

**CAPITAL IMPROVEMENT PROJECTS**

**REPORT**



**DECEMBER 9, 2011**

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## **CAPITAL IMPROVEMENT PROJECTS REPORT FLOODPLAIN MAPPING FOR CITY OF ALPHARETTA, GEORGIA**

### **INTRODUCTION**

Dewberry under contract to City of Alpharetta, GA, Engineering/Public Works Department has performed floodplain modeling and mapping of all streams within the City up to a 100-acre drainage area for both existing and future land use conditions. The primary intent of this study is to provide the City of Alpharetta with the models and floodplain information required to regulate floodplains in accordance with the City's Flood Damage Management Ordinance (Article 3, Section 3.4) adopted in response to the requirements of the Metropolitan North Georgia Water Planning District's Floodplain Management/Flood Damage Prevention Ordinance (Measure 5.A.2) which was designed to minimize future flooding impacts and integrate floodplain management with stormwater management.

In addition to performing floodplain modeling and mapping, Dewberry has identified and ranked all City maintained road crossing hydraulic structures that were identified as being overtopped by the 1% annual chance (100-year) existing land use conditions flood event. Dewberry will provide conceptual sizes for selected potential Capital Improvement Projects (CIPs) identified by City of Alpharetta and develop budget-level cost estimates of the selected CIPs to enable Capital Planning activities as part of the City of Alpharetta yearly budget in the future. Dewberry identified total of 75 structures and 48 of them will overtop during the 1% annual chance flooding event.

### **PROJECTS**

Each individual study reach with a drainage area greater than 100-acres was reviewed to identify all City owned road crossings which cannot pass the calculated 1% annual chance existing land use conditions flood without overtopping the road embankment, consequently identifying a CIP need. Each potential CIP was ranked based on factors identified in this report.

Once the City selects the CIPs for concept design, each will be designed to pass the 1% annual chance existing land use conditions flood without inundating roads and providing at least 1-foot of freeboard between the water surface elevation and roadway elevation unless otherwise stated in project sheets. All efforts will be made to maintain the existing profile of the road which will significantly reduce both the detailed design and construction cost for proposed projects, although in many cases raising the profile is needed to minimize flooding impacts. When designing culverts, every effort will be made to maintain the existing invert and rise of culverts to avoid the need to relocate utilities that may be located directly above the culvert opening, as relocation of utilities can incur considerable construction expense. Where possible, all CIPs will be designed to cause no adverse impacts to avoid the need for purchasing floodplain easements or complete buyouts of impacted properties. It can sometimes be impossible to modify structures that cause significant attenuations and still avoid adverse impacts without creating new flood retarding structures. In these situations, all efforts will be made to minimize the impact while still achieving the desired results. Any potential adverse impacts will be clearly indicated in the CIP report.

A ranking and weighting system to classify all CIPs was developed and finalized with input from City of Alpharetta. Using this criteria, this complete CIP report was created ranking the CIPs in order of most critical. Each CIP is detailed clearly in the CIP sheets found at the end of this report. These sheets state the flooding source, existing and proposed freeboard, the existing structure, the proposed structure and any important notes about the design or impacts on adjacent properties.

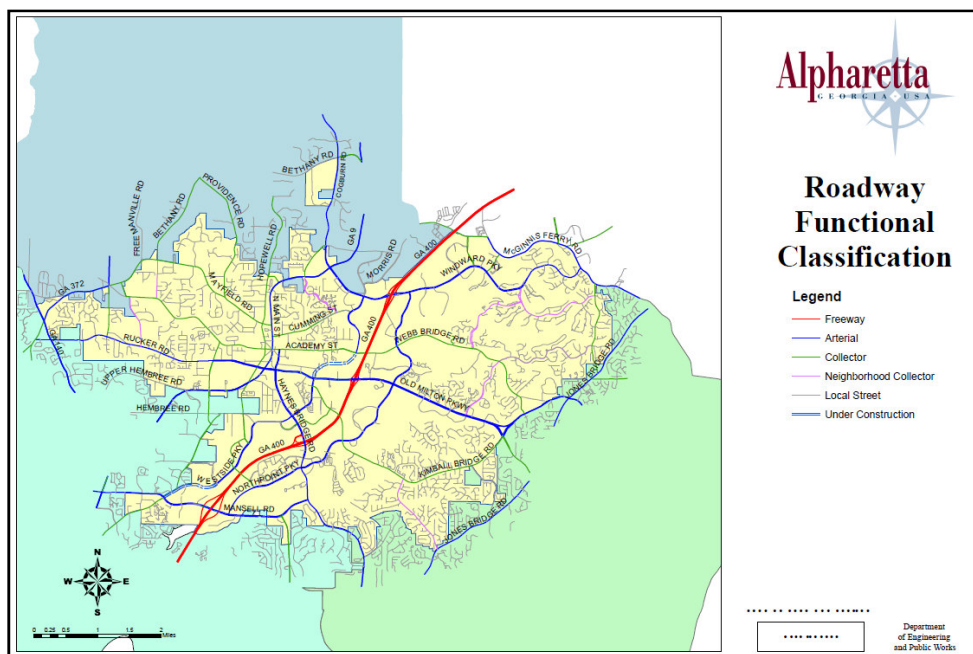
Table 1 gives the weighting and ranking criteria developed jointly by City of Alpharetta and Dewberry staff.

### Table 1: CIP Ranking and Weighting Factor Criteria

Criteria	Weighting Factor
Road Class	2
Depth of Flooding/ Frequency of Flooding	2
Structure Condition	1
Alternate Routes	1

## ROAD CLASS

Major roads are considered more critical and therefore score more points than smaller, less traveled roads. Major roads generally have more vehicles traveling at higher speeds, so the risk for accidents and injury if the roadway were to flood is increased. The road classification for the City of Alpharetta is based on the “City of Alpharetta - Roadway Functional Classification” map (Figure 1), provided by the City’s Department of Engineering and Public Works.



### Figure 1. City of Alpharetta – Roadway Functional Classification



The scoring criteria for the road class were adjusted to correspond to the City's street classification. This category has a weighting factor of 2, and its criteria are seen in Table 2.

**Table 2: CIP Ranking Criteria Based on Road Class**

<b>Description</b>	<b>Score</b>
Arterial	10
Collector	7
Local Road	5
Interstates, State Routes, Private roads, Railroads*	0

\*Since these are not maintained by the City, they will not be assessed.

### ***DEPTH OF FLOODING/ FREQUENCY OF FLOODING***

Depth of flooding is important because roads that have a higher depth of flooding would likely flood more frequently as a result of small storms. Also, a higher depth of flooding would generally indicate a longer time for the flood to subside, increasing the possible duration of the flooding at the roadway. Therefore, points for depth of flooding will be awarded based on the storm frequency that overtops the road. The frequency of flooding is factored in using multiple profiles from the flood studies with structures overtopping on the more frequent storms being given the higher scores as indicated in the table below. This category has a weighting factor of 2, and its criteria are seen in Table 3.

**Table 3: CIP Ranking Criteria Based on Frequency of Overtopping**

<b>Criteria</b>	<b>Score</b>
2-year Storm	10
10-year Storm	8
50-year Storm	6
100-year Storm	5
500-year Storm	0

Note: Roads that overtop in storms greater than the 100-year storm have a 0 score

### **STRUCTURE CONDITION**

Points were awarded based on the material and structural condition of the existing structure. Corrugated metal pipe (CMP) culverts would be considered poor to moderate since they often provide reduced design lives when compared to reinforced concrete pipes (RCP). Any structure that is visibly failing was also considered poor. Bridges where the piers are eroded or have steel piles without concrete encasement would be considered poor. Failing of the structure leads to decreased flow through the structure, so it is important to repair or replace the structure to provide increased flow and possibly reduce flooding in the area.

Structures categorized as poor scored the most points. Older structures that are not failing but lack modern flow enhancements for optimal conveyance, such as beveled edges or wing walls, were scored as moderate. While these structures are not failing, they are also not allowing the most flow through the structure. Also, structures that are in good condition but have been constructed with materials that have a short design life, such as CMP, were scored as moderate. Up to date, modern structures in good condition not requiring repair or enhancements, such as RC box culverts or bridges constructed with materials having a good design life, did not score any points in this category. This category has a weighting factor of 1, and its criteria are seen in Table 4.

**Table 4: CIP Ranking Criteria Based on Structure Condition**

<b>Structure Condition</b>	<b>Description</b>	<b>Score</b>
Poor	CMPs and other older structures; Structure obviously failing or crushed from photos; Bridge piers severely eroded or without concrete encasement of steel piles.	10
Moderate	Older culvert design - lacking beveled edges or wing walls (non optimal conveyance); Good condition culvert or bridges constructed with materials that have a short design life (i.e. CMPs)	5
Good	Good condition, properly working structures; RC box culverts: Standard DOT updated structures; Good condition bridges all with materials that have a good design life	0

### **ALTERNATE ROUTES**

Flooded roadways that provide the only access to a subdivision or other highly developed area scored the most points in this category. If there are multiple routes to an area, but all are flooded, this scored the middle range of points since it is unlikely that all would be inundated simultaneously, and if there are several routes to an area and at least one remains uninundated, then no points were scored. This criterion is an issue of public safety to ensure that citizens will be able to reach safety or have help come to them if an emergency arises during the flood event. This category has a weighting factor of 1, and its criteria are seen in Table 5.

**Table 5: CIP Ranking Criteria Based on Availability of Alternate Routes**

Alternate Route Description	Score
Provides only access to subdivision or other developed area	10
Alternate routes are available but also flooded	5
Alternate routes are available that are not flooded	0

### Capital Improvement Project List

Table 6 lists all the CIPs developed for this study. The table breaks down each project by giving the existing structure, as well as the final score and rank based on the ranking and scoring criteria described above.

**Table 6: Project List with Rank for all CIPs for City of Alpharetta**

Rank	CIP#	Road Name	Water Body	Existing Structure	Score
1	CAN_0100_1	Southlake Drive	Caney Creek Trib 1	Triple 4' CMP	54
2	BIG_0100_13_1	Cape York Trace	Big Creek Trib 13.1	Single 4' CMP	50
2	LIC_0200_1	Glenn Knolle Court	Long Indian Creek Trib 1	Single 2' CMP	50
4	FKR_0100_7_1	Mid Broadwell Road	Foe Killer Creek Trib 7.1	Single 4.5' RCP	49
5	FKR_0200_6	Rucker Road	Foe Killer Creek Trib 6	Single 5' RCP	48
5	LIC_0100_1	Birch Rill Drive	Long Indian Creek Trib 1	Single 3' CMP	48
7	BIG_1100_9	Morrison Parkway	Big Creek Trib 9	Double 6' CMP	46
7	FKR_0100_9	Mayfield Circle	Foe Killer Creek Trib 9	Single 6' CMP	46
9	BIG_0100_21	McGinnis Ferry Road	Big Creek Trib 21	Single 6' RCP	45
9	BIG_0400_15_2	Webb Bridge Court	Big Creek Trib 15.2	Double 8'x6' RCB and Single 4.35'x6.5' RCB	45
9	CAN_0100_2_1	Newport Bay Passage	Caney Creek Trib 2.1	Single 3.5' CMP	45
12	BIG_0100_26	Jamestowne Trail	Big Creek Unnamed Trib 26	Single 8'x5.5' CMP Arch	44
12	FKR_0100_6	Watermill Falls	Foe Killer Creek Unnamed Trib 6	Single 8' x 6.5' CMP	44
12	FKR_T07_0200	Squirrel Run	Foe Killer Creek Trib 7	Triple 7' CMP	44
15	CP1_0200	Windward Parkway	Camp Creek	36' Span Bridge	41
15	HUB_0200_1	Rucker Road	Hughes Branch Trib 1	Single 4.5' RCP	41
17	BIG_1200_15_2	Pine Grove Drive	Big Creek Trib 15.2	Single 4' CMP	40
17	FOE_1000	Mayfield Road	Foe Killer Creek	Single 8' CMP	40



## Capital Improvement Projects: City of Alpharetta, GA

Rank	CIP#	Road Name	Water Body	Existing Structure	Score
19	BIG_0100_16_1	Little Creek Crossing	Big Creek Trib 16.1	Single 4' CMP	38
19	FOE_0900	Maple Lane	Foe Killer Creek	Double 4'x4' RCB	38
21	BIG_0200_26	Dancliff Trace	Big Creek Trib 26	Single 6' CMP	37
21	FOE_0800	Mid Broadwell Road	Foe Killer Creek	Double 5' RCP	37
23	BIG_0100_20	Union Hill Road	Big Creek Trib 20	Double 5.5' RCP	36
24	FKR_0300_11	Arrowood Lane	Foe Killer Creek Trib 11	Single 6' RCP	35
25	BIG_0100_15_2_1	Jayne Ellen Way	Big Creek Trib 15.2.1	Triple 5.5' x 4' RCB	34
25	BIG_0600_15_2	Academy Street	Big Creek Trib 15.2	Single 9'x6' RCB	34
25	BIG_0900_15_2	Clairborne Drive	Big Creek Trib 15.2	Double 10'x6' RCB	34
25	BIG_1200_11	Northwinds Parkway	Big Creek Trib 11	Double 5' RCP	34
25	CSC_0200_21	Providence Place Drive	Cooper Sandy Creek Trib 21	Single 5' RCP	34
25	FKR_0400_11	Wills Road	Foe Killer Creek Trib 11	Single 6' RCP	34
25	HUB_0200	Brookhill Crossing Lane	Hughes Branch	Triple 5.5' RCP	34
25	BIG_0100_19_1	Walnut Creek Drive	Big Creek Trib 19.1	Single 3.5' RCP	34
33	CAN_0200_2	Newport Bay Passage	Caney Creek Trib 2	Single 4' RCP	33
34	BIG_0300	Kimball Bridge Road	Big Creek	56' Span Bridge	32
34	BIG_0300_13	Grey Abbey Drive	Big Creek Trib 13	Single 4' CMP	32
34	FKR_T07_0600	Mid Broadwell Road	Foe Killer Creek Trib 7	Double 4' RCP	32
34	FOE_0100_16	Rock Mill Road	Foe Killer Creek Trib 16	Double 6'x6' RCB	32
34	FOE_0700	Rucker Road	Foe Killer Creek	30' Span Bridge	32
39	BIG_0200	Haynes Bridge Road	Big Creek	129' Span Bridge	30
39	BIG_0400_11	Rock Mill Road	Big Creek Trib 11	Double 5'x5' RCB	30
39	BIG_1000_15_2	Cumming Street	Big Creek Trib 15.2	Double 10'x5' RCB	30
39	COO_0100_2	North Park Road	Cooper Creek Trib 2	Single 4' RCP	30
39	LIC_0100_3_1	Lauren Hall Court	Long Indian Creek Trib 3_1	Single 4.5' CMP	30
39	LIC_0500	Waters Road	Long Indian Creek	14' Span Bridge	30
45	BIG_0400	Webb Bridge Road	Big Creek	81' Span Bridge	28
46	HUB_0300	North Farm Drive	Hughes Branch	Double 4' RCP	26
47	BIG_0300_16	Park Bridge Parkway	Big Creek Trib 16	Single 8'x8' RCB	24
47	CAN_0100_3	Southlake Drive	Caney Creek Trib 3	Double 5' CMP	24



## Capital Improvement Projects: City of Alpharetta, GA

Rank	CIP#	Road Name	Water Body	Existing Structure	Score
49	BIG_0200_19	Windward Parkway	Big Creek Trib 19	167' Span Bridge	20
49	BIG_0200_10	Mansell Road	Big Creek Trib 10	Double 10'x10' RCB	20
49	BIG_0200_14	Park Brooke Trace	Big Creek Trib 14	Double 8'x5' RCB	20
49	BIG_0200_15_2	Westside Parkway	Big Creek Trib 15.2	Double 24'x12' ConSPAN	20
49	BIG_0500	Windward Parkway	Big Creek	148' Span Bridge	20
49	BIG_0600_11	North Point Parkway	Big Creek Trib 11	Triple 8.7'x5' RCB	20
49	BIG_0800_15	North Point Parkway	Big Creek Trib 15	Tripe 10'x8' RCB	20
49	BIG_1400_11	Westside Parkway	Big Creek Trib 11	Single 10'x10' RCB	20
49	BIG_3100	Mansell Road	Big Creek	342' Span Bridge	20
49	CSC_0100_21	Newcastle Drive	Cooper Sandy Creek Trib 21	Single 6' RCP	20
49	FKR_0100_11	Harris Road	Foe Killer Creek Trib 11	Triple 10'x5.5' RCB	20
49	FKR_0200_7_1	Briars Bend	Foe Killer Creek Trib 7.1	Double 7'x5' RCB	20
49	FKR_0300_6	Salisbury Drive	Foe Killer Creek Trib 6	Double 4' RCP	20
49	FOE_0200	Mansell Road	Foe Killer Creek	164' Span Bridge	20
49	FOE_0600	Rock Mill Road	Foe Killer Creek	143' Span Bridge	20
49	HUB_0100	Rucker Road	Hughes Branch	30' Span Bridge	20
49	HUB_0100_1	Walford Trace	Hughes Branch Trib 1	Double 5.5' RCP	20
49	HUB_0300_1	Crabapple Chase Court	Hughes Branch Trib 1	Double 5' RCP	20
67	BIG_1600_15	Webb Bridge Road	Big Creek Trib 15	Single 10'x8' RCB	14
68	BIG_0300_14	Park Brooke Drive	Big Creek Trib 14	Double 5' RCP	10
68	BIG_0500_9	North Point Drive	Big Creek Trib 9	Double 8'x8' RCB	10
68	CAN_0200	Lake Windward Drive	Caney Creek	OCS and Single 3.5' RCP	10
68	CP1_0100_3	Marconi Drive	Camp Creek Trib 3	Double 8'x7' RCB	10
68	CP1_0200_3	Edison Drive	Camp Creek Trib 3	Double 6'x6' RCB	10
68	FOE_0200_16	Sanctuary Parkway	Foe Killer Creek Trib 16	Triple 5' RCP	10
68	LIC_1300	Buice Road	Long Indian Creek	Triple 8'x10' RCB	10
75	CAN_0200_1	Webb Bridge Park Ped Bridge	Caney Creek Trib 1	46' Span Bridge	0

## Capital Improvement Project Design

The City has conducted a review of the Draft Capital Improvement Projects Report dated June 21, 2011, and selected the following nine(9) CIPs from Table 6 for concept design.

**Table 7: Selected CIP Project Design List for City of Alpharetta**

Rank	CIP#	Road Name	Water Body	Existing Structure	Score
1	CAN_0100_1	Southlake Drive	Caney Creek Trib 1	Triple 4' CMP	54
4	FRK_0100_7_1	Mid Broadwell Road	Foe Killer Creek Trib 7.1	Single 4.5' RCP	49
7	FRK_0100_9	May field Circle	Foe Killer Creek Trib 9	Single 6' CMP	46
17	FOE_1000	May field Road	Foe Killer Creek	Single 8' CMP	40
19	FOE_0900	Maple lane	Foe Killer Creek	Double 4'x4' RCB	38
21	FOE_0800	Mid Broadwell Road	Foe Killer Creek	Double 5' RCP	37
24	FRK_0300_11	Arrowood Lane	Foe Killer Creek Trib 11	Single 6' RCP	35
25	FRK_0400_11	Wills Road	Foe Killer Creek Trib 11	Single 6' RCP	34
34	FKR_T07_0600	Mid Broadwell Road	Foe Killer Creek Trib 7	Double 4' RCP	32

Each CIP has been designed to pass the 1% annual chance existing land use conditions flood without inundating roads and providing at least 1.5-feet of freeboard between the water surface elevation and roadway elevation unless otherwise stated in project sheets. All efforts were made to maintain the existing profile of the road which will significantly reduce both the detailed design and construction cost for the proposed projects; although, in many cases raising the profile is needed to minimize flooding impacts. When designing culverts, every effort was made to maintain the existing invert and rise of culverts to avoid the need to permanently relocate utilities that may be located directly above the culvert opening, as permanent relocation of utilities can incur considerable construction expense. Where possible, all CIPs were designed to cause no adverse impacts to avoid the need for purchasing floodplain easements or complete buyouts of impacted properties. It can sometimes be impossible to modify structures that cause significant attenuations and still avoid adverse impacts without creating new flood retarding structures. In these situations, all efforts were made to minimize the impact while still achieving the desired results. Any potential adverse impacts were clearly indicated in the CIP report.

Construction items considered for conceptual cost estimating purposes included clearing and grubbing, earthwork, concrete (including reinforcing steel), asphalt, graded aggregate base, bedding material, silt fence, grassing, riprap, curb and gutter, sidewalks, and utility relocation allowance. Additionally, allowances for temporary lanes for an on-site detour in the event that the roadway cannot be closed during construction are included. Georgia DOT (GDOT) and manufacturer standards and details were referenced for developing quantity estimates.

Total project costs include a contingency for incidentals (20%) and estimates for Engineering and Inspections (20%) and Right-of-Way (\$25,000 per project). Unit prices for the concept design cost estimates were based on Georgia DOT's (GDOT) Item Mean Summary prices from the Department's Detailed Estimate (DetEST) cost estimating program as of May 2010. Table 8 provides a summary of the concept designs and total estimated costs for the selected CIPs. A detailed cost estimate for each CIP Design Project is included following the CIP Sheets.

**Table 8: Concept designs and total estimated costs for selected CIPs for City of Alpharetta**

<b>CIP#</b>	<b>Road Name</b>	<b>Existing Structure</b>	<b>Proposed Structure</b>	<b>Total Estimated Cost</b>
CAN_0100_1	Southlake Drive	Triple 4' CMP	28'x6' ConSPAN	\$580,660.00
FRK_0100_7_1	Mid Broad well Road	Single 4.5' RCP	24'x5' ConSPAN	\$241,360.00
FRK_0100_9	May field Circle	Single 6' CMP	12'x6' ConSPAN	\$274,523.00
FOE_1000	May field Road	Single 8' CMP	24'x6' ConSPAN	\$261,232.00
FOE_0900	Maple lane	Double 4'x4' RCB	24'x6' ConSPAN	\$291,587.00
FOE_0800	Mid Broadwell Road	Double 5' RCP	28'x7' ConSPAN	\$263,968.00
FRK_0300_11	Arrowood Lane	Single 6' RCP	32'x8' ConSPAN	\$306,088.00
FRK_0400_11	Wills Road	Single 6' RCP	Triple 9'X6' RCB	\$339,280.00
FKR_T07_0600	Mid Broadwell Road	Double 4' RCP	20'x5' ConSPAN	\$243,880.00

### Capital Improvement Project Sheets

The pages that follow provide project sheets for each of the 75 CIPs for City of Alpharetta.



# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

1

**CIP No:** CAN\_0100\_1

<b>Water Body:</b>	Caney Creek Trib 1
<b>Road Name:</b>	Southlake Drive
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Triple 4' CMP

**100yr Water Surface Elevation at Existing Structure :** 1036.9 ft

**Minimum Top of Road Elevation:** 1034.54 ft

### **Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:** 28' x 6' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1032.09 ft

**Minimum Top of Road Elevation:** 1034.54 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

### **Conceptual Structure Notes:**

Total Estimated Cost = \$580,660

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

2

**CIP No: BIG\_0100\_13\_1**

<b>Water Body:</b>	Big Creek Trib 13.1
<b>Road Name:</b>	Cape York Trace
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Single 4' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1063.91 ft

**Minimum Top of Road  
Elevation:** 1060.93 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

2

**CIP No:** LIC\_0200\_1

<b>Water Body:</b>	Long Indian Creek Trib 1
<b>Road Name:</b>	Glenn Knolle Court
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Single 2' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1061.08 ft

**Minimum Top of Road  
Elevation:** 1059.48 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

4

**CIP No: FKR\_0100\_7\_1**

<b>Water Body:</b>	Foe Killer Creek Trib 7_1
<b>Road Name:</b>	Mid Broadwell Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Moderate
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

<b>Existing Structure:</b>	Single 4.5' RCP
<b>100yr Water Surface Elevation at Existing Structure :</b>	1051.35 ft
<b>Minimum Top of Road Elevation:</b>	1049.89 ft

#### Existing Structure Notes:

### Conceptual Structure

<b>Conceptual Structure:</b>	24' x 5' CONSPAN
<b>Water Surface Elevation at Conceptual Structure :</b>	1048.27 ft
<b>Minimum Top of Road Elevation:</b>	1049.89 ft
<b>Increased Water Surface Elevation Upstream:</b>	None
<b>Increased Water Surface Elevation Downstream:</b>	None
<b>Conceptual Road Profile:</b>	

#### Conceptual Structure Notes:

Structure needs more Riprap to avoid erosion, it has higher slope at the channel. Total Estimated Cost = \$241,360

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

5

**CIP No:** LIC\_0100\_1

**Water Body:** Long Indian Creek Trib 1  
**Road Name:** Birch Rill Drive  
**Road Classification:** Local Road  
**Condition of Existing Structure:** Poor  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 5-Year Flooding Event  
**Iternative Route Availability:** Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Single 3' CMP  
**100yr Water Surface Elevation at Existing Structure :** 987.43 ft  
**Minimum Top of Road Elevation:** 986.08 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

5

**CIP No:** FKR\_0200\_6

**Water Body:** Foe Killer Creek Trib 6  
**Road Name:** Rucker Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Poor  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 5-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 5' RCP  
**100yr Water Surface Elevation at Existing Structure :** 1039.17 ft  
**Minimum Top of Road Elevation:** 1038.26 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

7

**CIP No: BIG\_1100\_9**

**Water Body:** Big Creek Trib 9  
**Road Name:** Morrison Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Poor  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 10-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 6' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1031.71 ft

**Minimum Top of Road  
Elevation:** 1030.58 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

7

**CIP No:** FKR\_0100\_9

<b>Water Body:</b>	Foe Killer Creek Trib 9
<b>Road Name:</b>	Mayfield Circle
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	10-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Single 6' CMP

**100yr Water Surface Elevation at Existing Structure :** 1067.31 ft

**Minimum Top of Road Elevation:** 1065.93 ft

#### Existing Structure Notes:

### Conceptual Structure

**Conceptual Structure:** 12' x 6' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1063.73 ft

**Minimum Top of Road Elevation:** 1065.93 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

#### Conceptual Structure Notes:

Total Estimated Cost = \$274,523

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

9

**CIP No: BIG\_0400\_15\_2**

<b>Water Body:</b>	Big Creek Trib 15.2
<b>Road Name:</b>	Webb Bridge Court
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Moderate
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Double 8'x6' RCB and Single 4.35'x6.5' RCB

**100yr Water Surface Elevation at Existing Structure :** 1021.56 ft

**Minimum Top of Road Elevation:** 1017.57 ft

#### **Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### **Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

9

**CIP No: BIG\_0100\_21**

**Water Body:** Big Creek Trib 21

**Road Name:** McGinnis Ferry Road

**Road Classification:** Arterial

**Condition of Existing Structure:** Moderate

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** 2-Year Flooding Event

**Alternate Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 6' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1008.4 ft

**Minimum Top of Road  
Elevation:** 1006.44 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

9

**CIP No:** CAN\_0100\_2\_1

<b>Water Body:</b>	Caney Creek Trib 2.1
<b>Road Name:</b>	Newport Bay Passage
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available but also flooded



### Existing Structure

**Existing Structure:** Single 3.5' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1089.63 ft

**Minimum Top of Road  
Elevation:** 1088.9 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

12

**CIP No: BIG\_0100\_26**

<b>Water Body:</b>	Big Creek Trib 26
<b>Road Name:</b>	Jamestowne Trail
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Single 8'x5.5' CMP Arch

**100yr Water Surface  
Elevation at Existing  
Structure :** 1027.57 ft

**Minimum Top of Road  
Elevation:** 1025.87 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 12

**CIP No:** FKR\_0100\_6

<b>Water Body:</b>	Foe Killer Creek Trib 6
<b>Road Name:</b>	Watermill Falls
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Single 8' x 6.5' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1033.17 ft

**Minimum Top of Road  
Elevation:** 1032.35 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

12

**CIP No: FKR\_T07\_0200**

<b>Water Body:</b>	Foe Killer Creek Trib 7
<b>Road Name:</b>	Squirrel Run
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Triple 7' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1039.19 ft

**Minimum Top of Road  
Elevation:** 1037.38 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

15

**CIP No:** CP1\_0200

**Water Body:** Camp Creek

**Road Name:** Windward Parkway

**Road Classification:** Arterial

**Condition of Existing Structure:** Moderate

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** 10-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 36' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 998.3 ft

**Minimum Top of Road  
Elevation:** 996.58 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

15

**CIP No:** HUB\_0200\_1

**Water Body:** Hughes Branch Trib 1  
**Road Name:** Rucker Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Moderate  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 10-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 4.5' RCP  
**100yr Water Surface Elevation at Existing Structure :** 1053.63 ft  
**Minimum Top of Road Elevation:** 1052.71 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

17

**CIP No:** **FOE\_1000**

**Water Body:** Foe Killer Creek

**Road Name:** Mayfield Road

**Road Classification:** Collector

**Condition of Existing Structure:** Poor

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** 10-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 8' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1069.09 ft

**Minimum Top of Road  
Elevation:** 1067.9 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:** 24' x 6' CONSPAN

**Water Surface Elevation  
at Conceptual Structure :** 1067.67 ft

**Minimum Top of Road  
Elevation:** 1069.17 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Total Estimated Cost = \$261,232

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

17

**CIP No: BIG\_1200\_15\_2**

<b>Water Body:</b>	Big Creek Trib 15.2
<b>Road Name:</b>	Pine Grove Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 4' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1058.78 ft

**Minimum Top of Road  
Elevation:** 1056.95 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 19

**CIP No: BIG\_0100\_16\_1**

<b>Water Body:</b>	Big Creek Trib 16.1
<b>Road Name:</b>	Little Creek Crossing
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	5-Year Flooding Event
<b>Alternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 4' CMP

**100yr Water Surface Elevation at Existing Structure :** 1016.93 ft

**Minimum Top of Road Elevation:** 1015.9 ft

#### Existing Structure Notes:

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### Conceptual Structure Notes:

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

19

**CIP No: FOE\_0900**

<b>Water Body:</b>	Foe Killer Creek
<b>Road Name:</b>	Maple Lane
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	5-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Double 4'x4' RCB

**100yr Water Surface Elevation at Existing Structure :** 1063.55 ft

**Minimum Top of Road Elevation:** 1061.9 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:** 24' x 6' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1062.53 ft

**Minimum Top of Road Elevation:** 1063.90 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Total Estimated Cost = \$291,587

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 21

**CIP No: BIG\_0200\_26**

<b>Water Body:</b>	Big Creek Trib 26
<b>Road Name:</b>	Dancliff Trace
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Moderate
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	50-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Single 6' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1044.6 ft

**Minimum Top of Road  
Elevation:** 1043.74 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

21

**CIP No: FOE\_0800**

<b>Water Body:</b>	Foe Killer Creek
<b>Road Name:</b>	Mid Broadwell Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	5-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available but also flooded



**Existing Structure**

**Existing Structure:** Double 5' RCP

**100yr Water Surface Elevation at Existing Structure :** 1055.19 ft

**Minimum Top of Road Elevation:** 1053.7 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:** 28' x 7' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1052.16 ft

**Minimum Top of Road Elevation:** 1053.70 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Total Estimated Cost = \$263,968

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

23

**CIP No: BIG\_0100\_20**

**Water Body:** Big Creek Trib 20  
**Road Name:** Union Hill Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 10-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 5.5' RCP  
**100yr Water Surface Elevation at Existing Structure :** 1006.54 ft  
**Minimum Top of Road Elevation:** 1005.29 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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CIP Ranking:

24

**CIP No: FKR\_0300\_11**

<b>Water Body:</b>	Foe Killer Creek Trib 11
<b>Road Name:</b>	Arrowood Lane
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available but also flooded



**Existing Structure**

**Existing Structure:** Single 6' RCP

**100yr Water Surface Elevation at Existing Structure :** 1063.76 ft

**Minimum Top of Road Elevation:** 1062.35 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:** 32' x 8' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1060.90 ft

**Minimum Top of Road Elevation:** 1062.35 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** None

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Total Estimated Cost = \$306,088

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

25

**CIP No: BIG\_0100\_15\_2\_1**

<b>Water Body:</b>	Big Creek Trib 15.2.1
<b>Road Name:</b>	Jayne Ellen Way
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Triple 5.5' x 4' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1038.53 ft

**Minimum Top of Road  
Elevation:** 1037.21 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

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CIP Ranking:

25

**CIP No: BIG\_0600\_15\_2**

<b>Water Body:</b>	Big Creek Trib 15.2
<b>Road Name:</b>	Academy Street
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 9'x6' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1024.14 ft

**Minimum Top of Road  
Elevation:** 1021.81 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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Capital Improvement Projects  
December 2011

CIP Ranking:

25

**CIP No: HUB\_0200**

<b>Water Body:</b>	Hughes Branch
<b>Road Name:</b>	Brookhill Crossing Lane
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Triple 5.5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1056.71 ft

**Minimum Top of Road  
Elevation:** 1055.27 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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CIP Ranking:

25

**CIP No: BIG\_0900\_15\_2**

<b>Water Body:</b>	Big Creek Trib 15.2
<b>Road Name:</b>	Clairborne Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Double 10'x6' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1039.3 ft

**Minimum Top of Road  
Elevation:** 1037.52 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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December 2011

CIP Ranking:

25

**CIP No: BIG\_1200\_11**

**Water Body:** Big Creek Trib 11  
**Road Name:** Northwinds Parkway  
**Road Classification:** Collector  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 2-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1026.43 ft

**Minimum Top of Road  
Elevation:** 1024.35 ft

**Existing Structure Notes:**

Structure submerged. Assume material condition is good.

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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CIP Ranking:

25

**CIP No:** CSC\_0200\_21

**Water Body:** Cooper Sandy Creek Trib 21  
**Road Name:** Providence Place Drive  
**Road Classification:** Local Road  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 25-Year Flooding Event  
**Alternative Route Availability:** Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Single 5' RCP  
**100yr Water Surface Elevation at Existing Structure :** 1071.51 ft  
**Minimum Top of Road Elevation:** 1070.26 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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CIP Ranking:

25

**CIP No: FKR\_0400\_11**

**Water Body:** Foe Killer Creek Trib 11  
**Road Name:** Wills Road  
**Road Classification:** Collector  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 2-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 6' RCP  
**100yr Water Surface Elevation at Existing Structure :** 1075 ft  
**Minimum Top of Road Elevation:** 1073.67 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:** Triple 9'x6' RCB  
**Water Surface Elevation at Conceptual Structure :** 1072.02 ft  
**Minimum Top of Road Elevation:** 1073.67 ft  
**Increased Water Surface Elevation Upstream:** None  
**Increased Water Surface Elevation Downstream:** None  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Total Estimated Cost = \$339,280

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City of Alpharetta, Georgia  
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CIP Ranking:

25

**CIP No: BIG\_0100\_19\_1**

<b>Water Body:</b>	Big Creek Trib 19.1
<b>Road Name:</b>	Walnut Creek Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Single 3.5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1088.2 ft

**Minimum Top of Road  
Elevation:** 1087.07 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 33

**CIP No:** CAN\_0200\_2

**Water Body:** Caney Creek Trib 2

**Road Name:** Newport Bay Passage

**Road Classification:** Local Road

**Condition of Existing Structure:** Good

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** 5-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available but also flooded



### Existing Structure

**Existing Structure:** Single 4' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1112.63 ft

**Minimum Top of Road  
Elevation:** 1111.18 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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December 2011

CIP Ranking:

34

**CIP No: BIG\_0300\_13**

<b>Water Body:</b>	Big Creek Trib 13
<b>Road Name:</b>	Grey Abbey Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	50-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 4' CMP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1080.82 ft

**Minimum Top of Road  
Elevation:** 1080.23 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 34

**CIP No: FKR\_T07\_0600**

<b>Water Body:</b>	Foe Killer Creek Trib 7
<b>Road Name:</b>	Mid Broadwell Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	5-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 4' RCP

**100yr Water Surface Elevation at Existing Structure :** 1064.6 ft

**Minimum Top of Road Elevation:** 1063.4 ft

#### Existing Structure Notes:

### Conceptual Structure

**Conceptual Structure:** 20' x 5' CONSPAN

**Water Surface Elevation at Conceptual Structure :** 1060.98 ft

**Minimum Top of Road Elevation:** 1063.40 ft

**Increased Water Surface Elevation Upstream:** None

**Increased Water Surface Elevation Downstream:** 1.05 ft

**Conceptual Road Profile:**

#### Conceptual Structure Notes:

There is a rise of WSE downstream maximum of 1.05 ft by EX100 yr that dissipates in 453 feet. No structure is impacted.  
Total Estimated Cost = \$243,880

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

34

**CIP No: FOE\_0100\_16**

**Water Body:** Foe Killer Creek Trib 16  
**Road Name:** Rock Mill Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 50-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 6'x6' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 974.69 ft

**Minimum Top of Road  
Elevation:** 974.04 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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Capital Improvement Projects  
December 2011

CIP Ranking:

34

**CIP No: FOE\_0700**

**Water Body:** Foe Killer Creek  
**Road Name:** Rucker Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 50-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** 30' Span Bridge  
**100yr Water Surface Elevation at Existing Structure :** 1035.9 ft  
**Minimum Top of Road Elevation:** 1035.1 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

34

**CIP No:** BIG\_0300

<b>Water Body:</b>	Big Creek
<b>Road Name:</b>	Kimball Bridge Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	5-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 56' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 975.26 ft

**Minimum Top of Road  
Elevation:** 971.9 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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Capital Improvement Projects  
December 2011

CIP Ranking:

39

**CIP No: BIG\_1000\_15\_2**

**Water Body:** Big Creek Trib 15.2  
**Road Name:** Cumming Street  
**Road Classification:** Collector  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 10-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 10'x5' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1040.85 ft

**Minimum Top of Road  
Elevation:** 1038.54 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 39

**CIP No:** COO\_0100\_2

<b>Water Body:</b>	Cooper Creek Trib 2
<b>Road Name:</b>	North Park Road
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 4' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1027.4 ft

**Minimum Top of Road  
Elevation:** 1026.3 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

39

**CIP No: LIC\_0100\_3\_1**

<b>Water Body:</b>	Long Indian Creek Trib 3.1
<b>Road Name:</b>	Lauren Hall Court
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Single 4.5' CMP

**100yr Water Surface Elevation at Existing Structure :** 1055.67 ft

**Minimum Top of Road Elevation:** 1062.47 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 39

**CIP No: BIG\_0400\_11**

<b>Water Body:</b>	Big Creek Trib 11
<b>Road Name:</b>	Rock Mill Road
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	2-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 5'x5' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 993.49 ft

**Minimum Top of Road  
Elevation:** 991.36 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 39

**CIP No: BIG\_0200**

<b>Water Body:</b>	Big Creek
<b>Road Name:</b>	Haynes Bridge Road
<b>Road Classification:</b>	Arterial
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	100-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 129' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 971.44 ft

**Minimum Top of Road  
Elevation:** 970.1 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

39

**CIP No:** LIC\_0500

<b>Water Body:</b>	Long Indian Creek
<b>Road Name:</b>	Waters Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	10-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 14' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 997.27 ft

**Minimum Top of Road  
Elevation:** 995.71 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

45

**CIP No:** BIG\_0400

**Water Body:** Big Creek  
**Road Name:** Webb Bridge Road  
**Road Classification:** Collector  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 25-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



Existing Structure

**Existing Structure:** 81' Span Bridge  
**100yr Water Surface Elevation at Existing Structure :** 989.91 ft  
**Minimum Top of Road Elevation:** 987.6 ft

**Existing Structure Notes:**

Conceptual Structure

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

46

**CIP No:** HUB\_0300

<b>Water Body:</b>	Hughes Branch
<b>Road Name:</b>	North Farm Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	10-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 4' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1064.95 ft

**Minimum Top of Road  
Elevation:** 1063.72 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

47

**CIP No: BIG\_0300\_16**

<b>Water Body:</b>	Big Creek Trib 16
<b>Road Name:</b>	Park Bridge Parkway
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	25-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 8'x8' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1032.82 ft

**Minimum Top of Road  
Elevation:** 1031.77 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

47

**CIP No:** CAN\_0100\_3

<b>Water Body:</b>	Caney Creek Trib 3
<b>Road Name:</b>	Southlake Drive
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Poor
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

<b>Existing Structure:</b>	Double 5' CMP
<b>100yr Water Surface Elevation at Existing Structure :</b>	1050.62 ft
<b>Minimum Top of Road Elevation:</b>	1057.08 ft

#### Existing Structure Notes:

### Conceptual Structure

<b>Conceptual Structure:</b>	
<b>Water Surface Elevation at Conceptual Structure :</b>	ft
<b>Minimum Top of Road Elevation:</b>	ft
<b>Increased Water Surface Elevation Upstream:</b>	
<b>Increased Water Surface Elevation Downstream:</b>	
<b>Conceptual Road Profile:</b>	

#### Conceptual Structure Notes:

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No:** FKR\_0100\_11

<b>Water Body:</b>	Foe Killer Creek Trib 11
<b>Road Name:</b>	Harris Road
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	100-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Triple 10'x5.5' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1040.59 ft

**Minimum Top of Road  
Elevation:** 1040.52 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

49

**CIP No: BIG\_0200\_10**

**Water Body:** Big Creek Trib 10  
**Road Name:** Mansell Road  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 10'x10' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 968.25 ft

**Minimum Top of Road  
Elevation:** 990.86 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No:** **FOE\_0600**

**Water Body:** Foe Killer Creek

**Road Name:** Rock Mill Road

**Road Classification:** Arterial

**Condition of Existing Structure:** Good

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** >500-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 143' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 976.76 ft

**Minimum Top of Road  
Elevation:** 985.96 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No: BIG\_0200\_14**

<b>Water Body:</b>	Big Creek Trib 14
<b>Road Name:</b>	Park Brooke Trace
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Double 8'x5' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1025.73 ft

**Minimum Top of Road  
Elevation:** 1027.78 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

49

**CIP No: BIG\_0200\_15\_2**

**Water Body:** Big Creek Trib 15.2  
**Road Name:** Westside Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Double 24'x12' ConSpan

**100yr Water Surface  
Elevation at Existing  
Structure :** 1012.69 ft

**Minimum Top of Road  
Elevation:** 1026.16 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No:** **FOE\_0200**

<b>Water Body:</b>	Foe Killer Creek
<b>Road Name:</b>	Mansell Road
<b>Road Classification:</b>	Arterial
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 164' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 965.59 ft

**Minimum Top of Road  
Elevation:** 973.42 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 49

**CIP No:** FKR\_0300\_6

<b>Water Body:</b>	Foe Killer Creek Trib 6
<b>Road Name:</b>	Salisbury Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Iternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Double 4' RCP

**100yr Water Surface Elevation at Existing Structure :** 1074.96 ft

**Minimum Top of Road Elevation:** 1076.78 ft

#### Existing Structure Notes:

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### Conceptual Structure Notes:

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

49

**CIP No: FKR\_0200\_7\_1**

<b>Water Body:</b>	Foe Killer Creek Trib 7_1
<b>Road Name:</b>	Briars Bend
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



**Existing Structure**

**Existing Structure:** Double 7'x5' RCB

**100yr Water Surface Elevation at Existing Structure :** 1056.67 ft

**Minimum Top of Road Elevation:** 1057.02 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

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CIP Ranking:

49

**CIP No:** HUB\_0100\_1

<b>Water Body:</b>	Hughes Branch Trib 1
<b>Road Name:</b>	Walford Trace
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Double 5.5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1041.56 ft

**Minimum Top of Road  
Elevation:** 1045.17 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No: BIG\_1400\_11**

**Water Body:** Big Creek Trib 11  
**Road Name:** Westside Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Single 10'x10' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1036.25 ft

**Minimum Top of Road  
Elevation:** 1044.67 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

49

**CIP No:** BIG\_0500

**Water Body:** Big Creek  
**Road Name:** Windward Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** 148' Span Bridge  
**100yr Water Surface Elevation at Existing Structure :** 998.09 ft  
**Minimum Top of Road Elevation:** 999.3 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**  
**Water Surface Elevation at Conceptual Structure :** ft  
**Minimum Top of Road Elevation:** ft  
**Increased Water Surface Elevation Upstream:**  
**Increased Water Surface Elevation Downstream:**  
**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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CIP Ranking:

49

**CIP No:** CSC\_0100\_21

<b>Water Body:</b>	Cooper Sandy Creek Trib 21
<b>Road Name:</b>	Newcastle Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	100-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 6' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1044.18 ft

**Minimum Top of Road  
Elevation:** 1044.05 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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CIP Ranking:

49

**CIP No: BIG\_0600\_11**

**Water Body:** Big Creek Trib 11  
**Road Name:** North Point Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Triple 8.7'x5' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 998.43 ft

**Minimum Top of Road  
Elevation:** 1004.65 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 49

**CIP No: BIG\_0200\_19**

**Water Body:** Big Creek Trib 19

**Road Name:** Windward Parkway

**Road Classification:** Arterial

**Condition of Existing Structure:** Good

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** >500-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 167' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 1015.13 ft

**Minimum Top of Road  
Elevation:** 1025.73 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
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CIP Ranking:

49

**CIP No: BIG\_0800\_15**

**Water Body:** Big Creek Trib 15  
**Road Name:** North Point Parkway  
**Road Classification:** Arterial  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** 500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Tripe 10'x8' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 989.79 ft

**Minimum Top of Road  
Elevation:** 990.87 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No:** **BIG\_3100**

<b>Water Body:</b>	Big Creek
<b>Road Name:</b>	Mansell Road
<b>Road Classification:</b>	Arterial
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 342' Span Bridge

**100yr Water Surface Elevation at Existing Structure :** 963.65 ft

**Minimum Top of Road Elevation:** 972 ft

#### **Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### **Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

# 49

**CIP No:** HUB\_0300\_1

<b>Water Body:</b>	Hughes Branch Trib 1
<b>Road Name:</b>	Crabapple Chase Court
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Alternative Route Availability:</b>	Provides only access to subdivision or other developed area



### Existing Structure

**Existing Structure:** Double 5' RCP

**100yr Water Surface Elevation at Existing Structure :** 1062.28 ft

**Minimum Top of Road Elevation:** 1062.6 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

49

**CIP No:** HUB\_0100

**Water Body:** Hughes Branch

**Road Name:** Rucker Road

**Road Classification:** Arterial

**Condition of Existing Structure:** Good

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** >500-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 30' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 1042.29 ft

**Minimum Top of Road  
Elevation:** 1044.64 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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Capital Improvement Projects  
December 2011

CIP Ranking:

67

**CIP No: BIG\_1600\_15**

<b>Water Body:</b>	Big Creek Trib 15
<b>Road Name:</b>	Webb Bridge Road
<b>Road Classification:</b>	Collector
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Single 10'x8' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1020.68 ft

**Minimum Top of Road  
Elevation:** 1030 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

68

**CIP No: BIG\_0300\_14**

<b>Water Body:</b>	Big Creek Trib 14
<b>Road Name:</b>	Park Brooke Drive
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1072.66 ft

**Minimum Top of Road  
Elevation:** 1074.81 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

68

**CIP No: BIG\_0500\_9**

**Water Body:** Big Creek Trib 9  
**Road Name:** North Point Drive  
**Road Classification:** Local Road  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 8'x8' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 985.22 ft

**Minimum Top of Road  
Elevation:** 990.3 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

68

CIP No: CAN\_0200

Water Body: Caney Creek  
Road Name: Lake Windward Drive  
Road Classification: Local Road  
Condition of Existing Structure: Good  
CIP Design Flood Event: 100-year Existing Flood  
Frequency of Overtopping: >500-Year Flooding Event  
Alternate Route Availability: Alternate routes are available that are not flooded



Existing Structure

Existing Structure: OCS and Single 3.5' RCP

100yr Water Surface  
Elevation at Existing  
Structure : 1028.79 ft

Minimum Top of Road  
Elevation: 1042.11 ft

Existing Structure Notes:

Conceptual Structure

Conceptual Structure:

Water Surface Elevation  
at Conceptual Structure : ft

Minimum Top of Road  
Elevation: ft

Increased Water Surface Elevation Upstream:

Increased Water Surface Elevation Downstream:

Conceptual Road Profile:

Conceptual Structure Notes:

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

68

**CIP No:** LIC\_1300

<b>Water Body:</b>	Long Indian Creek
<b>Road Name:</b>	Buice Road
<b>Road Classification:</b>	Local Road
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	>500-Year Flooding Event
<b>Iternative Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Triple 8'x10' RCB

**100yr Water Surface Elevation at Existing Structure :** 1054.64 ft

**Minimum Top of Road Elevation:** 1059.6 ft

#### Existing Structure Notes:

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation at Conceptual Structure :** ft

**Minimum Top of Road Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### Conceptual Structure Notes:

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

68

**CIP No:** CP1\_0100\_3

**Water Body:** Camp Creek Trib 3

**Road Name:** Marconi Drive

**Road Classification:** Local Road

**Condition of Existing Structure:** Good

**CIP Design Flood Event:** 100-year Existing Flood

**Frequency of Overtopping:** >500-Year Flooding Event

**Iternative Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 8'x7' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1006.64 ft

**Minimum Top of Road  
Elevation:** 1008.12 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

68

**CIP No:** CP1\_0200\_3

**Water Body:** Camp Creek Trib 3  
**Road Name:** Edison Drive  
**Road Classification:** Local Road  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Alternate Route Availability:** Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** Double 6'x6' RCB

**100yr Water Surface  
Elevation at Existing  
Structure :** 1016.62 ft

**Minimum Top of Road  
Elevation:** 1025.3 ft

**Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



**Dewberry**  
www.dewberry.com

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Suite 100  
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City of Alpharetta, Georgia  
Capital Improvement Projects  
December 2011

CIP Ranking:

68

**CIP No: FOE\_0200\_16**

**Water Body:** Foe Killer Creek Trib 16  
**Road Name:** Sanctuary Parkway  
**Road Classification:** Local Road  
**Condition of Existing Structure:** Good  
**CIP Design Flood Event:** 100-year Existing Flood  
**Frequency of Overtopping:** >500-Year Flooding Event  
**Iternative Route Availability:** Alternate routes are available that are not flooded



**Existing Structure**

**Existing Structure:** Triple 5' RCP

**100yr Water Surface  
Elevation at Existing  
Structure :** 1010.01 ft

**Minimum Top of Road  
Elevation:** 1013.87 ft

**Existing Structure Notes:**

**Conceptual Structure**

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

**Conceptual Structure Notes:**

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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# City of Alpharetta, Georgia

## Capital Improvement Projects

December 2011

CIP Ranking:

75

**CIP No:** CAN\_0200\_1

<b>Water Body:</b>	Caney Creek Trib 1
<b>Road Name:</b>	Webb Bridge Park Ped Bridge
<b>Road Classification:</b>	Not maintained by city
<b>Condition of Existing Structure:</b>	Good
<b>CIP Design Flood Event:</b>	100-year Existing Flood
<b>Frequency of Overtopping:</b>	500-Year Flooding Event
<b>Alternate Route Availability:</b>	Alternate routes are available that are not flooded



### Existing Structure

**Existing Structure:** 46' Span Bridge

**100yr Water Surface  
Elevation at Existing  
Structure :** 1071.51 ft

**Minimum Top of Road  
Elevation:** 1071.66 ft

#### **Existing Structure Notes:**

### Conceptual Structure

**Conceptual Structure:**

**Water Surface Elevation  
at Conceptual Structure :** ft

**Minimum Top of Road  
Elevation:** ft

**Increased Water Surface Elevation Upstream:**

**Increased Water Surface Elevation Downstream:**

**Conceptual Road Profile:**

#### **Conceptual Structure Notes:**

Both the existing and conceptual structures described in this Capital Improvement Report are modeled using Limited Detail and Detailed modeling methodologies. Development of a detailed design is highly recommended before construction using detailed modeling techniques. All conceptual CIP designs were developed for hydraulic capacity only and designed to cause either no or minimal adverse impacts on adjacent properties. This often results in unrealistically large structures. A detailed review of adjacent properties and careful collaboration with property owners may allow rises to occur, enabling a smaller and less expensive design to be constructed.



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SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Lelti Abrha	Date	10/14/2011
Checked	SLF	Date	10/14/2011
Reviewed			

**CIP: CAN 0100 1**      **Caney Creek Trib 1 - Southlake Drive**

Existing Culvert Dimensions

**3 - 4' CMP with Headwall**

Diameter	4 ft
Span	ft
Rise	ft
No. Barrels	3
Length	136 ft

Proposed CONSPAN Bridge Dimensions

**1 - CONSPAN Bridge (28' Span & 6' Rise)**

Span	28 ft
Rise	6 ft
No. Barrels	1
Unit Weight (tons/lf)	2.84
Length	136 ft

Culvert and Road Dimensions

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1034.5	1034.5	1025.0	14	41	40	68	54	24

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	250	1	Y	Y	350	20	4	30

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	2730	CY	\$ 15.00	\$ 40,950.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	370	CY	\$ 550.00	\$ 203,500.00
Asphalt (4 Inch Binder, 2 Inch Surface)	110	Tons	\$ 75.00	\$ 8,250.00
Graded Aggregate Base (10 Inch)	200	SY	\$ 15.00	\$ 3,000.00
Foundation BackFill Material TP II	640	CY	\$ 40.00	\$ 25,600.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	180	SY	\$ 40.00	\$ 7,200.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	160	LF	\$ 15.00	\$ 2,400.00
Utility Relocation Allowance	90	LF	\$ 150.00	\$ 13,500.00
Concrete Sidewalk (6 Inch)	80	SY	\$ 25.00	\$ 2,000.00

<b>Sub Total</b>	<b>\$ 322,400.00</b>
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**On site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension (3 - 48" CMP)	100	LF	\$ 165.00	\$ 16,500.00
Grading Complete (Excavation and Embankment)	2000	CY	\$ 15.00	\$ 30,000.00
Asphalt (3 Inch Binder, 1 Inch Surface)	125	TONS	\$ 75.00	\$ 9,375.00
Graded Aggregate Base (8 Inch)	500	SY	\$ 12.00	\$ 6,000.00
Foundation BackFill Material TP II	40	CY	\$ 40.00	\$ 1,600.00

<b>Sub Total</b>	<b>\$ 63,475.00</b>
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<b>Construction Incidental Allowance (20%)</b>	<b>\$ 77,175.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 463,050.00</b>
<b>Engineering (Design &amp; C.E.I.) 20%</b>	<b>\$ 92,610.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 580,660.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Lelti Abrha	Date	10/14/2011
Checked	SLF	Date	10/14/2011
Reviewed			

**CIP: FKR 0100 7 1** **Foe Killer Creek Trib 7.1 - Mid Broadwell Road**

Existing Culvert Dimensions

**1 - 4.5' RCP with Headwall**

Diameter	4.5 ft
Span	ft
Rise	ft
No. Barrels	1
Length	40 ft

Proposed CONSPAN Bridge Dimensions

**1 - CONSPAN Bridge (24' Span & 5' Rise)**

Span	24 ft
Rise	5 ft
No. Barrels	1
Unit Weight (tons/lf)	2.05
Length	60 ft

Culvert and Road Dimensions

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1049.9	1049.9	1043.0	11	30	36	58	47	22

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	250	1	y	y	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acres	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	950	CY	\$ 15.00	\$ 14,250.00
Class AA Concrete ( Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	150	CY	\$ 550.00	\$ 82,500.00
Asphalt (4 Inch Binder, 2 Inch Surface)	90	Tons	\$ 75.00	\$ 6,750.00
Graded Aggregate Base (10 Inch)	160	SY	\$ 15.00	\$ 2,400.00
Foundation BackFill Material TP II	190	CY	\$ 40.00	\$ 7,600.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	160	SY	\$ 40.00	\$ 6,400.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	140	LF	\$ 15.00	\$ 2,100.00
Utility Relocation Allowance	70	LF	\$ 150.00	\$ 10,500.00
Concrete Sidewalk (6 Inch)	70	SY	\$ 25.00	\$ 1,750.00

<b>Sub Total</b>	<b>\$ 150,250.00</b>
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**On site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 100.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder & 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation BackFill Material TP II	0	CY	\$ 40.00	\$ -

<b>Sub Total</b>	<b>\$ -</b>
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<b>Construction Incidental Allowance (20%)</b>	<b>\$ 30,050.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 180,300.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 36,060.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 241,360.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Yige Gao	Date	10/18/2011
Checked	SLF	Date	10/20/2011
Reviewed			

**CIP: FKR 0100 9 Foe Killer Creek Trib 9 - Mayfield Circle**

**Existing Culvert Dimensions**

**1 - 72" CMP project from fill**

Diameter	6 ft
Span	ft
Rise	ft
No. Barrels	1
Length	57 ft

**Proposed CONSPAN Bridge Dimensions**

**1 - CONSPAN Bridge (12' Span & 6' Rise)**

Span	12 ft
Rise	6 ft
No. Barrels	1
Unit Weight (tons/lf)	1.24
Length	60 ft

**Culvert and Road Dimensions**

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1065.9	1065.9	1056.6	13	49	24	50	37	22

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	400	1	Y	N	200	20	4	30

**Construction**

Clearing and Grubbing  
Grading Complete (Excavation and Embankment)  
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)  
Asphalt (4 Inch Binder, 2 Inch Surface)  
Graded Aggregate Base (10 Inch)  
Foundation Backfill Material TP II  
Type C Silt Fence  
Grassing Complete (Temp & Permanent)  
Rip Rap  
Curb and Gutter (6 Inch x 30 Inch TP 2)  
Utility Relocation Allowance  
Concrete Sidewalk (6 Inch)

Quantity      Unit  
0.5 Acre  
1070 CY  
120 CY  
110 Tons  
130 SY  
270 CY  
1000 LF  
0.5 Acres  
120 SY  
120 LF  
70 LF  
0 SY

Unit Cost	Estimated Cost
\$ 10,000.00	\$ 5,000.00
\$ 15.00	\$ 16,050.00
\$ 550.00	\$ 66,000.00
\$ 75.00	\$ 8,250.00
\$ 15.00	\$ 1,950.00
\$ 40.00	\$ 10,800.00
\$ 5.00	\$ 5,000.00
\$ 1,000.00	\$ 500.00
\$ 40.00	\$ 4,800.00
\$ 15.00	\$ 1,800.00
\$ 150.00	\$ 10,500.00
\$ 25.00	\$ -

**Sub Total**

<b>Sub Total</b>	<b>\$ 130,650.00</b>
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**On Site Temporary Detour**

Temporary Pipe Extension (1 -72" CMP)  
Grading Complete (Excavation and Embankment)  
Asphalt (3 Inch Binder, 1 Inch Surface)  
Graded Aggregate Base (8 Inch)  
Foundation Backfill Material TP II

Quantity      Unit  
40 LF  
1140 CY  
110 TONS  
490 SY  
10 CY

Unit Cost	Estimated Cost
\$ 275.00	\$ 11,000.00
\$ 15.00	\$ 17,100.00
\$ 75.00	\$ 8,250.00
\$ 12.00	\$ 5,880.00
\$ 40.00	\$ 400.00

<b>Sub Total</b>	<b>\$ 42,630.00</b>
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<b>Construction Incidental Allowance (20%)</b>	<b>\$ 34,656.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 207,936.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 41,587.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 274,523.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Yige Gao	Date	10/18/2011
Checked	SLF	Date	10/20/2011
Reviewed			

**CIP: FOE 1000**    **Foe Killer Creek - Mayfield Road**

**Existing Culvert Dimensions**

**1 - 96" CMP with Headwall**

Diameter	8 ft
Span	ft
Rise	ft
No. Barrels	1
Length	45 ft

**Proposed CONSPAN Bridge Dimensions**

**1 - CONSPAN Bridge (24' Span & 6' Rise)**

Span	24 ft
Rise	6 ft
No. Barrels	1
Unit Weight (tons/lf)	2.18
Length	60 ft

**Culvert and Road Dimensions**

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1069.2	1069.2	1061.7	11	40	36	58	47	30

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	400	1	Y	Y	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	1050	CY	\$ 15.00	\$ 15,750.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	160	CY	\$ 550.00	\$ 88,000.00
Asphalt (4 Inch Binder, 2 Inch Surface)	160	Tons	\$ 75.00	\$ 12,000.00
Graded Aggregate Base (10 Inch)	210	SY	\$ 15.00	\$ 3,150.00
Foundation BackFill Material TP-II	210	CY	\$ 40.00	\$ 8,400.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acre	\$ 1,000.00	\$ 1,000.00
Rip Rap	160	SY	\$ 40.00	\$ 6,400.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	140	LF	\$ 15.00	\$ 2,100.00
Utility Relocation Allowance	70	LF	\$ 150.00	\$ 10,500.00
Concrete Sidewalk (6 Inch)	70	SY	\$ 25.00	\$ 1,750.00

<b>Sub Total</b>	<b>\$ 164,050.00</b>
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**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 125.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder, 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation BackFill Material TP-II	0	CY	\$ 40.00	\$ -

<b>Sub Total</b>	<b>\$ -</b>
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<b>Construction Incidental Allowance (20%)</b>	<b>\$ 32,810.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 196,860.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 39,372.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 261,232.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Yige Gao	Date	10/18/2011
Checked	SLF	Date	10/20/2011
Reviewed			

**CIP: FOE 0900** Foe Killer Creek - Maple Lane

**Existing Culvert Dimensions**

**2 - 4'x4' RCB with Headwall**

Diameter	ft
Span	4 ft
Rise	4 ft
No. Barrels	2
Length	50 ft

**Proposed CONSPAN Bridge Dimensions**

**1 - CONSPAN Bridge (24' Span & 6' Rise)**

Span	24 ft
Rise	6 ft
No. Barrels	1
Unit Weight (tons/lf)	2.18
Length	50 ft

**Culvert and Road Dimensions**

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1063.9	1063.9	1055.5	12	25	36	60	48	25

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	400	1	Y	N	200	20	4	30

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	880	CY	\$ 15.00	\$ 13,200.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	140	CY	\$ 550.00	\$ 77,000.00
Asphalt (4 Inch Binder, 2 Inch Surface)	130	TON	\$ 75.00	\$ 9,750.00
Graded Aggregate Base (10 Inch)	180	SY	\$ 15.00	\$ 2,700.00
Foundation Backfill Material TP II	240	CY	\$ 40.00	\$ 9,600.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acre	\$ 1,000.00	\$ 1,000.00
Rip Rap	160	SY	\$ 40.00	\$ 6,400.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	140	LF	\$ 15.00	\$ 2,100.00
Utility Relocation Allowance	80	LF	\$ 150.00	\$ 12,000.00
Concrete Sidewalk (6 Inch)	0	SY	\$ 25.00	\$ -
<b>Sub Total</b>			<b>\$</b>	<b>148,750.00</b>

**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension (2 - 54" HDPE)	80	LF	\$ 75.00	\$ 6,000.00
Grading Complete (Excavation and Embankment)	1030	CY	\$ 15.00	\$ 15,450.00
Asphalt (3 Inch Binder, 1 Inch Surface)	110	TONS	\$ 75.00	\$ 8,250.00
Graded Aggregate Base (8 Inch)	490	SY	\$ 12.00	\$ 5,880.00
Foundation Backfill Material TP II	20	CY	\$ 40.00	\$ 800.00
<b>Sub Total</b>			<b>\$</b>	<b>36,380.00</b>

<b>Construction Incidental Allowance (20%)</b>	<b>\$</b>	<b>37,026.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$</b>	<b>222,156.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$</b>	<b>44,431.00</b>
<b>Right of Way</b>	<b>\$</b>	<b>25,000.00</b>
<b>Total Cost</b>	<b>\$</b>	<b>291,587.00</b>



SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Yige Gao	Date	10/18/2011
Checked	SLF	Date	10/20/2011
Reviewed			

**CIP: FOE 0800**      **Foe Killer Creek - Mid Broadwell Road**

**Existing Culvert Dimensions**

**2 - 60" RCP with headwall**

Diameter	5 ft
Span	ft
Rise	ft
No. Barrels	2
Length	25 ft

**Proposed CONSPAN Bridge Dimensions**

**1 - CONSPAN Bridge (28' Span & 7' Rise)**

Span	28 ft
Rise	7 ft
No. Barrels	1
Unit Weight (tons/lf)	2.99
Length	50 ft

**Culvert and Road Dimensions**

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1053.7	1053.7	1042.3	15	30	40	70	55	20

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	400	1	Y	Y	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	1340	CY	\$ 15.00	\$ 20,100.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	160	CY	\$ 550.00	\$ 88,000.00
Asphalt (4 Inch Binder, 2 Inch Surface)	120	Tons	\$ 75.00	\$ 9,000.00
Graded Aggregate Base (10 Inch)	170	SY	\$ 15.00	\$ 2,550.00
Foundation BackFill Material TP II	120	CY	\$ 40.00	\$ 4,800.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	180	SY	\$ 40.00	\$ 7,200.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	170	LF	\$ 15.00	\$ 2,550.00
Utility Relocation Allowance	90	LF	\$ 150.00	\$ 13,500.00
Concrete Sidewalk (6 Inch)	90	SY	\$ 25.00	\$ 2,250.00
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ 165,950.00</b>

**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 275.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder, 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation BackFill Material TP II	0	CY	\$ 40.00	\$ -
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ -</b>

<b>Construction Incidental Allowance (20%)</b>	<b>\$ 33,190.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 199,140.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 39,828.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 263,968.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Lelti Abrha	Date	10/14/2011
Checked	SLF	Date	10/14/2011
Reviewed			

**CIP: FKR 0300 11 Foe Killer Trib 11 - Arrowood Lane**

Existing Culvert Dimensions

**1 - 6' RCP with Headwall**

Diameter	6 ft
Span	ft
Rise	ft
No. Barrels	1
Length	50 ft

Proposed CONSPAN Bridge Dimensions

**1 - CONSPAN Bridge (32' Span & 8' Rise)**

Span	32 ft
Rise	8 ft
No. Barrels	1
Unit Weight (tons/lf)	3.71
Length	50 ft

Culvert and Road Dimensions

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1062.4	1062.4	1052.5	14	30	44	72	58	24

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	175	1	Y	N	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	1320	CY	\$ 15.00	\$ 19,800.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	210	CY	\$ 550.00	\$ 115,500.00
Asphalt (4 Inch Binder, 2 Inch Surface)	100	Tons	\$ 75.00	\$ 7,500.00
Graded Aggregate Base (10 Inch)	210	SY	\$ 15.00	\$ 3,150.00
Foundation Backfill Material TP II	240	CY	\$ 40.00	\$ 9,600.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	190	SY	\$ 40.00	\$ 7,600.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	170	LF	\$ 15.00	\$ 2,550.00
Utility Relocation Allowance	90	LF	\$ 150.00	\$ 13,500.00
Concrete Sidewalk (6 Inch)	0	SY	\$ 25.00	\$ -
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ 195,200.00</b>

**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 275.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder, 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation Backfill Material TP II	0	CY	\$ 40.00	\$ -
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ -</b>

<b>Construction Incidental Allowance (20%)</b>	<b>\$ 39,040.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 234,240.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 46,848.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 306,088.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Lelti Abrha	Date	10/14/2011
Checked	SLF	Date	10/14/2011
Reviewed			

**CIP: FKR 0400 11**      **Foe Killer Creek Trib 11 - Wills Road**

Existing Culvert Dimensions

**1 - 6' RCP with Headwall**

Diameter	6 ft
Span	ft
Rise	ft
No. Barrels	1
Length	60 ft

Proposed Box Culvert Dimensions

**3 - 9'x 6' RCB**

Span	9 ft
Rise	6 ft
No. Barrels	3
Volume (CY/ LF)	2.828
Length	60 ft

Culvert and Road Dimensions

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1073.7	1073.7	1064.7	13	43	43	69	56	27

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	260	1	Y	Y	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	1530	CY	\$ 15.00	\$ 22,950.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	220	CY	\$ 550.00	\$ 121,000.00
Asphalt (4 Inch Binder, 2 Inch Surface)	130	Tons	\$ 75.00	\$ 9,750.00
Graded Aggregate Base (10 Inch)	230	SY	\$ 15.00	\$ 3,450.00
Foundation Backfill Material TP II	570	CY	\$ 40.00	\$ 22,800.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	110	SY	\$ 40.00	\$ 4,400.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	160	LF	\$ 15.00	\$ 2,400.00
Utility Relocation Allowance	90	LF	\$ 150.00	\$ 13,500.00
Concrete Sidewalk (6 Inch)	80	SY	\$ 25.00	\$ 2,000.00
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ 218,250.00</b>

**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 275.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder, 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation Backfill Material TP II	0	CY	\$ 40.00	\$ -
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ -</b>

<b>Construction Incidental Allowance (20%)</b>	<b>\$ 43,650.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 261,900.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 52,380.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 339,280.00</b>

SUBJECT	Detailed Cost Estimate for Proposed Capital Improvement Projects		
Created by	Lelti Abrha	Date	10/14/2011
Checked	SLF	Date	10/14/2011
Reviewed			

**CIP: FKR T07 0600**   **Foe Killer Creek Trib 7 - Mid Broadwell Road**

Existing Culvert Dimensions

**2 - 4' RCP with Headwall**

Diameter	4 ft
Span	ft
Rise	ft
No. Barrels	2
Length	60 ft

Proposed CONSPAN Bridge Dimensions

**1 - CONSPAN Bridge (20' Span & 5' Rise)**

Span	20 ft
Rise	5 ft
No. Barrels	1
Unit Weight (tons/lf)	1.86
Length	60 ft

Culvert and Road Dimensions

Existing Road Elev. (ft)	Proposed Road Elev. (ft)	Estimated Stream Bed Elev. (ft)	Approx Trench Depth (ft)	Approx Roadway Section Top Width (ft)	Excavation Width at Bottom of Trench (ft)	Excavation Width at Top of Trench (ft)	Average Excavation Trench Width (ft)	Roadway Pavement Width (ft)
1063.3	1063.3	1053.0	14	30	32	60	46	20

Full Depth Pavement Thickness (in)	Total Overlay Length Both Approaches (ft)	Overlay Pavement Thickness (in)	Curb and Gutter (Y/N)	Sidewalk (Y/N)	On-Site Detour Length (ft)	On-Site Detour Pavement Width (ft)	On-Site Detour Pavement Thickness (in)	On-Site Detour Average Embankment Width (ft)
6	240	1	Y	Y	-	-	-	-

**Construction**

	Quantity	Unit	Unit Cost	Estimated Cost
Clearing and Grubbing	1.0	Acre	\$ 10,000.00	\$ 10,000.00
Grading Complete (Excavation and Embankment)	1180	CY	\$ 15.00	\$ 17,700.00
Class AA Concrete (Conspan Unit, WW, Parapet, & Footer Incl Rein Steel)	140	CY	\$ 550.00	\$ 77,000.00
Asphalt (4 Inch Binder, 2 Inch Surface)	80	Tons	\$ 75.00	\$ 6,000.00
Graded Aggregate Base (10 Inch)	150	SY	\$ 15.00	\$ 2,250.00
Foundation BackFill Material TP II	280	CY	\$ 40.00	\$ 11,200.00
Type C Silt Fence	1000	LF	\$ 5.00	\$ 5,000.00
Grassing Complete (Temp & Permanent)	1.0	Acres	\$ 1,000.00	\$ 1,000.00
Rip Rap	150	SY	\$ 40.00	\$ 6,000.00
Curb and Gutter (6 Inch x 30 Inch TP 2)	140	LF	\$ 15.00	\$ 2,100.00
Utility Relocation Allowance	80	LF	\$ 150.00	\$ 12,000.00
Concrete Sidewalk (6 Inch)	70	SY	\$ 25.00	\$ 1,750.00
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ 152,000.00</b>

**On Site Temporary Detour**

	Quantity	Unit	Unit Cost	Estimated Cost
Temporary Pipe Extension	0	LF	\$ 275.00	\$ -
Grading Complete (Excavation and Embankment)	0	CY	\$ 15.00	\$ -
Asphalt (3 Inch Binder, 1 Inch Surface)	0	TONS	\$ 75.00	\$ -
Graded Aggregate Base (8 Inch)	0	SY	\$ 12.00	\$ -
Foundation Backfill Material TP II	0	CY	\$ 40.00	\$ -
<b>Sub Total</b>			<b>Sub Total</b>	<b>\$ -</b>

<b>Construction Incidental Allowance (20%)</b>	<b>\$ 30,400.00</b>
<b>Sub-Total Construction Cost</b>	<b>\$ 182,400.00</b>
<b>Engineering (Design &amp; C.E.I) 20%</b>	<b>\$ 36,480.00</b>
<b>Right of Way</b>	<b>\$ 25,000.00</b>
<b>Total Cost</b>	<b>\$ 243,880.00</b>