

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 771180, DeKalb County **OFFICE** Preconstruction
 BRZLB-89(7)
 Linecrest Road over Conley Creek **DATE** March 24, 2005

FROM *Cylin Kunkle*
 Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT REVISED PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

- David Mulling
- Harvey Keepler
- Ken Thompson
- Jamie Simpson
- Michael Henry
- Keith Golden
- Joe Palladi (file copy)
- Babs Abubakari
- Bryant Poole
- BOARD MEMBER**

DATE 3/23/05

4210

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

RECEIVED
MAR 22 2005
BY:

INTERDEPARTMENTAL CORRESPONDENCE

FILE: BRZLB-89(7), DeKalb County
Linecrest Road over Conley Creek
P. I. NO. 771180

OFFICE: District Seven
Chamblee

DATE: March 15, 2005

Bel

FROM: Bryant Poole, District Engineer

TO: Margaret B. Pirkel, P.E., Assistant Director of Preconstruction

SUBJECT: Revised Project Concept Report

Attached is the original copy of the revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

The proposed project limits defined in the approved concept report for this project is being revised to provide logical termini. The western limit will be extended to Bouldercrest Road from 250 feet west of the proposed bridge, and the eastern limit will be extended to existing Linecrest Road at Ward Lake Road and Fairview Road from 150 east of the proposed bridge. The length of project will be increased from 0.14 mile to 1.08 miles.

The length of the proposed bridge over Conley Creek is being revised to 250 feet from the 354 feet stated in the approved concept report. Impacts to wetlands and Conley Creek will be minimized with the longer bridge; however a 250-foot bridge is sufficient to satisfy the backwater requirement specified in Section 14.1.4 of the GDOT Drainage Manual.

A 5-foot sidewalk is being added to the right shoulder. The width of the right shoulder will remain unchanged. A 10-foot sidewalk is included for the left shoulder in the approved concept report, but no sidewalk is included for the right shoulder. The addition of the sidewalk to the right shoulder would improve pedestrian mobility.

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

Please contact Chris Woods with District 7 at chris.woods@dot.state.ga.us for additional information.

DATE: 3/23/05

Joseph P. Allred
State Transportation Planning Administrator

Note: adequate space for utilities req on 'Right' side

REVISED PROJECT CONCEPT REPORT

Need and Purpose:

The proposed Linecrest Road project is located in DeKalb County, southeast of the City of Atlanta, Georgia, near the DeKalb and Henry County line. Currently, there is no access provided over Conley Creek. East-west travel between Bouldercrest Road and Ward Lake Road currently carries traffic through residential areas. The completion of the proposed bridge would provide new access to Seminole Road Landfill (situated on Ward Lake Road), thereby reducing landfill traffic in residential areas. Also, the addition of sidewalks along the proposed road would encourage alternatives to single-occupancy vehicles (SOVs) in the area. The projected traffic of the proposed project is 3,600 vehicles per day in the build year (2005) and 14,700 vehicles per day in the design year (2025). Ward Lake Road currently carries 6,070 vehicles per day and is projected to carry 13,700 vehicles per day in 2025. With the construction of the proposed road, traffic volumes on Ward Lake Road could be reduced by 60-percent in the build year (2005), and by up to 93-percent by the design year (2025).

Project location:

The proposed Linecrest Road is located in DeKalb and Clayton Counties, southeast of the City of Atlanta, Georgia, near the DeKalb/Henry County line. Project BRZLB-89(7) is an addition to the existing Linecrest Road. The proposed roadway is on new location. It begins 0.04 mile south of DeKalb County/Clayton County line at Bouldercrest Road and extends eastward for 0.94 mile, 0.14 mile to the east of Fairview Road, to tie in with the existing Linecrest Road. A new sanitation facility is proposed at this site. The new facility will be located in the northwest quadrant of the proposed intersection at the project terminus. The existing Ward Lake Road will be turned into a cul-de-sac, ending just north of the proposed facility. The proposed roadway typical section consists of two 12-foot travel lanes, one in each direction, with curb and gutter. On the left side of the roadway, there is a 18.5-foot shoulder with a 10-foot sidewalk. A 10-foot shoulder with a 5-foot sidewalk is included for the right side of the roadway. The proposed 250-foot bridge will be 49 feet wide, including two 12-foot lanes, two 2-foot shoulders, a 12.5-foot sidewalk and parapet on the left side, and a 6-foot sidewalk and parapet on the right side.

Description of the approved concept:

The proposed project will provide the only access point over Conley Creek. It will also provide an alternate for traveling between Bouldercrest Road and Ward Lake Road/Fairview Road, alleviate the existing east-west traffic through residential areas. The proposed project consists of 250-feet of roadway, including a 30-foot approach slab, west of the bridge, a new 354-foot bridge over Conley Creek and 150-feet of roadway, including a 30-foot approach slab, east of the bridge.

PDP Classification: Minor

Full Oversight (), Exempt(X), SF(), Other ()

Functional Classification: Local Road

U. S. Route Number(s): None

State Route Number(s): None

Traffic (AADT) as shown in the approved concept:

Current Year: (2005) 3,600

Design Year: (2025) 14,700

Proposed features to be revised:

Project Termini – The changes in the project termini will provide logical termini for this project.

The proposed project consists of 250-feet of roadway (including 30-foot approach slab) west of the bridge, a new 354-foot bridge over Conley Creek and 150-feet of roadway (including 30-foot approach slab) east of the bridge.

Roadway Typical Section – A 5-foot sidewalk will be added to the right shoulder.

DeKalb County will be preparing the roadway plans for the proposed Linecrest Road between Bouldercrest Road and Ward Lake Road. This concept consists only of the approaches and bridge required for this roadway to span Conley Creek. DeKalb County's proposed roadway consists of two 12-foot wide travel lanes (one in each direction) with curb and gutter. There is a 16-foot shoulder on the left side of the roadway with a 12-foot concrete sidewalk at the back of curb. The right side of the roadway has a 7.5-foot grassed shoulder with no sidewalk.

Bridge Length – The approved concept for this project is being revised to modify the length of the bridge over Conley Creek from 354 feet to 250 feet. The bridge length stated in the approved concept was determined based on environmental concerns. With a longer bridge, the potential impacts to wetlands and Conley Creek, which is a 303 (d) listed stream, will be greatly minimized. However to satisfy the backwater requirements specified in Section 14.1.4 of the GDOT Drainage Manual, a bridge of 250 feet in length is required. The difference between the costs of the two alternates, taking additional mitigation costs into account, is determined to be approximately \$300,000.

The proposed project consists of 250-feet of roadway (including 30-foot approach slab) west of the bridge, a new 354-foot bridge over Conley Creek and 150-feet of roadway (including 30-foot approach slab) east of the bridge. The proposed approaches will match the DeKalb County typical section. The proposed bridge will be 49-feet wide consisting of two 12-foot lanes, two 2-foot shoulders, a 12.5-foot sidewalk and parapet on the left side, and a 6-foot sidewalk and parapet on the right side.

Describe the revised feature(s) to be approved:

Project Termini - The project will begin at Bouldercrest Road, approximately 70ft south of the existing intersection with Whitfield Road. It will end at Fairview Road, where it will tie in with the existing Linecrest Road. The through movement from Bouldercrest Road to Fairview Road/existing Linecrest Road will be terminated. Ward Lake Road will be turned into a dead end road ending just north of existing intersection of Ward Lake Road/Fairview Road/Linecrest Road. The length of project will be increased from 0.14 mile to 1.08 miles.

DeKalb County will be responsible for the construction of the roadway and all associated items, such as drainage, sidewalks, signing and marking, etc. DeKalb County will also be responsible

for acquiring the necessary Right of Way for the construction of the proposed roadway and bridge.

Roadway Typical Section – A 5-foot sidewalk, along with a 2-foot strip of stamped concrete, will be added to the right shoulder. The width of the right shoulder will remain at 10 feet.

Bridge Length – The revised bridge length will be 250 feet.

Updated traffic data (AADT):

Current Year: (2005) 3,600 Design Year: (2025) 14,700

Programmed/Schedule:

P.E. 2004 R/W: 2004 Construction: 2005

Revised cost estimates:

1. DeKalb County will be responsible for the construction of the roadway and all associated items, such as drainage, sidewalks, signing and marking, etc. Therefore the attached cost estimate does not include the cost of the roadway, except for the approaches to the bridge.
2. Construction cost including E&C
3. Construction cost does not include inflation
4. Right-of-way is local responsibility and is not included in the attached cost estimate.

Is the project located in a Non-attainment area? Yes No. Concept is consistent with the model which indicates the construction and extension of Linecrest Road.

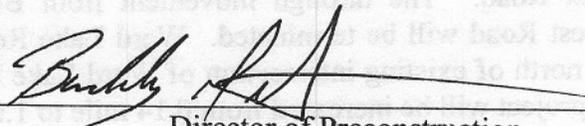
Recommendation: It is recommended that the proposed revisions to the concept be approved for implementation.

Attachments:

1. Sketch Map,
2. Cost Estimate,
3. Typical Sections
4. Intersection Capacity Analyses
5. Intersection Sketches
6. Traffic Volumes

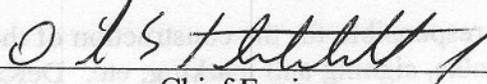
- Exempt projects

Concur:



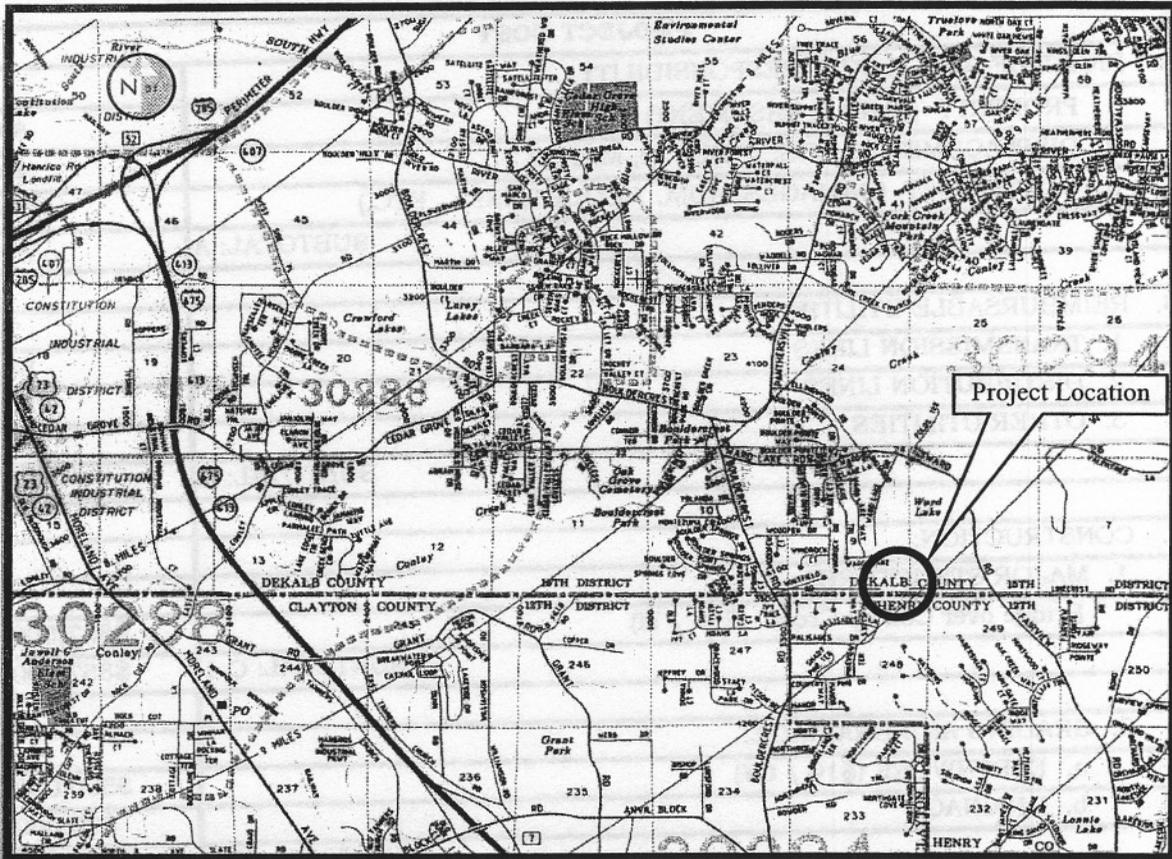
Director of Preconstruction

Approve:

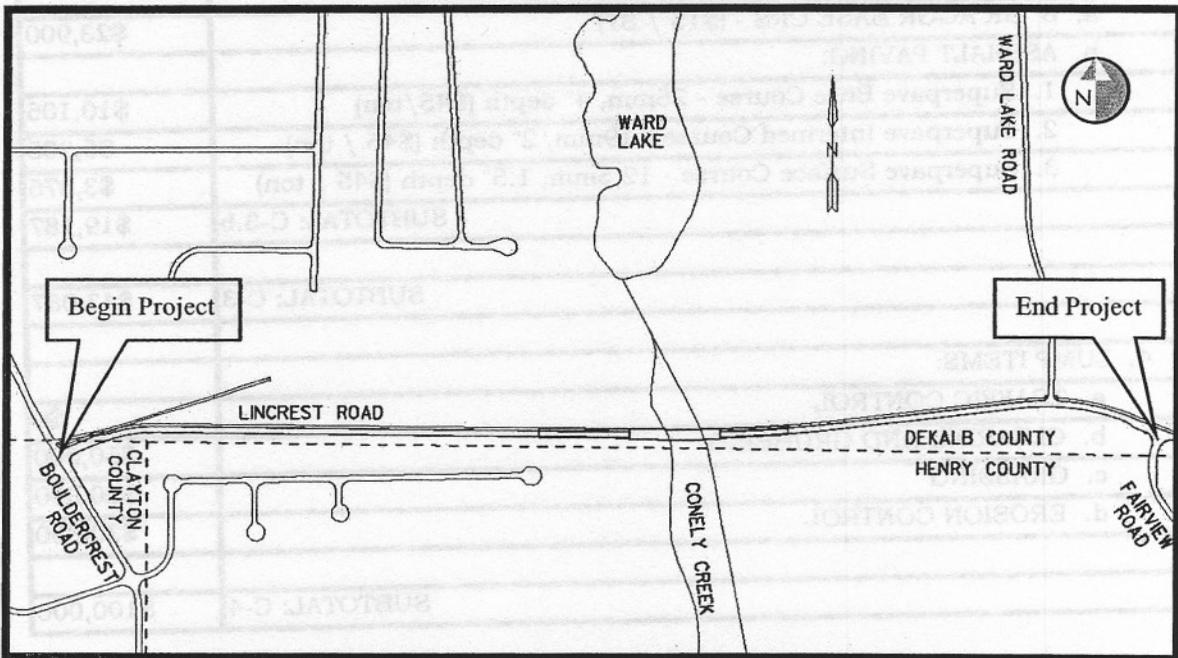


Chief Engineer

Regional Map



Project Location Sketch



**PRELIMINARY PROJECT COST ESTIMATE
LINECREST ROAD OVER CONLEY CREEK
BRZLB-89(7)**

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P.I. NO. 771180
DeKalb County

PROJECT COST	
A. RIGHT-OF-WAY: LOCAL RESPONSIBILITY	
1. PROPERTY (LAND & EASEMENT)	\$0
2. DISPLACEMENTS; RES: 0, BUS: 0, M.H.: 0	\$0
3. OTHER COST (DAMAGES, ADM. / COURT, INFL., ETC.)	\$0
SUBTOTAL: A	\$0
B. REIMBURSABLE UTILITIES:	
1. TRANSMISSION LINES	\$0
2. DISTRIBUTION LINES	\$0
3. OTHER UTILITIES	\$0
SUBTOTAL: B	\$0
C. CONSTRUCTION:	
1. MAJOR STRUCTURES:	
Bridge over Conley Creek (\$70 / sf)	\$857,500
SUBTOTAL: C-1	\$857,500
2. GRADING AND DRAINAGE:	
a. EARTHWORK (\$10 / CY)	\$500,000
b. DRAINAGE	\$30,000
SUBTOTAL: C-2	\$530,000
3. BASE AND PAVING:	
a. 8" GR AGGR BASE CRS - (\$15 / SY)	\$23,900
b. ASPHALT PAVING:	
1. Superpave Base Course - 25mm, 4" depth (\$45/ton)	\$10,106
2. Superpave Intermed Course - 19mm, 2" depth (\$45 / ton)	\$5,205
3. Superpave Surface Course - 12.5mm, 1.5" depth (\$45 / ton)	\$3,876
SUBTOTAL: C-3.b	\$19,187
SUBTOTAL: C-3	\$43,087
4. LUMP ITEMS:	
a. TRAFFIC CONTROL	\$0
b. CLEARING AND GRUBBING	\$50,000
c. GRASSING	\$20,000
d. EROSION CONTROL	\$30,000
SUBTOTAL: C-4	\$100,000

**PRELIMINARY PROJECT COST ESTIMATE
LINECREST ROAD OVER CONLEY CREEK
BRZLB-89(7)**

5. MISCELLANEOUS:	
a. SIGNING & STRIPING	\$8,000
b. FIELD OFFICE	\$60,000
c. CONCRETE CURB AND GUTTER - (\$20 / ft)	\$17,760
d. CONCRETE SIDEWALK - (\$40 / SY)	\$28,333
e. 4" STAMPED CONCRETE - (\$25 / SY)	\$18,500
f. APPROACH SLABS - (\$150 / SY)	\$51,000
g. MITIGATION	\$15,000
h. GUARDRAIL - (\$12/ft)	\$6,000
i. GUARDRAIL ANCHOR - (\$1000/ea)	\$6,000
SUBTOTAL: C-5	\$210,593

**PRELIMINARY PROJECT COST ESTIMATE
LINECREST ROAD OVER CONLEY CREEK
BRZLB-89(7)**

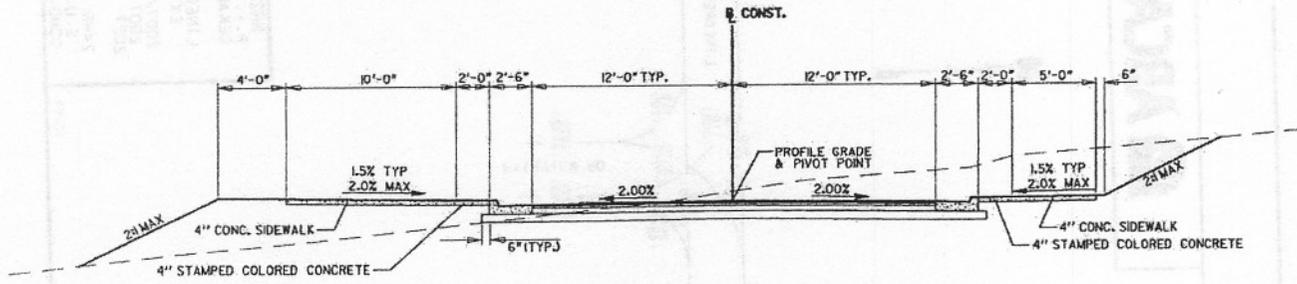
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P.I. NO. 771180
DeKalb County

ESTIMATE SUMMARY	
A. RIGHT-OF-WAY:	Local Responsibility
B. REIMBURSABLE UTILITIES:	Local Responsibility
C. CONSTRUCTION:	
1. MAJOR STRUCTURES	\$857,500
2. GRADING AND DRAINAGE	\$530,000
3. BASE AND PAVING	\$43,087
4. LUMP ITEMS	\$100,000
5. MISCELLANEOUS	\$210,593
SUBTOTAL CONSTRUCTION COST	\$1,741,181
E. & C. (10%)	\$174,118
Inflation (5%, 0 yrs)	\$0
TOTAL CONSTRUCTION COST	\$1,915,299
TOTAL PROJECT COST	\$1,915,299

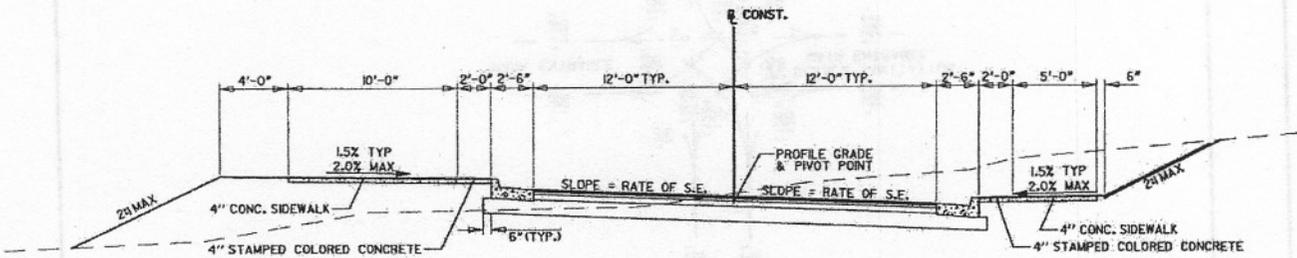
LINECREST ROAD

PROJECT NO. BRZLB-89(7)

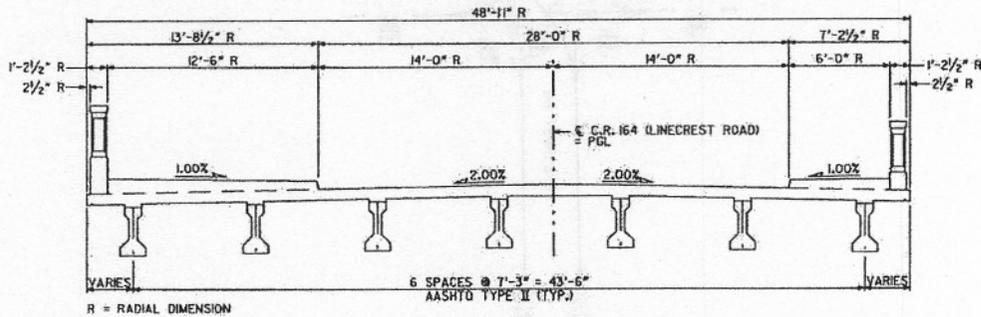
P.I. NO. 771180



LINECREST ROAD
TANGENT SECTION



LINECREST ROAD
SUPERELEVATED SECTION



LINECREST ROAD
BRIDGE SECTION



2949 Peach Ferry Road, Suite 400
Atlanta, Georgia 30339
Tel 770/438-8666 Fax 770/435-2666

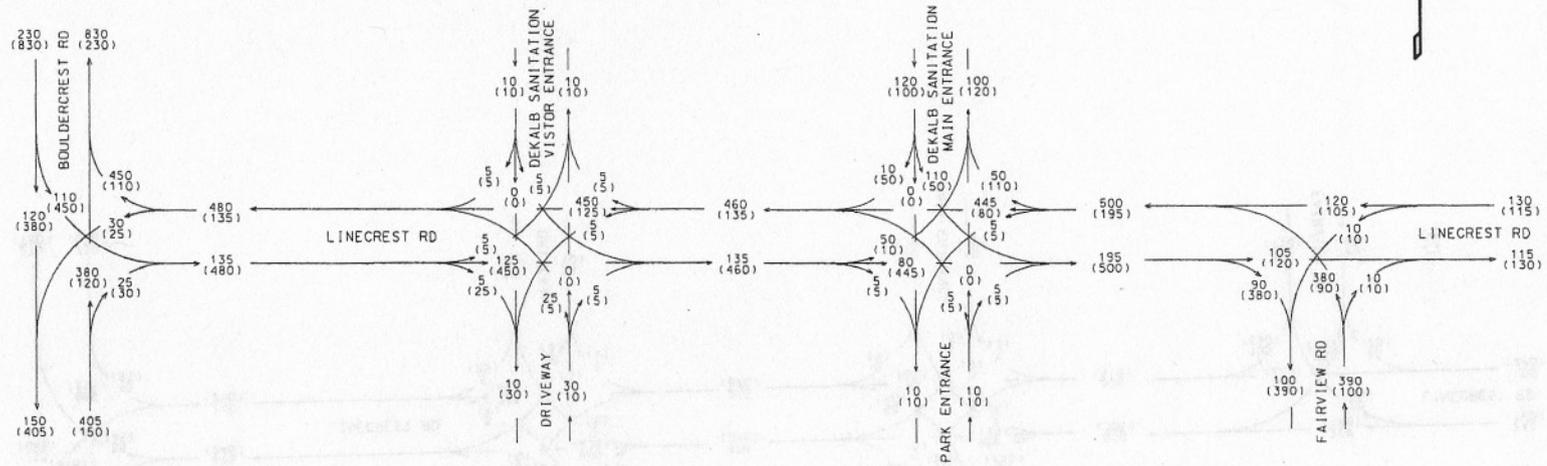
LINECREST ROAD

DEKALB COUNTY, GA

TYPICAL SECTIONS

PROJECT NUMBER
BRZLB-89(7)

P.I. NUMBER
771180



BRZLB-89(7)
 P.I. # 771180
 DEKALB COUNTY

LINECREST RD
 EXTENSION

2007 DHV
 PM = (000)
 AM = 000

T = 12.0%

Intersection Capacity Analysis Summary

Future Signalized Intersections	Signalized Intersection LOS / Control Delay (sec/veh)							
	2007				2027			
	AM		PM		AM		PM	
Linecrest Road @ Bouldercrest Road	B	12.7	B	11.2	F	113.5	C	28.2
Linecrest Road @ Bouldercrest Road (free flow right-turn)					B	13.5	C	22.0
Linecrest Road @ Fairview Road	B	11.8	A	8.9	B	19.1	B	10.0
Linecrest Road @ Dekalb Sanitation Main Entrance					B	15.1	B	19.0

Note:

- The breakdown analysis was conducted for the intersection of Linecrest Road @ Bouldercrest Road in AM peak period.
The LOS will reach E in 2022 without free flow right-turn.
- The intersection of Linecrest Road @ DeKalb Sanitation Main Entrance will warrant a signal in 2027.

Future Unsignalized Intersections	Unsignalized Intersection LOS / Avg. Control Delay (sec/veh)							
	2007				2027			
	AM		PM		AM		PM	
Linecrest Road @ Dekalb Sanitation Main Entrance	C	21.3	B	14.0	F	111.9	C	25.7
Linecrest Road @ Dekalb Sanitation Visitor Entrance	B	14.8	B	11.1	D	30.3	C	23.6

ADT's & DHV's

Linecrest Road Extension

2007 Mainline ADT (VEH/DAY)	6,820	2007 Mainline DHV (VEH/HR)	695
2027 Mainline ADT (VEH/DAY)	12,320	2027 Mainline DHV (VEH/HR)	1,215

HCM 2000 Level of Service Criteria for Unsignalized Intersections

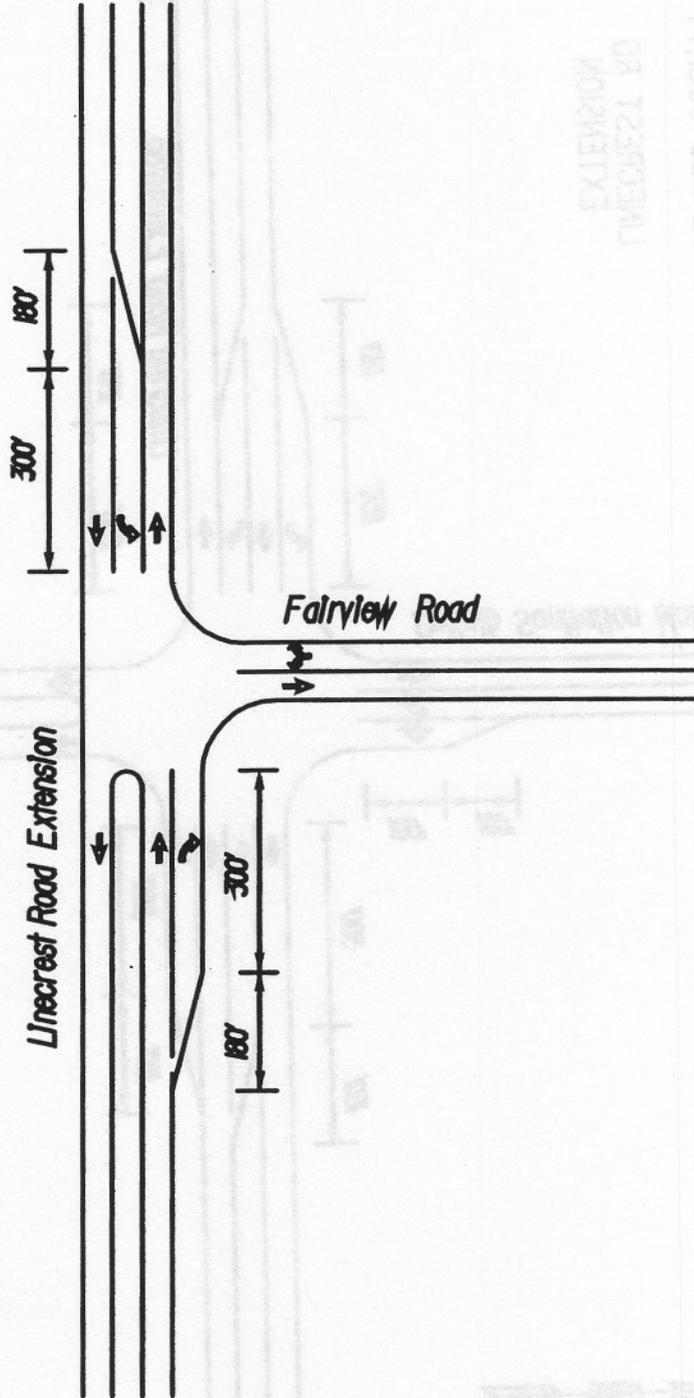
LOS	CONTROL DELAY (sec/veh) [UNSIGNALIZED]
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

HCM 2000 Level of Service Criteria for signalized Intersections

LOS	CONTROL DELAY (sec/veh) [SIGNALIZED]
A	0 - 10
B	>10 - 20
C	>20 - 35
D	>35 - 55
E	>55 - 80
F	>80

BRZLB-89(7)
P.I. # 771180
DEKALB COUNTY

LINECREST RD
EXTENSION



NOT TO SCALE



ARCADIS

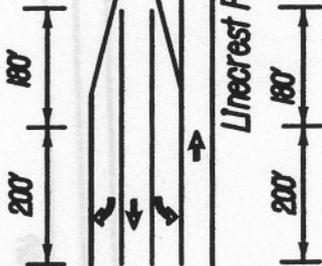
LINECREST RD EXTENSION

ARCADIS Project No. 62812-17

BRZLB-89(7)
P.I. # 77180
DEKALB COUNTY
LINECREST RD
EXTENSION

Dekalb Sanitation Visitor Entrance

Linecrest Road Extension



NOT TO SCALE



ARCADIS

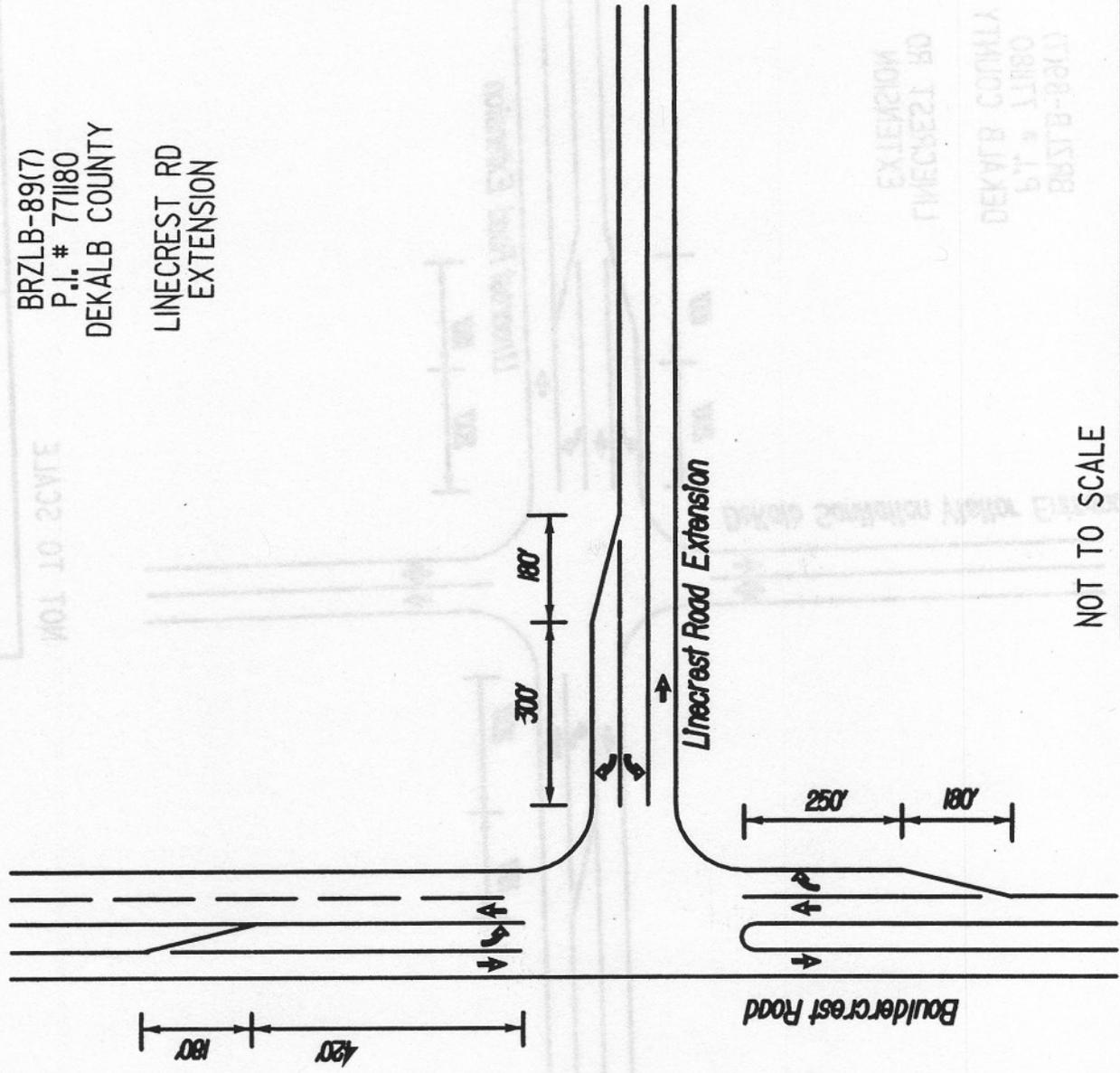
LINECREST RD EXTENSION

ARCADIS Project No. 62812-17

ARCADIS

BRZLB-89(7)
P.I. # 771180
DEKALB COUNTY

LINECREST RD
EXTENSION



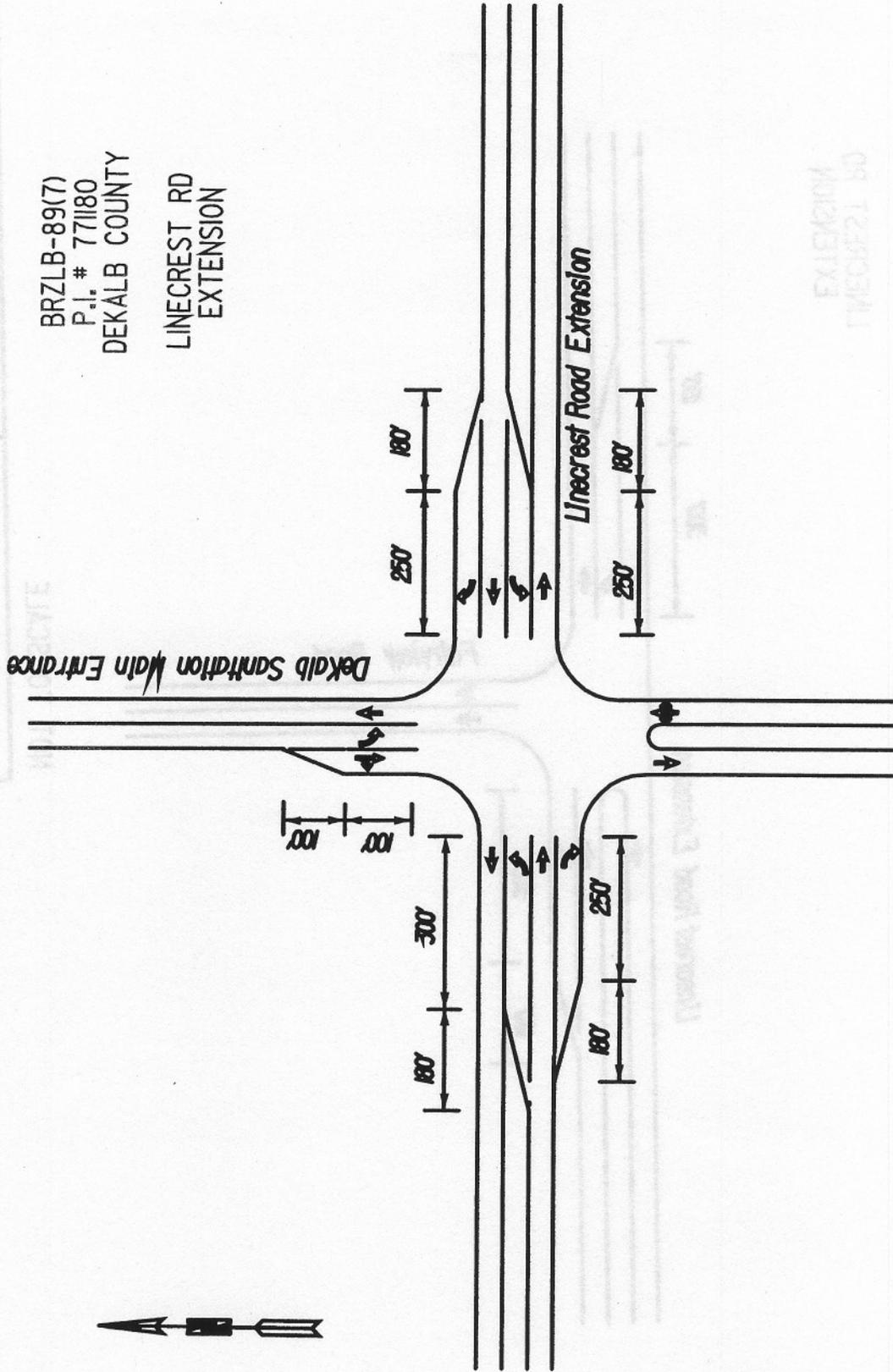
NOT TO SCALE



LINECREST RD EXTENSION

ARCADIS Project No. 62812-17

BRZLB-89(7)
P.I. # 771180
DEKALB COUNTY
LINECREST RD
EXTENSION



NOT TO SCALE



Two-Lane Highway Capacity Analysis Summary

Two-Lane Highway Capacity Analysis	Percent Time-Spend-Following			
	2007		2027	
	AM/PM		AM/PM	
Linecrest Road Extension	C	65.2%	D	78.5%

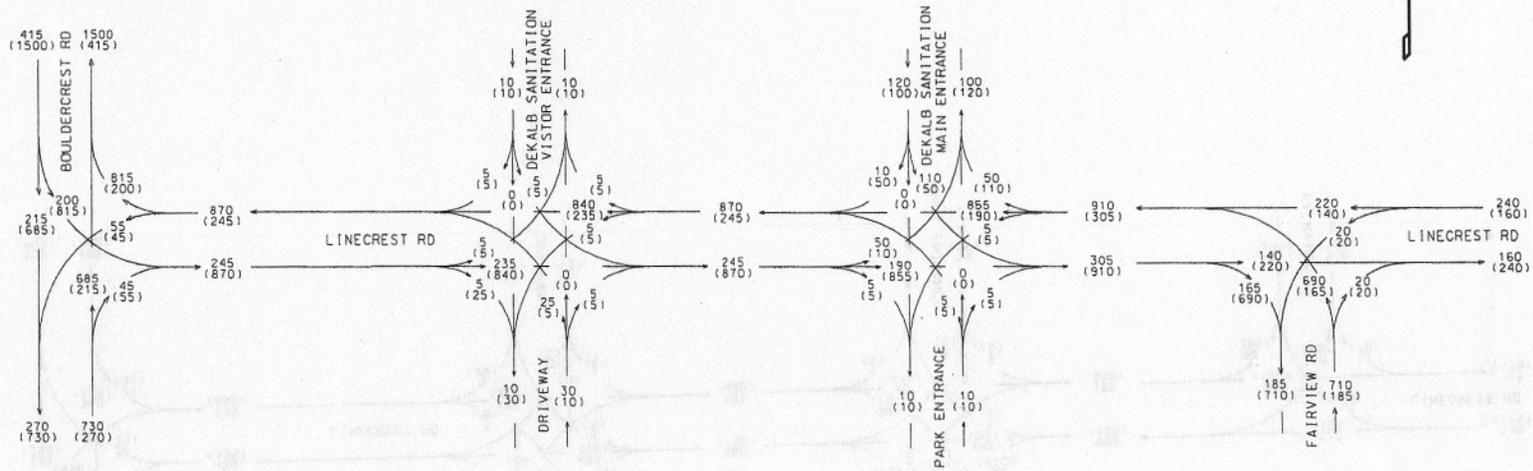
ADT's & DHV's

Linecrest Road Extension

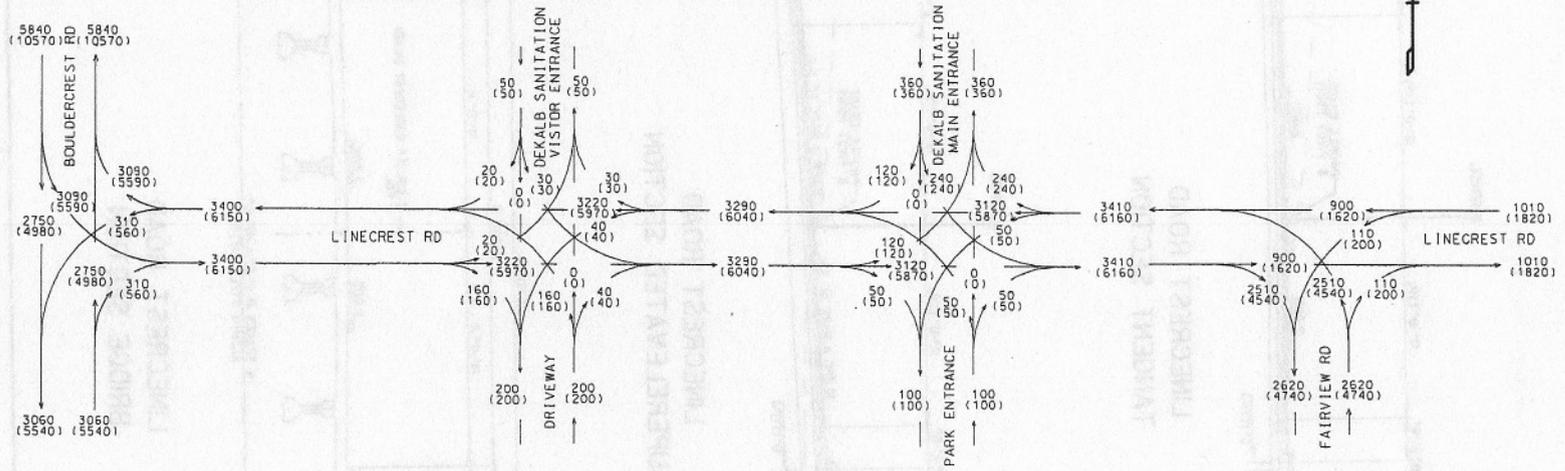
2007 Mainline ADT (VEH/DAY)	6,820	2007 Mainline DHV (VEH/HR)	695
2027 Mainline ADT (VEH/DAY)	12,320	2027 Mainline DHV (VEH/HR)	1,215

HCM 2000 Level of Service Criteria for Two-Lane Highway in Class II

LOS	Percent Time-Spend-Following
A	<=40
B	>40 - 55
C	>55 - 70
D	>70 - 85
E	>85



BRZLB-89(7)
P.I. # 771180
DEKALB COUNTY
LINECREST RD
EXTENSION
2027 OHV
PM = (000)
AM = 000
T = 12.0%



BRZLB-89(7)
P.I. # 771180
DEKALB COUNTY
LINECREST RD
EXTENSION
2007/2027 ADT
2007 = 0000
2027 = (0000)
24HR T = 9.0%
S.U. = 8.0%
C.D.M.B. = 1.0%