

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** STP00-0003-00(623) **OFFICE** Program Delivery  
Peach County  
SR 49 FM S of CS 629 to SR7 & SR7 **DATE** May 8, 2012  
FM SR 49 TO S OF CS 740  
P.I. 0003623

**FROM** Bobby Hilliard, P.E., State Program Delivery Engineer *B.H.*

**TO** Lisa Myers, State Project Review Engineer  
Attn: Matt Sanders, Value Engineering Specialist

**SUBJECT** Value Engineering Implementation Reversal Request

The Office of Program Delivery requests a Value Engineering (VE) Study Implementation Revision for PI 0003623. The VE Study was conducted by your office on February 14-17, 2011.

The recommendation DR-13 was originally implemented. The recommendation was to use two sections of Jack or bore in lieu of one under the railroad tracks between College Street and Preston Street from structure A55 to A41. Structure A41 has been renamed to structure A40, see attached sheet. Our VE response explained that this implementation was subject to railroad approval. This was not approved by Norfolk Southern Railroad per their preliminary review on July 11, 2011 comment 3. In addition, per railroad observations received on March 27, 2012 comment 2(a)(i) structure A39, previously numbered as A55 has been removed and the entire length from structures A38 to A40 is being installed by jack or bore.

This office proposes reversing the VE Recommendation DR-13 as recommended by the State Utilities Office. Therefore, there will be only one section of Jack or bore under the railroad tracks between College Street and Preston Street.

The VE Reversal of implementation DR-13 will have a potential cost increase of \$33,261.00 to the cost of the project. The VE study comments as well as the railroad comments are attached.

If you have any questions about this request or need additional information, please contact the Project Manager, Chad E. White, at 404-631-1546 if there are any questions and/or concerns.

Approved: *Lisa L Myers* Date *5/8/12*

Lisa Myers, State Project Review Engineer

Approved:     Russell McMurry     Date 5/9/12  
Russell McMurry, Director of Engineering

Approved:     Gerald M. Ross     Date 5/15/2012  
Gerald M. Ross, P.E., Chief Engineer

Attachments: VE Study Responses, Rail Road Comments, revised plan sheet, and the Original Implementation Letter

BKH: MAH: cew



# STV/Ralph Whitehead Associates

3505 Koger Boulevard, Suite 205  
Duluth, Georgia 30096  
(770)452-0797 fax:(770)936-9171

July 11, 2011

Mr. E. L. Jackson  
Engineer, Public Improvements  
Bridges and Structures  
Norfolk Southern Corporation  
1200 Peachtree St.  
Atlanta, GA 30309

Fort Valley, GA

**Proposed Drainage Improvements on SR 49 near SR 7 along  
Norfolk Southern, GDOT Project STP-0003-00(623),  
PI No. 0003623, Peach County, GA  
MP 105.0-FV and H-219.65 File BR0120839**

Dear Mr. Jackson:

We have completed a review of the May 24, 2011 preliminary plan submittal from Georgia Department of Transportation (GDOT), and offer the following comments:

**General:**

- 1) "General Notes" for the project should include the following:
  - a) "One Call" services do not locate buried railroad signal and communications lines. The contractor shall contact the railroad's representative two (2) days in advance of those places where excavation, pile driving, or heavy loads may damage railroad underground lines on railroad property. Upon request from the contractor or agency, railroad signal forces will locate and paint mark or flag railroad underground signal, communication, and power lines in the area to be disturbed for the contractor. The contractor shall avoid excavation or other disturbance of these lines which are critical to the safety of the railroad and the public. If disturbance or excavation is required near a buried railroad signal, communication, or power line, the line shall be potholed manually with careful hand excavation by the contractor and protected by the contractor during the course of the disturbance under the supervision and direction of a railroad signal representative. The contractor may request the name and phone number of the aforementioned railroad contact from Mr. E. L. Jackson."
  - b) Shoring shall be installed in compliance with NS "Guidelines for Design of Grade Separated Structures" ("Guidelines"). Plans and calculations for this shoring, prepared by a Georgia Registered Professional Engineer, must be submitted to GDOT, or their designated representatives, and Norfolk Southern, for review and approval.

**Drawing No. 13-08, "Mainline Plan"**

- 2) This drawing shows a "Ch C" at Drainage Structure C-12, and Drawing No. 22-16 includes a note to "See Special Ditch Section". Such a section was not included in this submittal. Design calculations and details should be submitted that include the means by which the surface drainage is carried through the Railroad property. Please note that the depth of



# STV/Ralph Whitehead Associates

Mr. E. L. Jackson  
File: BR0120839  
July 11, 2011  
Page two

Drainage Structure C-12, detailed at 8.5 feet below top of rail and only 11.5 feet  $\pm$  from centerline of track, cannot be accommodated at that location and still meet minimum requirements for the track structure. Also see associated Drawing No. 22-16, "Drainage Profiles", Drawing No. 24-14, "Utility Plans".

## Drawing No. 14-01, "Crossroad Plan"

- 3) The entire length of the proposed 36-inch steel pipe, from Drainage Structure A-39 to A-40, should be installed by jack and bore. Also see associated Drawing No. 22-04, "Drainage Profiles", and Drawing, No. 24-20, "Utility Plans".

## Drawing No. 14-03, "Crossroad Plan"

- 4) Drainage Structure D-2 is also shown to direct surface drainage to "Ch C" and Railroad property, and at approximately 90° to the track structure. As with Item 2 above, this runoff should be included in design calculations and details that are requested to be submitted to show the means by which the surface drainage is carried through the Railroad property. If it can be shown that "Ch C" will accommodate these flows, they must also be directed into the Railroad property at a flatter angle to minimize erosion of the track structure. Drainage Structure D-2, detailed at 2.9 feet below top of rail and only 13.5 feet  $\pm$  from centerline of track, must be confirmed to accommodate minimum requirements for the track structure. Also see associated Drawing No. 22-16, "Drainage Profiles", Drawing No. 24-16, "Utility Plans".

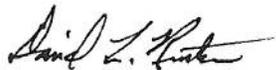
## Drawing No. 38-01, "Typical Casing Detail"

- 5) Review and confirm the necessity for the "Typical Casing Detail" to be included in these plans. The only under-track pipes shown on the submittal drawings are a 36-inch steel pipe to be installed by "jack or bore" with no casing as shown on Drawing No. 14-01, and a 60-inch steel pipe to also be installed by "jack or bore" with no casing as shown on Drawing No. 14-03.

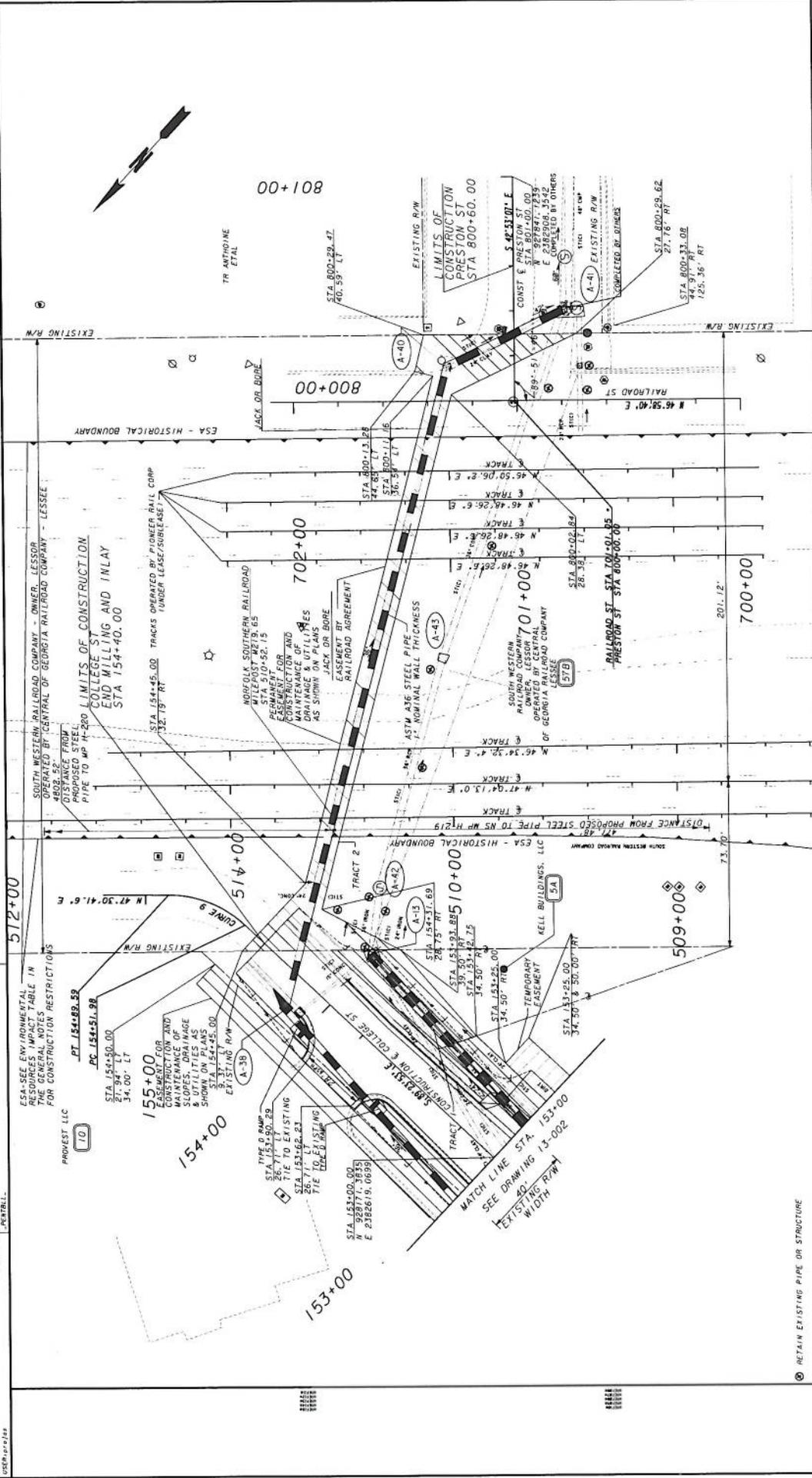
If you have further questions or need additional information, please call me at 770-452-0797.

Sincerely yours,

STV/Ralph Whitehead Associates



David L. Runton, P.E.  
Project Engineer



STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT 3 DESIGN  
**CROSSROAD PLAN**

SR 49 DRAINAGE IMPROVEMENTS  
COUNTY: PEACH  
DRAWING NO. 14-001

REVISION DATES

LAND LOT NO.: 204  
LAND DISTRICT: 9  
GMD: 1813

SCALE IN FEET  
0 20 40 80

Health & Lashback Engineers  
1000 Peachtree Street, N.W.  
Atlanta, Georgia 30309  
www.healthandlashback.com

PROPERTY AND EXISTING R/W LINE  
REQUIRED R/W LINE  
CONSTRUCTION LIMITS  
EASEMENT FOR CONSTR. & MAINTENANCE OF SLOPES, DRAINAGE & UTILITIES, EASEMENT FOR CONSTR. OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
END LIMIT OF ACCESS.....ELA  
LIMIT OF ACCESS.....LLA  
RED'D R/W & LIMIT OF ACCESS.....H  
ESA - BOUNDARY

RETAIN EXISTING PIPE OR STRUCTURE

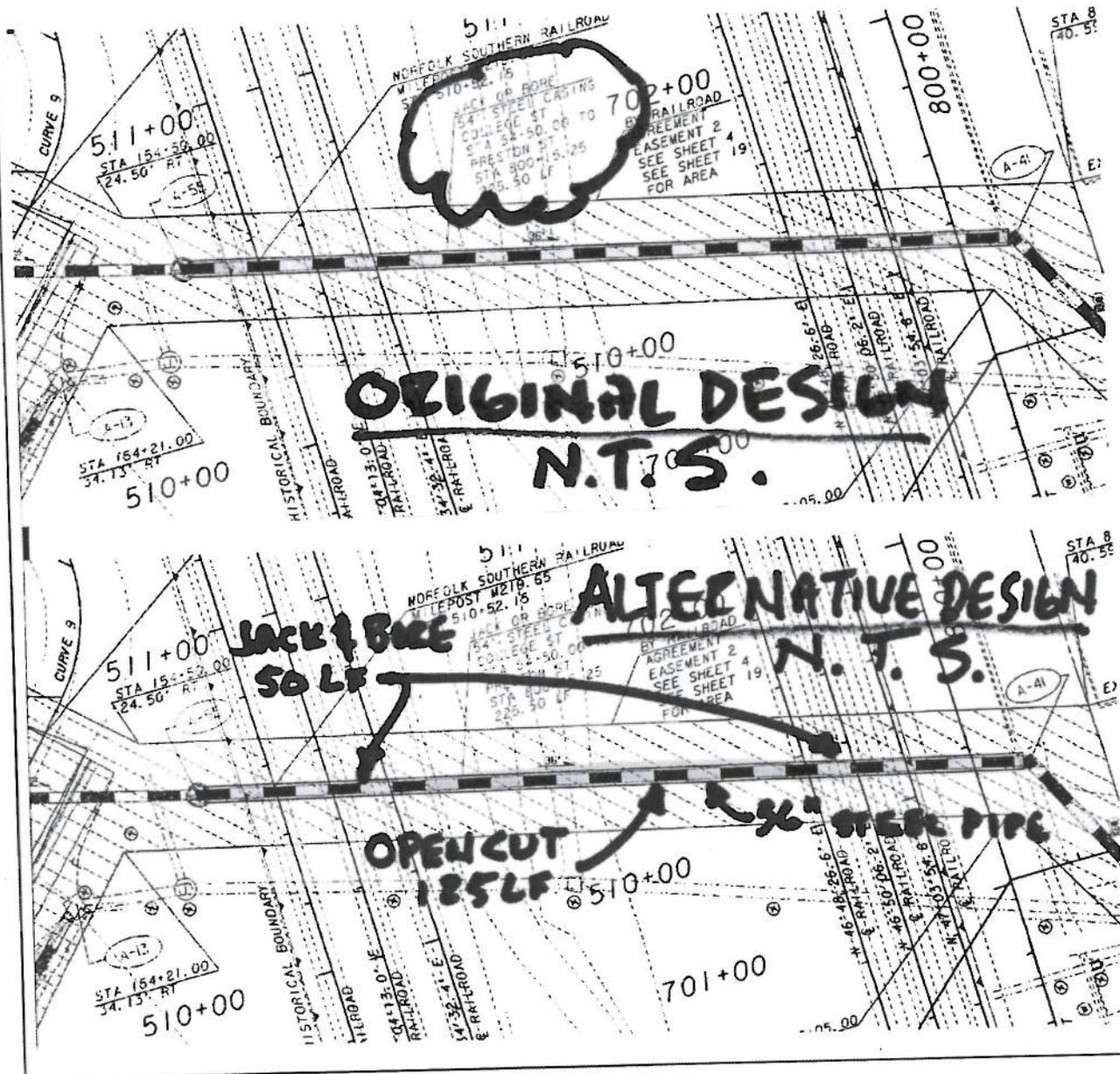
# Illustrations

**PROJECT:** Georgia Department of Transportation  
 PESTP-0003-00(623) – PI No: 0003623  
 SR49 South of CS 629 to SR7 from SR 49 to South of CS 740  
 Peach County

**ALTERNATIVE NO.:**  
**DR-13**

**DESCRIPTION:** Use two jack and bore sections in lieu of one from  
 drainage structures A-41 to A-55

**SHEET NO.:** 2 of 4



**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** STP00-0003-00(623) Peach **OFFICE:** Engineering Services  
P.I. No.: 0003623  
SR 49 Drainage Improvements **DATE:** May 6, 2011

**FROM:** Ronald E. Wishon, State Project Review Engineer *REW*

**TO:** David B. Millen, PRLS, District Engineer, Thomaston  
Attn.: Jason Mobley

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

The VE Study for the above project was held February 14-17, 2011. Responses were received on April 22, 2011. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
DR-7	Reduce the length of jack and bore sections between B59 and B60	Proposed = \$50,968 Actual = \$49,309	Yes, with modifications	This will be done; however, the layout has been modified from what was proposed by the VE Team. The modification resulted in a slightly smaller savings. This implementation is subject to railroad approval.
DR-8	Reduce the size of outfall from B60 to B66 by utilizing existing outfall	\$38,581	No	This has already been done with the System C drainage design. It currently reroutes water that should be flowing into System B. The amount of flow diverted to the existing outfall by way of System C is causing the existing pipe to flow at near capacity.
DR-9	Reroute C1 to C8 collection system to go through the B33 system	\$73,541	No	This recommendation would negate the use of the existing outfall and increase the size of the pipes in System B. Portions of the proposed savings would be realized by eliminating all road construction close to the intersection. The proposed construction limits must remain as shown in the plans to accommodate signing and marking and upgrading the signals

DR-10	Place proposed drainage structures in same location of existing storm drain to minimize impacts to utilities	\$110,000	No	The illustration on page 2-14 of the VE Report does not accurately reflect the location of the existing pipes. As shown in the attached plan sheets, the existing utilities are located closer to the existing pipes than the proposed pipes and moving to the location specified by the VE Team will cause a conflict with the existing 6" gas main from Sta. 33+65 to Sta. 43+20. A major modification of System B would result in a resubmittal to all utilities. This could extend the schedule by 5 months and add \$30,000 of redesign costs.
DR-13	Use two jack and bore sections in lieu of one from A41 to A55	Proposed = \$76,699 Actual = \$33,261	Yes, with modifications	This will be done; however, some of the lengths shown in page 2-18 of the VE Report will be modified to provide the required 25 ft of clearance from the centerline of the track. This results in two sections of jack or bore pipe. This implementation is subject to railroad approval but does meet the requirements negotiated with Quest Communications.
DR-14	Eliminate piping in selective areas	Proposed = \$30,633 Actual = \$6,553	Yes, partially (Site 2)	<p>Site 1 – This recommendation would reduce some storm drain pipe length, but increase the required length of sanitary sewer pipe and add three sewer man holes.</p> <p>Site 2 – Some of the proposed 30" pipe shown on page 2-23 of the VE Report will actually be 36" pipe; however, since the proposed recommendation still provides a small savings, it will be implemented at this site.</p> <p>Site 3 – This recommendation would reduce the length of 18" pipe, but would result in an increased pipe size from structure A-31 to A-35; therefore, the proposed design is more economical.</p>

				<p>Site 4 – To avoid conflict with a clay sewer line, the proposed pipe must be raised 1 ft, which would place it in the subbase of the pavement and would require non-standard catch basins. This recommendation would also increase the size of the pipe on the left side of SR 49 causing increase utility conflicts.</p> <p>Sites 5 &amp; 6 – A major modification to drainage System B would result in a resubmittal to all utilities. This recommendation would also impact the 6" gas main and cause at least \$20,000 in relocation costs for cutovers on the gas main. This recommendation would add 5 months to the schedule.</p>
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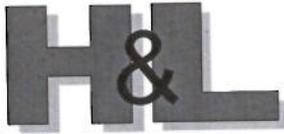
The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 5/10/11  
Gerald M. Ross, PE, Chief Engineer

REW/LLM

Attachments

- c: Ben Buchan
- David Millen/Bill Rountree/Jason Mobley/Tyler Peek
- Ken Robinson/Mike England/Kerry Gore/Debra Pruitt/Scott Parker
- Ken Werho
- Lisa Myers
- Matt Sanders



# Heath & Lineback Engineers I N C O R P O R A T E D

2390 Canton Rd., Bldg. 200 • MARIETTA, GEORGIA 30066  
e-mail: tbarwick@heath-lineback.com  
770.424.1668 • (FAX) 770.424.2907

April 6, 2011

RE: STP00-0003-00(623)  
Peach County  
PI No. 0003623  
VE Study Responses

1. **Recommendation DR-7:** (Reduce length of jack or bore sections between B59 and B60)

VE Team Savings: \$ 50,698.

Yes, will implement; however, the current layout has been modified from that proposed by the VE Study team resulting in a revised savings of \$ 52,684. Please see attached Sheets for layout and revised cost estimate.

2. **Recommendation DR-8:** (Reduce the size of outfall from B60-B66 by utilizing existing outfall)

VE Team Savings: \$ 38,581.

No, will not implement. This recommendation is already implemented with the System C drainage design. It currently reroutes water that should be flowing into System B. The amount of flow diverted to the existing outfall by way of System C is causing the existing pipe to flow at near capacity.

**Recommendation DR-9:** (Re-route C1 to C8 collection system to go through structure B33 into system B)

VE Team Savings: \$ 73,541.

No, will not implement. This recommendation would negate the use of the existing outfall and increase the size of the pipes in System B. Some of the savings stated in this recommendation involve stopping all road construction close to the intersection. The construction will need to stay at the limits as shown in the current plans to accommodate signing and marking and upgrading the signals at the intersection.

3. **Recommendation DR-10:** (Placed proposed drainage structures in same location of existing storm drain to minimize impacts to utilities)

VE Team Savings: \$ 97,507.

No, will not implement. The Illustration on page 2-14 of the report does not accurately reflect the location of the existing pipes. As shown in the attached plan sheets, the existing utilities are located closer to the existing pipes than the proposed pipes and moving to this location will cause a conflict with the existing 6" gas main from station 33+65 to 43+20 causing at least \$20,000 in cutovers based on discussions with the District 3 Utility Department during the design phase of this project. This

will also require the closure of the connection from US341/SR7 and SR96 to SR49 SB during the excavation of the existing pipes and construction of the proposed box culvert. The proposed system was designed to minimize cross drains in an effort to reduce the impact to existing utilities as much as possible. A major modification to drainage system B will result in a resubmittal to all utility companies. This will result in a schedule extension of approximately 5 months (2 months for design and 3 months for utility company review). Also, the savings did not incorporate drainage redesign costs of approximately \$30,000.

4. **Recommendation DR-13:** (Use two jack or bore sections in lieu of one from drainage structures A-41 to A-55)

VE Team Savings: \$ 76,699.

Yes, will implement; however some of the lengths shown in the report on page 2-18 will have to be modified to keep the construction 25 feet from the centerline of the tracks. This results in two sections of jack or bore pipe totaling 167 LF, and an open cut section of 63 LF. The actual savings will be \$ 33,261. The original spreadsheet had a \$30,800 error in the proposed cost as well.

5. **Recommendation DR-14:** (Eliminate piping in selective areas)

VE Team Savings: \$ 30,633.

**Site 1** - No, will not implement. This option will reduce some storm drain pipe length, but will increase the length of sanitary sewer that will need to be replaced as well as add three sewer manholes. Please see attached sheets for revised cost estimate.

**Site 2** - Yes, will implement. Some the proposed 30" pipe shown on sheet 2-23 will actually be 36" pipe; however, the proposed option still costs \$5,071.77 less than the existing layout. Please see attached sheets for layout and revised cost estimate.

**Site 3** – No, will not implement. This option will reduce the length of 18 inch pipe by about 55 LF but will result in an increased pipe size from structure A-31 to A-35. This means the layout as currently shown is less expensive by approximately \$2,200. Please see attached sheets for layout and revised cost estimate.

**Site 4** - No, will not implement. To avoid an additional conflict with a clay sewer line, the proposed pipe would have to be raised by 1 foot forcing the proposed to be in the subbase of the pavement and would require nonstandard catch basins. This option will also increase the size of the pipe running down the left side of SR49 causing increased utility conflicts.

**Sites 5 & 6** - No, will not implement. A major modification to drainage system B will result in a resubmittal to all utility companies. This option will also impact the 6" gas main and cause at least \$20,000 in relocation costs for cutovers on the gas main. This will result in a schedule extension of approximately 5 months (2 months for design and 3 months for utility company review).

Revised Savings: \$ 5,071.77.

Total Revised Project Savings: \$91,017.