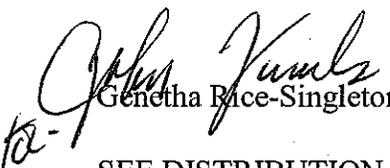


**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 221875-, Wilkinson County **OFFICE** Preconstruction
STP00-0062-00(025)
SR 57 at SR 18 Intersection Improvements
DATE May 7, 2008

FROM  Genetha Rice-Singleton, Assistant Director of Preconstruction

TO *to-* SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

DISTRIBUTION:

Brian Summers
Glenn Bowman
Ken Thompson
Michael Henry
Keith Golden
Angela Alexander
Paul Liles
Tony Collins
George Brewer
BOARD MEMBER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

MEMORANDUM

FILE STP00-0062-01(025), Wilkinson County OFFICE Planning
P.I. 221875

DATE 4/15/08

FROM Angela T. Alexander, State Transportation Planning Administrator

TO Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT Revised Concept Report – S.R. 57 / S.R. 18 Intersection Improvements

STP00-0062-01(025), P.I. 221875

The Planning Office was requested by Preconstruction to verify if the subject project was identified in the current STIP. PE was authorized in 2000 for P.I. 221875. The Right-of-Way and Construction phases are currently outside of the currently approved FY '08- '11 STIP. The project will move into the STIP as funding allows. This project as defined in this revised concept report, is currently not consistent with the project description which will appear in the STIP. Planning request the project manager update the project information in TPRO to concur with the revised concept report which indicates an intersection improvement project.

ATA:dec

Attachment

CC: Matthew Fowler
Radney Simpson
Sean Bush

Date:

4/9/08

Matthew Fowler
mf State Transportation Planning Administrator

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP00-0062-01(025)
 Wilkinson County OFFICE Tennille
 P.I. # 221875
 Intersection Improvements on SR 57 at SR 18 DATE 3-31-2008

FROM Douglas Alan Smith, District Design Engineer

TO Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT **REVISED 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 above mentioned project consists of 4.70 miles of realignment and reconstruction of SR 57 and SR 18 to improve the poor horizontal and vertical alignments of these roadways and to improve the acute existing intersection angle.

The concept is now revised to shorten the project length to 0.15 miles and to correct the intersections deficiencies with the use of a round-a-bout design. This design will allow the angle of the intersection to become insignificant to the function ability of the intersection while providing a much safer intersection. This will reduce right of way and environmental impacts to the surrounding properties and avoid impacting several kaolin mine pits which are located on either side fo SR 57 and SR 18. Thereby reducing construction, right of way and mitigation costs significantly.

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

DATE _____

** Not in STIP **

 State Transportation Planning Administrator

REVISED PROJECT CONCEPT REPORT

Need and Purpose: *See Attached Need and Purpose Statement*

Project Location: *This project is located at the intersection of SR 57 and SR 18 approximately 1.0 miles south of the City of Gordon in Wilkinson County.*

Description of the approved concept: *The current concept is approved to correct 4.70 miles of vertical and horizontal alignment of SR 57 and SR 18 in order to correct the poor alignments of the intersection. The current intersection would be converted from a two-way stop condition to a four-way stop intersection.*

PDP Classification: Major: Minor:

Federal Oversight: Full Oversight Exempt SF Other

Functional Classification: SR 57: Rural Principle Arterial, SR 18: Rural Major Collector

U. S. Route Number(s): None

State Route Number(s): 57 and 18

Traffic (AADT) as shown in the approved concept:

SR 57: Current Year: 1300 (2003) Design Year: 2100 (2023)

Proposed features to be revised:

- *Project Termini*
- *Typical Section*
- *Right-Of-Way Limits*
- *Revised Alignment*
- *Controlling Criteria (Speed Design, Superelevation)*

Describe the revised feature(s) to be approved: *The project concept is now revised to construct a round-a-bout intersection at this location. The speed design for this project is to be reduced from 55 mph to 45mph in order to produce a low speed environment for the round-a-bout design. The speed reduction will be posted with this project. The superelevation for one horizontal curve on SR 57 and one horizontal curve on SR 18 will both need to be transitioned to normal crown just before the intersection in order to provide a smooth crossing. The overall project length is revised from 4.70 miles to 0.15 miles. The project will now begin on SR 57 at approximate MP 1.88 and end approximately at MP 2.03. The typical section for both SR 57 and SR 18 shall consist of one 12-ft. travel lane in each direction with 10-ft. rural shoulders. Auxiliary lanes will be provided on SR 57 onto SR 18 from both directions. The right of way limits will be greatly reduced to match the project limits as well as reduced in width since little vertical reconstruction will be required. The horizontal alignments of SR 57 and SR 18 will be retained instead of being realigned.*

Updated traffic data (AADT):

SR 57: Current Year: 4800 (2007)

Design Year: 8200 (2027)

SR 18: Current Year: 5400 (2007)

Design Year: 9200 (2027)

Programmed/Schedule:

P.E.: Authorized

R/W: LR

Construction: LR

VE Study Required: Yes No

Revised cost estimates:

- 1. Construction cost: \$567,783 ~~\$550,760.00~~ *add*
- 2. Right-of-way: \$56,300.00
- 3. Utilities: \$31,080.00

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

Recommendation: *The District recommends that the proposed revision to the concept be approved for implementation.*

Concur: _____
Director of Preconstruction

Approve: _____
Chief Engineer

Attachments:

- 1. Need and Purpose Statement
- 2. Plan Sheet
- 3. Typical Section
- 4. Revised Cost Estimates

-NEED AND PURPOSE-

PROJECT STP00-0062-01(025) Wilkinson County

P.I. # 221875

Intersection improvements on SR 57 at SR 18 south of the City of Gordon

Planning Background and Project History:

Project STP00-0062-01(025), P.I. # 221875 originated from a request from a former State Senator's constituents to evaluate the safety of this intersection due to the high accident rates occurring here and the poor alignment of the intersection. The intent of this project is to focus on the improvement of the intersection of SR 57 and SR 18 approximately 1.0 miles south of the City of Gordon. SR 18 intersects SR 57 at a poor horizontal angle of less than the desired 60 degree angle recommended by AASHTO Green Book. The severity of this angle causes sight distance to be limited and makes turning very difficult for large trucks to maneuver. The current posted speed of 55mph encourages vehicles to ignore the stop signs on SR 18 causing near misses of mid intersection collisions with oncoming traffic on SR 57. The construction date for this project in the GDOT construction Work Program is in Long Range.

Logical Termini:

Project STP00-0062-01(025) focuses on the safety improvements of the intersection of SR 57 and SR 18. The logical terminus for this project has been based on the need to improve safety of the existing intersection and the limits need to construct a round-a-bout intersection at this location.

Traffic:

<u>SR 57</u>	<u>SR 18</u>
4800 ADT (2007)	5400 ADT (2007)
8200 ADT (2027)	8600 ADT (2027)
% Trucks = 8%	% Trucks = 8%
24 Hr. Trucks = 10%	24 Hr. Trucks = 9%

General Land Use / Project Setting:

SR 57 serves as a main arterial route between the cities of Irwinton in Wilkinson County and Macon in Bibb County. SR 18 serves as a commuter route between the cities of Milledgeville in Baldwin County and Gordon in Wilkinson County. Both act as commuter routes for tractor-trailers hauling kaolin from the local mines in Baldwin, Twiggs, Washington and Wilkinson Counties to the kaolin plants located in the City of Gordon and McIntire. These plants employ several hundred employees that use these routes to get to and from work each day. These plants operate 24 hours a day, 7 days a week. Both of these routes are also used by local traffic including school buses, emergency vehicles and lightweight vehicles to get to shopping areas, schools and educational facilities.

Land use in this area is a mixture of residential home sites located on land planted in pine trees and hardwoods, kaolin mines, churches and one commercial convenience store property. The project setting is primarily rural even though this project is located approximately 1 mile south of the City of Gordon.

Capacity / Operational Function:

SR 57 is functionally classified as a Principal Rural Arterial. It is comprised of one 12-ft. asphalt travel lane in each direction with rural shoulders each side. The posted speed for SR 57 is currently 55mph. The existing right-of-way width is 100-ft. (50-ft symmetrical of the centerline). The traffic along SR 57 is comprised of lightweight vehicles, tractor-trailers, school buses and emergency vehicles. Heavy equipment is also hauled along these routes loaded onto tractor-trailers. SR 57 currently operates at a level of service for "D" given the daily volume of 740 vehicles per hour. Without any capacity being added, it is predicted that by the year 2027, this route will continue to function at a level of service of "D" with a predicted daily hourly volume of 900 vehicles per hour.

SR 18 is functionally classified as a Rural Major Collector. It is comprised of one 12-ft. asphalt travel lane in each direction with rural shoulders each side. The posted speed for SR 18 is currently 55mph. The existing right-of-way width is 100-ft. (50-ft symmetrical of the centerline). The traffic along SR 18 is comprised of lightweight vehicles, tractor-trailers, school buses and emergency vehicles. Heavy equipment is also hauled along these routes loaded onto tractor-trailers. SR 18 currently operates at a level of service for "D" given the daily volume of 850 vehicles per hour. Without any capacity being added, it is predicted that by the year 2027, this route will continue to function at a level of service of "D" with a predicted daily hourly volume of 990 vehicles per hour.

Safety:

An accident history report has been generated for the intersection of SR 57 at SR 18 to determine how many accidents have occurred at this location for the years 2000 through 2006. The accident history revealed the following information:

Crash Summary

Year	Not A Collision	Angle	Head On	Sideswipe	Rear End
2000	2	0	0	0	0
2001	2	0	0	0	1
2002	1	0	0	0	0
2003	3	0	0	0	0
2004	3	0	0	1	0
2005	4	3	0	2	1
2006	1	1	1	0	0
Totals	16	4	1	3	2

As indicated, (16) accidents occurred on or off the roadway which did not involve other vehicles. Of these accidents (3) were caused by animals crossing the roadway, (5) involved the vehicles leaving the roadway and hitting trees or embankments, and (5) were accidents in which the vehicle overturned on the roadway. The accident patterns listed suggests that the existing congestion and poor angle within the intersection combined with the high rates of speed for this area are causing motorists to have "near misses" as well as several different types of accidents within the intersection.

Crash Comparison Chart to Statewide Average

Year	SR 57 Rural Principal Arterial	Statewide Average 100 - MVM	SR 18 Rural Collector	Statewide Average 100 - MVM
2000	144	No Data Avail.	144	No Data Avail.
2001	200	No Data Avail.	200	No Data Avail.
2002	61	No Data Avail.	61	No Data Avail.
2003	61	No Data Avail.	61	No Data Avail.
2004	226	90	226	94
2005	0	No Data Avail.	0	No Data Avail.
2006	202	183	202	73

MVM = Accidents per 100 Million Vehicle Miles Travelled

The chart above indicates the comparison of the accident rates of both SR 57 and SR 18 with the available data for statewide average crash data for the years 2004 and 2006. Both years, SR 57 and SR 18 had accident rates that exceeded the statewide average.

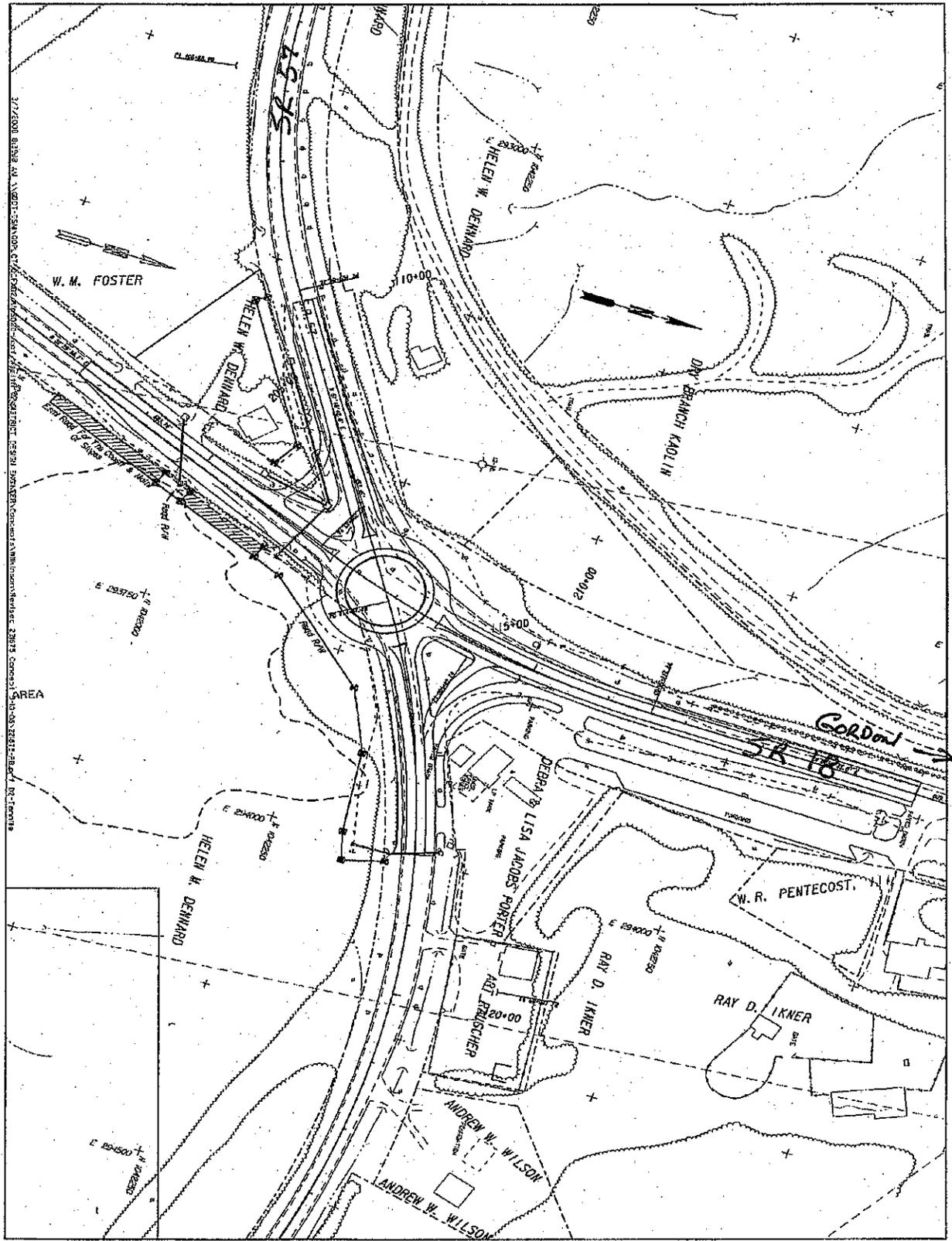
The proposed project will improve the safety of the intersection by replacing the existing two-way stop condition with a modern round-a-bout design that will force traffic from all four directions to stop, traverse through the intersection at a slower rate and execute turns more easily than before. Advance warning signs will be installed to lengthen the awareness time of the oncoming traffic from all directions. The speed limit will be reduced to 45mph which will increase reaction times and provide the slower approach speeds to the round-a-bout which will enhance the operation of this type of design.

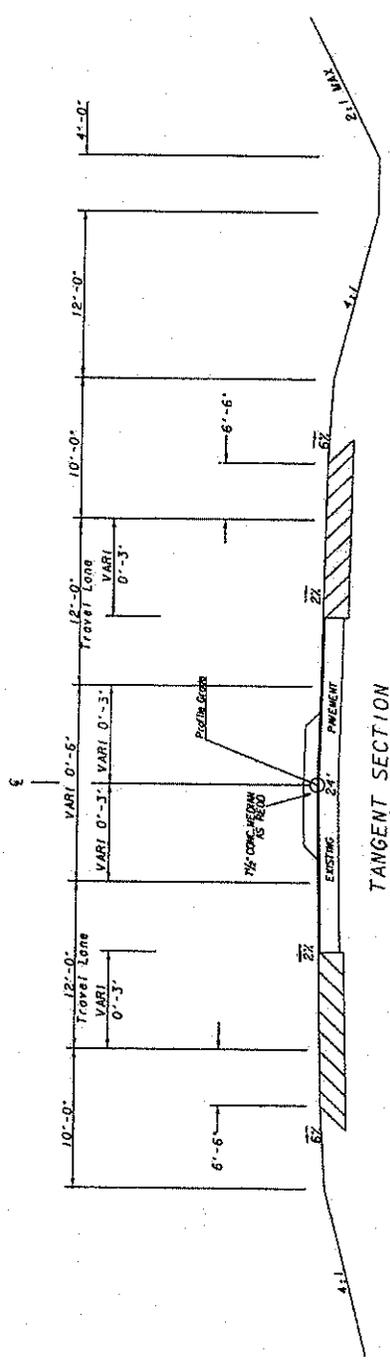
Need and Purpose Summary:

The need exists to improve the safety of the existing intersection of SR 57 at SR18 and provide adequate turning opportunities for the large trucks which frequently use this route. The purpose of this project is to provide a much safer type of intersection by using the round-a-bout design and to provide auxiliary lanes and turning radii to accommodate large trucks. These improvements will greatly enhance the safety of the intersection while improving function ability.

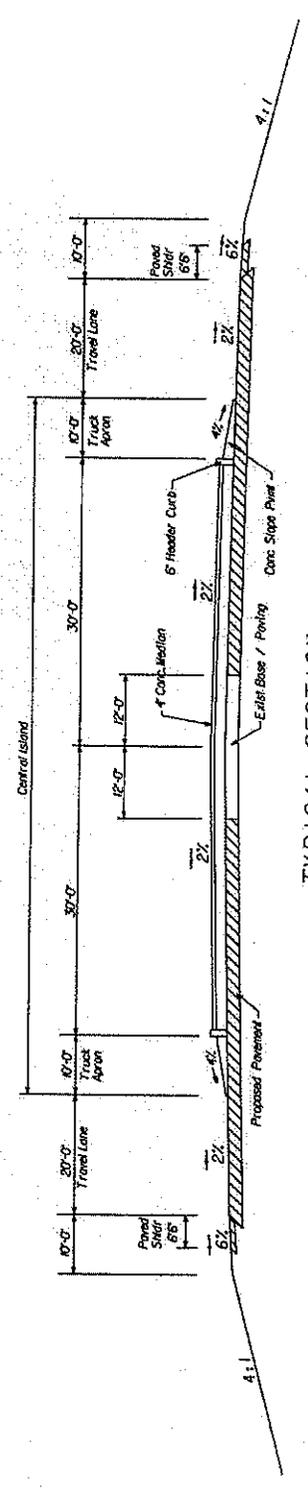
Other projects in the Area:

1. CSBRG-0007-00(060) Wilkinson County
2. CSSTP-0007-00(519) Wilkinson County
3. CSSTP-0007-00(520) Wilkinson County





TANGENT SECTION
SR 57
SR 18



TYPICAL SECTION
ROUNDABOUT

STP00-0062-00(025) WILKINSON COUNTY
P.I. • 221875

**Revised Construction Cost Estimate
STP00-0062-01(025) Wilkinson County
P.I. # 221875 - 3-31-08**

Section ROADWAY					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	50000.00	TRAFFIC CONTROL - STP00-0062-01(025)	50000.00
205-0001	1540	CY	4.51	UNCLASS EXCAV	6945.40
310-1101	1590	TN	24.32	GR AGGR BASE CRS, INCL MATL	38668.80
318-3000	250	TN	25.23	AGGR SURF CRS	6307.50
402-1812	450	TN	70.00	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	31500.00
402-3121	993	TN	70.00	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	69510.00
402-3131	850	TN	66.87	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	56839.50
402-3190	400	TN	65.03	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	26012.00
413-1000	556	GL	2.05	BITUM TACK COAT	1139.80
441-0004	455	SY	45.83	CONC SLOPE PAV, 4 IN	20852.65
441-0740	1256	SY	37.35	CONCRETE MEDIAN, 4 IN	46911.60
441-0754	178	SY	55.85	CONCRETE MEDIAN, 7 1/2 IN	9941.30
441-5002	378	LF	19.29	CONCRETE HEADER CURB, 6 IN, TP 2	7291.62
446-1100	4200	LF	5.28	PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	22176.00
550-1180	380	LF	46.92	STORM DRAIN PIPE, 18 IN, H 1-10	17829.60
550-1240	120	LF	58.56	STORM DRAIN PIPE, 24 IN, H 1-10	7027.20
550-4218	3	EA	656.40	FLARED END SECTION 18 IN, STORM DRAIN	1969.20
550-4224	2	EA	786.39	FLARED END SECTION 24 IN, STORM DRAIN	1572.78
634-1200	16	EA	94.00	RIGHT OF WAY MARKERS	1504.00
641-1200	270	LF	15.72	GUARDRAIL, TP W	4244.40
641-5001	1	EA	627.58	GUARDRAIL ANCHORAGE, TP 1	627.58
641-5012	1	EA	1813.66	GUARDRAIL ANCHORAGE, TP 12	1813.66
668-2100	5	EA	3571.00	DROP INLET, GP 1	17855.00
668-5000	4	EA	1797.00	JUNCTION BOX	7188.00
Section Sub Total:					\$455,727.59

Section EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
603-2181	20	SY	38.28	STN DUMPED RIP RAP, TP 3, 18 IN	765.60
603-7000	20	SY	4.31	PLASTIC FILTER FABRIC	86.20
700-6910	3	AC	834.00	PERMANENT GRASSING	2502.00
700-7000	5	TN	60.00	AGRICULTURAL LIME	300.00
700-7010	11	GL	19.38	LIQUID LIME	213.18
700-8000	3	TN	293.00	FERTILIZER MIXED GRADE	879.00
700-8100	281	LB	1.43	FERTILIZER NITROGEN CONTENT	401.83
Section Sub Total:					\$5,147.81

Section TEMPORARY EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	2	AC	462.63	TEMPORARY GRASSING	925.26
163-0240	42	TN	190.18	MULCH	7987.56
163-0520	500	LF	12.12	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	6060.00
163-0550	12	EA	177.79	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	2133.48
165-0010	675	LF	1.06	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	715.50
165-0105	12	EA	82.00	MAINTENANCE OF INLET SEDIMENT TRAP	984.00
167-1000	2	EA	2166.87	WATER QUALITY MONITORING AND SAMPLING	4333.74
167-1500	9	MO	776.63	WATER QUALITY INSPECTIONS	6989.67
171-0010	1350	LF	1.87	TEMPORARY SILT FENCE, TYPE A	2524.50
Section Sub Total:					\$32,653.71

Section SIGNING AND MARKING

Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1033	72	SF	22.90	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	1648.80
636-2070	140	LF	6.71	GALV STEEL POSTS, TP 7	939.40
653-1501	5040	LF	0.25	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	1260.00
653-1502	4640	LF	0.24	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	1113.60
653-1704	120	LF	3.23	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	387.60
653-6004	400	SY	2.42	THERMOPLASTIC TRAF STRIPING, WHITE	968.00
653-6006	240	SY	2.56	THERMOPLASTIC TRAF STRIPING, YELLOW	614.40
654-1001	32	EA	3.20	RAISED PVMT MARKERS TP 1	102.40
654-1003	40	EA	3.20	RAISED PVMT MARKERS TP 3	128.00
Section Sub Total:					\$7,162.20

Total Estimated Cost: \$500,691.31

Subtotal Construction Cost		\$500,691.31
E&C Rate (in %) <input type="text" value="10.0"/>		\$50,069.13
Inflation Rate (in %) <input type="text" value="0.0"/>	Years <input type="text" value="0.0"/>	\$0.00
Total Construction Cost		\$550,760.44
Right Of Way \$ <input type="text" value="0.0"/>		
ReImb. Utilities \$ <input type="text" value="0.0"/>		
Grand Total Project Cost		\$550,760.44

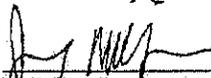
SUBTOTAL CONST COST = 500,691
 ENGINEERING @ 5% = 25,034
 CONTIGENCY @ 8% = 42,058

 TOTAL CONST COST = \$567,783
 RIGHT-OF WAY - 56,300
 UTILITIES - 31,080

 GRAND TOTAL FOR PROJECT = \$655,163

Done 4/23/08

Preliminary Right of Way Cost Estimate



Phil Copeland
Right of Way Administrator
By: Jerry Milligan

Date: March 14, 2008
 Project: STP00-0062-01(025)Wilkinson
 Existing/Required R/W: Varies/Varies
 Project Termini: SR 57 @ SR 18 Intersection Improvement
 Project Description: SR 57 @ SR 18 Intersection Improvement

P.I. Number: 221875
 No. Parcels: 2

Land: Ag/Res R/W : 0.53 acres @ \$4,000/acre	\$	2,120	
Ag/Res Estmt: 0.12 acres @ \$ 4,000/acre @ 50%		<u>240</u>	\$ 2,360
Improvements : misc. site improvements			10,000
Relocation: Commercial (0)			
Residential (0)			0
Damage : Proximity (0)			
Cost to Cure (0)			
Uneconomic Remnant(1)			<u>3,850</u>
Net Cost	\$		16,210
Net Cost	\$		16,210
Scheduling Contingency 55 %			8,915
Adm/Court Cost 60			15,075
Market Appreciation 40 %			<u>16,080</u>
	\$		56,280
Total Cost			\$56,300

