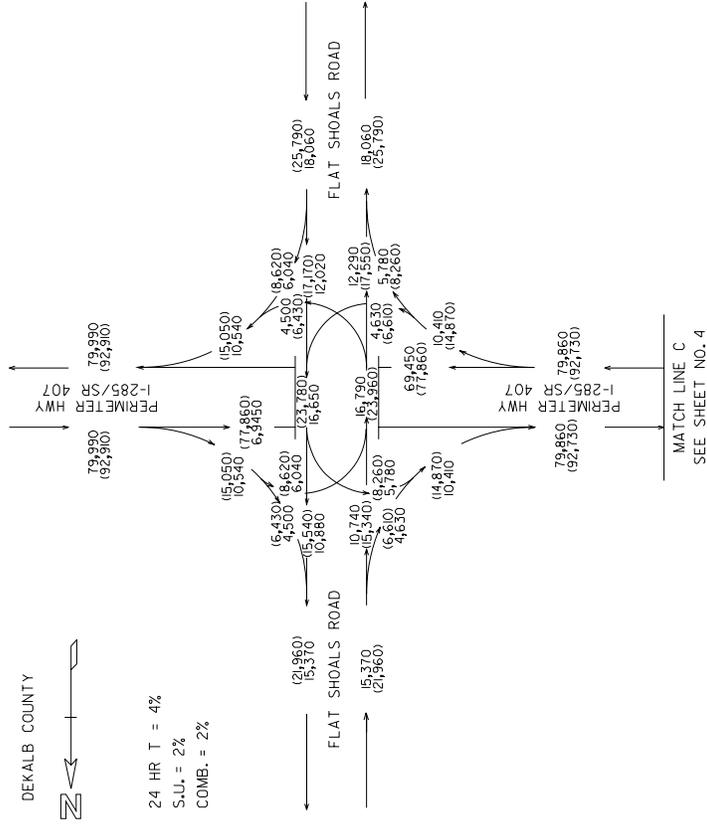
BOULDERCREST RD NORTH OF I-285
24 HR T = 11%
S.U. = 7%
COMB. = 4%

BOULDERCREST RD SOUTH OF I-285
24 HR T = 5%
S.U. = 3%
COMB. = 2%

I-675
24 HR T = 9.5%
S.U. = 8.5%
COMB. = 1%

IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
I-285 @
BOULDERCREST RD
CR 5187
2015 ADT = 000
2035 ADT = (000)
SHEET 4 OF 15

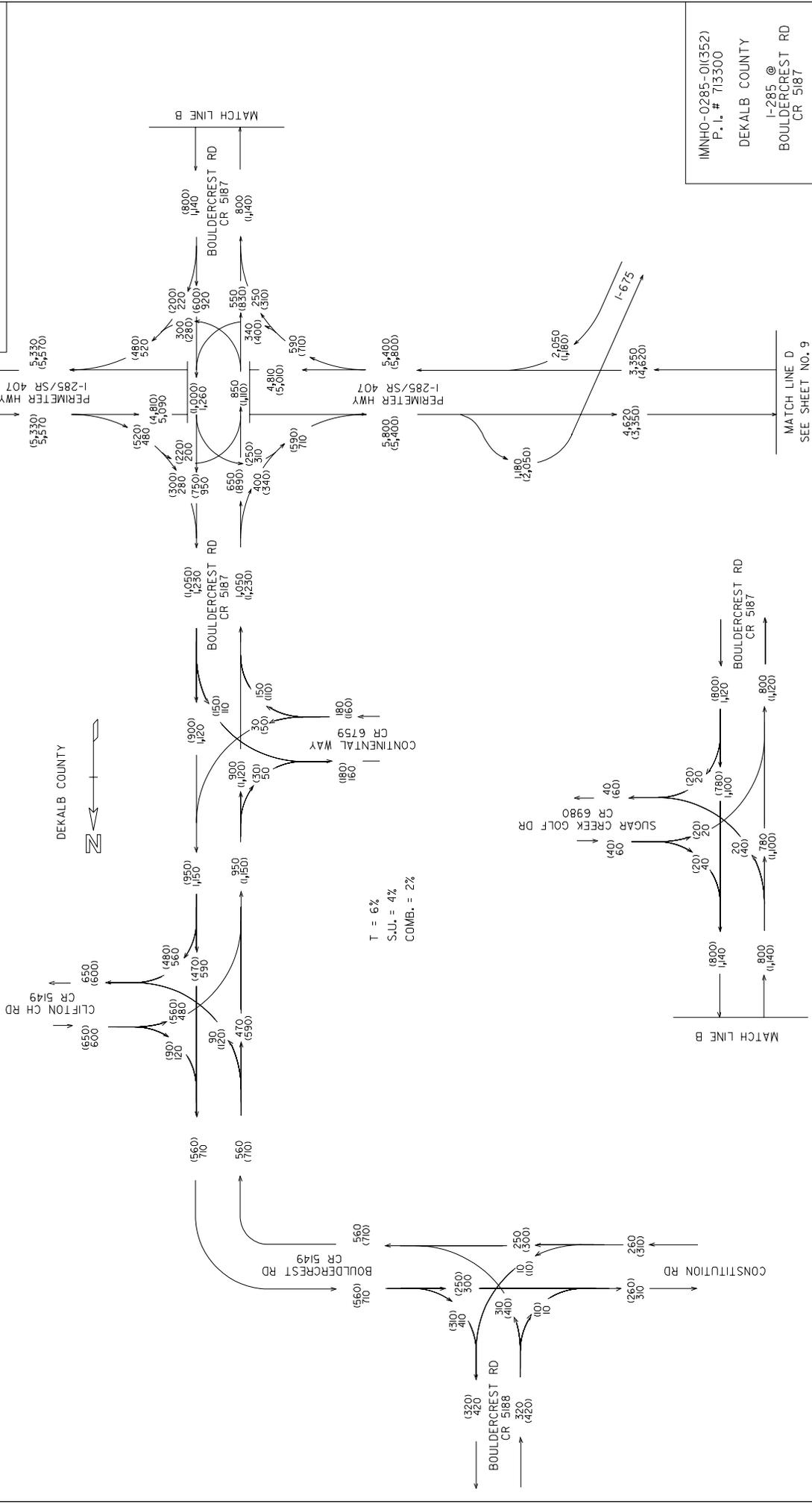
**PARSONS
BRINCKERHOFF**



IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
1-285 @
FLAT SHOALS ROAD
2015 ADT = 000
2035 ADT = (000)
SHEET 5 OF 15



SEE SHEET NO. 8
MATCH LINE C



T = 6%
S.U. = 4%
COMB. = 2%

IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
BOULDERCREST RD
CR 5187
I-285 @
BOULDERCREST RD
CR 5187
2011AM DHV = 000
2011PM DHV = 000
SHEET 7 OF 15

**PARSONS
BRINCKERHOFF**

MATCH LINE D
SEE SHEET NO. 9

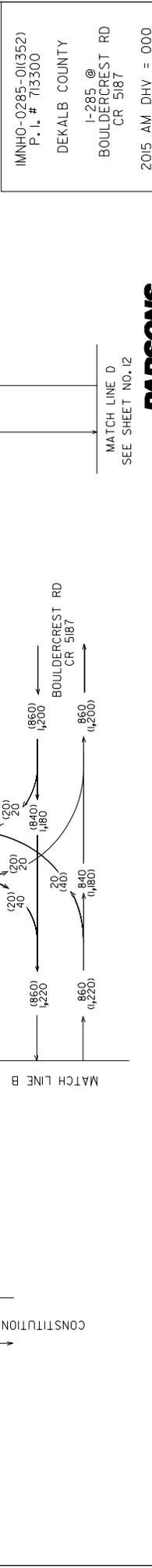
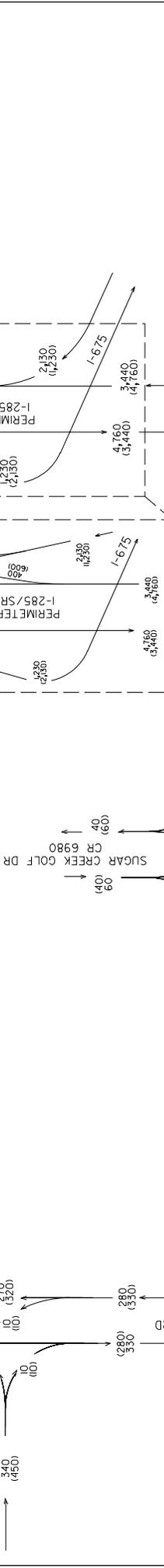
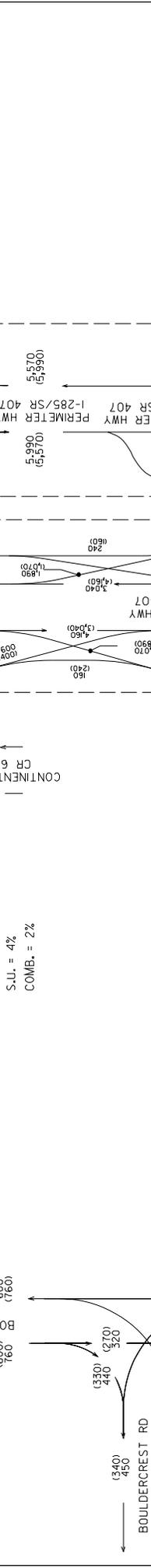
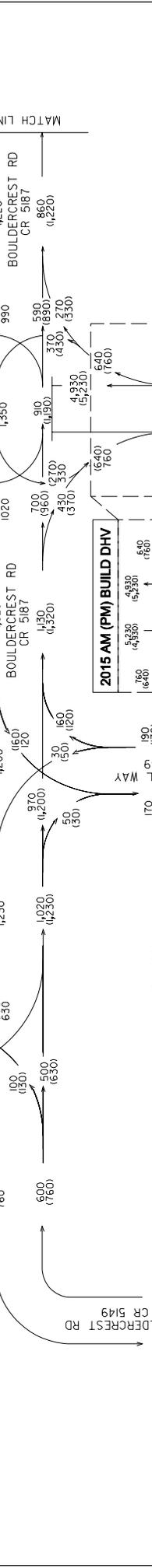
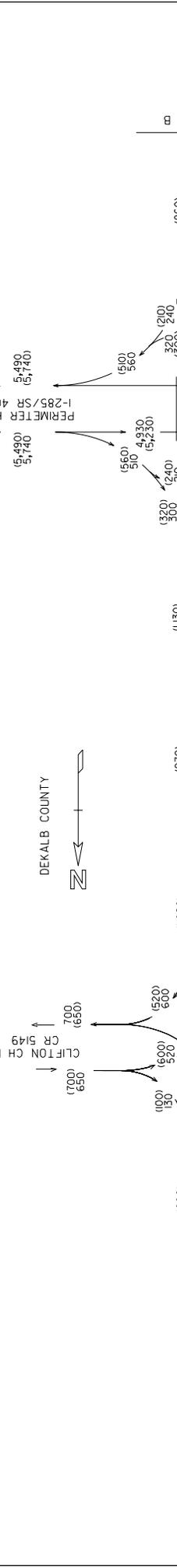
SEE SHEET NO. II
MATCH LINE C

DEKALB COUNTY

CLIFTON CH RD
CR 5149

BOULDERCREST RD
CR 5149

BOULDERCREST RD
CR 5149



T = 6%
S.U. = 4%
COMB. = 2%

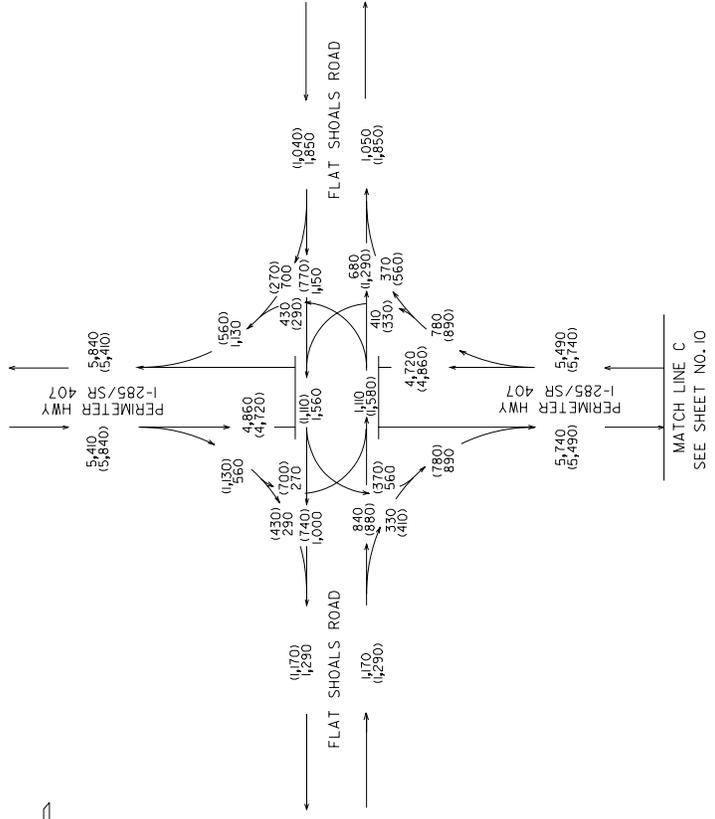
MATCH LINE D
SEE SHEET NO. 12

IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
BOULDERCREST RD
CR 5187
1-285 @
2015 AM DHV = 000
2015 PM DHV = (000)

**PARSONS
BRINCKERHOFF**

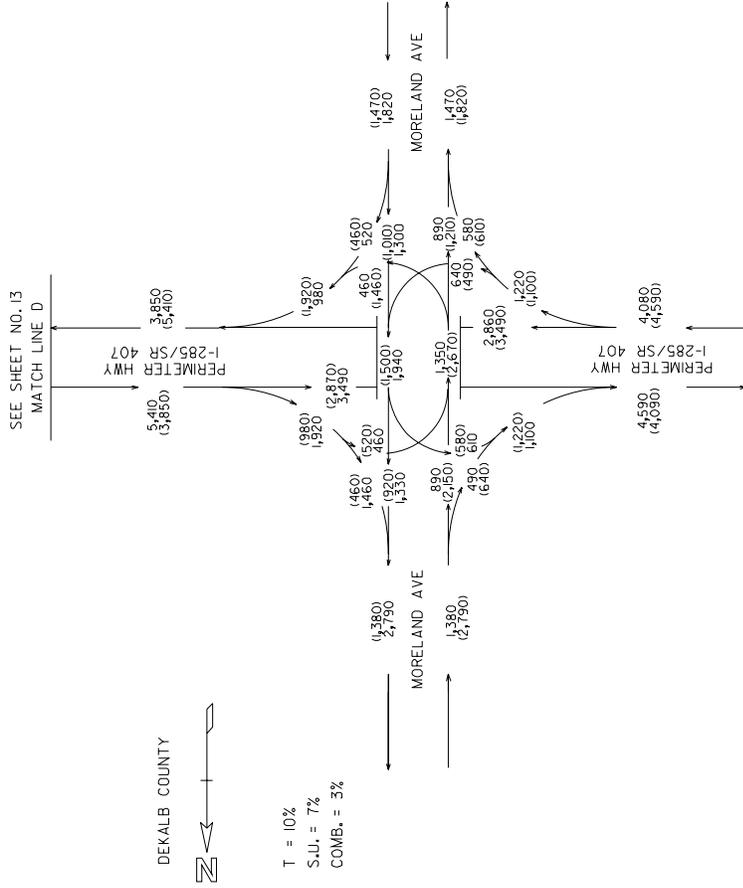


T = 2%
S.W. = 1%
COMB. = 1%



IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
1-285 @
FLAT SHOALS ROAD
2015 AM DHV = 000
2015 PM DHV = (000)
SHEET 11 OF 15





T = 10%
S.J.J. = 7%
COMB. = 3%

IMNH0-0285-01(352)
P.L. # 713300
DEKALB COUNTY
1-285 @
MORELAND AVENUE
2035 AM DHV = 000
2035 PM DHV = 1000
SHEET 15 OF 15

Attachment 5

Conforming plan's network schematics showing thru lanes

Attachment 6

Value Engineering Implementation Letter

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: IMNHO-0285-01 DeKalb **OFFICE:** Engineering Services
P.I. No.: 713300
I-285 @ Bouldercrest Road Interchange **DATE:** April 25, 2012

FROM: Lisa L. Myers, State Project Review Engineer *LLM*

TO: Bobby K. Hilliard, PE, State Program Delivery Engineer
Attn.: Jeremy Busby, PE

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held February 20-23, 2012. Corrected responses were received on April 24, 2012. 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. Please note, if the implementation of a VE recommendation requires a Design Exception or Design Variance, it (DE or DV) must be requested separately.

ALT #	Description	Potential Savings /LCC	Implement	Comments
R-1.0	Use a Collector-Distributor (CD) System in lieu of braided ramps with new single combined bridges on each side of I-285.	Proposed = \$17,306,305 Actual = \$17,213,389	Yes, with modifications	This will be done. However, the design team modified this idea by making Ramp C a two-lane ramp rather than a single lane ramp as shown in the VE Study Report.
R-1.1	Use a Collector-Distributor System in lieu of braided ramps along each side of I-285 with a single combined bridge widening across South River.	\$18,746,269	No	R-1.1 will not be implemented because R-1.0 was selected instead.
R-2.0	Combine exit ramps C & E and F & G and use tight exit flyover ramps for H & D (2 bridges over the river on each side).	\$2,436,097	No	R-1.0 will not be implemented because R-1.0 was selected instead.
R-3.0	Shift new Bouldercrest bridge west and stage construction to eliminate re-alignment work on Bouldercrest Road north of Continental Way and south of I-285.	\$3,149,378	Yes	This will be done.

R-4.0	Eliminate improvements on Bouldercrest Road north of Continental Way.	\$2,506,577	Yes	This will be done.
R-6.0	Incorporate dedicated left turn lane into Industrial Drive and eliminate new connector and improvements at Sugar Creek Golf Drive.	Proposed = \$436,876 Actual = \$581,145	Yes, with modifications	This will be done. However, the Design team recommends deleting improvements on Industrial Drive beyond the radius returns for additional savings.
R-7.0	Eliminate sidewalks along Industrial Drive and Sugar Creek Golf Drive.	\$124,550	No	R-7.0 will not be implemented because R-6.0 was selected instead.
R-10.0	Realign Ramp A to intersect at Continental Way and add Loop Ramp (Ramp F revised) from Bouldercrest to I-285 WB; reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2 lane left turning bay.	Proposed = \$27,978 Actual = (\$44,290) Increase	Yes, with modifications	This will be done for the most part. However, the entrance ramp to I-285 WB from Bouldercrest Road SB will be retained for car and truck access from the Pilot Travel Center.
R-12.0	Reduce Ramp E from two lanes to one.	\$483,761	No	R-12.0 will not be implemented because R-1.0 was selected instead.
R-13.0	Realign Ramp C to intersect at Industrial Drive and add Loop Ramp (Ramp B revised) from Bouldercrest to I-285 EB; reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2 lane left turning bay.	Proposed = \$800,601 Actual = (\$621,510) Increase	No	Ramp D is a two-lane entrance ramp from I-675 which cannot taper into I-285 EB before the point shown for Ramp B to begin its merge also onto I-285 EB. The AASHTO Green Book recommends 300 feet minimum between the end of the first on-ramp and the theoretical gore for the succeeding on-ramp. To avoid this conflict, 2200' of Ramp B needs to remain to connect to I-285 as shown in the original design. The bridge over I-285 would need to be 60' longer and the wall can only be reduced by 1000' which would negate any proposed savings.
R-14.0	Eliminate the improvements along Continental Way.	Proposed = \$407,799 Actual = (\$66,428) Increase	No	Operations at the truck stop have been observed to result in queuing on Continental Way which would impact the Bouldercrest Road/Continental Way intersection. This requires widening Continental Way to a two-lane facility divided by a 14' center turning lane, so the improvements along Continental Way cannot be eliminated.

R-15.0	Limit project scope to EB I-285 intersection with Bouldercrest Road; widen existing bridge and add Whitehall Forest Connector.	\$50,425,682	No	This alternative does not address the current observed issue at the Bouldercrest Road / Continental Way intersection. It also does not address the issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.
R-15.1	Limit project scope to braided ramps, EB I-285 intersection with Bouldercrest Road; widen existing bridge and add Whitehall Forest Connector.	\$17,588,633	No	This alternative does not address the current observed issue at the Bouldercrest Road / Continental Way intersection. It also does not address the issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.

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

Approved:  Date: 4/25/12
 Gerald M. Ross, PE, Chief Engineer

LLM/MJS
 Attachments

- c: Russell McMurry
- Bobby Hilliard/Mike Haithcock/Jeremy Busby
- Paul Liles/Ben Rabun/Bill Duvall/Lyn Clements
- Funmi Adesesan
- Lee Upkins
- Ken Werho/Chris Barrow
- Melissa Harper
- Matt Sanders