

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 632920-, Paulding County **OFFICE** Preconstruction
BRST- 114-1(101)
SR 120 Over Silver Comet Trail **DATE** February 7, 2006

FROM *John Jurek*
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO *MBP* SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keepler
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
Joe Palladi (file copy)
Babs Abubakari
Kent Sager
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE **BRST-114-1 (101), PAULDING COUNTY** **OFFICE** Atlanta
SR 120 over Silver Comet Trail
P.I. No. 632920

FROM *M. Babs Abubakari*
Babs Abubakari P.E., State Consultant Design Engineer **DATE** January 27, 2005

TO Meg Pirkle P.E., Assistant Director of Preconstruction

SUBJECT **REVISED PROJECT CONCEPT REPORT**

Attached is the Revised Concept Report for your further handling and approval in accordance with the Plan Development Process (PDP).

The original concept is revised from a 20'x20' precast bottomless arch culvert to a special design 14'x 10' reinforced concrete box culvert. The culvert will be built at a 52 degree skew to SR 120 to match the Silver Comet Trail alignment.

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

DATE 1/31/06

Joyce P. Pirkle

State Transportation Planning Administrator

Distribution:

Project Review Engineer
State Environmental/Location Engineer
State Traffic Operations Engineer
State Transportation Planning Administrator
State Transportation Programming Engineer
District 6 Engineer
State Bridge Design Engineer
Consultant Design Office

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

REVISED PROJECT CONCEPT REPORT

Need & Purpose: Bridge project BRST-114-1(101) will replace the structurally deficient bridge located on State Road (SR) 120 over Silver Comet Trail, southwest of the city of Dallas. The existing bridge's sufficiency rating is 43.68. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved. This project will replace the existing bridge with a structure that meets all GDOT design requirements.

This section of SR 120 is classified as a Rural Minor Arterial, is a designated school bus route and is not on a bike route. The posted speed limit along SR 120 is 45 mph. The Annual Average Daily Traffic (AADT) along this section of roadway is 6,500 vehicles in 2008 with 12 percent trucks. The projected traffic (2028) for this section of roadway is 11,000 AADT.

Replacing the existing bridge in accordance with current design standards will improve the operation and safety of this roadway.

Project Location This project is located at SR 120 over the Silver Comet Trail in Paulding County, 1.1 miles SW of the city of Dallas. The project length is approximately 550 ft. (0.10 mi.), beginning at M.P. 13.03 and ending at M.P. 13.13. The project is located within Land District 2 and Land Lot numbers 351 and 370.

Description of the original approved concept: The approved concept replaces the existing SR 120 bridge with a 20'x20' precast bottomless arch culvert. The proposed travel lanes on SR 120 consist of two, 12' lanes with 10' shoulders (2' paved). Traffic is proposed to be maintained on the existing bridge while the pedestrian culvert is constructed underneath the bridge. Traffic will then be detoured off-site while the existing bridge is demolished and final roadway is constructed. The approved construction cost is \$532,000.

PDP Classification: Minor

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

Functional Classification: Rural Minor Arterial

U. S. Route Number(s): None

State Route Number(s): 120

Traffic (AADT):

Current Year: (2008) 6500

Design Year: (2028) 11000

Proposed features to be revised: The original concept is a 20' x 20' precast bottomless arch culvert supported on spread footings. A culvert foundation investigation found poor existing soil conditions, including the groundwater table at the surface. This information and the space restriction due to the existing bridge piers required expensive pile foundations for the bottomless arch culvert. For these reasons it is proposed to reduce the culvert opening size.

Describe the revised feature(s) to be approved: The revised concept proposes to reduce the culvert size to a 165 linear foot special design 14'x 10' reinforced concrete box culvert. The culvert will be built at a 52 degree skew to SR 120 to match the Silver Comet Trail alignment. A 14' span is the minimum opening width required by AASHTO to accommodate the pedestrian trail. Lighting will be provided along the length of the culvert.

Updated Traffic Data (AADT): No change from approved concept

Programmed/Schedule:

P.E. 2002 R/W 2005 Construction 2006

Revised cost estimates:

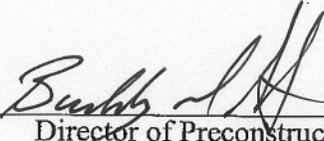
- | | | |
|----|--|--------------|
| 1. | Construction cost including inflation and E&C, | \$703,557.14 |
| 2. | Right-of-way, and | \$10,000.00 |
| 3. | Utilities | \$0.00 |
- The revised estimated cost increased \$171,557 compared to the Nov, 2004 program cost due to increased mean item unit prices and a more accurate calculation of the culvert quantities.

Is the project located in a non-attainment area? Yes No

Recommendation: The Consultant Design Office recommends that the proposed revision to the concept be approved for implementation.

Attachments:

1. Location Map
2. Cost Estimate

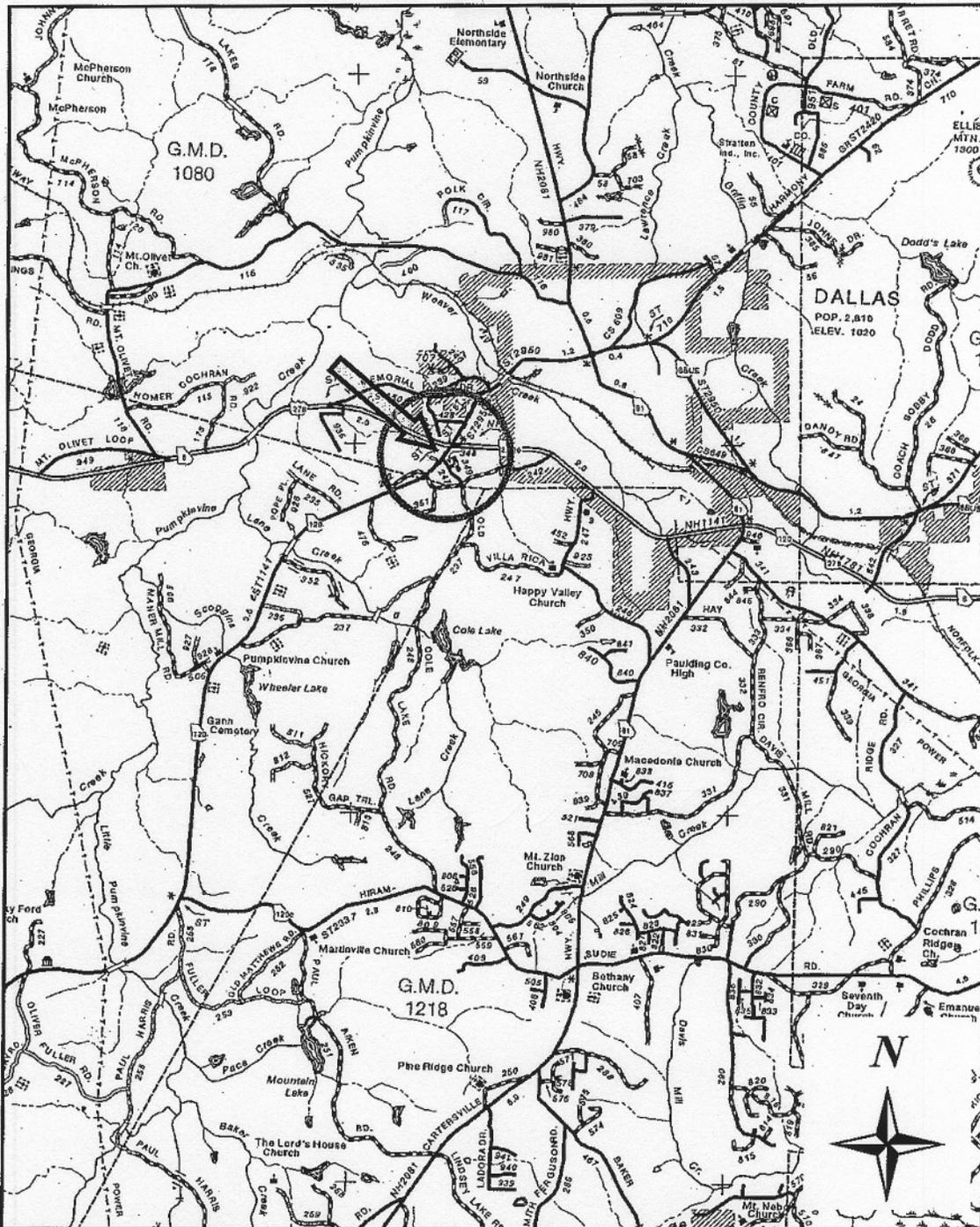
Concur: 
Director of Preconstruction

Approve: 
Chief Engineer

Project Number: BRST-114-1(101)

P. I. Number: 632920

County: Paulding



Scale: 1 inch = 1 mile

Location Map

Project: BRST-114-1(101), Paulding County, PI No.: 632920-
Description: SR 120 over Silver Comet Trail, 1.1 miles SW of Dallas

Estimate Report for file "BRST-114-1(101) - Paulding_2005-06-01_2005-10-14"

Section Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	20000.00	TRAFFIC CONTROL -BRST-114-1(101)	20000.00
207-0203	110	CY	35.81	FOUND BK FILL MATL, TP II	3939.10
210-0100	1	LS	48770.00	GRADING COMPLETE -BRST-114-1(101)	48770.00
310-1101	1417	TN	14.61	CR AGGR BASE CRS, INCL MATL	20702.37
318-3000	100	TN	16.15	AGGR SURF CRS	1615.00
402-3121	894	TN	38.50	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	34419.00
402-3130	269	TN	38.75	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM	10423.75
402-3190	383	TN	42.42	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	16246.86
413-1000	346	CL	0.99	BITUM TACK COAT	342.54
436-1000	316	LF	7.96	ASPHALTIC CONCRETE CURB -6 IN	2515.36
441-0105	400	SY	29.58	CONC SIDEWALK, 5 IN	11832.00
500-3101	570	CY	457.36	CLASS A CONCRETE	260695.20
511-1000	76000	LB	0.72	BAR REINF STEEL	54720.00
540-1101	1	LS	50000.00	REMOVAL OF EXISTING BR, STA NO 26+11.27	50000.00
550-1183	266	LF	36.69	STORM DRAIN PIPE, 18 IN, H 20-25	9759.54
550-2180	26	LF	24.14	SIDE DRAIN PIPE, 18 IN, H 1-10	627.64
550-3618	2	EA	522.02	SAFETY END SECTION 18 IN, SIDE DRAIN, 6:1 SLOPE	1044.04
550-4118	4	EA	251.64	FLARED END SECTION 18 IN, SIDE DRAIN	1006.56
576-1018	356	LF	26.08	SLOPE DRAIN PIPE, 18 IN	9284.48
577-1100	2	EA	1216.78	METAL DRAIN INLET - COMPLETE ASSEMBLY	2433.56
634-1200	11	EA	87.38	RIGHT OF WAY MARKERS	961.18
641-1200	313	LF	13.25	GUARDRAIL, TP W	4147.25
641-5001	2	EA	469.61	GUARDRAIL ANCHORAGE, TP 1	939.22
641-5012	2	EA	1525.97	GUARDRAIL ANCHORAGE, TP 12	3051.94
643-8200	450	LF	1.38	BARRIER FENCE (ORANGE), 4 FT	621.00
Section Sub Total:					\$570,097.59

Section Erosion Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	1	AC	483.10	TEMPORARY GRASSING	483.10
163-0240	20	TN	205.25	MULCH	4105.00
163-0300	2	EA	1173.35	CONSTRUCTION EXIT	2346.70
163-0503	1	EA	483.27	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	483.27
163-0520	230	LF	12.63	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	2904.90
163-0530	135	LF	2.47	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	333.45
165-0030	1107	LF	1.12	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	1239.84
165-0070	68	LF	1.32	MAINTENANCE OF BALED STRAW EROSION CHECK	89.76
165-0087	1	EA	169.48	MAINTENANCE OF SILT CONTROL GATE, TP 3	169.48
165-0101	2	EA	385.72	MAINTENANCE OF CONSTRUCTION EXIT	771.44
167-1000	1	EA	1837.51	WATER QUALITY MONITORING AND SAMPLING	1837.51
167-1500	12	MO	817.56	WATER QUALITY INSPECTIONS	9810.72
171-0030	2214	LF	3.15	TEMPORARY SILT FENCE, TYPE C	6974.10
603-2180	14	SY	32.09	STN DUMPED RIP RAP, TP 3, 12 IN	449.26
603-7000	14	SY	3.93	PLASTIC FILTER FABRIC	55.02
700-6910	2	AC	772.50	PERMANENT GRASSING	1545.00
700-7000	4	TN	58.37	AGRICULTURAL LIME	233.48
700-7010	4	GL	18.58	LIQUID LIME	74.32
700-8000	2	TN	257.90	FERTILIZER MIXED GRADE	515.80
700-8100	70	LB	1.48	FERTILIZER NITROGEN CONTENT	103.60
716-2000	615	SY	1.12	EROSION CONTROL MATS, SLOPES	688.80
Section Sub Total:					\$35,214.55

Section Signing & Marking					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	86	SF	13.52	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	1162.72

636-1029	15	SF	19.94	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	299.10
636-1031	7	SF	16.78	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	117.46
636-2070	136	LF	6.61	GALV STEEL POSTS, TP 7	898.96
636-2080	69	LF	8.62	GALV STEEL POSTS, TP 8	594.78
653-1501	1278	LF	0.26	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	332.28
653-1502	1232	LF	0.24	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	295.68
653-1704	24	LF	3.29	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	78.96
654-1001	14	EA	3.45	RAISED PYMT MARKERS TP 1	48.30
Section Sub Total:					\$3,828.24

Total Estimated Cost: \$609,140.38

Subtotal Construction Cost	\$609,140.38
E&C Rate 10.0 %	\$60,914.04
Inflation Rate 5.0 % @ 1.0 Years	\$33,502.72
<hr/>	
Total Construction Cost	\$703,557.14
Right Of Way	\$10,000.00
ReImb. Utilities	\$0.00
<hr/>	
Grand Total Project Cost	\$713,557.14