

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. #0009825 **OFFICE** Design Policy & Support
ARC Project No. GW -346A
Gwinnett County Project No. F-0781-01
GDOT District 1 - Gainesville
Gwinnett County **DATE** 5/31/2011
I-85 @ CR 3273/Pleasant Hill Road

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

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

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
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BOARD MEMBER - 7th Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

County: Gwinnett
ARC Project Number: GW-346A
Gwinnett County Project Number: F-0781-01
Federal Route Number: None
State Route Number: None
County Route Number: 3723

I-85 North Diverging Diamond Interchange at Pleasant Hill Road

Submitted for approval:

DATE 1/06/11
DATE 3/16/11
DATE 4/29/11
DATE 4/29/11

[Signature]
URS Corporation
Alan R. Chapman
Gwinnett County Department of Transportation
Russell R. Mc Murray
Office Head -- Office of Roadway Design
[Signature]
Project Manager

Recommendation for approval:

DATE 3/30/2011
DATE 4/6/2011
DATE _____
DATE 3/30/2011
DATE _____
DATE 3/22/2011
DATE 5/19/2011
DATE _____

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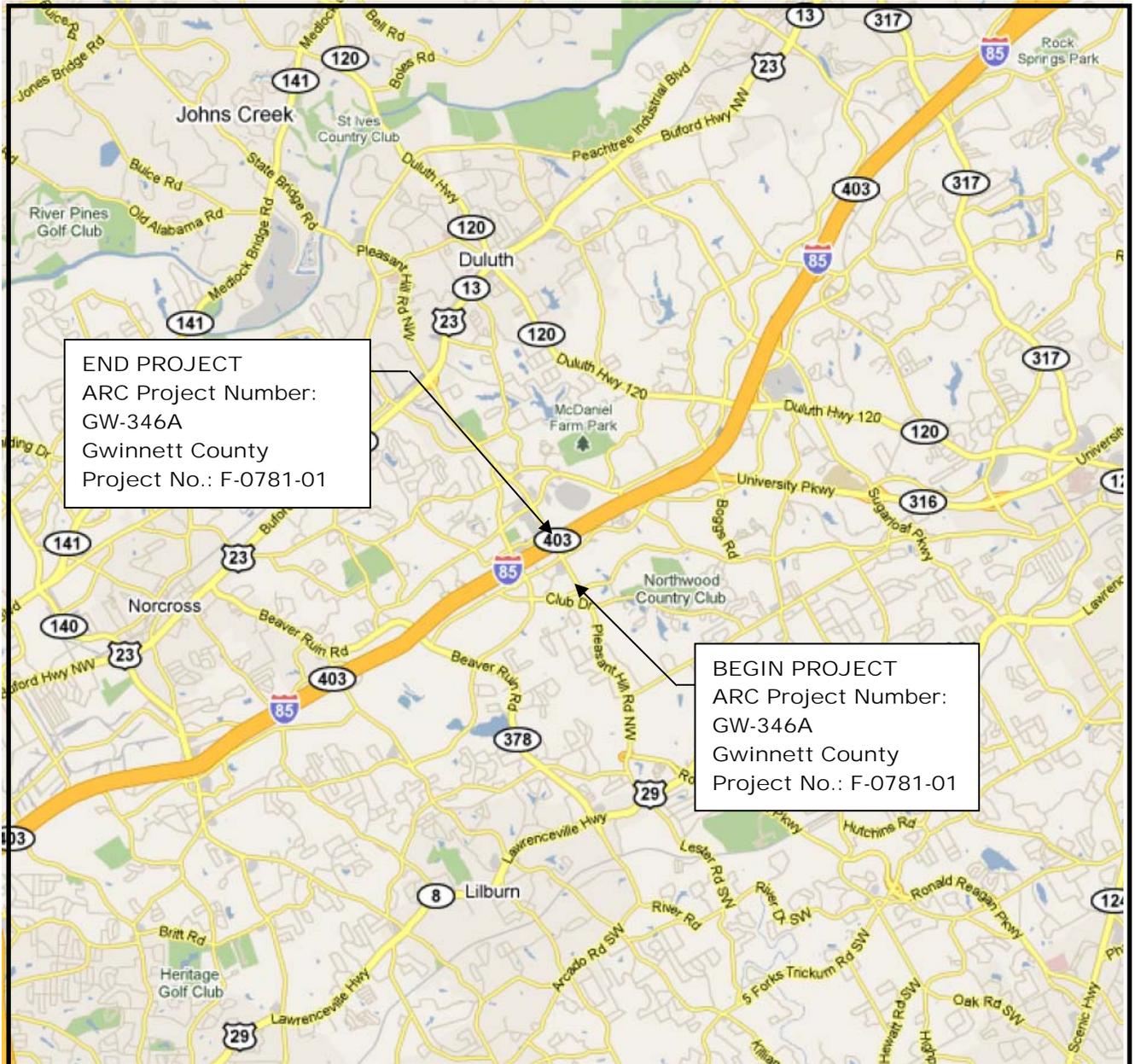
State Transportation Financial Management Administrator

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).

DATE 3/25/2011 * CINDY VAN DYKE T.J.
State Transportation Planning Administrator

* RECOMMENDATION ON FILE

PROJECT LOCATION MAP
ARC Project Number: GW-346A
Gwinnett County Project No.: F-0781-01
County: Gwinnett



Need and Purpose
I-85 @ C.R. 3273/PLEASANT HILL ROAD
DIVERGING DIAMOND INTERCHANGE
ARC Project Number: GW-346A
Gwinnett County Project No.: F-0781-01
GWINNETT COUNTY

PURPOSE

The purpose of the reconstruction of the I-85 Interstate Interchange with CR 3273/Pleasant Hill Road from a conventional diamond configuration to a diverging diamond interchange is to:

- Alleviate traffic congestion; accommodate the need for mobility, access, and goods movement; and better accommodate near future travel demand through the reconfiguration of the bridge over I-85 to allow unobstructed left-turn movements and reduce the number of signal phases.
- Facilitate efficient and improved operation of traffic exiting and entering I-85 by reducing the number of conflict points at the signalized intersections of the ramp terminals; reduce the potential occurrence and severity of vehicle crashes; and reduce the number of signal phases resulting in an increase in overall signal operation.
- Reduce conflicts between pedestrians and vehicles by the installation of raised channelization islands and signal controls at each crosswalk.

NEED

- Deficient levels-of-service (LOS) for vehicular traffic through the corridor.
- Accident rates and injury rates that significantly exceed statewide averages for similar facilities.

(See Attachments for Full Need and Purpose Statement as approved by GDOT Office of Planning on November 18, 2010)

Description of the proposed project: ARC Project Number: GW-346A;Gwinnett County Project No.: F-0781-01 proposes to maintain the existing bridge deck, but remove the existing parapet (barrier) wall and sidewalk. New barrier wall will be constructed into the existing deck. An 8-foot-wide sidewalk will be constructed along the centerline of the bridge, flanked by single-faced barrier walls with two-foot shy distance to the through lanes. On each side of the median will be two 11-foot dedicated through lanes, a 12-foot through/left-turn combination lane, and a 12-foot dedicated left-turn lane.

The direction of the traffic flow on each side of the bridge will be opposite that of the approaches. The northbound traffic will shift to the west side of the bridge median, and the southbound traffic will shift to the east side of the bridge median. The transition between these opposing traffic flows will be accomplished in the ramp intersections through the use of the median islands and channelizing islands at those intersections. These channelizing islands will also serve to separate the traffic turning onto the entrance ramps from opposing directions, and to direct traffic turning opposite directions from the exit ramps onto Pleasant Hill Road. Due to the roadway geometry, coupled with the use of large radius returns at the intersections, the raised concrete channelizing islands will each exceed 2000 square feet in area, thereby providing positive physical and visual clues for the unconventional traffic flow transitions. Advance warning signage will also be installed at the approaches to the transitions to help guide motorists.

Each of the proposed exit ramps off of I-85 will accommodate two left-turn and two right-turn lanes at their approaches to Pleasant Hill Road. Both the left-turn and the right-turn lanes will be signal-controlled. The entrance ramps onto I-85 Northbound and I-85 Southbound will continue to accommodate the two lanes of left-turning traffic, and the right-turning lane will merge just beyond the channelizing islands as it does currently. On the I-85 Northbound entrance ramp, the two lanes will continue until they tie to the collector-distributor lanes. On the I-85 Southbound entrance ramp, the two lanes will extend to the existing ramp meter, where they will then immediately merge to one lane before merging onto I-85.

At each ramp intersection, traffic signals will be relocated, as needed, to align with the new lane configurations. The proposed improvements include revision of the signal timing and phasing to satisfy the requirements of the diverging diamond traffic patterns. Typically, the phasing will be a simplified two-phase arrangement, whereby traffic flowing in each direction along Pleasant Hill Road will alternate with the opposing traffic. That phasing will require that stop bars be located between the ends of the median islands along Pleasant Hill Road, and their respective right-hand channelizing island.

This project proposes to construct sidewalks along the Pleasant Hill Road corridor from Breckinridge Boulevard/Shackelford Road to Venture Drive/Venture Parkway. When the sidewalk reaches the ramp intersections, the pedestrians will be directed, via crosswalks, to cross the right-turn lanes, proceed to the channelizing islands, and then cross the through lanes to the barrier-protected bridge median. The median will provide an 8-foot-wide sidewalk flanked by concrete barriers to protect pedestrians from vehicular traffic. The pedestrians will then reverse that process at the other end of the bridge to access the conventional sidewalk location at the outside edge of the roadway. Pedestrian crossings will be protected by the vehicular signal phases, pedestrian signals, and crosswalks.

As stated, the proposed project consists of the conversion of the interchange to a Diverging Diamond Interchange (DDI). As a result of its geometric configuration, this solution is expected to mitigate the operational deficiencies of the existing interchange, increase capacity, and provide improvements for both pedestrians and vehicles. The proposed geometry allows for the reduction of signal phases to two, thereby reducing the delays that result from the transitions from one phase to another.

With the reduction in delays achieved with the proposed project, the traffic flow rate to the interstate entrance ramps can be expected to increase. If the rate of flow increases on the I-85 Southbound ramp, but the rate of flow through the meter and onto I-85 doesn't change, then vehicles will tend to overfill the

existing storage lane. To avoid this obstruction, the second lane at the top of the ramp will be extended to the ramp meter, thereby providing about 30% more storage capacity. That additional storage should be adequate to allow the ramp meter cycle to remain near its current rate (2010) in the design year (2022) without impacting the operations at the top of the ramp. See Table 8 below. The additional lane will also have no negative effect on I-85 traffic flow.

**Table 8
 AM Peak Hour Southbound Ramp Meter Comparisons**

| Intersection Approach | Existing 2010 | 2022 | |
|--------------------------------------|---------------|----------|-------|
| | | No-Build | Build |
| <i>Southbound On Ramp</i> | | | |
| Average Number of Ramp Meter Flushes | 14.4 | 18.2 | 14.0 |

The safety improvements that the DDI provides should be noted. The proposed geometry will reduce the number of conflict points from 26 to 14. Many of the conflict points that are eliminated are head-on and side-impact conflicts. Since those types of conflicts generally generate the most dangerous and severe accidents, not only is the number of potential accidents expected to decrease, but the potential severity of injuries is expected to drop considerably.

Although the number of vehicle-pedestrian conflict points would not be reduced significantly, a number of those conflict points are no longer accompanied by coincidental vehicle-vehicle conflicts. Since the drivers' focus will no longer be divided between pedestrians and opposing traffic, the drivers' awareness of the pedestrians should improve. The proposed project also includes adding signal controls at all crossings to improve pedestrian access by only permitting crossings during a signal phase.

The DDI configuration is a viable option due to its high cost-to-benefit ratio and minimal impacts to surrounding properties. The lower cost will be realized in both construction, right-of-way, and staging activities as compared to a bridge replacement.

Total length of the project is approximately 0.36 miles as measured along CR 3273/Pleasant Hill Road. The southern terminus of this proposed project is at Breckinridge Boulevard/Shackelford Road. The northern terminus of this proposed project is at Venture Drive/Venture Parkway. Since the intent of the proposed project is to improve operations (i.e. increase the LOS and reduce delays), the termini were established by extending the project only as far as necessary to transition to the existing typical section of each approach. There is no intent to modify, or impact, the physical configuration at any other intersections along Pleasant Hill Road corridor except to modify signal timing, as previously described. The proposed project does not increase traffic when comparing the build scenario to the no-build scenario ADT.

The existing typical section of CR 3273/ Pleasant Hill Road north and south of the proposed project termini is sufficient to handle the projected design year traffic without further improvements. Therefore the proposed project along CR 3273/Pleasant Hill Road does not negatively impact the operations of I-85, nor the overall Pleasant Hill Road corridor.

Is the project located in a PM 2.5 Non-attainment area? X Yes No.

Is the project located in an Ozone Non-attainment area? X Yes No.
Exempt from conformity modeling

PDP Classification: Major Minor X

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

Exempt with FHWA approval of NEPA and Concept

Funding Sources: Local Funds Only

Functional Classification: Urban Principal Arterial

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

Traffic (AADT):

Current Year: (2010) 51,255

Build Year: (2012) 54,770

Design Year: (2020) 72,410

Existing design features:

Pleasant Hill Road (CR 3723) [East of I-85 Interchange]

Typical Section:

- Three (3) 12-foot through lanes (EB)
- Two (2) 12-foot through lanes (WB)
- Two (2) 11-foot left turn lanes (WB)
- One (1) 20-foot center median with 13-foot raised conc. island
- One (1) 11-foot right turn lane (WB)
- 2'-6" curb and gutter (WB & EB)
- 5'-0" sidewalk (EB side only)

Posted speed 45 mph Minimum radius for curve: N/A

Maximum super-elevation rate for curve: N.C. %

Maximum mainline grade: 4.75 %

Maximum cross road grade: 5.09 %

Maximum driveway grade: 10.40 %

Width of right-of-way: Varies 110-160 ft.

Major Structure:

- Existing Bridge: 212' X 114'
- Structure ID No: 135-0073-0
- Suff. Rating: 74.71
- Typical Section:

- One (1) 15-foot through lane (EB)
- One (1) 13-foot through lane (WB)
- One (1) 12-foot through lane (WB & EB)
- Two (2) 11-foot left turn lanes (WB & EB)

- 6'-0" Sidewalk (EB & WB)

Pleasant Hill Road (CR 3723) [West of I-85 Interchange]

- Typical Section:
 - Three (3) 11-foot through lanes (WB)
 - Three (3) 12-foot through lanes (EB)
 - One (1) 12-foot left turn lanes (EB)
 - One (1) 22-foot center median and raised conc. island
 - One (1) 11-foot right turn lane (WB)
 - 2'-6" curb and gutter (WB & EB)
- Posted speed 45 mph Minimum radius for curve: N/A
- Maximum super-elevation rate for curve: NC %
- Maximum mainline grade: 3.36 %
- Maximum cross road grade: 4.11 %
- Maximum driveway grade: 14.50 %
- Width of right-of-way: Varies 110-160 ft.

- Major interchanges or intersections along the project:
 - o I-85 / SR 403 @ CR 3723/Pleasant Hill Road
 - o Venture Road @ CR 3723/Pleasant Hill Road
 - o Breckinridge Boulevard/Shackelford Road @ CR 3723/Pleasant Hill Road

- Existing length of roadway segment and the beginning mile logs for each county segment:
Total length of the project is approximately 0.36 miles and located 100% in Gwinnett County. MP 3.28 to MP 3.64 along CR 3723/Pleasant Hill Road

Proposed Design Features:

The project proposes to convert the existing tight diamond interchange to a Diverging Diamond Interchange (DDI) by removing the existing bridge sidewalk and parapet; retrofitting a doweled-in parapet wall and 8-foot median with concrete barrier, and a 2-foot inside shoulder, and providing four lanes (two lanes 11 feet wide, and two lanes 12 feet wide).

Pleasant Hill Road – East of I-85 Interchange

- Typical Section
 - Three (3) or four (4) varies from 11 feet to 14-foot through lanes (WB)
 - One (1) 11-foot right turn lane onto I-85 NB
 - Three (3) varies from 11 feet to 14-foot through lanes (EB)
 - One (1) variable width raised center median
 - 2'-6" curb and gutter both sides
 - 2'-0" grass stripe (EB only)
 - 4'-0" to 5'-0" sidewalk both sides

- Design Speed Mainline: 25 mph (Speed Zone Reduction)
- Proposed Maximum grade Mainline: Match Existing % Maximum grade allowable 6 %
- Proposed Maximum grade Side Street 9 % Maximum grade allowable 9 %
- Proposed Maximum grade driveway: match existing (varies by location)
- Proposed Minimum radius of curve 250' Minimum radius allowable 198'
- Proposed maximum super elevation rate: -2.0% (normal crown, low speed criteria)

Pleasant Hill Road Bridge over I-85 Interchange

- Typical Section
 - Two (2) 11-foot through lanes (EB)
 - One (1) 12-foot shared lane (through and left) (EB)
 - One (1) 12-foot left turn lane onto I-85 NB on-ramp
 - Two (2) 11-foot through lanes (WB)
 - One (1) 12-foot shared lane (through and left) (WB)
 - One (1) 12-foot left turn lane onto I-85 SB on-ramp
 - 11'-2" center median with concrete barrier
 - 2'-0" shy distance both sides
 - 2-foot inside shoulder both sides
 - 1'-7 1/2" concrete barrier both sides

- Design Speed Ramps: 55_mph

Pleasant Hill Road – West of I-85 Interchange

- Typical Section
 - Three (3) or four (4) varies from 11 feet to 14-feet through lanes (EB)
 - Three (3) varies from 11 feet to 14-feet through lanes (WB)
 - One (1) 11-foot right turn lane onto I-85 SB on-ramp
 - One (1) variable width raised center median
 - 2'-6" curb and gutter both sides
 - 2'-0" grass stripe (WB only)
 - 5'-0" side walk both sides

- Design Speed Mainline: 25_mph (Speed Zone Reduction)
- Proposed Maximum grade Mainline: Match Existing % Maximum grade allowable 6 %
- Proposed Maximum grade Side Street 9 % Maximum grade allowable 9 %
- Proposed Maximum grade driveway 22 %
- Proposed Minimum radius of curve 250' Minimum radius allowable 198'
- Proposed maximum super elevation rate: -2.0% (normal crown, low speed criteria)

- Right-of-Way
 - o Width 110 to 160 Feet
 - o Easements: Temporary (X), Permanent (), Utility (), Other ().
 - o Type of access control: Full (), Partial (), By Permit (X), Other ().
 - o Number of parcels: 5 Number of displacements:
 - o Business: 0
 - o Residences: 0
 - o Mobile homes: 0
 - o Other: 0

- Structures:
 - o The existing bridge, substructure and deck, over I-85/SR 403 will be retained. No structural or rehabilitative changes are anticipated as part of this project. Proposed modifications include removal of existing parapet wall and sidewalk. Construction will also include the new parapet walls (concrete side barrier), raised concrete median with flanking barrier walls, signing and marking and lighting.
 - o Gravity Retaining walls will be constructed:
 - East of I-85 in front of 6207 009

- East of I-85 in front of Parcel ID 6208 006
- West of I-85 in front of Parcel ID 6208 007A and 6208 012

Major intersections:

- I-85 / SR 403 @ CR 3723/Pleasant Hill Road
- Venture Road @ CR 3723/Pleasant Hill Road
- Breckinridge Boulevard/Shackelford Road @ CR 3723/Pleasant Hill Road

Transportation Management Plan Anticipated: YES () NO (X)

Design Exceptions to controlling criteria anticipated:

| | <u>YES</u> | <u>NO</u> | <u>UNDETERMINED</u> |
|--------------------------------|------------|-----------|---------------------|
| DESIGN SPEED: | () | (X) | () |
| LANE WIDTH: | () | (X) | () |
| SHOULDER WIDTH: | () | (X) | () |
| BRIDGE WIDTH: | () | (X) | () |
| HORIZONTAL ALIGNMENT: | (X) | () | () |
| SUPERELEVATION: | () | (X) | () |
| VERTICAL ALIGNMENT: | () | (X) | () |
| GRADE: | () | (X) | () |
| STOPPING SIGHT DISTANCE: | () | (X) | () |
| CROSS SLOPE: | () | (X) | () |
| VERTICAL CLEARANCE: | () | (X) | () |
| LATERAL OFFSET TO OBSTRUCTION: | () | (X) | () |
| STRUCTURAL CAPACITY: | () | (X) | () |

Design Exceptions: Horizontal Alignment

The design speed along Pleasant Hill Road, functionally classified as an Urban Principal Arterial, is 45 mph on both the eastbound and westbound approaches to the I-85 Interchange. The proposed project will reconstruct the existing, conventionally-configured Diamond Interchange to a Diverging-Diamond Interchange. The major controlling element of a DDI (other than vertical alignment) is the design speed of the horizontal alignment (e.g. crossover movements). The crossover movements associated with the proposed project have been designed to meet 25 mph. The placement of the crossovers is largely dependent on the spacing and location of the Interstate Interchange Ramps (i.e. intersections spaced closely together will result in lower horizontal curve radii). The horizontal alignment of the DDI consists of three main interacting elements: 1) crossing angle; 2) tangent length approaching and following the crossover; and 3) curve radii approaching and following the crossover.

1. Crossing Angle

a. Potential mitigation strategies:

- Additional signage indicating “no right turn” or “no left turn” at crossover intersections to clarify permitted movements.
- Enhanced pavement markings, such as directional arrows on opposite side of intersection to guide traffic to appropriate lanes.
- Enhanced pavement markings, such as RPMs and “mini-skips” across intersection for guidance.
- Additional intersection lighting for clarity during night-time operations.

- Upward-oriented “green arrow” on signal installations to indicate straight-ahead movement.

2. Tangent Length

a. Potential mitigation strategies:

- Additional signage indicating reverse curves.
- Enhanced pavement markings, such as RPMs for guidance.
- Select curve radii such that normal crown can be maintained throughout based on design speed and low-speed super elevation criteria.

3. Curve Radii

a. Potential mitigation strategies:

- Additional signage to indicate reverse curves.
- Enhanced pavement markings, such as RPMs for guidance.

Design Variances : None

Environmental concerns

○ Anticipated Permits Required:

- NPDES
- Encroachment Permit: To be issued by GDOT
- Signals Permit: Plan submittal to Gwinnett County for review and comment, then to GDOT for issuance of permit. No warrant studies required as no new signal locations are proposed, only modifications to existing signalized intersections.

○ Environmental Screening

▪ Ecology

- Ephemeral Stream west of I-85 Southbound entrance ramp (No Impacts Expected)
- Intermittent Stream east of Venture Drive (No Impacts Expected)

▪ Archeology

- None

▪ History

- Legacy Oak Tree located on cemetery property east of I-85 Northbound entrance ramp (Local Significance only, but may still be protected under Section 4(f) of the DOT Act) (No Impacts Expected)

▪ Environmental Resource to be Considered/Avoided

- Cemetery bounded by I-85/ SR 403, Pleasant Hill Road, and Breckinridge Boulevard.
- A Cemetery Permit may be required on the project. A determination of the permit requirement will be made during preliminary plan development.

▪ USTs

- Several active gas stations located near/within the project area. (No Impacts Expected)

- P A R meetings, dates and results. *None anticipated.*
- FEMA, USCG, and/or TVA. *None anticipated.*
- Public involvement. PIOH (held February 24, 2011 at Gwinnett Marriot). *Results attached.*
- Local government comments. *N/A*
- Other projects in the area.
 - I-85 HOV lanes to HOT lanes (PI # 0009295, TIP # AR-945A) currently under construction
 - Streetscape Enhancement on Pleasant Hill (PI #'s 0009072 & 0008148) currently in design and R/W acquisition
 - Venture Drive Improvements (Not in TIP) currently in design
 - ATMS Installation on Pleasant Hill (TIP # GW-302; PI # 0006827) currently in design
 - ATMS Installation on I-85 (TIP # GW-344; PI # 110720) currently in design
- Railroads. *N/A*

8 Policy Requirements for an Interchange Modification Report (IMR)

The FHWA Guidance on Interstate Access Requests document provides the requirements for the justification and documentation necessary to substantiate any proposed changes in access to the Interstate System. This policy also facilitates decision making regarding proposed changes in access to the Interstate System in a manner that considers and is consistent with the vision, goals and long-range transportation plans of a metropolitan area, region and State.

The FHWA's decision to approve a request is dependent on the proposal satisfying and documenting the following eight requirements.

- 1) The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands.

The initial VISSIM model analysis of the DDI at the proposed interchange has indicated that the average delay at the interchange is reduced both in the AM and PM. Through modifications to the surface street, the DDI enhances the efficiency of the traffic operations on Pleasant Road, which satisfies this requirement.

- 2) The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access.

The DDI is an alternative improvement on the Pleasant Hill Road interchange that will have minimal (if any) impacts to I-85. The DDI can be constructed requiring only minor modifications to the existing bridge without the need to replace or widen (i.e. sidewalk and barrier reconstruction). With the reduction in delays achieved with the proposed project, the traffic flow rate to the interstate entrance ramps can be expected to increase. If the rate of flow increases on the I-85 Southbound ramp, but the rate of flow through the meter and onto I-85 doesn't change, then vehicles will tend to overfill the existing storage lane. To avoid this obstruction, the second lane at the top of the ramp will be extended to the ramp meter, thereby providing about 30% more storage capacity. That additional storage should be adequate to allow the ramp meter cycle to remain near

its current rate (2010) in the design year (2022) without impacting the operations at the top of the ramp. See Table 8 below. The additional lane will also have no negative effect on I-85 traffic flow.

Table 8
AM Peak Hour Southbound Ramp Meter Comparisons

| Intersection Approach | Existing 2010 | 2022 | |
|--------------------------------------|---------------|----------|-------|
| | | No-Build | Build |
| <i>Southbound On Ramp</i> | | | |
| Average Number of Ramp Meter Flushes | 14.4 | 18.2 | 14.0 |

No change in access to the interstate facility is proposed.

- 3) An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access. The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network.

Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network. Each request must also include a conceptual plan of the type and location of the signs proposed to support each design.

The DDI would have no impact to the function of the I-85 corridor, as it will not change the operations of the existing ramps. The initial VISSIM model has indicated that the DDI should also have no impacts to the operations of the I-85 corridor. The minor impact to the Southbound on-ramp ramp meter will be offset with the additional storage that will be added to the ramp as outline in the response to requirement 3 above.

The VISSIM model analysis of the DDI for the design year (2022) at the proposed interchange has indicated that the efficiency of the traffic operations on Pleasant Hill Road will improve. By virtue of its geometry, the DDI will have lower operating speeds along Pleasant Hill Road. However, the benefits realized by the reduction in delay on the exit ramps far exceeds the losses due to a lower operating speed on Pleasant Hill Road.

Reductions in delay are observed at the ramp terminal intersection locations. LOS is improved from D levels in the 2022 No-Build scenario to C levels in the 2022 Build scenario during the AM peak and LOS is improved from D and E levels in the 2022 No-Build scenario to D and C levels in the 2022 Build scenario during the PM peak.

The results of the VISSIM model analysis can be improved as the signal timing of the diverging diamond signals are further refined. Note that the AM I-85 SB Exit Ramp LOS is reduced from D to E in the design year. These results are due to the following factors:

- The right turn keep moving lane is being eliminated to improve intersection operation.
 - The primary movement along Pleasant Hill Rd in the AM is WB. The signal at the SB ramp is timed to allow for a longer green cycle to accommodate this heavier traffic movement. Since the signal is only a two phase signal, when the thru movement is in the green cycle, the SB I-85 ramp right turn is in a red cycle.
 - The design year AM SB I-85 ramp left turn movement has an improvement in LOS. Another important result is the I-85 NB ramp PM design year improving from LOS F to LOS A. The northbound off ramp commonly experiences queue lengths that extend onto I-85 impacting through movements. The improved level of services for this movement will greatly improve the congestion that is experienced on I-85.
- 4) The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards.

The DDI does not change the access to any of the local streets or the I-85 corridor. The DDI will be constructed to be as unobtrusive as possible to the existing infrastructure. The proposed access will be designed to meet or exceed current standards.

- 5) The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, the applicable provisions of 23 CFR part 450 and the transportation conformity requirements of 40 CFR parts 51 and 93.

The existing interchange is planned for reconstruction to a single point urban interchange, which is the preferred alternative of the IMR completed by Jacobs Engineering. The GDOT project identification number is 0009825 and the TIP number is GW-353. The DDI while not the preferred alternative will provide operational improvements and efficiency improvements to the interchange without the costly reconstruction of the bridge over I-85.

- 6) In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan.

The TIP does not indicate any new or planned interchanges on I-85 adjacent to Pleasant Hill Road in the future. Also, the I-85 corridor in this area already has interchanges spaced approximately 1-3 miles apart, future new interchanges would be unlikely, especially full access interchanges.

- 7) When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements. The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point.

This is not a new access point, but a modification to an existing access point. There is no known planned development accompanying the proposed interchange modifications.

- 8) The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing.

The proposed DDI project will follow GDOT's Plan Development Process (PDP), including NEPA documentation taking place during the preliminary plans phase. For this type of project (i.e. bridge replacement/modification), the anticipated class of action is a categorical exclusion (CE). However, FHWA will make the final decision as to what class of action is appropriate after their review of the concept. Typical requirements for a CE include early coordination and notification for local, state, and federally interested agencies; survey, reporting, and agency review in accordance with Section 106 of the National Historic Preservation Act, the Clean Water Act, the Endangered Species Act, the Migratory Bird Treaty Act, the Farmland Protection Policy Act, and others; and the preparation of the appropriate NEPA document, which must be approved by GDOT and FHWA.

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: Begin: Sept 2010 End: July 2011
- Time to complete prelim. construction plans: Begin: Sept 2010 End: Mar 2011
- Time to complete right-of-way plans: Begin: Mar 2011 End: May 2011
- Time to complete the Section 404 Permit: Begin: N/A End: N/A
- Time to complete final construction plans: Begin: Mar 2011 End: Aug 2011
- Time to complete the purchase of right-of-way: Begin: July 2011 End: Dec 2011
- Other major items affecting project schedule:
- Utility relocations: Begin: Aug 2011 End: Dec 2011

Other alternates considered:

- 1) Alternative 1: No Build was considered as a comparison point to the proposed Build alternate. As demonstrated previously, the existing interchange configuration results in deficient LOS under the current conditions. The existing interchange also exhibits accidents that are caused by the configuration of the existing travel lanes. Based on this data it was concluded that a No-Build alternate could not satisfy the demonstrated needs.
- 2) Alternative 2: This alternative consists of a six-lane bridge with an median sidewalk. The sidewalk is flanked on either side by a concrete barrier wall, which is flanked by a two-foot paved shoulder. On the outside of each median shoulder are four through lanes, and a 2-foot outside shoulder. The outside shoulders are flanked by the newly-constructed barrier-faced parapet wall. This alternative requires no widening of the bridge, thereby minimizing costs and impacts. This configuration would not improve the deficient LOS as they exist under the current conditions. Based on this data it was concluded that alternate 2 could not satisfy the demonstrated needs.

Comments: The design vehicle is WB-50 (WB-67 is accommodated on all through movements and can make all right and left turns with minor encroachments into adjacent lane. Lighting will follow the guidance set forth in Chapter 14 of the GDOT Design Policy Manual. Placement of pedestrians into center walkway will likely require additional lighting.

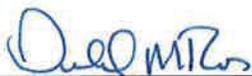
Project Concept Report page 16
ARC Project Number: GW-346A
Gwinnett County Project No.: F-0781-01
County: Gwinnett

Attachments:

1. Detailed Cost Estimates:
 - a. *Construction including Engineering and Inspection.*
 - b. *Completed Fuel & Asphalt Price Adjustment forms*
 - c. Right of Way
2. Bridge Inventory
3. Concept Layout
4. Typical Sections
5. Approved Need and Purpose Statement
6. Capacity Analyses and Accident Summaries (included in Need and Purpose statement)
7. Approved Traffic Diagrams
8. Minutes of Initial Concept Team Meetings (9/1/10)
9. TIP Project Sheet
10. Benefit Cost Analysis
11. Public Information Open House (PIOH results)

Exempt Projects

Concur: 
Director of Engineering

Approve:  Date: 05/27/2011
Chief Engineer

**DIVERGING DIAMOND INTERCHANGE
I-85 at PLEASANT HILL ROAD
GWINNETT COUNTY**

ARC Project Number: GW-346A

Gwinnett County Project Number: F-0781-01

BASE BID ITEMS

ROADWAY ITEMS

| Item Number | Units | Quantity | Item Description | Unit Cost | Extended cost |
|-------------|-------|----------|---|--------------|---------------|
| 150-1000 | LS | 1 | TRAFFIC CONTROL - | \$420,000.00 | \$420,000.00 |
| 207-0203 | CY | 40 | FOUND BK FILL MATL, TP II | \$60.00 | \$2,400.00 |
| 210-0100 | LS | 1 | GRADING COMPLETE - | \$140,000.00 | \$140,000.00 |
| 310-5100 | SY | 6663 | GR AGGR BASE CRS, 10 INCH, INCL MATL | \$16.44 | \$109,539.72 |
| 400-0001 | LS | 1 | ASPHALT CEMENT INDEX (+/-) | \$193,335.00 | \$193,335.00 |
| 402-1802 | TN | 20 | RECYCLED ASPH CONC PATCHING, INCL BITUM MATL & H LIME | \$79.88 | \$1,597.60 |
| 402-1812 | TN | 120 | RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME | \$66.70 | \$8,004.00 |
| 402-4310 | SY | 5696 | RECYCLED ASPH CONC 4" SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | \$13.00 | \$74,048.00 |
| 402-3910 | SY | 21562 | RECYCLED ASPH CONC 1 1/2" SUPERPAVE, GP 1 OR 2 ONLY, INCL BITUM MATL & H LIME | \$6.00 | \$129,372.00 |
| 402-4012 | SY | 5696 | RECYCLED ASPH CONC 2" SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | \$7.00 | \$39,872.00 |
| 413-1000 | GL | 1156 | BITUM TACK COAT | \$2.00 | \$2,312.00 |
| 432-5010 | SY | 15206 | MILL ASPHALT CONC PVMT, VARIABLE DEPTH | \$2.00 | \$30,412.00 |
| 441-0104 | SY | 1024 | CONC SIDEWALK, 4 IN | \$30.72 | \$31,457.28 |
| 441-???? | SY | 283 | CONC "V" GUTTER | \$52.91 | \$14,973.53 |
| 441-0760 | SY | 1735 | CONCRETE MEDIAN, 6 IN | \$32.91 | \$57,098.85 |
| 441-0770 | SY | 301 | CONC MEDIAN, 7 1/2 IN | \$45.00 | \$13,545.00 |
| 441-4030 | SY | 260 | CONC VALLEY GUTTER, 8 IN | \$43.89 | \$11,411.40 |
| 441-5000 | LF | 283 | CONCRETE HEADER CURB, 18 IN | \$20.00 | \$5,660.00 |
| 441-6216 | LF | 15611 | CONC CURB & GUTTER, 8 IN X 24 IN, TP 2 | \$11.96 | \$186,707.56 |
| 444-1000 | LF | 200 | SAWED JOINTS IN EXIST PAVEMENTS - PCC | \$4.32 | \$864.00 |
| 446-1100 | LF | 1866 | PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH | \$4.57 | \$8,527.62 |
| 500-3201 | CY | 276 | CLASS B CONCRETE, RETAINING WALL | \$515.26 | \$142,211.76 |
| 500-9999 | CY | 90 | CLASS B CONC, BASE OR PVMT WIDENING | \$192.85 | \$17,356.50 |
| 515-2020 | LF | 828 | GALV STEEL PIPE HANDRAIL, 2 IN ROUND | \$37.75 | \$31,257.00 |
| 620-0100 | LF | 3198 | TEMPORARY BARRIER, METHOD NO. 1 | \$26.46 | \$84,619.08 |
| 621-???? | LF | 428 | CONCRETE SIDE BARRIER, TYPE 7R | \$425.40 | \$182,071.20 |
| 634-1200 | EA | 27 | RIGHT OF WAY MARKERS | \$93.93 | \$2,536.11 |
| 641-1100 | LF | 362 | GUARDRAIL, TP T | \$52.35 | \$18,950.70 |
| 641-5001 | EA | 2 | GUARDRAIL ANCHORAGE, TP 1 | \$673.15 | \$1,346.30 |
| 641-5012 | EA | 2 | GUARDRAIL ANCHORAGE, TP 12 | \$1,762.58 | \$3,525.16 |

Section Sub Total: **\$1,965,011.37**

DRAINAGE ITEMS

| | | | | | |
|----------|----|-----|---|------------|-------------|
| 500-3101 | CY | | CLASS A CONCRETE | \$310.64 | \$0.00 |
| 500-3800 | CY | | CLASS A CONCRETE, INCL REINF STEEL | \$653.93 | \$0.00 |
| 511-1000 | LB | | BAR REINF STEEL | \$0.85 | \$0.00 |
| 550-1180 | LF | 327 | STORM DRAIN PIPE, 18 IN, H 1-10 | \$36.48 | \$11,928.96 |
| 550-1240 | LF | 625 | STORM DRAIN PIPE, 24 IN, H 1-10 | \$43.46 | \$27,162.50 |
| 550-2180 | LF | 34 | SIDE DRAIN PIPE, 18 IN, H 1-10 | \$33.24 | \$1,130.16 |
| 550-4224 | EA | 1 | FLARED END SECTION 24 IN, STORM DRAIN | \$643.26 | \$643.26 |
| 603-2182 | SY | 15 | STN DUMPED RIP RAP, TP 3, 24 IN | \$44.17 | \$662.55 |
| 603-7000 | SY | 15 | PLASTIC FILTER FABRIC | \$3.80 | \$57.00 |
| 668-1100 | EA | 8 | CATCH BASIN, GP 1 | \$2,613.36 | \$20,906.88 |
| 668-1110 | LF | 16 | CATCH BASIN, GP 1, ADDL DEPTH | \$290.58 | \$4,649.28 |
| 668-2100 | EA | 7 | DROP INLET, GP 1 | \$2,304.95 | \$16,134.65 |
| 668-2110 | LF | 12 | DROP INLET, GP 1, ADDL DEPTH | \$290.58 | \$3,486.96 |
| 668-4300 | EA | 5 | STORM SEWER MANHOLE, TP 1 | \$2,269.90 | \$11,349.50 |
| 668-4311 | LF | 30 | STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 | \$210.85 | \$6,325.50 |

Section Sub Total: **\$104,437.20**

SIGNING AND MARKING

| | | | | | |
|----------|----|------|---|---------|-------------|
| 610-9001 | EA | 20 | REM SIGN | \$20.00 | \$400.00 |
| 611-5551 | EA | 20 | RESET SIGN | \$75.00 | \$1,500.00 |
| 636-1033 | SF | 1000 | HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9 | \$20.24 | \$20,240.00 |
| 636-2070 | LF | 420 | GALV STEEL POSTS, TP 7 | \$8.71 | \$3,658.20 |
| 653-0110 | EA | 26 | THERMOPLASTIC PVMT MARKING, ARROW, TP 1 | \$72.49 | \$1,884.74 |
| 653-0120 | EA | 24 | THERMOPLASTIC PVMT MARKING, ARROW, TP 2 | \$72.49 | \$1,739.76 |

| | | | | | |
|----------|-----|-------|---|---------|------------|
| 653-0130 | EA | 4 | THERMOPLASTIC PVMT MARKING, ARROW, TP 3 | \$95.75 | \$383.00 |
| 653-1501 | LF | 13437 | THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE | \$0.44 | \$5,912.28 |
| 653-1502 | LF | 1248 | THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW | \$0.45 | \$561.60 |
| 653-1704 | LF | 341 | THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE | \$3.47 | \$1,183.27 |
| 653-3501 | GLF | 2605 | THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE | \$0.33 | \$859.65 |
| 653-6004 | SY | 352 | THERMOPLASTIC TRAF STRIPING, WHITE | \$2.71 | \$953.92 |
| 654-1001 | EA | 235 | RAISED PVMT MARKERS, TP 1 | \$10.00 | \$2,350.00 |
| 654-1003 | EA | 235 | RAISED PVMT MARKERS, TP 3 | \$5.00 | \$1,175.00 |
| 657-1054 | LF | 1935 | PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, WHITE, TP PB | \$3.75 | \$7,256.25 |
| 657-6054 | LF | 549 | PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, YELLOW, TP PB | \$3.75 | \$2,058.75 |

Section Sub Total: \$52,116.42

| | | | | | |
|--------------------------|----|---|--|--------------|--------------|
| Signal Quantities | | | | | |
| 647-1000 | LS | 1 | TRAFFIC SIGNAL INSTALLATION NO 1 - TEMPORARY | \$50,000.00 | \$50,000.00 |
| 647-1000 | LS | 1 | TRAFFIC SIGNAL INSTALLATION NO 1 - PERMANENT | \$200,000.00 | \$200,000.00 |
| 647-1000 | LS | 1 | TRAFFIC SIGNAL INSTALLATION NO 2 - TEMPORARY | \$50,000.00 | \$50,000.00 |
| 647-1000 | LS | 1 | TRAFFIC SIGNAL INSTALLATION NO 2 - PERMANENT | \$200,000.00 | \$200,000.00 |
| 647-1000 | LS | 1 | TRAFFIC SIGNAL INSTALLATION NO 2 - PERMANENT | \$40,000.00 | \$40,000.00 |

Section Sub Total: \$540,000.00

| | | | | | |
|-------------|----|---|----------------------------------|--------------|--------------|
| ATMS | | | | | |
| | LS | 1 | ATMS INSTALLATION AND ADJUSTMENT | \$150,000.00 | \$150,000.00 |

Section Sub Total: \$150,000.00

| | | | | | |
|----------------------------------|----|------|---------------------------------|----------|------------|
| PERMANENT EROSION CONTROL | | | | | |
| 603-2181 | SY | 12 | STN DUMPED RIP RAP, TP 3, 18 IN | \$34.43 | \$413.16 |
| 603-7000 | SY | 12 | PLASTIC FILTER FABRIC | \$3.80 | \$45.60 |
| 700-6910 | AC | 1 | PERMANENT GRASSING | \$674.07 | \$674.07 |
| 700-7000 | TN | 2 | AGRICULTURAL LIME | \$60.51 | \$121.02 |
| 700-7010 | GL | 2 | LIQUID LIME | \$20.53 | \$41.06 |
| 700-8000 | TN | 1 | FERTILIZER MIXED GRADE | \$409.57 | \$409.57 |
| 700-8100 | LB | 40 | FERTILIZER NITROGEN CONTENT | \$2.30 | \$92.00 |
| 700-9300 | SY | 1200 | SOD | \$3.56 | \$4,272.00 |
| 716-2000 | SY | 1500 | EROSION CONTROL MATS, SLOPES | \$0.95 | \$1,425.00 |

Section Sub Total: \$7,493.48

| | | | | | |
|----------------------------------|----|------|--|------------|-------------|
| TEMPORARY EROSION CONTROL | | | | | |
| 163-0232 | AC | 1 | TEMPORARY GRASSING | \$283.37 | \$283.37 |
| 163-0240 | TN | 4 | MULCH | \$129.90 | \$519.60 |
| 163-0300 | EA | 4 | CONSTRUCTION EXIT | \$1,148.70 | \$4,594.80 |
| 163-0501 | EA | 0 | CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 1 | \$839.99 | \$0.00 |
| 163-0503 | EA | 0 | CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3 | \$442.20 | \$0.00 |
| 163-0527 | EA | 0 | CONSTRUCT AND REMOVE RIP RAP CHECK DAMS, STONE PLAIN RIP RAP/SAND BAGS | \$78.59 | \$0.00 |
| 163-0528 | LF | 200 | CONSTRUCT AND REMOVE FABRIC CHECK DAM - TYPE C SILT FENCE | \$3.74 | \$748.00 |
| 163-0529 | LF | 200 | CONSTRUCT AND REMOVE TEMPORARY SEDIMENT BARRIER OR BALED STRAW CHECK DAM | \$3.37 | \$674.00 |
| 163-0550 | EA | 16 | CONSTRUCT AND REMOVE INLET SEDIMENT TRAP | \$188.29 | \$3,012.64 |
| 165-0010 | LF | 6000 | MAINTENANCE OF TEMPORARY SILT FENCE, TP A | \$0.53 | \$3,180.00 |
| 165-0030 | LF | 2000 | MAINTENANCE OF TEMPORARY SILT FENCE, TP C | \$0.66 | \$1,320.00 |
| 165-0041 | LF | 0 | MAINTENANCE OF CHECK DAMS - ALL TYPES | \$1.87 | \$0.00 |
| 165-0071 | LF | 0 | MAINTENANCE OF SEDIMENT BARRIER - BALED STRAW | \$0.97 | \$0.00 |
| 165-0085 | EA | 0 | MAINTENANCE OF SILT CONTROL GATE, TP 1 | \$339.92 | \$0.00 |
| 165-0087 | EA | 0 | MAINTENANCE OF SILT CONTROL GATE, TP 3 | \$113.48 | \$0.00 |
| 165-0101 | EA | 4 | MAINTENANCE OF CONSTRUCTION EXIT | \$481.34 | \$1,925.36 |
| 165-0105 | EA | 16 | MAINTENANCE OF INLET SEDIMENT TRAP | \$78.69 | \$1,259.04 |
| 167-1000 | EA | 4 | WATER QUALITY MONITORING AND SAMPLING | \$460.30 | \$1,841.20 |
| 167-1500 | MO | 12 | WATER QUALITY INSPECTIONS | \$685.80 | \$8,229.60 |
| 171-0010 | LF | 6000 | TEMPORARY SILT FENCE, TYPE A | \$1.84 | \$11,040.00 |
| 171-0030 | LF | 2000 | TEMPORARY SILT FENCE, TYPE C | \$2.95 | \$5,900.00 |
| 603-2182 | SY | 0 | STN DUMPED RIP RAP, TP 3, 24 IN | \$44.17 | \$0.00 |
| 643-8200 | LF | 1000 | BARRIER FENCE (ORANGE), 4 FT | \$2.21 | \$2,210.00 |

Section Sub Total: \$46,737.61

LIGHTING

| | | | | | |
|----------|----|---|----------------------------|--------------|--------------|
| 680-9999 | LS | J | HIGHWAY LIGHTING - PROJECT | \$400,000.00 | \$400,000.00 |
|----------|----|---|----------------------------|--------------|--------------|

Section Sub Total: \$400,000.00

LANDSCAPING

| | | | | | |
|----------|----|---|---|-------------|-------------|
| 702-0001 | LS | 1 | MISC LANDSCAPING - CEMETERY | \$54,300.00 | \$54,300.00 |
| 702-9999 | LS | 1 | MISC LANDSCAPING - DEMOLITION NEAR CEMETERY | \$15,000.00 | \$15,000.00 |

Section Sub Total: \$69,300.00

BRIDGE 1

| | | | | | |
|----------|----|-------|---|-------------|-------------|
| 500-1006 | CY | 112 | SUPERSTRUCTURE CONCRETE, CL AA - MEDIAN SIDEWALK AND REPAIR AREAS | \$612.00 | \$68,544.00 |
| 500-2100 | LF | 433 | CONCRETE BARRIER | \$40.00 | \$17,320.00 |
| 500-2110 | LF | 428 | CONC PARAPET, SPCL DES | \$150.00 | \$64,200.00 |
| 511-3000 | LB | 16000 | SUPERSTRUCTURE REINF STEEL - BRIDGE NO. 1 | \$0.60 | \$9,600.00 |
| 514-1000 | LB | 8000 | SUPERSTRUCTURE REINF STEEL, EPOXY COATED - BRIDGE NO. 1 | \$0.81 | \$6,480.00 |
| 540-1202 | LS | 1 | REMOVE PARTS OF BRIDGE PARAPET AND SIDEWALK | \$50,000.00 | \$50,000.00 |
| 610-6872 | EA | 2 | REMOVE STEEL STRAIN POLE | \$1,000.00 | \$2,000.00 |
| 643-1152 | LF | 500 | CH LINK FENCE, ZC COATED, 6 FT | \$30.00 | \$15,000.00 |

Section Sub Total: \$238,144.00

BASE BID TOTAL \$3,568,240.08

| | |
|---------------------------------|-----------------------|
| Total Estimated Cost: | BASE BID ONLY |
| E&C Rate 0.0 % | \$3,568,240.08 |
| Inflation Rate 0.0 % @ 1 Years | \$356,824.01 |
| | \$0.00 |
| Total Construction Cost | \$3,925,064.09 |
| Right Of Way | \$2,946,000.00 |
| Reimb. Utilities (Jackson EMC) | \$100,000.00 |
| Grand Total Project Cost | \$6,971,064.09 |

P.I. Number N/A

County GWINNETT

Project Number Gwinnett County Proj. No: F-0781-01; ARC Proj. No: GW-346A

Special Provision, Section 109-Measurement and Payment
FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)

| | |
|------------------|-------|
| ENTER FPL DIESEL | 2.986 |
| ENTER FPM DIESEL | 6.719 |

| | |
|--------------------|-------|
| ENTER FPL UNLEADED | 2.672 |
| ENTER FPM UNLEADED | 6.012 |

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

| |
|----------------------------|
| INCREASE ADJUSTMENT |
| 125.00% |

| |
|----------------------------|
| INCREASE ADJUSTMENT |
| 125.00% |

| ROADWAY ITEMS | QUANTITY | DIESEL FACTOR | GALLONS DIESEL | UNLEADED FACTOR | GALLONS UNLEADED | REMARKS |
|--|----------|---------------|----------------|-----------------|------------------|---------|
| Excavations paid as specified by Sections 205 (CUBIC YARD) | | 0.29 | | 0.15 | | |
| Excavations paid as specified by Sections 206 (CUBIC YARD) | | 0.29 | | 0.15 | | |
| GAB paid as specified by the ton under Section 310 (TON) | 3648.000 | 0.29 | 1057.92 | 0.24 | 875.52 | |
| Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON) | | 2.90 | | 0.71 | | |
| Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON) | 3780.000 | 2.90 | 10962.00 | 0.71 | 2683.80 | |
| PCC Pavement paid as specified by the square yard under Section 430 (SY) | | 0.25 | | 0.20 | | |

| BRIDGE ITEMS | Quantity | Unit Price | QF/1000 | Diesel Factor | Gallons Diesel | Unleaded Factor | Gallons Unleaded | REMARKS |
|---------------------------------------|----------|------------|---------|---------------|----------------|-----------------|------------------|---------|
| Bridge Excavation (CY) Section 211 | | | | 8.00 | | 1.50 | | |
| Class __ Concrete (CY) Section 500 | | 612.00 | | 8.00 | | 1.50 | | |
| Class __ Concrete (CY) Section 500 | | | | 8.00 | | 1.50 | | |
| Class __ Concrete (CY) Section 500 | | | | 8.00 | | 1.50 | | |
| Superstru Con Class__(CY) Section 500 | 119.00 | | | 8.00 | | 1.50 | | |
| Superstru Con Class__(CY) Section 500 | | | | 8.00 | | 1.50 | | |
| Superstru Con Class__(CY) Section 500 | | | | 8.00 | | 1.50 | | |
| Concrete Handrail (LF) Section 500 | | | | 8.00 | | 1.50 | | |
| Concrete Barrier (LF) Section 500 | 433.00 | 40.00 | 17.3200 | 8.00 | 138.56 | 1.50 | 25.98 | |

| BRIDGE ITEMS | Quantity | Unit Price | QF/1000 | Diesel Factor | Gallons Diesel | Unleaded Factor | Gallons Unleaded | REMARKS |
|---|----------|------------|-----------------|-------------------------|--------------------|-----------------|------------------|---------|
| Stru Steel <u>Plan Quantity</u> (LB) Section 501 | | | | 8.00 | | 1.50 | | |
| Stru Steel <u>Plan Quantity</u> (LB) Section 501 | | | | 8.00 | | 1.50 | | |
| PSC Beams _____ (LF) Section 507 | | | | 8.00 | | 1.50 | | |
| PSC Beams _____ (LF) Section 507 | | | | 8.00 | | 1.50 | | |
| PSC Beams _____ (LF) Section 507 | | | | 8.00 | | 1.50 | | |
| Stru Reinf <u>Plan Quantity</u> (LB) Section 511 | | | | 8.00 | | 1.50 | | |
| Stru Reinf <u>Plan Quantity</u> (LB) Section 511 | | | | 8.00 | | 1.50 | | |
| Bar Reinf Steel (LB) Section 511 | 24000.00 | 0.67 | 16.0800 | 8.00 | 128.64 | 1.50 | 24.12 | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Piling _____ inch (LF) Section 520 | | | | 8.00 | | 1.50 | | |
| Drilled Caisson, _____ (LF) Section 524 | | | | 8.00 | | 1.50 | | |
| Drilled Caisson, _____ (LF) Section 524 | | | | 8.00 | | 1.50 | | |
| Drilled Caisson, _____ (LF) Section 524 | | | | 8.00 | | 1.50 | | |
| Pile Encasement, _____(LF) Section 547 | | | | 8.00 | | 1.50 | | |
| Pile Encasement, _____(LF) Section 547 | | | | 8.00 | | 1.50 | | |
| SUM QF DIESEL= | | | 12287.12 | SUM QF UNLEADED= | | | 3609.42 | |
| DIESEL PRICE ADJUSTMENT(\$) | | | | | \$42,192.74 | | | |
| UNLEADED PRICE ADJUSTMENT(\$) | | | | | \$11,091.03 | | | |

**ASPHALT CEMENT PRICE ADJUSTMENT FOR
TACK COAT(Surface Treatment 125% MAX)**

BITUMINOUS

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

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

ENTER APL

ENTER APM

125.00% INCREASE ADJUSTMENT

Use this side for Asphalt Emulsion Only

| L.I.N. | TYPE | ASPHALT EMULSION (GALLONS) |
|--------|------|----------------------------|
| | | |

TMT =

REMARKS:

Use this side for Asphalt Cement Only

| L.I.N. | TYPE | TACK (GALLONS) |
|----------|-----------|----------------|
| 413-1000 | PG 64-22* | 1156 |

TMT =

REMARKS:

MONTHLY PRICE ADJUSTMENT(\$) \$2,675.22

ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (*ENGLISH 125% MAX*)

DIESEL PRICE ADJUSTMENT(\$) \$42,192.74

UNLEADED PRICE ADJUSTMENT(\$) \$11,091.03

ASPHALT CEMENT PRICE ADJUSTMENT (**BITUMINOUS TACK COAT 125% MAX**) \$2,675.22

400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX \$134,700.00

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(**Surface Treatment 125% MAX**) \$2,675.22

REMARKS:

TOTAL ADJUSTMENTS

\$193,334.20

Preliminary Right of Way Cost Estimate

| | | |
|------------------------|--|---------------------|
| Date: | December 1, 2010 | |
| Project: | I-85 at Pleasant Hill Rd. - DDI | P.I. Number 0009825 |
| Existing/Required R/W: | Varies / Varies | No. Parcels 6 |
| Project Termini: | Venture Drive to Liddell Drive | |
| Project Description: | I-85 at Pleasant Hill Road - Diverging Diamond Interchange | |

Fee Simple:

| | | | | |
|------------------|-----------|------|----------------|------------|
| Heavy Commercial | | | | |
| | 5,544 sf | @ \$ | 18.00 /sf = \$ | 99,792 |
| Large comm. | | | | |
| | 10,007 sf | @ \$ | 14.00 /sf = \$ | 140,098 |
| | | | | \$ 239,890 |

Permanent Construction Easement:

| | | | | |
|------------------|------|------|---------------|-------------|
| Heavy Commercial | | | | |
| | 0 sf | @ \$ | 9.00 /sf = \$ | 0 |
| Large comm. | | | | |
| | 0 sf | @ \$ | 7.00 /sf = \$ | 0 |
| TOTAL | | | | \$ 0 |

Temporary Construction Easement: (10% of fee simple per year x 3 years)

| | | | | |
|------------------|----------|------|---------------|-----------|
| Heavy Commercial | | | | |
| | 1,314 sf | @ \$ | 5.40 /sf = \$ | 7,096 |
| Large comm. | | | | |
| | 2,565 sf | @ \$ | 4.20 /sf = \$ | 10,773 |
| | | | | \$ 17,869 |

Improvements:

| | | | | |
|---------------|---|----|------------------|--|
| 3 Commercial | = | \$ | 30,000 | |
| 0 Residential | = | \$ | | |
| TOTAL | | | \$ 30,000 | |

Relocation:

| | | | | |
|---------------|---|----|-------------|--|
| 0 Commercial | = | \$ | 0 | |
| 0 Residential | = | \$ | 0 | |
| TOTAL | | | \$ 0 | |

Damages:

| | | | | |
|-----------------|-----------|----|-------------------|--|
| Proximity - | 0 Parcels | \$ | 0 | |
| Consequential - | 2 Parcels | \$ | 900,000 | |
| Cost to Cure - | 0 Parcels | \$ | 0 | |
| TOTAL | | | \$ 900,000 | |

SUB-TOTAL **\$ 1,187,759**

| | | | | |
|------------------------|-----|----|------------------|--|
| Net Cost | | \$ | 1,187,759 | |
| Scheduling Contingency | 55% | \$ | 653,267 | |
| Adm/Court Cost | 60% | \$ | 1,104,616 | |
| | | \$ | 2,945,642 | |

Total Cost

\$ 2,946,000

Prepared By : Emory D. Dixon III Reviewed / Approved: _____
 Emory D. Dixon III, Cert. No. 2403 R/W Administrator
 Moreland Altobelli Associates, Inc.

Note: Accuracy of estimate is the sole responsibility of the Preparer.
 Note: The Market Appreciation (40%) is not included in this Preliminary Cost Estimate.

Parameters: Bridge Serial Num

Bridge Inventory Data Listing



Structure ID: 135-0073-0

SUFF. RATING: 74.71

Gwinnett

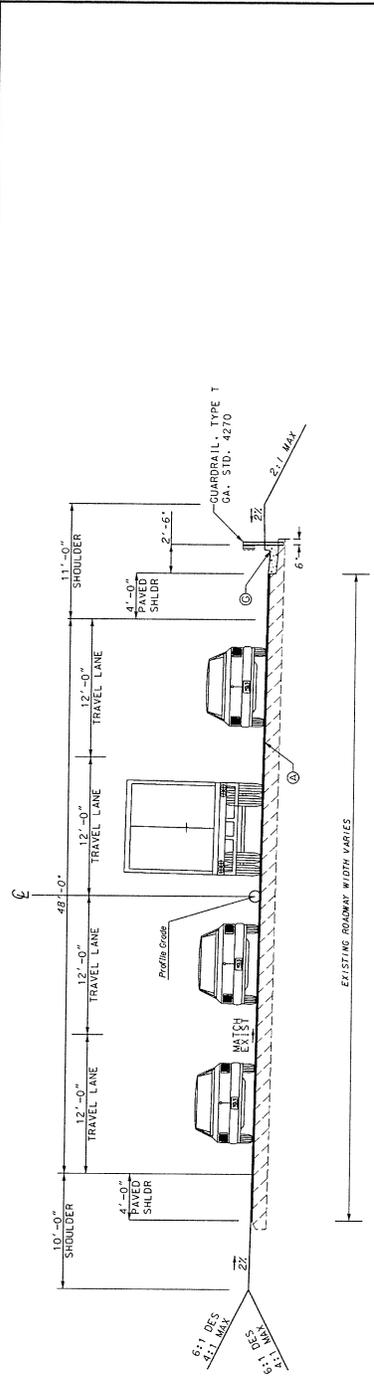
Location & Geography

| Structure ID: | 135-0073-0 | *104 Highway System: | 0 | Signs & Attachments: |
|--------------------------------|----------------------------------|--------------------------------|-------------|-------------------------------|
| 200 Bridge Information: | 06 | *26 Functional Classification: | 14 | 222 Erection Joint Type: |
| *64 Feature Int: | 1-85 | *34s Tolerant Road Type: | S No: 01891 | 242 Deck Drains: |
| *65 Critical Bridge: | 0 | 106 Federal Link Highway: | 0 | 243 Parapet Location: |
| *7A Route No. Carried: | C001956 | *10 Trunk Road: | 0 | Height: |
| *7B Facility/Carried: | PLEASANT HILL RD | *00K School Bus Road: | 0 | Width: |
| 9 Location: | 3.3 MI S CF DULUTH | *17 Benchmark Elevation: | 0000.00 | 236 Curb Height: |
| 2 Det District: | 1 | *18 Datum: | 0 | Curb Material: |
| 207 Year Photo: | 2008 | *19 Bypass Length: | 05 | 239 Handrail: |
| *91 Inspection Frequency: | 24 | *20 Tall: | 3 | *240 Medium Barrier Rail: |
| 92A Fract Crk Insp Freq: | 0 | *21 Maintenance: | 01 | 241 Bridge Median Height: |
| 92B Underwater Insp Freq: | 0 | *22 Over: | 01 | Bridge Median Width: |
| 92C Other Soc Insp Freq: | 0 | *23 Design Load: | 6 | 230 Guardrail Loc. Dir. Rear: |
| *4 Pile Code: | 60360 | *24 Historical Significance: | 5 | Fwd: |
| *5 Inventory Points (1): | 1 | 201 Congressional District: | 07 | Oppo. Dir. Rear: |
| Type: | 4 | *25 Year Constructed: | 1958 | Oppo. Fwd: |
| Designation: | 1 | 106 Year Reconstructed: | 1984 | 244 Approach Slab: |
| Number: | 62343 | *27 Bridge Modum: | 0 | 224 Retaining Wall: |
| Division: | 0 | *28 Slab: | 00 | 233 Posted Speed Limit: |
| *16 Estimate: | 33 57.1342 H/M/S Prefix | *29 Structure Fibred: | 0 | 236 Warning Sign: |
| *17 Longitude: | 84 -7.8018 H/M/S Suffix, MP:0.00 | *30 Navigation Control: | N | 234 Delimitor: |
| 06 Bridge Rating: | 000% Shared/00 | *31 Special Steel Design: | 0 | 235 Hazard Boards: |
| 03 ID Number: | 000000000000000 | *32 Type of Point: | 1 | 237 Utilities Gas: |
| *100 STRAHEE: | 0 | *32 Type of Service Out: | 5 | Water: |
| 15 Bus Highway Network: | 1 | Type of Service In: | 1 | Electric: |
| *1A LRS Inventory Route: | 1352327300 | *34 Movable Bridge: | 0 | Telephone: |
| *1B Sub Inventory Route: | 0 | *35 Type Bridge: | 0 | Sewer: |
| *1C Parallel Structure: | N | 299 Pile Encasement: | 3 | 247 Lighting Street: |
| *1D Direction of Traffic: | 2 | *43 Structure Type Main: | 4-02 | Navigation: |
| *2A1 Road Inventory Mile Post: | 000.87 | 45 No Spans Main: | 0/04 | Aerial: |
| *20K Inspection Area: | 1 | 44 Structure Type Appr: | 0 00 | *248 County Continuity No.: |
| Engineer's Initials: | SAAI | 46 No Spans Appr: | 0000 | |
| Location ID No: | 135-0243F-500.87N | 226 Bridge Curve Horiz: | 0 Vert: 1 | |
| | | 111 pier Protection: | 0 | |
| | | 107 Deck Structure Type: | 1 | |
| | | 106 Weaving Structure Type: | 1 | |
| | | Members Type: | 0 | |
| | | Deck Protection: | 8 | |



LEGEND
 PROPOSED RETAINING WALL
 PROPOSED ASPHALT
 PROPOSED FLAG

WINNETT COUNTY
 GEORGIA
URS
 CONSULTING ENGINEERS
 1000 PHOENIX AVENUE, SUITE 1000
 ATLANTA, GA 30329
 TEL: 404.521.4000
 FAX: 404.521.4001
 WWW.URS.COM



TANGENT SECTION NO. 6

APPLIES TO:
 RAMP A
 MILL & INLAY
 STA. 201+50.00 TO STA. 202+08.35

ALLOWABLE RANGES TABLE
 FOR THE PERCENTAGES THAT ARE ADJUSTED TO BEST FIT
 EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS.

| A. NORMAL CROWN | |
|--|--|
| SECTION WITH GRADES/SECTION WITH GRADES 0.5% OR GREATER LESS THAN 0.5% | 1.5% - MINIMUM 2.0% - DESIRABLE 2.5% - MAXIMUM |
| SECTION WITH GRADES/SECTION WITH GRADES LESS THAN 0.5% | 1.5% - MINIMUM 2.0% - DESIRABLE 2.5% - MAXIMUM |

B. SUPERELEVATION RATE
 IN RAMP OR SE RATE EXISTING IN FIELD,
 WHICHEVER IS GREATER.

| RATE OF CHANGE | CORRESPONDING PERCENTAGE IN GRADE BETWEEN POINT POINT AND EDGE OF PAVEMENT |
|---------------------------------|--|
| MINIMUM DESIRABLE MAXIMUM | 0.50% 0.50% 0.33% |

C. SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT
 TO FULL SE)

| MINIMUM | DESIRABLE | MAXIMUM |
|---------|-----------|---------|
| 1000 | 1000 | 1500 |

D. POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE
 CURVES

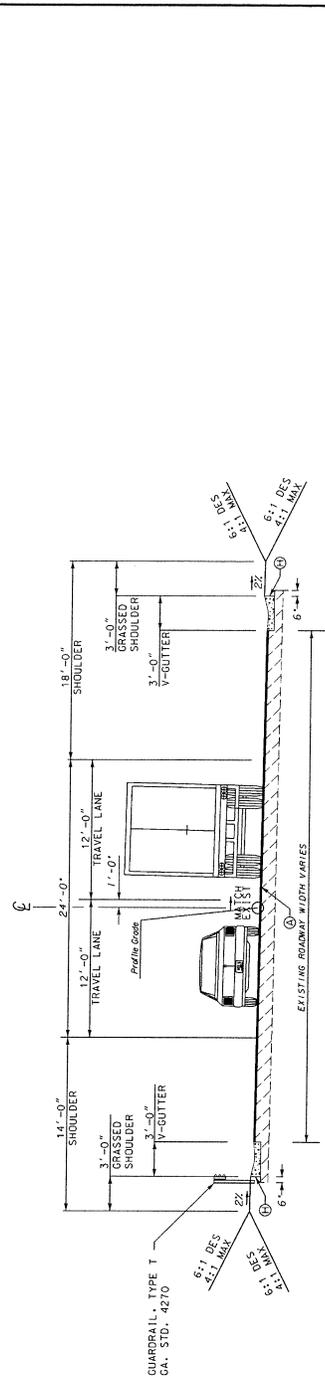
| SIZE OF TRANSITION INSIDE CURVE - MAXIMUM | PERCENTAGE OF TRANSITION INSIDE CURVE - MINIMUM | 20% OF TRANSITION INSIDE CURVE - MAXIMUM |
|---|---|--|
| 1000 | 1000 | 1500 |

NOTE: CROWN WIDE-OUT SHALL BE AT THE SAME RATE AS THE SE
 TRANSITION.

E. SHORTENING OF SUPERELEVATION TRANSITION LENGTH AT THE END OF A
 TRANSITION SHALL BE ACCORDING TO THE FOLLOWING AND THE
 MINIMUM LENGTH EQUAL TO THE SPEED DESIGN DIVIDED BY 5.

TANGENT SECTION NO. 7

APPLIES TO:
 RAMP B
 MILL & INLAY
 STA. 301+34.21 TO STA. 301+70.00

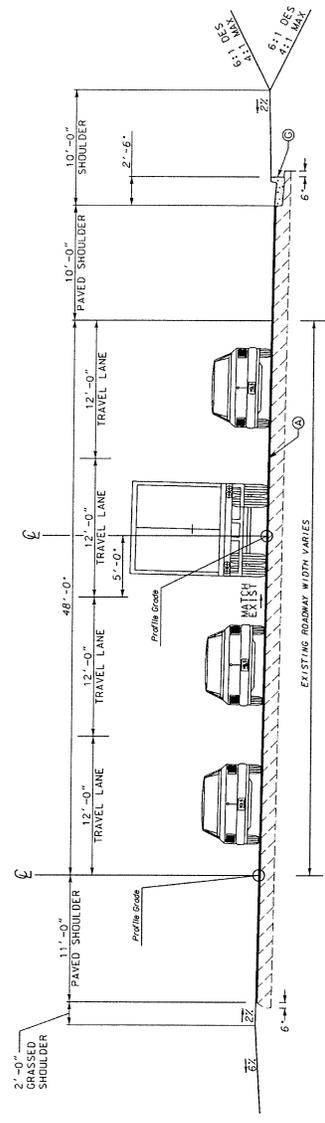


TANGENT SECTION NO. 7

APPLIES TO:
 RAMP B
 MILL & INLAY
 STA. 301+34.21 TO STA. 301+70.00

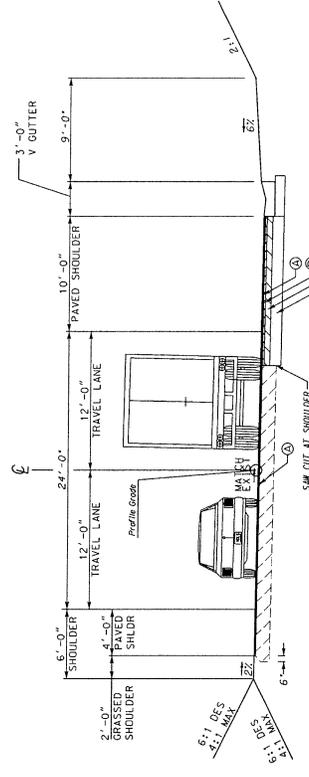
- REQUIRED PAVEMENT**
- ① ASPHALTIC CONCRETE 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL ??? LB/SY
 - ② ASPHALTIC CONCRETE 19 MM SUPERPAVE, GP 1 OR 2 INCL BITUM MATL & H LIME ??? LB/SY
 - ③ ASPHALTIC CONCRETE 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME ??? LB/SY
 - ④ SHADED AGGREGATE BASE, ?? INCH INCL MATL
 - ⑤ ASPHALTIC CONCRETE LEVELING, INCL BITUM MATL (AS REQ'D)
 - ⑥ 8" X 30" CONC. CURB & GUTTER, GA. STD. 9032 B, TYPE 7
 - ⑦ 8" X 30" CONC. CURB & GUTTER, GA. STD. 9032 B, TYPE 2
 - ⑧ 10-1/2" X 36" CONC. V-GUTTER, GA. DET. D-33
 - ⑨ CONC. MEDIAN PAVING, 4" THK, INTEGRAL WITH TIE BARS, TYPE 2 FACE, GA. STD. 9032B

- SLOPES AS FOLLOWS:**
- △ SLOPE 6% OR RATE OF S.E. WHICHEVER IS GREATER
 - S.E. RATE OF 2% USE 6%
 - S.E. RATE OF 3% USE 5%
 - S.E. RATE OF 4% USE 4%
 - S.E. RATE OF 5% USE 3%
 - S.E. RATE OF 6% USE 2%



TANGENT SECTION NO. 9

APPLIES TO:
RAMP C
STA. 402+00.00 TO STA. 402+40.49



TANGENT SECTION NO. 8

APPLIES TO:
RAMP D
STA. 501+49.79 TO STA. 514+74.27

- REQUIRED PAVEMENT**
- Ⓐ ASPHALTIC CONCRETE 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL ??? LB/YS
 - Ⓑ ASPHALTIC CONCRETE 19 MM SUPERPAVE, GP 1 OR 2 INCL BITUM MATL & H LIME ??? LB/YS
 - Ⓒ ASPHALTIC CONCRETE 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME ??? LB/YS
 - Ⓓ GRADED AGGREGATE BASE, ?? INCH INCL MATL
 - Ⓔ ASPHALTIC CONCRETE LEVELING, INCL BITUM MATL (AS REQ'D)
 - Ⓕ 8" X 30" CONC. CURB & GUTTER, GA. STD. 9032 B, TYPE 7
 - Ⓖ 8" X 30" CONC. CURB & GUTTER, GA. STD. 9032 B, TYPE 2
 - Ⓗ 10-1/2" X 36" CONC. V-GUTTER, GA. DET. D-23
 - Ⓘ CONC. MEDIAN PAVING, 4" THK, INTEGRAL WITH TIE BARS, TYPE 2 FACE, GA. STD. 9032B

- SLOPES AS FOLLOWS:**
- △ SLOPE 6% OR RATE OF S.E., WHICHEVER IS GREATER
 - S.E. RATE OF 2% USE 6%
 - S.E. RATE OF 3% USE 5%
 - S.E. RATE OF 4% USE 4%
 - S.E. RATE OF 5% USE 3%
 - S.E. RATE OF 6% USE 2%

URS
400 NORTHPARK TOWER CENTER
900 ATLANTA, GEORGIA 30328
TEL: (678) 808-8800 FAX: (678) 808-8400

REVISION DATES

GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS

1-85 DIVERGING DIAMOND INTERCHANGE @ PLEASANT HILL RD

DATE: 11-11-11
5-005

Need and Purpose
I-85 @ C.R. 3273/PLEASANT HILL ROAD
DIVERGING DIAMOND INTERCHANGE
ARC Project Number: GW-346A
Gwinnett County Project Number: F-0781-01
GWINNETT COUNTY

PURPOSE

The purpose of the reconstruction of the I-85 Interstate Interchange with CR 3273/Pleasant Hill Road from a conventional diamond configuration to a diverging diamond interchange is to:

- Alleviate traffic congestion; accommodate the need for mobility, access, and goods movement; and better accommodate near future travel demand through the reconfiguration of the bridge over I-85 to allow unobstructed left-turn movements and reduce the number of signal phases.
- Facilitate efficient and improve operation of traffic exiting and entering I-85 by reducing the number of conflict points at the signalized intersections of the ramp terminals; reduce the potential occurrence and severity of vehicle crashes; and reduce the number of signal phases resulting in an increase in overall signal operation.
- Reduce conflicts between pedestrians and vehicles by the installation of raised channelization islands and signal controls at each crosswalk.

NEED

- Deficient levels-of-service (LOS) for vehicular traffic through the corridor.
- Accident rates and injury rates that significantly exceed statewide averages for similar facilities.

Background

The proposed Project No. GW-346A is included in the approved ARC TIP and proposed to reconstruct the existing tight diamond interchange to a diverging diamond interchange at Pleasant Hill Road and I-85. The proposed project is part of a partnership between the Gwinnett Place Community Improvement District (CID) and Gwinnett County to improve mobility within the CID service area.

These improvements would not restrict the implementation of the long range transportation plan for this region. The proposed project is an interim project with a design year of 2022. The proposed project is considered a short-term improvement to provide operational benefits to the corridor until the future re-construction of the Pleasant Hill Road at I-85 interchange is undertaken. As such, this project will be developed in a way that considers and accommodates the future project to the extent reasonable. The future project as recommended by the Interchange Modification Report completed by Jacobs Engineering in October 2008 is a Single Point Urban Interchange.

CR 3723/Pleasant Hill Road is a vital east-west corridor through central Gwinnett County providing access to US 23/SR 13, Satellite Boulevard, Ronald Reagan Parkway, I-85, SR 864, and US 29/SR 8. The corridor provides direct access to the City of Duluth to the west, and to the Cities of Lilburn and Snellville to the east. The corridor is bounded for miles by retail, commercial, and light industrial businesses. The area surrounding the project site is heavily commercialized and provides access to a large shopping mall (Gwinnett Place Mall), several shopping centers, office/industrial parks, car dealerships, and restaurants lying just off of the immediate corridor.

The overall project objective is to address current operation deficiencies and accommodate future traffic volumes in the interchange area. Mobility and access will be improved by the reconstruction of the existing, conventional diamond interchange to a diverging diamond interchange configuration. Operational efficiency, and capacity will be improved by the proposed work, even though no additional lanes are proposed. The proposed roadway's horizontal and vertical alignments will very closely mimic the existing conditions, with the exception of minor horizontal shifts at the exit and entrance ramps. The project will also reduce the conflicts between pedestrians and vehicles by adding signal controls at all crossings.

Land Use

The properties immediately bounding the proposed project consists entirely of retail businesses, with the exception of White Chapel Cemetery in the northeast quadrant.

These properties will be impacted by required acquisitions of right-of-way and easements; the impacts are expected to be relatively minor. The Evolution Home Theater property will experience a reduction in its parking capacity, and the cemetery may experience some encroachment along its boundary with Pleasant Hill Road. A cemetery permit may be required for this encroachment.

The future land use in the area includes redevelopment of previously developed sites. Several locations within the Gwinnett Place CID have been identified by Gwinnett's redevelopment task force as jumpstart potential properties including Malls Corners Assemblage and Santa Fe Mall. Other area's surrounding the project area could see potential redevelopment as the Gwinnett Place CID experiences revitalization.

The proposed project is anticipated to have minor impact on property access.

Existing Conditions

Currently, the Pleasant Hill Road corridor, in the vicinity of the I-85 at CR3273/Pleasant Hill Road interchange, consists of an urban six-lane, divided, roadway with three through lanes in each direction. The interchange is a standard tight urban diamond interchange with CR 3273/Pleasant Hill Road crossing over I-85 on a 4-span, 114-foot wide (100-foot roadway width) by 212-foot long, 8-lane undivided bridge, with two through lanes and two left-turn lanes in each direction. The left-turn lanes on the bridge and approaches service Pleasant Hill Road traffic turning onto the I-85 entrance ramps. The 2010 Annual Average Daily Traffic (AADT) for the Pleasant Hill Road at I-85 is 52,255. The 2022 AADT for the Pleasant Hill Road at I-85 is 72,410.

In the southeast quadrant, the left-most through lane transitions to one of the left-turn lanes. At the northwest quadrant, the right-most through lane converts to a dedicated right-turn lane. In both the northeast and southwest quadrants, the right-most right-turn lane on the exit ramps form the third through lane along Pleasant Hill Road. The two right-turn lanes are divided by splitter (channelizing) islands, thereby permitting the right-most turn lane to flow freely, and controlling the left-most right-turn lane movements with the traffic signal at each intersection.

Both exit ramps off of I-85 carry four lanes on their approaches to Pleasant Hill Road, with two dedicated right-turn and two dedicated left-turn lanes each. Both entrance ramps leading to I-85 accommodate the two left-turning lanes as well as the island-separated right-turn lane that must immediately merge.

Pleasant Hill Road is flanked by 5-foot-wide sidewalks on both shoulders throughout the corridor, and they continue across the bridge with a 6-foot-wide, raised concrete sidewalk. The crosswalks existing through the intersections at the ramps are relatively long due to the number (three or four) of lanes, the splitter islands, and the long skew created by the large outside pavement radii.

There are several heavily-traveled cross streets that intersect with Pleasant Hill Road within approximately 1000 feet of the interchange. To the north, Venture Drive/Venture Parkway services retail and commercial properties on both sides of Pleasant Hill Road. Gwinnett Place Drive provides one of the major access routes into the Gwinnett Place Mall shopping center and surrounding retail establishments. To the south, East Liddell Road provides access to two major chain stores and other smaller businesses, and also to the south, Breckinridge Boulevard/Shackelford Road provides access to a large hotel, office and industrial parks, numerous other businesses, and connectivity to other major arterials in the area.

The existing right-of-way along Pleasant Hill Road varies from approximately 110 to 160 feet. The existing right-of-way along this section of the I-85 corridor generally ranges from 300 to 320 feet; however it flares to approximately 385 feet at Pleasant Hill Road to accommodate the flared ramps and bridge. The posted speed limit is 45 mph along the Pleasant Hill Corridor, and 65 mph along the I-85 corridor.

Deficient Level of Service (LOS)

Much of the delays and operational deficiency is attributable to the extended left-turn queues turning onto, and off of, the ramps, the high number of signal phases required for a diamond interchange, and the close proximity of the two ramp intersections.

The evaluation of existing year (2010) AM and PM peak hour traffic reveals the intersections with Pleasant Hill Road currently operate at a unacceptable LOS as shown in Table 1.

The model analysis of the DDI for the design year (2022) at the proposed interchange has indicated, as shown in Table 2, 3, and 4, that the efficiency of the traffic operations on Pleasant Hill Road will improve. By virtue of its geometry, the DDI will have lower operating speeds along Pleasant Hill Road. However, the benefits realized by the reduction in delay on the exit ramps far exceeds the losses due to a lower operating speed on Pleasant Hill Road.

**Table 1
Existing Year 2010
Intersection Level of Service (secs/veh)**

| Intersection Approach | AM Peak Hour | PM Peak Hour |
|------------------------------|--------------|--------------|
| Pleasant Hill Road @ Venture | A (4.0) | C (32.4) |
| Pleasant Hill Road @ I-85 SB | C (21.0) | C (32.7) |
| Pleasant Hill Road @ I-85 NB | C (34.2) | D (35.2) |
| Pleasant Hill @ Breckinridge | C (33.4) | D (42.6) |

Table 2
Design Year 2022
Intersection Level of Service (secs/veh)

| Intersection Approach | AM Peak Hour | | PM Peak Hour | |
|------------------------------|--------------|----------|--------------|----------|
| | No Build | Build | No-Build | Build |
| Pleasant Hill Road @ Venture | B (16.3) | A (9.7) | E (65.1) | D (39.6) |
| Pleasant Hill Road @ I-85 SB | D (43.0) | C (32.1) | D (49.6) | D (37.8) |
| Pleasant Hill Road @ I-85 NB | D (39.1) | C (28.3) | E (55.3) | C (21.9) |
| Pleasant Hill @ Breckinridge | F (82.7) | E (78.8) | E (61.3) | E (56.1) |

Table 3
Pleasant Hill Road Diverging Diamond Interchange Improvements
Pleasant Hill Road @ I-85 SB Ramps
Intersection Level of Service (secs/veh)

| Intersection Approach | AM Peak Hour | | PM Peak Hour | |
|--------------------------------|---------------|------------|---------------|------------|
| | No Build 2022 | Build 2022 | No-Build 2022 | Build 2022 |
| Pleasant Hill Road WB Approach | C (23.2) | B (15.8) | D (37.6) | B (16.1) |
| Pleasant Hill Road EB Approach | F (88.0) | B (16.1) | E (63.6) | E (62.5) |
| I-85 SB Exit Ramp Approach | D (39.6) | E (68.7) | D (45.7) | C (32.9) |
| Total | D (43.0) | C (32.1) | D (49.6) | D (37.8) |

Table 4
Pleasant Hill Road Diverging Diamond Interchange Improvements
Pleasant Hill Road @ I-85 NB Ramps
Intersection Level of Service (secs/veh)

| Intersection Approach | AM Peak Hour | | PM Peak Hour | |
|--------------------------------|---------------|------------|---------------|------------|
| | No Build 2022 | Build 2022 | No-Build 2022 | Build 2022 |
| Pleasant Hill Road WB Approach | D (38.4) | C (22.9) | E (64.1) | C (22.8) |
| Pleasant Hill Road EB Approach | C (30.1) | D (35.5) | C (25.3) | C (31.8) |
| I-85 NB Exit Ramp Approach | D (54.5) | C (28.2) | F (105.5) | A (9.6) |
| Total | D (39.1) | C (28.3) | E (55.3) | C (21.9) |

Note that reductions in delay are observed at the targeted ramp terminal intersection locations. LOS is improved from D levels in the 2022 No-Build scenario to C levels in the 2022 Build scenario during the AM peak and LOS is improved from D and E levels in the 2022 No-Build scenario to D and C levels in the 2022 Build scenario during the PM peak.

Tables 3 and 4 also demonstrate the operational improvements of individual movements that are recognized at the ramp termini. These results can be improved as the signal timing of the diverging diamond signals are further refined. Note that the AM I-85 SB Exit Ramp LOS is reduced from D to E in the design year. These results are due to the following factors:

- The right turn keep moving lane is being eliminated to reduce crashes and crash severity.
- The primary movement along Pleasant Hill Rd in the AM is WB. The signal at the SB ramp is timed to allow for a longer green cycle to accommodate this heavier traffic movement. Since the signal is only a two phase signal, when the thru movement is in the green cycle, the SB I-85 ramp right turn is in a red cycle.
- The design year AM SB I-85 ramp left turn movement has an improvement in LOS.

Another important result is the I-85 NB ramp PM design year improving from LOS F to LOS A. The northbound off ramp commonly experiences queue lengths that extend onto I-85 impacting through movements. The improved level of services for this movement will greatly improve the congestion that is experienced on I-85.

Based on the 10-year design traffic period, a benefit/cost ratio of 28.77 is achieved through a reduction in travel times through the project limits. This calculation includes the impacts on commercial time savings based on 9.8% truck traffic.

Accident History

Crash data from 2006 through 2009 along Pleasant Hill Road corridor from Venture Drive to Breckinridge Boulevard was provided by Gwinnett County. This analysis included summarizing the number of accidents, fatalities and injuries. The crash analysis determined that between Venture Drive and Breckinridge Boulevard along Pleasant Hill Road there were 184 crashes and 27 injuries. The results of the crash analysis are presented in Table 5 and Table 6.

Table 5 summarizes the number of accidents, injuries, and fatalities for approximate project limits along Pleasant Hill Road. The rates determined for accidents, injuries, and fatalities were based on 100,000,000 vehicle miles traveled. This data was compared to the Statewide Average Rates provided by GDOT for an Urban Principal Arterial, which is the functional classification for Pleasant Hill Road in the vicinity of the I-85 interchange.

Table 5

| GDOT Crash History | | | | | | | | | |
|--|--------------------------------|-----------------------|----------------------|-----------------------------|--------------------------|-------------------------|--|--------------------------|-------------------------|
| Pleasant Hill Road from Venture Drive to Breckenridge Boulevard | | | | | | | | | |
| Year | Study Corridor Quantity | | | Study Corridor Rates | | | Georgia Statewide Average Rates | | |
| | Total Crashes | Injury Crashes | Fatal Crashes | Total Crash Rate | Injury Crash Rate | Fatal Crash Rate | Total Crash Rate | Injury Crash Rate | Fatal Crash Rate |
| 2007 | 179 | 32 | 0 | 2373 | 424 | 0 | 519 | 126 | 1.42 |
| 2008 | 161 | 35 | 0 | 2224 | 484 | 0 | 470 | 114 | 1.03 |
| 2009 | 131 | 18 | 0 | 1839 | 253 | 0 | 369 | 92 | 0.82 |

The proposed geometry of the DDI will reduce the number of conflict points from 26 to 14. Many of the conflict points that are eliminated are head-on and side-impact conflicts. Since those types of conflicts generally generate the most dangerous and severe accidents, not only is the number of potential accidents expected to decrease, but the potential severity of injuries is expected to drop considerably. Additionally, the introduction of the pairs of curves along Pleasant Hill Road is expected to provide some traffic calming benefit, thereby reducing the average speed, in turn reducing the severity of any accidents that might occur.

In addition, by reducing the number of signal phases, the DDI will reduce the number of rear end collisions. The proposed project will also eliminate the trap left turn lanes both eastbound and westbound which should reduce the number of sideswipe collisions.

**Table 6
Pleasant Hill Road Diverging Diamond Interchange Improvements**

| Accident History | | | |
|---|-----------------|-------------------|-----------------|
| Pleasant Hill Road between Venture Drive and Breckinridge Boulevard | | | |
| YEAR | No. of Accident | No. of Fatalities | No. of Injuries |
| 2006 | 61 | 0 | 7 |
| 2007 | 44 | 0 | 8 |
| 2008 | 43 | 0 | 6 |
| 2009 | 36 | 0 | 6 |

**Table 7
Pleasant Hill Road Diverging Diamond Interchange Improvements**

| Intersection Accident History | | | | | | |
|---|---------------------|-----------|-----------|-----------|-----------|-----------|
| Pleasant Hill Road between Venture Drive and Breckinridge Boulevard | | | | | | |
| Intersection of Pleasant Hill Road at | Manner of Collision | 2006 | 2007 | 2008 | 2009 | Total |
| Venture Drive | Sideswipe | 4 | 5 | 2 | 3 | 14 |
| | Rear End | 16 | 14 | 12 | 5 | 47 |
| | Right Angle | 2 | | 1 | 3 | 6 |
| | Left Turn | | | | | |
| | Lost Control | | | | | |
| | Head On | | | | | |
| Total | | 22 | 19 | 15 | 11 | 67 |
| I-85 SB Ramp | Sideswipe | 8 | 4 | | 1 | 13 |
| | Rear End | 8 | 3 | 5 | 8 | 24 |
| | Right Angle | | | | 1 | 1 |
| | Left Turn | | | | | |
| | Lost Control | | | | | |
| | Head On | | | | | |
| Total | | 16 | 7 | 5 | 10 | 38 |
| I-85 NB Ramp | Sideswipe | 3 | 2 | | 1 | 6 |
| | Rear End | 6 | 10 | 4 | 3 | 23 |
| | Right Angle | | 1 | | | 1 |
| | Left Turn | | | | | |
| | Lost Control | | | | | |
| | Head On | | | | | |
| Total | | 9 | 13 | 4 | 4 | 30 |

| | | | | | | |
|------------------------|--------------|----|----|----|----|----|
| Breckinridge Boulevard | Sideswipe | 6 | 4 | 4 | 4 | 18 |
| | Rear End | 7 | 9 | 15 | 7 | 38 |
| | Right Angle | | 1 | | | 1 |
| | Left Turn | | | | | |
| | Lost Control | 1 | 1 | | | 2 |
| | Head On | | | | | |
| Total | | 14 | 15 | 19 | 11 | 59 |

Description of Proposed Project

ARC Project Number GW-346A proposes to maintain the existing bridge deck, but remove the existing parapet (barrier) wall and sidewalk. New barrier wall will be constructed into the existing deck. An 8-foot-wide sidewalk will be constructed along the centerline of the bridge, flanked by single-faced barrier walls with two-foot shy distance to the through lanes. On each side of the median will be two 11-foot dedicated through lanes, a 12-foot through/left-turn combination lane, and a 12-foot dedicated left-turn lane.

The direction of the traffic flow on each side of the bridge will be opposite that of the approaches. The northbound traffic will shift to the west side of the bridge median, and the southbound traffic will shift to the east side of the bridge median. The transition between these opposing traffic flows will be accomplished in the ramp intersections through the use of the median islands and channelizing islands at those intersections. These channelizing islands will also serve to separate the traffic turning onto the entrance ramps from opposing directions, and to direct traffic turning opposite directions from the exit ramps onto Pleasant Hill Road. Due to the roadway geometry, coupled with the use of large radius returns at the intersections, the raised concrete channelizing islands will each exceed 2000 square feet in area, thereby providing positive physical and visual clues for the unconventional traffic flow transitions. Advance warning signage will also be installed at the approaches to the transitions to help guide motorists.

Each of the proposed exit ramps off of I-85 will accommodate two left-turn and two right-turn lanes at their approaches to Pleasant Hill Road. Both the left-turn and the right-turn lanes will be signal-controlled. The entrance ramps onto I-85 Northbound and I-85 Southbound will continue to accommodate the two lanes of left-turning traffic, and the right-turning lane will merge just beyond the channelizing islands as it does currently. On the I-85 Northbound entrance ramp, the two lanes will continue until they tie to the collector-distributor lanes. On the I-85 Southbound entrance ramp, the two lanes will extend to the existing ramp meter, where they will then immediately merge to one lane before merging onto I-85.

At each ramp intersection, traffic signals will be relocated, as needed, to align with the new lane configurations. The proposed improvements include revision of the signal timing and phasing to satisfy the requirements of the diverging diamond traffic patterns. Typically, the phasing will be a simplified two-phase arrangement, whereby traffic flowing in each direction along Pleasant Hill Road will alternate with the opposing traffic. That phasing will require that stop bars be located between the ends of the median islands along Pleasant Hill Road, and their respective right-hand channelizing island.

This project proposes to construct sidewalks along the Pleasant Hill Road corridor from Breckinridge Boulevard/Shackelford Road to Venture Drive/Venture Parkway. When the sidewalk reaches the ramp intersections, the pedestrians will be directed, via crosswalks, to cross the right-turn lanes, proceed to the channelizing islands, and then cross the through lanes to the barrier-protected bridge median. The median will provide an 8-foot-wide sidewalk flanked by

concrete barriers to protect pedestrians from vehicular traffic. The pedestrians will then reverse that process at the other end of the bridge to access the conventional sidewalk location at the outside edge of the roadway. Pedestrian crossings will be protected by the vehicular signal phases, pedestrian signals, and crosswalks.

As stated, the proposed project consists of the conversion of the interchange to a Diverging Diamond Interchange (DDI). As a result of its geometric configuration, this solution is expected to mitigate the operational deficiencies of the existing interchange, increase capacity, and reduce crashes and crash severity for both pedestrians and vehicles. The proposed geometry allows for the reduction of signal phases to two, thereby reducing the delays that result from the transitions from one phase to another.

With the reduction in delays achieved with the proposed project, the traffic flow rate to the interstate entrance ramps can be expected to increase. If the rate of flow increases on the I-85 Southbound ramp, but the rate of flow through the meter and onto I-85 doesn't change, then vehicles will tend to overfill the existing storage lane. To avoid this obstruction, the second lane at the top of the ramp will be extended to the ramp meter, thereby providing about 30% more storage capacity. That additional storage should be adequate to allow the ramp meter cycle to remain near its current rate (2010) in the design year (2022) without impacting the operations at the top of the ramp. See Table 8 below. The additional lane will also have no negative effect on I-85 traffic flow.

Table 8
AM Peak Hour Southbound Ramp Meter Comparisons

| Intersection Approach | Existing 2010 | 2022 | |
|--------------------------------------|---------------|----------|-------|
| | | No-Build | Build |
| <i>Southbound On Ramp</i> | | | |
| Average Number of Ramp Meter Flushes | 14.4 | 18.2 | 14.0 |

The crash reductions and reduced crash severity that the DDI provides should be noted. The proposed geometry will reduce the number of conflict points from 26 to 14. Many of the conflict points that are eliminated are head-on and side-impact conflicts. Since those types of conflicts generally generate the most dangerous and severe accidents, not only is the number of potential accidents expected to decrease, but the potential severity of injuries is expected to drop considerably.

Although the number of vehicle-pedestrian conflict points would not be reduced significantly, a number of those conflict points are no longer accompanied by coincidental vehicle-vehicle conflicts. Since the drivers' focus will no longer be divided between pedestrians and opposing traffic, the drivers' awareness of the pedestrians should improve. The proposed project also includes adding signal controls at all crossings to reduce conflicts between pedestrians and vehicles by only permitting crossings during a signal phase.

The DDI configuration is a viable option due to its high cost-to-benefit ratio and minimal impacts to surrounding properties. The lower cost will be realized in both construction, right-of-way, and staging activities as compared to a bridge replacement.

Total length of the project is approximately 0.37 miles as measured along CR 3273/Pleasant Hill Road. The southern terminus of this proposed project is at Breckinridge Boulevard/Shackleford Road. The northern terminus of this proposed project is at Venture Drive/Venture Parkway. Since the intent of the proposed project is to improve operations (i.e. increase the LOS and reduce delays), the termini were established by extending the project only as far as necessary to transition to the existing typical section of each approach. There is no intent to modify, or impact, the physical configuration at any other intersections along Pleasant Hill Road corridor except to modify signal timing, as previously described. The proposed project does not increase traffic when comparing the build scenario to the no-build scenario ADT.

The existing typical section of CR 3273/ Pleasant Hill Road north and south of the proposed project termini is sufficient to handle the projected design year traffic without further improvements. Therefore the proposed project along CR 3273/Pleasant Hill Road does not negatively impact the operations of I-85, nor the overall Pleasant Hill Road corridor.

Logical Termini

Logical Termini is defined as rational endpoints for a transportation improvement project, as well as for the assessment of the environmental impacts. In order to conduct a meaningful comparison of alternatives and to avoid commitment of funding to a less than optimal alternative for a given transportation project, the evaluated alternative shall:

- 1) connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- 2) have independent utility and 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.

By improving CR 3273/Pleasant Hill Road, between Venture Parkway and Breckinridge Boulevard/Shackleford Road, this project encompasses a segment of the corridor of sufficient size to address the environmental matters on a broad scope. This project addresses a segment that has significant, identifiable and quantifiable operational deficiencies, and is of sufficient length to improve those deficiencies.

The project has independent utility in that it would meet the defined need and purpose even if no other transportation projects were to be implemented in the area. The existing operational levels of service and accident rates, as illustrated in Tables 1 through 6, demonstrate the operational needs and the need to reduce crashes and crash severity along this corridor. Tables 2, 3 and 4 also demonstrate that the proposed action would meet those needs at this location.

The proposed project is also of limited scope such that it would not restrict consideration of alternatives for other foreseeable transportation projects. The intent of this project is to successfully implement significant improvements in the operation, reduce crashes and crash severity of this corridor with relatively minor expenditures of funds. The minor widening of the segment's footprint, along with use of the existing bridge structure, with slight modifications, would not interfere with any other improvements that might be forecast.

The project is not a widening project and there are no adjacent or connecting projects currently programmed that might affect capacity.

Projects in the Area

Currently, there are several projects in the project area either in the design or construction phases of development. Along I-85, a project (TIP # AR-945A; PI # 0009295) to convert the HOV lanes to HOT lanes has been let for construction bidding. Along the Pleasant Hill Road corridor, a streetscape enhancement project (PI # 0009072 & 0008148) is in the design phase, and its intent is to visually and operationally provide a better transportation experience and provide more transportation choices.

A Gwinnett Place CID project to improve Venture Drive, which intersects Pleasant Hill Road near the western limit of the proposed DDI project, is in the design phase, but not yet in the TIP. Nearby, an extension to the Ronald Reagan Parkway is in the feasibility phase with the Gwinnett County DOT, and it will connect the existing parkway in the general vicinity of this project.

Other than the Pleasant Hill Road streetscape enhancement project, none of these projects are expected to materially affect, or be affected by, the proposed DDI project. Depending on scheduling of the enhancement and DDI projects, some coordination may be required to enable them to benefit from a common, comprehensive approach.

As referenced in the Envision6 Regional Transportation Plan; Volume II: FY 2008-2013 TIP, there are two other projects programmed within, or in the immediate vicinity of this project. Project (TIP # GW-302; PI # 0006827) consists of the installation and implementation of an Automated Transportation Management System (ATMS) to monitor and control the traffic signals along Pleasant Hill Road from US 29 / Lawrenceville Highway to US 23/ Buford Highway. This project is slated to open 2012. Although the interchange project will involve localized modifications to the signal timing and phasing, it should not preclude the proposed ATMS work; rather, the ATMS system timing will simply require study of, and adjustments to, the proposed work under this project, thereby enhancing the localized beneficial results such that they better serve the system-wide efficiencies. The additional costs for any redesign, if any, would be relatively minor. No additional construction costs should arise from the overlapping of the two projects.

The second project (TIP # GW-344; PI # 110720) also involves the installation and implementation of an ATMS system, this time on I-85 from Pleasant Hill Road to Old Peachtree Road. It is currently in the design phase, and is slated to be operational in 2011. Again, no significant duplication of work is expected since the proposed interchange project does not impact the ramps at the I-85 terminals. Although some slight modifications may be required in the proposed physical features (e.g. poles, underground cable), the costs of such redesign or adjustment should be insignificant.

Demographic Information

The proposed project lies within Block Groups 1 and 3 of Census Tract 502.07, and within Block Group 2 of Census Tract 505.17. Table 9, below, provides select demographic data for each of the block groups and census tracts, as well as for Gwinnett County.

Table 9
Pleasant Hill Road Diverging Diamond Interchange Improvements
2000 Census Data

| Area | Total Population | % Minority | Median Household Income | 1999 Family Income for Household | | | | |
|------------------------|------------------|------------|-------------------------|----------------------------------|--------------------|--------------------|---------------------|-------------------|
| | | | | \$0 to 25,000 | \$25,000 to 50,000 | \$50,000 to 75,000 | \$75,000 to 100,000 | \$100,000 or more |
| Gwinnett County | 808,167 | 33.5% | \$60,537 | 12.6% | 26.2% | 24.5% | 16.8% | 19.7% |
| Tract 502.07 | 14,636 | 49.9% | \$50,637 | 14.2% | 34.4% | 24.0% | 14.7% | 12.6% |
| 502.07.01 | 5,749 | 30.1% | \$52,336 | 12.5% | 32.2% | 23.8% | 16.2% | 15.2% |
| 502.07.03 | 6,885 | 55.6% | \$41,991 | 18.7% | 40.6% | 22.4% | 10.5% | 7.8% |
| Tract 505.17 | 15,165 | 59.5% | \$43,910 | 17.9% | 40.6% | 26.1% | 10.9% | 4.4% |
| 505.17.02 | 7,247 | 51.0% | \$41,667 | 19.9% | 42.4% | 23.8% | 10.8% | 2.9% |

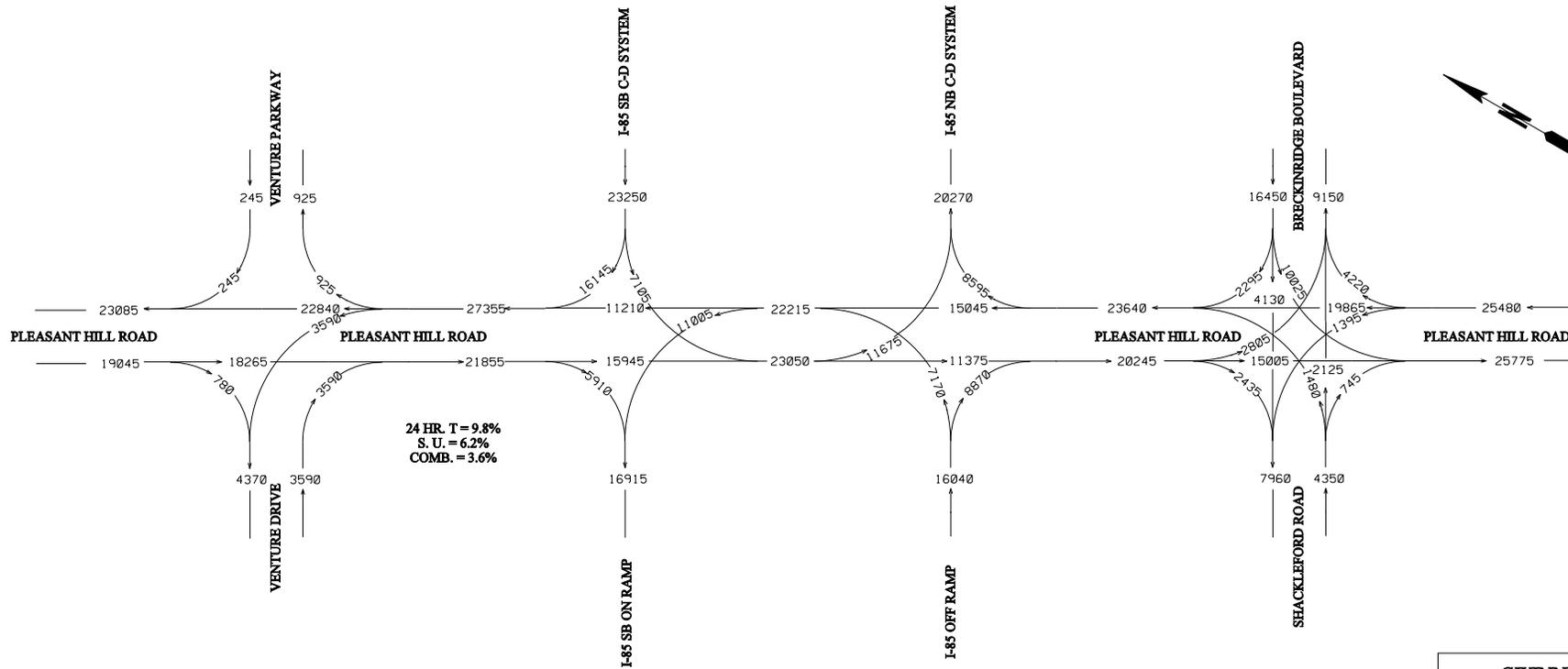
Bike and Pedestrian Facilities

No specific bike facilities exist along the project corridor. Although, the Gwinnett County Comprehensive Transportation Plan has identified the project corridor (Pleasant Hill Road) as being a “current project that match[es] needs assessment,” with regards to Future Bike/Pedestrian/Trail projects, no such project is programmed.

The proposed project will complement the existing sidewalks by enhancing the effectiveness of the system. This will be accomplished by reconstructing and reconfiguring the sidewalks such that all roadway crossings will be signal-controlled.

Summary

The proposed Pleasant Hill Road at I-85 Diverging Diamond Interchange project will improve the LOS at each of the four signalized intersections within the interchange area along Pleasant Hill Road; Venture Dr., SB Ramps, NB Ramps, and Breckinridge Blvd/Shackelford Rd. As demonstrated within this document, the proposed project will also reduce crashes and crash severity for vehicular and pedestrian traffic movements throughout the interchange. The recommended improvements to the interchange will alleviate traffic congestion, facilitate efficient and improved operations of traffic, and reduce conflicts between pedestrians and vehicles.



GWINNETT COUNTY
**PLEASANT HILL ROAD
 AT I-85**
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 EXISTING YEAR 2010 ADT
 TRAFFIC VOLUMES
 09/10

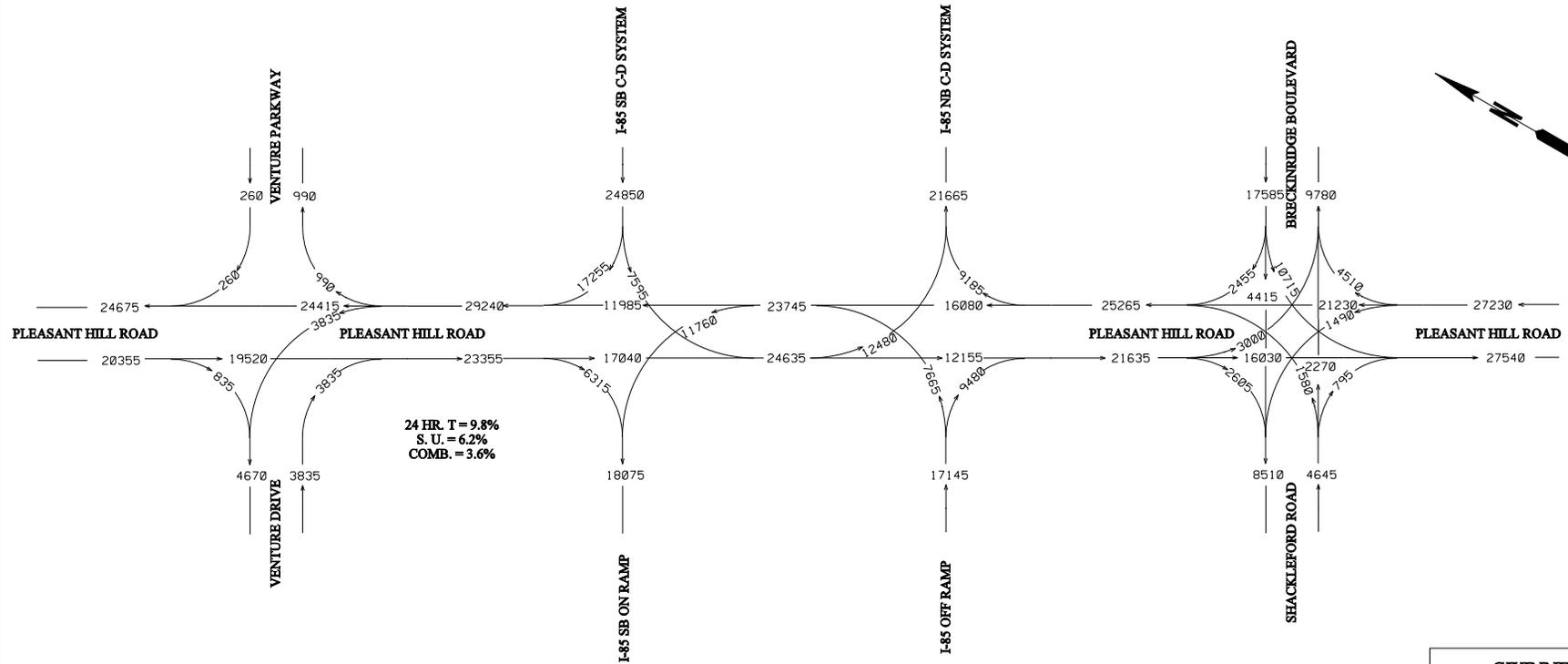
PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
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 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES

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GWINNETT COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
 I-85 DIVERGING DIAMOND
 INTERCHANGE @ PLEASANT HILL RD
 DRAWING NO.
10-001



GWINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 BUILD YEAR 2012 ADT
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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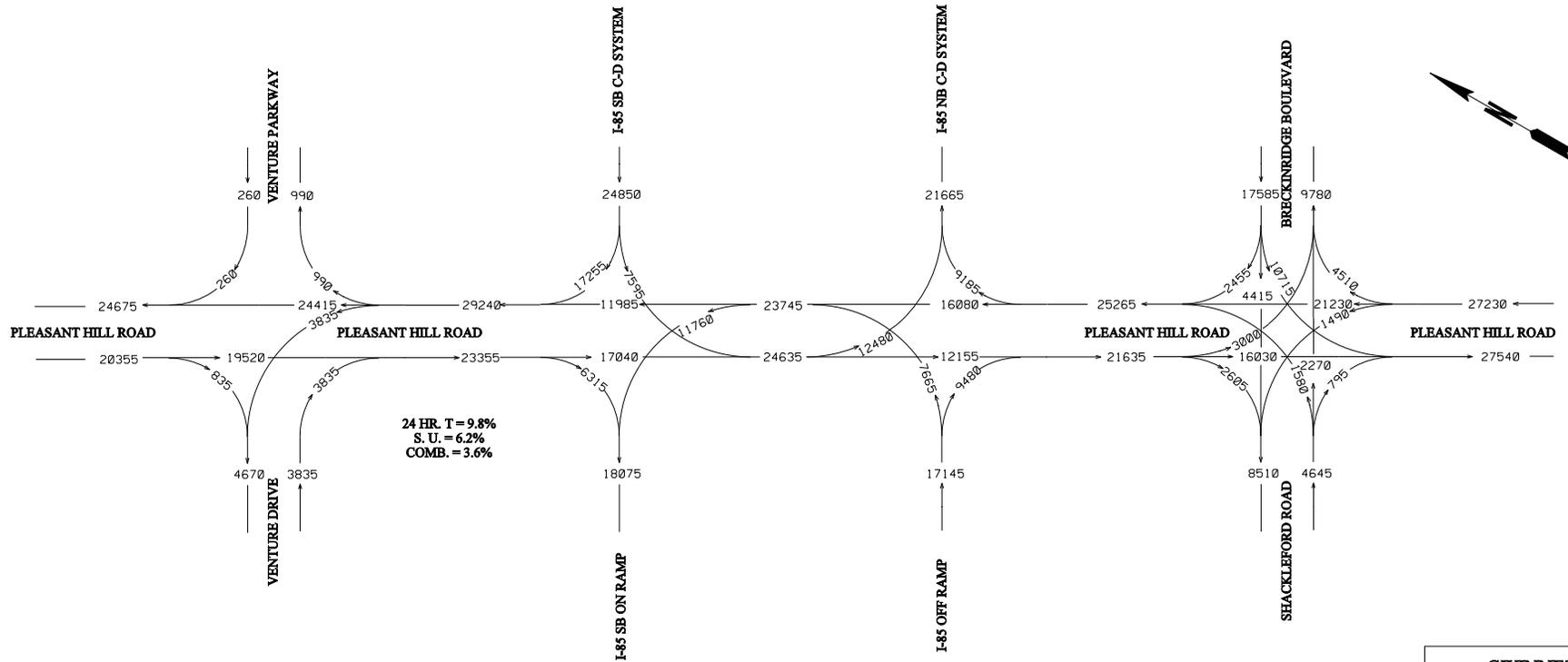
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GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD

DRAWING No.
10-002



GWINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 NO BUILD YEAR 2012 ADT
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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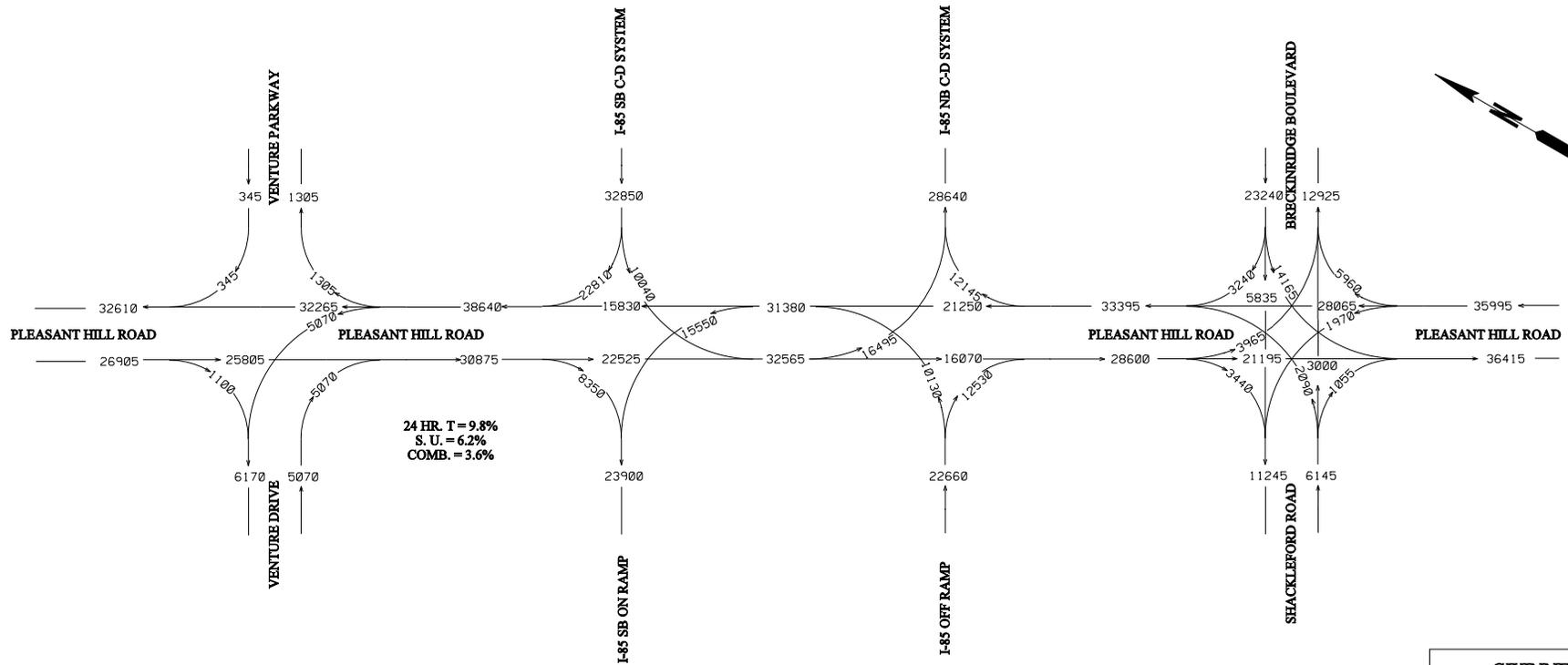
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GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD

DRAWING No:
10-003



GWINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 DESIGN YEAR 2022 ADT
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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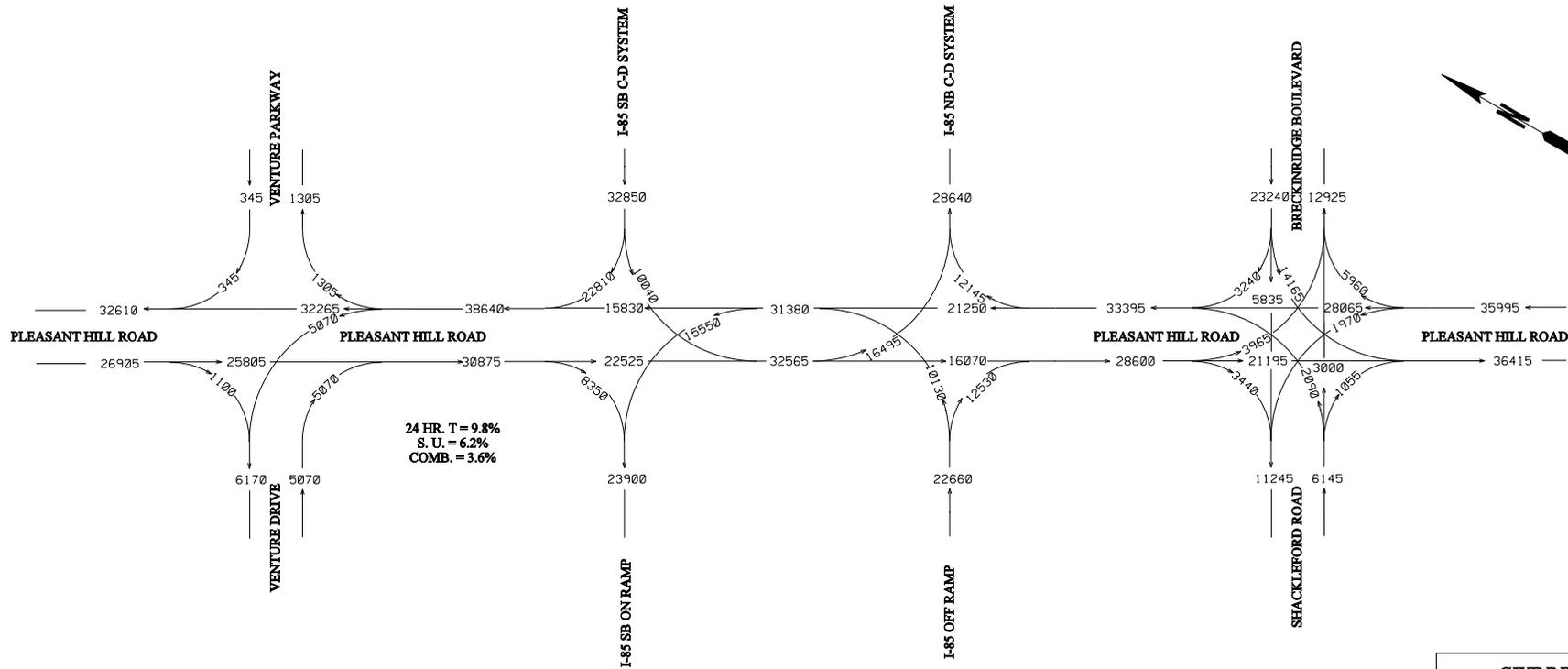
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GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD

DRAWING No:
10-004



GWINNETT COUNTY
**PLEASANT HILL ROAD
 AT I-85**
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 NO BUILD DESIGN
 YEAR 2022 ADT
 TRAFFIC VOLUMES

09/10

PROPERTY AND EXISTING R/W LINE
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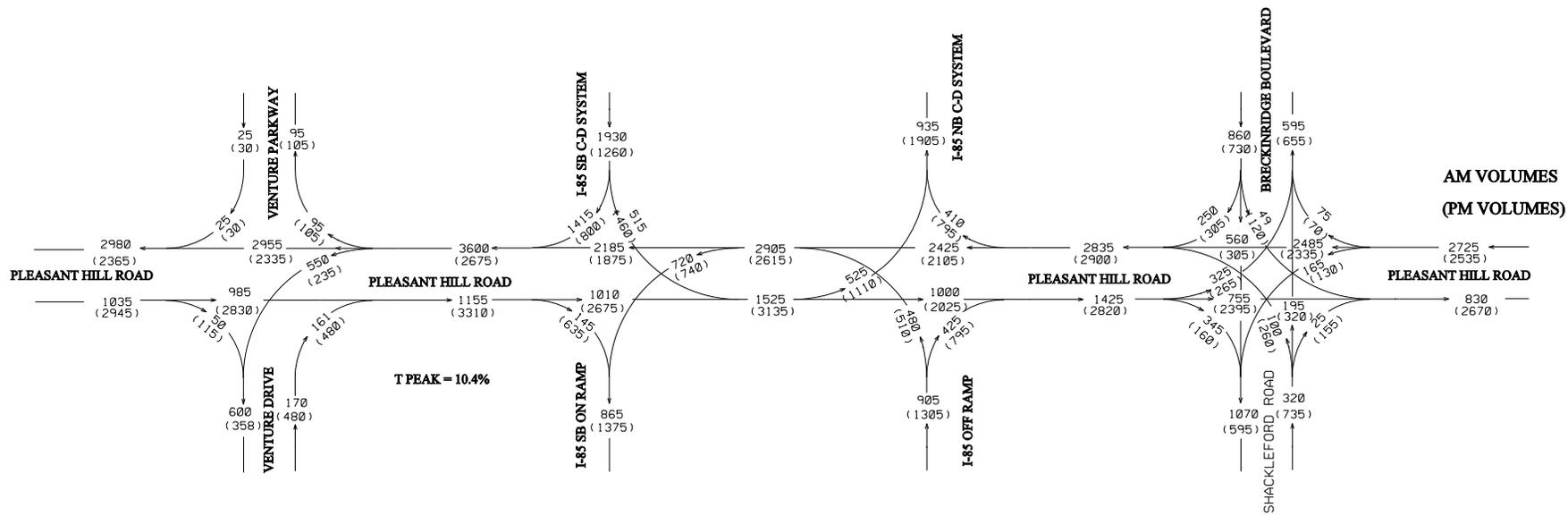
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GWINNETT COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
 I-85 DIVERGING DIAMOND
 INTERCHANGE @ PLEASANT HILL RD

DRAWING No:
10-005



GWINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 BUILD YEAR 2012 DHV
 AM & PM
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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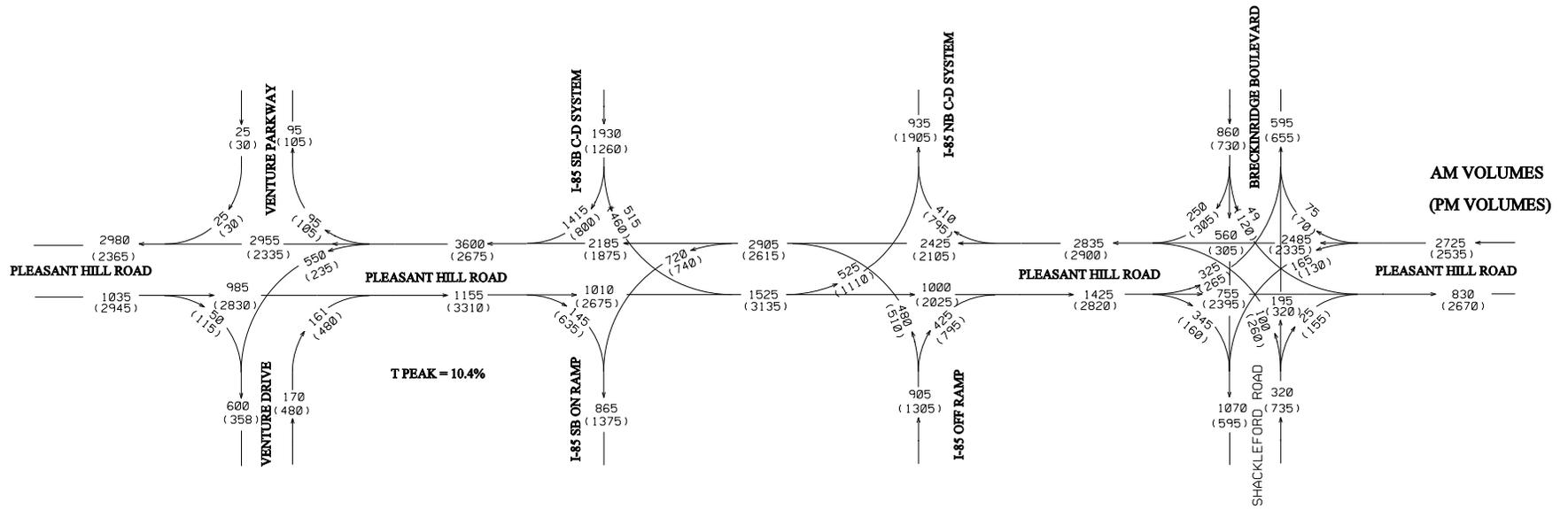
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GWINNETT COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD

DRAWING No.
10-007



GWINNETT COUNTY
 PLEASANT HILL ROAD
 AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 NO BUILD YEAR 2012 DHV
 AM & PM
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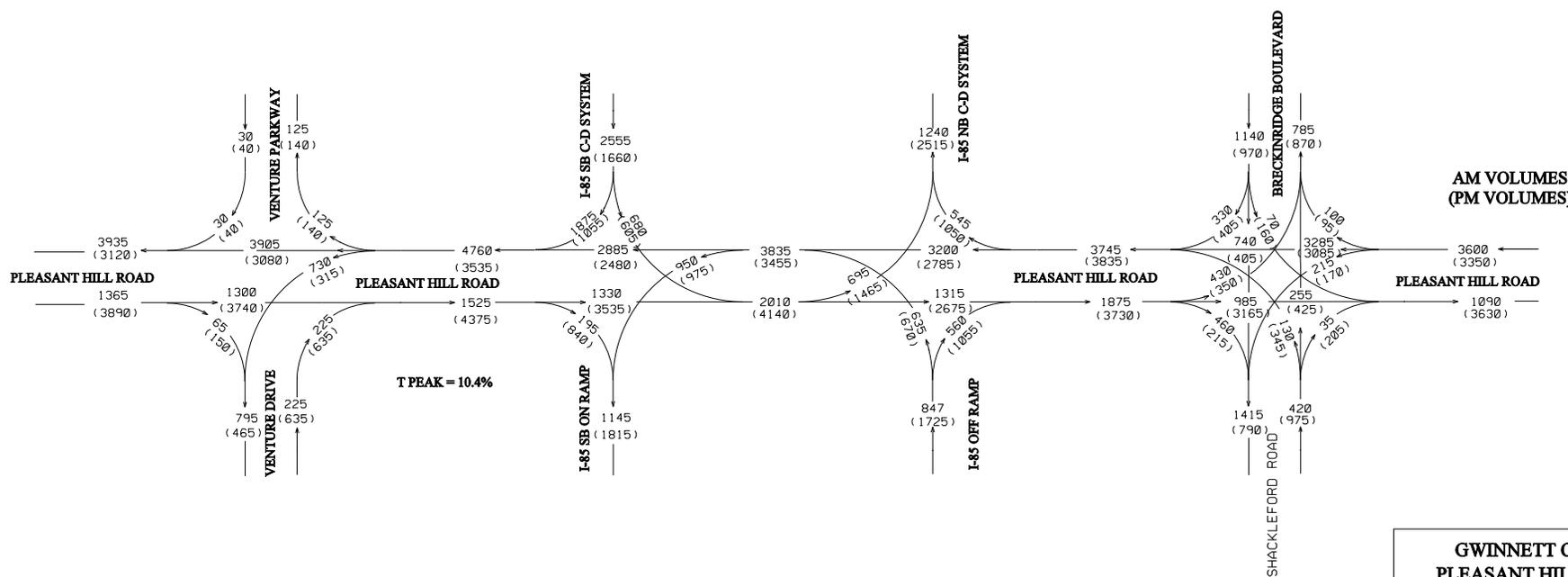
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GWINNETT COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
 I-85 DIVERGING DIAMOND
 INTERCHANGE @ PLEASANT HILL RD
 DRAWING No. 10-008



GWINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 DESIGN YEAR 2022 DHV
 AM & PM
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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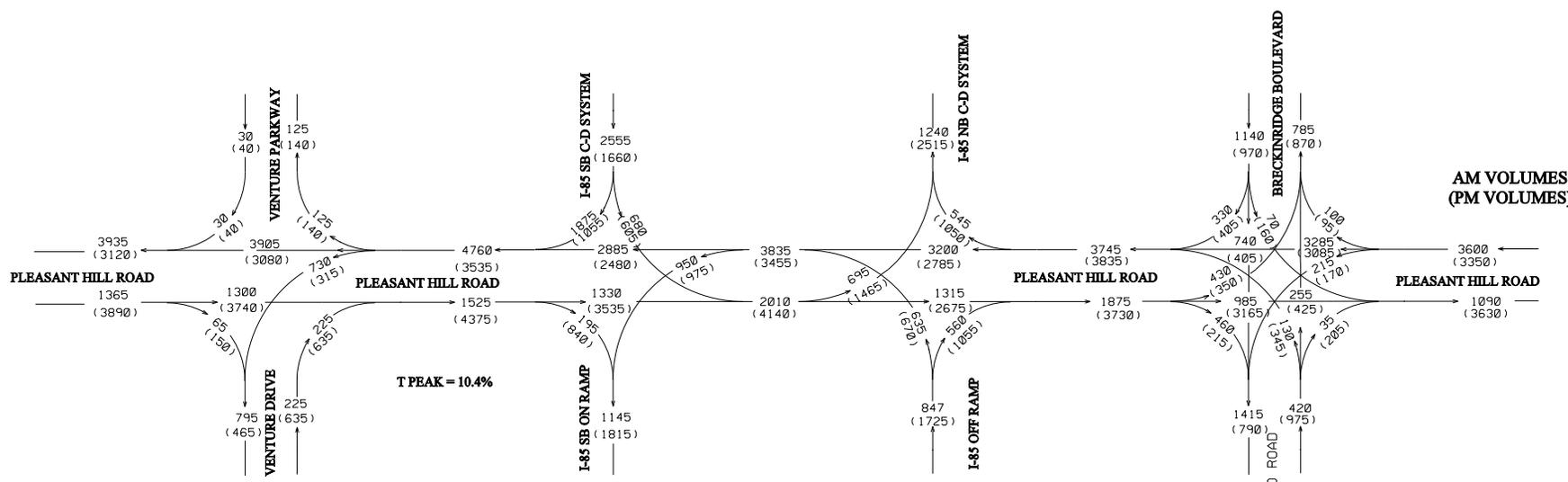
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GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD

DRAWING No. 10-009



WINNETT COUNTY
PLEASANT HILL ROAD
AT I-85
 ARC Proj No: GW-346A
 Gwinnett County Proj No: F-0781-01
 NO BUILD DESIGN
 YEAR 2022 DHV
 AM & PM
 TRAFFIC VOLUMES
 09/10

PROPERTY AND EXISTING R/W LINE
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WINNETT COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
I-85 DIVERGING DIAMOND
INTERCHANGE @ PLEASANT HILL RD
 DRAWING No. 10-010



TO: Attendees
FROM: Hatem Aly, URS Corporation

MEETING DATE: September 01, 2010
Gwinnett County - GCJAC Facilities Conference Room B

PARTICIPANTS: Erick Fry, URS Corporation
Hatem Aly, URS Corporation
Lewis Cooksey, Gwinnett County
Jesse Vance, GCDWR
Tony Harris, GCDWR
Bill Ruhsam, Moreland/ Gwinnett
Kendra Bunker, FHWA
Mike Rushing, Kimley-Horn
John Ray, GCDOT
Joe Allen, Gwinnett Place CID
Alan Chapman, GCDOT
Kim Conroy, GCDOT
David Tucker, GCDOT
John McHenry, Gwinnett Village CID
Russell McMurry, GDOT
David Faulkner, Jackson EMC
Craig Roberts, Jackson EMC
Brian Allen, GCDOT

SUBJECT: I-85 @ C.R. 3273/PLEASANT HILL ROAD DIVERGING DIAMOND
INTERCHANGE
STP00-0009-00(825) Gwinnett; PI 0009825
Concept Team Meeting

- A meeting of the above-listed participants was held on September 1st, 2010 at 2:00PM in Gwinnett County to discuss the draft concept report for the above-referenced project.
- Lewis Cooksey welcomed the attendees and briefly introduced the project as the reconstruction of the I-85 Interstate Interchange with CR 3273/Pleasant Hill Road from a conventional diamond configuration to a diverging diamond interchange.
- Erick Fry asked if everybody received the new concept report, and he started describing the project as the redesigning of the existing conventional diamond to a DDI interchange. He mentioned that the area around the project is heavily commercial with a cemetery on the

northeast quadrant. He added that the project has no impact on history, ecology, or archeology. There are a couple of streams adjacent to the site but they will not be impacted by the proposed project. Erick continued stating that the project starts at the intersection with Breckinridge Blvd and ends at the intersection with Venture Drive, with 8 lanes across the bridge. Then Erick described the typical section at the DDI and also on the ramps. Erick added that the proposed project eliminates the free-flowing right turns at both exit ramps onto Pleasant Hill Rd. He also mentioned that URS is still working on the Traffic analysis, and it will be submitted to GDOT next week. He added that URS used VISSIM as the tool for traffic modeling and the analysis indicated a 26% reduction in AM delay and a 7% reduction in PM delay when the DDI is compared to the conventional diamond. Erick mentioned that most accidents are rear end and side-swipe crashes.

- Lewis mentioned that the DDI reduces points of conflict and puts pedestrians in the middle of the bridge.
- Erick said that URS tried to keep pedestrians on the existing outside sidewalk on the bridge but it is safer to put them in the middle because all pedestrian crossings will be signal-controlled. Erick added that the existing parapet wall and sidewalk will be removed and replaced with pavement and “Jersey” barrier.
- Alan Chapman asked about the design speed for the DDI. Erick answered that Pleasant Hill Rd. is 45 mph and speed at the crossover is 25 mph. He added there will be a transition before and after the DDI. Alan asked if the proposed design addressed the radii required for the radius return to accommodate truck movements. Erick answered that WB-50 and WB-67 were used to check truck movements. URS used AUTOTRACK, and trucks represent only 9% of the traffic at this interchange.
- Lewis mentioned that URS couldn’t bulge out the lanes like Jimmy Carter interchange due to the cemetery, and that the businesses would be affected by such design. Erick noted that the lanes are shifted towards Best Buy to reduce the impact on the cemetery.
- Alan requested raised pavement markers be used on the crossover to avoid opposite direction movements. He also added that the design proposed encroached on the cemetery more than he expected. Erick said that we have to acquire R/W from the cemetery, and we added a retaining wall to reduce the impact on the cemetery and avoid impacts to graves. Alan asked if this will have any impact on the environment. Erick answered this cemetery is not deemed historic according to SHPO. Alan asked if we have an estimate for the R/W. Erick said we will still need to get this from the county. Alan said we would like to see how much R/W will cost us and also see how much the proposed project will impact the businesses.
- Lewis asked if anybody had comments on the design.

- Erick stated that URS will sit down with FHWA to discuss the FHWA 8 policy points that show the impact on the interstate. Brain Allen said that the county must be involved in this meeting.
- Erick said that URS will determine the impact on the ramp meter located on the SB on ramp and will add more storage on this ramp.
- Erick talked about providing SUE utility with quality level D. He added that there is a utility building located at SB on-ramp that is a hub for GDOT ATMS lines, and URS will coordinate with GDOT regarding affected utilities.
- Lewis commented on table 1 in the concept report. He questioned the 211.7 seconds shown for No-Build 2009 and said it shouldn't be that big. John Ray stated that it takes around 2 to 3 cycles to make a left onto Pleasant Hill at end of SB off-ramp due to the short cycle.
- Lewis then moved to the concept report and asked if anybody had a comment on the cover and location map. Lewis said that we have to add a signature line for Gwinnett County.
- Jesse Vance asked if we got the project listed in the TIPP. Erick replied it will be added in September.
- Lewis said that we looked at this concept before and he doesn't think he will have more comments on it. Erick mentioned that he already addressed all the comments that he received from Chuck Hasty. Erick added that URS will submit the need and purpose to GDOT planning once URS finishes concept report. Lewis asked Erick if he also addressed the comments that he sent to him. Erick responded, "Yes, I did".
- Erick went back to the concept and mentioned the speed design as following:
 - Pleasant Hill Rd. 45 mph
 - I-85 65 mph
 - Ramps 55 mph
 - At the Bridge 25 mph.
- Lewis asked if anybody had comments on page 4. And then he moved on to page 5.
- Erick explained the traffic projections for 2012 and 2022 from the concept report
- Lewis asked Erick to check tables 1 and 2 on pages 5 and 6. Erick said that URS will revisit them. Lewis questioned the increase in the delay with the proposed design. Erick explained that it is because of the adjacent signals that must be retimed after completion of DDI construction.

- Kim Conroy asked how far we need to change signal timing. Erick replied about 11 signals. Mike noted that a signal timing study has been done already for Jimmy Carter interchange.
- Lewis asked anybody has comments on pages 6 or 7 related to adjacent projects, land use, and demographic information. Lewis commented on the second paragraph in the land use section that must be revised to show that the project may have impact on some property accesses. Erick said URS will fix it and he started talking about bike and pedestrian facilities. He mentioned that sidewalk will be added at the cemetery and a wall will be proposed to reduce the R/W needed from the cemetery. Erick then added that the lanes can still be shifted towards Best Buy if we can't get this design approved due to the cemetery impact, but this alternative would have a reverse bulge out effect.
- Erick mentioned that crash data are revised but still needs to be updated.
- Alan asked if we are consistent with EB and WB on Pleasant Hill Rd. Erick replied that URS will check that before submittal.
- Lewis asked about the paragraph that he saw in the previous draft concept that mentioned the impact on businesses. Erick replied that he took it out.
- Alan asked if we have a cost for utility reimbursements. Erick answered that it will be added to cost estimate.
- Erick continued, describing the typical sections provided in the concept report.
- Alan asked if we have only temporary easement, or if we need to show some permanent easement on the project. Erick responded that permanent easement is not needed. The wall will be in R/W and construction slopes can be in temporary easement. Alan stated that Gwinnett County prefers all construction slopes to be in temporary easement.
- Lewis asked what type of wall will be provided at cemetery. Erick replied it will be a gravity wall. And, he added, all driveway easements are temporary. Lewis asked what the height of the wall will be. Erick said it will not exceed 5 feet.
- Erick then started talking about construction stages, and Alan said that plans must be provided first before we determine stages. Russell wanted to add a statement to the concept that states that DDI conversion will require temporary detour.
- Erick then went through the environmental concerns on page 14.

- Lewis asked if we are impacting any utilities in the vicinity of the project. David Faulkner replied that two utility poles will be impacted in front of the cemetery. And, he added, when Jackson EMC gets preliminary plans, he can examine the impact. Erick asked if we have any missing utilities besides ATMS. David replied that what is shown is a good representation of existing utilities, except minor missing.
- Erick asked Kendra if fence is required on the bridge. Kendra replied that she will get back to him on this issue. Russell added that he will look into fencing policy.
- Alan asked about time of R/W acquisition shown in the concept report, and whether we wanted to change it to at least 6 months, 8 months preferred. Erick said he will change it to 8 months. He added that URS will provide Gwinnett County with square footage of R/W to roughly estimate R/W cost.
- Russell asked how much time is needed for environmental review. Erick replied 2 months, and added that all special studies have been submitted to GDOT except ecology. Russell asked Erick where he sent it. Erick replied, "To OES". Russell wanted to have it before it is submitted to OES. Erick said he will gather what was sent before and send copy to Lewis and Russell
- Alan asked if we need to have the need and purpose approved by GDOT. Russell replied, "Yes".
- Erick talked about the 6 lanes alternative, and he said URS will have more details when we finalize concept.
- Alan asked if construction time should be added to schedule. Russell replied URS should check the latest version of concept report to see if construction time is required or not.
- Jesse asked Erick to check all attachments needed before submitting concept report to GDOT because missing attachments will delay approval.
- Erick asked how we can get utility cost. Alan replied that it must be coordinated with utility companies and, most likely, will not take place until preliminary plans are done.
- Lewis thanked everybody and mentioned that meeting minutes and sign-in sheet will be sent to attendees.

The meeting adjourned at 3:50 PM.

Sign In Sheet
 September 1, 2:00PM
 Concept Team Meeting
 Pleasant Hill Rd over I-85 Diverging Diamond Interchange

| Name | Organization Project Role | Email Address | Phone |
|---------------|------------------------------|-----------------------------------|---------------|
| Erick Fry | URS / PM | erick_fry@urscorp.com | 578-808-8852 |
| Hatem Aly | URS / Project Eng. | Hatem_Aly@urscorp.com | 678-808-8817 |
| Lewis Cooksey | Gwinnett County | lewis.cooksey@gwinnettcountry.com | 770-822-7478 |
| JESSE VANCE | GC DWR | Jesse.Vance@gwinnettcountry.com | 678-376-7127 |
| Tony Amador | " " | Tony.Amador@gwinnettcountry.com | 678-376-6928 |
| Bill Puhlsam | Moreland / Gwinnett | bruh.sam@magi.net | 7) 263 5945 |
| Kendra Bunker | FHWA | kendra.bunker@dot.gov | 404-562-3044 |
| MIKE RUSHING | KHA | Mike.rushing@kimley-horn.com | 678-6922-3925 |
| John Roy | GC DOT | John.Roy@gwinnettcountry.com | 770-822-7764 |
| Soc Allen | Gwinnett Plan CDs | jallen@gwinnettcountry.com | 6-924-4171 |
| Alan Chapman | Gwin. County | alan.chapman@gwinnettcountry.com | 7-822-7448 |
| Kim Conway | " " | Kim.Conway@ " " " | 7-822-7414 |

Gwinnett County Department of Transportation

| | | | |
|-----------------|----------------------|----------------------------------|--------------|
| David Tucker | GCDOT | David.Tucker@gwinnettcountry.com | 770.322.7407 |
| John McHenry | Gwinnett Village CID | johnmchenry@gwinnettvillage.com | 7-449-6575 |
| Russell McMurry | GDOT | rmmcmurry@dot.ga.gov | 404/631-1700 |
| DAVID FRANKNER | JACKSON EMC | Dfrankner@jacksonenc.com | 7822-3251 |
| Craig Roberts | JEMC | CRobert@JacksonEnc.com | 7822-3265 |
| Brian Allen | Gwinnett DOT | | |
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Envision6 Regional Transportation Plan and FY 2008-2013 Transportation Improvement Program - Sorted by ARC Project Number

| Status | Year | Fund Type | Federal | | | State | | | Local | | | Bonds | Total | Network Year |
|----------------|------|---|--------------|--|---------|---------|---------|---------|---------|---------|---------|---------|-------------|--------------|
| | | | Federal | State | Local | Federal | State | Local | Federal | State | Local | | | |
| GW-345B | | I-85 NORTH ADVANCED RIGHT-OF-WAY ACQUISITION | | | | | | | | | | | | |
| TBD | | AT JIMMY CARTER BOULEVARD | | | | | | | | | | | | 2020 |
| Programmed | | | | | | | | | | | | | | 2013 |
| | | | Jurisdiction | Gwinnett County | | | | | | | | | | |
| | | | Sponsor | Gwinnett County | | | | | | | | | | |
| | | | Service Type | Other | | | | | | | | | | |
| | | | Existing | N/A | | | | | | | | | | |
| | | | Planned | N/A | | | | | | | | | | |
| | | | Length (mi.) | N/A | | | | | | | | | | |
| | | | Analysis | Exempt from Air Quality Analysis (40 CFR 93) | | | | | | | | | | |
| | | | Open Year | 2013 | | | | | | | | | | |
| ROW | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$5,500,000 | 2020 |
| | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$5,500,000 | 2020 |
| GW-346A | | I-85 NORTH DIVERGING DIAMOND INTERCHANGE | | | | | | | | | | | | |
| TBD | | AT PLEASANT HILL ROAD | | | | | | | | | | | | 2020 |
| Programmed | | | | | | | | | | | | | | 2012 |
| | | | Jurisdiction | Gwinnett County | | | | | | | | | | |
| | | | Sponsor | Gwinnett County | | | | | | | | | | |
| | | | Service Type | Roadway Operational Upgrades | | | | | | | | | | |
| | | | Existing | N/A | | | | | | | | | | |
| | | | Planned | N/A | | | | | | | | | | |
| | | | Length (mi.) | N/A | | | | | | | | | | |
| | | | Analysis | Exempt from Air Quality Analysis (40 CFR 93) | | | | | | | | | | |
| | | | Open Year | 2012 | | | | | | | | | | |
| PE AUTH | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | 2020 |
| ROW | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$1,000,000 | 2020 |
| CST | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$3,000,000 | 2012 |
| | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$4,000,000 | 2020 |
| GW-346B | | I-85 NORTH ADVANCED RIGHT-OF-WAY ACQUISITION | | | | | | | | | | | | |
| TBD | | AT PLEASANT HILL ROAD | | | | | | | | | | | | 2020 |
| Programmed | | | | | | | | | | | | | | 2013 |
| | | | Jurisdiction | Gwinnett County | | | | | | | | | | |
| | | | Sponsor | Gwinnett County | | | | | | | | | | |
| | | | Service Type | Other | | | | | | | | | | |
| | | | Existing | N/A | | | | | | | | | | |
| | | | Planned | N/A | | | | | | | | | | |
| | | | Length (mi.) | N/A | | | | | | | | | | |
| | | | Analysis | Exempt from Air Quality Analysis (40 CFR 93) | | | | | | | | | | |
| | | | Open Year | 2013 | | | | | | | | | | |
| ROW | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$5,500,000 | 2020 |
| | | | | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$0,000 | \$5,500,000 | 2020 |

**Benefit Cost Analysis Work Sheet
CONGESTION Projects**

*ARC Project Number: GW-346A
Gwinnett County Project Number: F-0781-01
Gwinnett County*

I-85 Diverging Diamond Interchange @ Pleasant Hill Road

Congestion Benefit = Tb + CMb + Fb

Person Time Savings Benefit (Tb)

| | |
|-----------|-----------------|
| *Db (hrs) | 0.024 |
| ADT | 72,410.00 |
| Tb (\$s) | \$60,161,395.94 |

Commercial or Truck Time Savings Benefit (CMb)

| | |
|-----------------|-----------------|
| Db (hrs) | 0.024 |
| % Truck Traffic | 0.098 |
| ADT | 72,410.00 |
| CMb | \$30,932,248.62 |

Fuel Savings Benefit (Fb)

| | |
|----------|-----------------|
| ADT | 72,410.00 |
| Fb (\$s) | \$20,965,334.95 |

| | |
|---------------------------------|-------------------------|
| Total Congestion Benefit | \$112,058,979.51 |
| Total Project Cost | \$3,894,973.87 |
| B/C Ratio | 28.77 |

Comments Received from Pleasant Hill Road at I-85 Diverging Diamond Interchange Public Information Open House - February 24, 2011

| Name | Address | Comment | Support |
|------|---------|---------|---------|
|------|---------|---------|---------|

| | | | |
|-----------------|------------------------------------|---|-----|
| Cheryl Stricker | 2951 Cardinal Lake Drive Duluth | I think this is a very good idea. However, I don't know how much it will alleviate congestion on the rest of Pleasant Hill. I always go over behind or around Pleasant Hill. Hopefully, it'll work well and help bring the area back. There is definitely a perception out there that his area is "gone." | Yes |
|-----------------|------------------------------------|---|-----|

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| | | This project looks as if it will truly work. By eliminating the left turn signal phase and, in turn, elongating the green cycles, traffic will move much easier especially during rush hours. | |
|--|--|---|--|

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|---|--|---|-----|
| R J Cox rj.cox@cbcmetrobr okers.com | 411 Paper Woods Drive Lawrenceville, GA 30046 | I also like the fact that pedestrians have also been taken into account. They will be able to cross Pleasant Hill in a much safer fashion. Working as a commercial real estate broker, many clients love the traffic count near the corridor but are wary of the bottlenecks and whether it would drive clientele away from their location. This project, and its quick timeline to completion, will help alleviate their concerns. | Yes |
|---|--|---|-----|

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| Mike Rushing | 5415 Hedgewick Way Cumming, GA 30040 | This is innovative and a great project. Seems like a cost-effective approach. PIOH was well-staffed and well-organized. | Yes |
|--------------|---|---|-----|

| | | | |
|----------------|--|--|-----|
| William Moskal | 231 Nouveau Court Lilburn, GA 30047 | This should provide much need relief to the existing traffic congestion both here at Pleasant Hill as well as at Jimmy Carter Blvd. The freeflow right on JCB to I-85 NB has also made a difference in the traffic trying to cross I-85. | Yes |
|----------------|--|--|-----|

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|---------|--|---|-----|
| Tim Hur | 3021 Creek Falls Way Duluth, GA 30097 | Very excited to see progress and potential. | Yes |
|---------|--|---|-----|

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| | | As a traffic engineer and one who has some knowledge of DDIs, it appears the concept at Jimmy Carter Blvd has a better deflection of the approach lanes to the crossover locations. The crossover seems to have a greater angle between travel directions and a short tangent section to better steer vehicles to the far side of the intersection and reduce the change of wrong-way travel. | |
|--|--|---|--|

| | | | |
|------------------|--|--|-----|
| Andrew Antweiler | 2252 Merrymount Drive Suwanee, GA 30024 | If the limitation only allow for what is proposed, I think the lane marking through the crossovers need to be well maintained! | Yes |
|------------------|--|--|-----|

Comments Received from Pleasant Hill Road at I-85 Diverging Diamond Interchange Public Information Open House - February 24, 2011

| Name | Address | Comment | Support |
|------------------|--|--|---------|
| Douglas Sosa | 3824 Rod Place Lawrenceville, GA 30044 | <p>I think this is a great idea. I know this area really well, and it is such a pain especially with the continuous lane allowing people to try to get into Best Buy comin from one area -- actually, all four areas. Stopping that continuous thing is going to help a whole lot. I mean, I've had so many near-misses, so hopefully that will eliminate all of these close-call accidents. That's one of the best things, especially the way the flow is. And also, it will allow people to walk without getting hit, so I think it's a fantastic idea.</p> <p>There are few people that don't like change. I didn't like it in the beginning the way you did it over there for people coming west on Pleasant Hill to go north on 85 and you put that access road there, but that turned out to be a great idea. In the beginning I thought nobody was going to like the change, but in the end I think it's a fantastic idea.</p> <p>You're talking to an aggressive driver, so I think it's going to be great for everybody. It's going to be more civil and less hectic. Fantastic idea.</p> | CR |
| R J Cox | 411 Paper Woods Drive Lawrenceville, GA 30046 | <p>I believe this is a fantastic idea. This will bring a lot more business to the area and alleviate a lot of the traffic concerns, and for that reason we will be able to move more safely crossing the interchange. I believe this will be a great stimulus to the Pleasant Hill corridor.</p> | CR |
| Lauren Salas | 670 Tab Roberts Road Lawrenceville, GA 30043 | <p>I'm really looking forward to this project. I think that this is going to be a vast improvement for the area, and I really like some of the landscaping that they're going to incorporate. I just had to sit through two traffic lights to get across the bridge, and anything's got to be better than that.</p> | CR |
| Muffy Harman | 2325 Brick Mill Court Duluth, GA 30096 | <p>We've looked at it, and we think it's a great idea, so you need to start it tomorrow. We're hoping that it will alleviate a lot of the traffic problems that are currently on Pleasant Hill.</p> <p>I think it's a fantastic idea for economic development reasons and just for sheer traffic flow. We need to get something going fast. It's bad for business when you can't get around because people will avoid places that you can't get around in. I live here and I would come down here more often, you know, instead of going to the Mall of Georgia. As soon as it's completed, it will be a lot better.</p> | CR |
| Sandy Richardson | 3873 Davis Street Suwanee, GA 30024 | | CR |