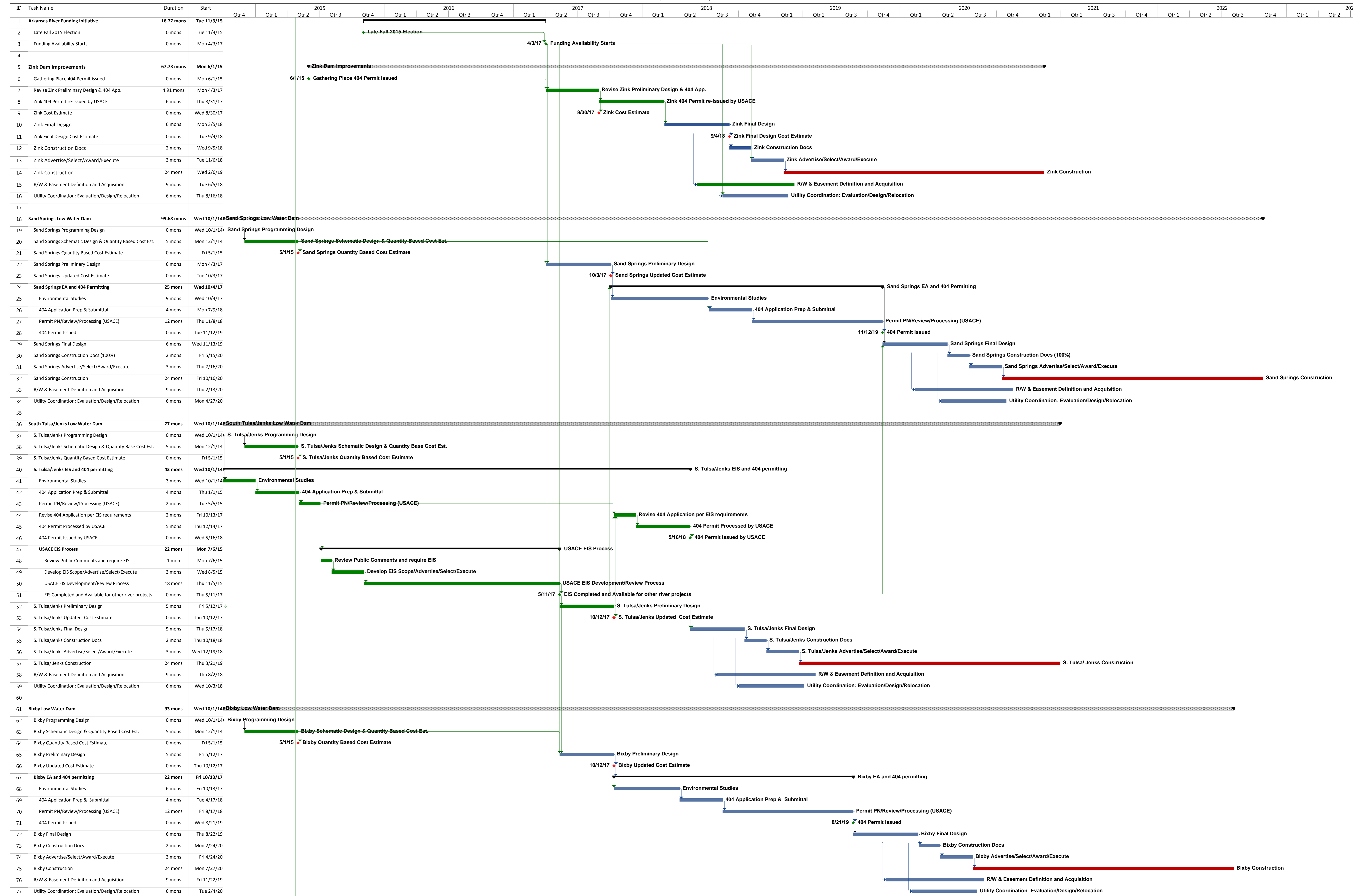






Preliminary Implementation Schedule  
Arkansas River Low Water Dams &  
Public Access / Recreational Improvements





Project: **Ark River Low Water Dams & Public Access/Recreational Improvements**

Estimator: **Tom Jones/CVO**

Client: **Tulsa County**

Estimate Date: **4/24/2015**

Location: **Sand Springs-Tulsa Zink-South Tulsa/Jenks-Bixby**

Revision: **2**

**ESTIMATE SUMMARY**

Description	Sand Springs	Zink	South Tulsa / Jenks	Bixby	Total
Low Water Dams / Bridges	\$45,940,000	\$28,200,000	\$34,700,000	\$32,620,000	\$141,460,000
Public Access					
Sand Springs					
North Bank Public Access	\$6,630,000				\$6,630,000
South Bank Public Access	\$3,470,000				\$3,470,000
Franklin Creek Landing Public Access	\$10,260,000				\$10,260,000
Franklin Creek Landing Lazy River	\$2,520,000				\$2,520,000
Zink					
Big Water Recreation Feature		\$3,080,000			\$3,080,000
East Bank		\$1,230,000			\$1,230,000
Island		\$6,030,000			\$6,030,000
Recreational Flume / Cut Off Wall		\$3,450,000			\$3,450,000
South Tulsa / Jenks					
West Bank Public Access			\$8,170,000		\$8,170,000
East Bank Public Access			\$9,350,000		\$9,350,000
Vensel Creek Public Access			\$4,220,000		\$4,220,000
Bixby					
North Bank Public Access				\$5,100,000	\$5,100,000
South Bank Public Access				\$3,620,000	\$3,620,000
Memorial Public Access				\$1,910,000	\$1,910,000
Memorial to Dam Trail				\$1,750,000	\$1,750,000
Irving North Park Access				\$920,000	\$920,000
Bank Stabilization	\$2,690,000	\$400,000	\$1,180,000	\$1,220,000	\$5,490,000
Outfall Protection	\$40,000	\$280,000	\$140,000	\$40,000	\$500,000
Mitigation	\$3,680,000	\$1,260,000	\$620,000	\$580,000	\$6,140,000
<b>Total Construction Cost (2015)</b>	<b>\$75,230,000</b>	<b>\$43,930,000</b>	<b>\$58,380,000</b>	<b>\$47,760,000</b>	<b>\$225,300,000</b>
Permitting	\$610,000	\$130,000	\$180,000	\$610,000	\$1,530,000
Overall EIS	\$130,000	\$130,000	\$130,000	\$130,000	\$520,000
<b>Subtotal Project Costs</b>	<b>\$75,970,000</b>	<b>\$44,190,000</b>	<b>\$58,690,000</b>	<b>\$48,500,000</b>	<b>\$227,350,000</b>
Escalation					
Anticipated Midpoint of Construction	October-21	February-20	April-20	July-21	
Years of Escalation	6.48	4.80	4.98	6.23	
Escalation per Year	3.00%	3.00%	3.00%	3.00%	
Escalation Factor	19.45%	14.40%	14.94%	18.69%	
Total Escalation	\$14,780,000	\$6,360,000	\$8,770,000	\$9,060,000	\$38,970,000
<b>Subtotal Project Costs</b>	<b>\$90,750,000</b>	<b>\$50,550,000</b>	<b>\$67,460,000</b>	<b>\$57,560,000</b>	<b>\$266,320,000</b>
Owner's Reserve for Scope Changes (%)	5.00%	5.00%	5.00%	5.00%	
Total Owner's Reserve for Scope Changes	\$4,540,000	\$2,530,000	\$3,370,000	\$2,880,000	\$13,320,000
<b>Subtotal Project Costs</b>	<b>\$95,290,000</b>	<b>\$53,080,000</b>	<b>\$70,830,000</b>	<b>\$60,440,000</b>	<b>\$279,640,000</b>
Total Engineering	\$10,670,000	\$6,100,000	\$7,650,000	\$6,350,000	\$30,770,000
Total Admin. / Legal	\$1,910,000	\$1,060,000	\$1,420,000	\$1,210,000	\$5,600,000
<b>Total Capital Costs</b>	<b>\$107,870,000</b>	<b>\$60,240,000</b>	<b>\$79,900,000</b>	<b>\$68,000,000</b>	<b>\$316,010,000</b>

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*Basis of Estimate*

# Arkansas River Low Water Dams and Public Access/Recreational Improvements

Prepared for  
**Tulsa County**  
**Oklahoma**

April 2015



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**Appendixes**

- A: Cost Estimate
- B: AACEI Classification







# Acronyms and Abbreviations

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AACEI	Association for the Advancement of Cost Engineering International
GC	General Conditions or General Contractor
NTP	Notice to Proceed
VE	Value Engineering
O&M	Operation and Maintenance





# Executive Summary

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## 1.1 Project Overview

The proposed dam and public access improvements will enhance portions of the Arkansas River corridor for the enjoyment of citizens and the public at large by creating new ways to experience the river. This goal has been the focus of many studies conducted since 2007 and the subject of numerous community discussions. The schematic design discussed in this report was developed so that reliable cost estimates could be prepared and used as the basis for community leaders to make funding decisions.

The proposed dam and public access improvements involve the construction of three new low-water dams and the modification of the existing Zink Dam. These improvements will result in four individual lakes between the Keystone Dam and the town of Bixby.

TABLE NUMBER 1.1

### Project Overview

Estimate Classification:	Class 3
Requested By:	Murry Fleming/TUL
Estimated By:	Tom Jones/CVO
Estimate Date	April 27, 2015

## 1.2 Overall Costs

This executive summary provides an overview of the Cost Estimate. Reliance on this information is advised to be in consideration of the full context of this report. The costs shown here represents complete capital costs excluding financing and operation and maintenance (O&M) costs.

The cost estimate has been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. This estimate represents the best opinion of the anticipated costs based on the information available at the time of estimate. The final costs of the project will depend on actual labor and material costs, competitive market conditions, final project costs, implementation schedule and other variable factors. As a result, the final project costs will vary from the estimate presented herein. The following is a summary breakdown of the cost (rounded to the nearest \$100,000).

TABLE NUMBER 1.2

### Overall Costs

	Low Range [-15%]	Estimated Costs <sup>a</sup>	High Range [+20%]
<b>Overall Costs</b>	\$268,600,000	<b>\$316,000,000</b>	\$379,200,000

<sup>a</sup> See Appendix A for cost estimate details



# Estimate Information

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## 2.1 Purpose of Estimate

The purpose of this estimate of construction costs is to establish the Engineer's opinion of probable capital costs for the schematic level of design. The capital costs are based on the construction costs.

## 2.2 Client

Tulsa County, Oklahoma.

## 2.3 Project Location and General Scope

The current project consists of the construction of three new dams and associated public access area adjacent to the dams. The project also includes the renovation of the existing dam at Zink, and the construction of recreational features.

The following is an outline of the Work Breakdown Structure (WBS) to develop the cost estimate and the major scope items included in this cost estimate:

- Sand Springs
  - Low Water Dam & Pedestrian Bridge
  - North Bank Public Access
  - South Bank Public Access
  - Franklin Creek Landing Public Access
  - Franklin Creek Landing Lazy River
- Zink
  - Low Water Dam (Renovation to existing)
  - Big Water Recreation Feature
  - West Bank
  - East Bank
  - Island
  - Recreational Flume
- South Tulsa/Jenks
  - Low Water Dam & Pedestrian Bridge
  - West Bank Public Access
  - East Bank Public Access
  - Vensel Creek Public Access
- Bixby
  - Low Water Dam
  - North Bank Public Access
  - South Bank Public Access
  - Memorial Public Access
  - Memorial to Dam Trail
  - Irving North Park Access
- Bank Stabilization (Additional shoreline protection not included in Public Access areas)
- Outfall Protection
- Mitigation



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## 2.4 Estimate Classification

This cost estimate prepared is considered a Budget Authorization / Control Estimate or Class 3 estimate as defined by the Association for the Advancement of Cost Engineering International (AACEI). Refer to Appendix B for more definition.

Typical accuracy ranges for Class 3 estimates are -10% to -20% on the low side, and +10% to +30% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances. Accuracy range for this estimate has been determined to be -15% to +20%.

Project feasibility and funding needs must be carefully reviewed prior to making specific financial decisions to help ensure proper project evaluation and adequate funding. Our estimate is based on material, equipment, and labor pricing as of April 2015.

This Cost Estimate is based on the use of conceptual and stochastic costs and detailed items using separate Labor, Materials and Equipment costs. The estimate uses parametric costs where design information or details are insufficient to allow a detailed item method. Quotations, allowances, and other costs are as described in Section 3.

# Basis of Estimate

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## 3.1 Basis Documents

The cost estimate is based upon the follow project documents:

- Landplan Consultants Inc. drawings & renderings dated March/April 2015
- CH2M design report dated April 2015

## 3.2 Estimate Methodology

This cost estimate is considered a bottom rolled up type estimate with cost items and breakdown of Labor, Materials and Equipment.

For the development of this cost estimate, there may be systems that have yet to be defined enough on which to base a scope of work for estimating purposes. CH2M estimating provides parametric costing based on a unit of measurement (i.e. cost per square foot or cost per unit). The cost is assigned per unit and typically is developed by averaging similar projects and analysis of historic costs. Using this approach, CH2M HILL parametric estimators strive to generate a basic system design fitting the parameters of the structure and its proposed function.

Finally, pricing is geographically adjusted to reflect local labor and material rates and job site conditions and requirements. Cost items have been reviewed and validated by local contracting firms. As the design process progresses and the details have increased, the parametric costing can be replaced with a detailed takeoff and estimated accordingly.

## 3.3 Key Assumptions

An estimating contingency was included in the cost estimate to account for the level of design and the estimating methodology used. Estimate contingency for the dam portion of work was considered to be 15% due to current design level and estimate methodology. Though there is less risk of scope overruns in the dam portion, the inherent risk of working in the river and the uncertainty of mass excavation to get a solid foundation warranted a 15% contingency. Since the design for the Public Access area are schematic and there are more risks in scope overruns due to the lack of design at this stage of the project, a 20% contingency for the Public Access areas was deemed appropriate.

The cost estimates shown in Appendix A only represent the anticipated construction “Bid Day” cost anticipated for this project. The following is a list of the Key Assumptions by area on how the estimator interprets how the project will be constructed:

- **Sand Springs**
  - Low Water Dam & Pedestrian Bridge
    - Rock Anchors will be required (269 each)
    - Concrete will need to be cooled for mass placement
    - The river will be diverted using the sand material excavated from the dam footprint, constructing a temporary earthen coffer dam in conjunction with a portable cofferdam system.
    - Dewatering will be required and can be handled using 3 each dewatering pumps (6” dia.) and piping discharging the water downstream of the dam.

- 
- Rock excavation for the dam will be required. Typically 4' depth.
  - Grouted Rock will be placed on the downstream side of the dam for ballast and scour protection.
  - Dam will include 26 each Obermeyer Gates for water control (14 each Crest Gates, and 12 each Full Gates). Gate Equipment will be housed in new Maintenance Structure constructed as part of the South Bank Public Access Area.
  - Soldier pile retaining walls with cast in place concrete facing will extend up and down river on each bank from midpoint of dam.
    - Up river – 20' High wall extending 100 linear feet.
    - Down river – 10' high wall extending 100 linear feet.
  - A 20' wide Pedestrian Bridge will be constructed over the new Low Water Dam.
    - Bridge construction assumed 100 linear foot spans, typical, using Type U40 Prestressed Concrete Beams with Prestressed Concrete Deck Panels.
    - Bridge includes concrete curbs, metal handrails, and 2" Asphalt topping.
  - New Structures:
    - 1 each – 20'x40' Dam Control Building
  - North Bank Public Access
    - The estimate assumes that the 31.17 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 8,400 linear feet of trail and sidewalks.
    - Asphalt roads are included for Bridge Access and Entry Roads.
    - New 4,500 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 6 each – 12'x24' Steel Structure with Stone Columns
      - 5 each – 20'x30' Steel Structure with Stone Columns
      - 1 each – 20'x30' Restroom Structure
    - Special Features:
      - 3,500 square foot colored shotcrete landing
      - 52,000 square foot colored shotcrete area with recirculating waterfall feature.
      - Double locking pole gate
      - Monument Signage
      - 4,200 square foot Overlook with Shade Structure
    - The site will be moderately landscaped with seeded areas with 305 planted shade trees (3"-4" caliper). There will be 4,700 square feet of extensive planting areas.
    - Estimate includes 3,800 cubic yards of Rip Rap Shoreline protection.
    - Utilities:



- 
- Electrical Service by Public Service Company of Oklahoma (PSO)
  - 3" PVC water service
  - 2" PVC forcemain sewer
- South Bank Public Access
    - The estimate assumes that the 15.46 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 3,300 linear feet of trail and sidewalks with 2 each 16 foot wide pedestrian bridges.
    - Asphalt roads are included for maintenance and Entry Roads.
    - Portions of existing pavement to be topped with 2" of Asphalt. The estimate assumes that milling will not be required.
    - New 2,300 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 1 each – 40'x60' Steel Structure with Stone Columns
      - 1 each – 20'x30' Restroom Structure
    - Special Features:
      - 3,000 square foot Overlook with Shade Structure
    - The site will be moderately landscaped with seeded areas with 88 planted shade trees (3"-4" caliper).
    - Estimate includes 2,400 cubic yards of Rip Rap Shoreline protection.
    - Utilities:
      - Electrical Service by Public Service Company of Oklahoma (PSO)
      - 3" PVC water service
      - 2" PVC forcemain sewer
  - Franklin Creek Landing Public Access
    - The estimate assumes that the 33.63 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 8,200 linear feet of trail and sidewalks with a 16 foot wide pedestrian bridge and a 20 foot wide concrete bridge for vehicular access.
    - Asphalt roads are included for Park Roads and Entry Roads.
    - Portions of existing pavement to be topped with 2" of Asphalt. The estimate assumes that milling will not be required.
    - New 23,600 square yard of asphalt Parking Lots with concrete curb and gutters.
    - New Structure:
      - 1 each – 20'x30' Restroom Structure
    - Special Features:
      - Shotcrete channel lined with boulders from Lazy River to Franklin Creek.

- 
- Stone Cascade at Terminus of Franklin Creek
  - Lighthouse feature with decorative concrete plaza
  - 1,200 linear feet of Floating Dock and Gangway Ramp
  - Retaining Walls
    - 2,400 linear feet of 12' high stone faced seawall. Estimate assumes 50,000 cubic yards of excavation and backfill behind retaining walls will be required.
  - The site will be moderately landscaped with seeded areas with 425 planted shade trees (3"-4" caliper). There will be 6,900 square feet of extensive planting areas.
  - Estimate includes 2,600 cubic yards of Rip Rap Shoreline protection.
  - Stabilize existing stream bank with large boulders and rip rap, approximately 2,700 linear feet of bank.
  - Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 20 linear feet of 8'x3' concrete box culvert
    - 3" PVC water service
    - 2" PVC forcemain sewer
  - Franklin Creek Landing Lazy River
    - The estimate assumes a 35,600 square foot area of a shotcrete channel will rocks and boulders.
    - The channel will require 4,000 cubic yards of excavation and rough grading.
    - Water for the Lazy River will come from an intake structure near the Lighthouse feature and pumped to the Lazy River via 2,000 linear feet of 30" PVC Pipe. The pump station will house 2 each 100 HP pumps and 1 each 50 HP pump.
  - **Zink Dam** (Pricing shown for Zink are based upon the 30% design cost estimate performed by CH2M HILL in 2012. The estimate has been modified to reflect the expected change to the design due to the construction project adjacent to the dam. A detailed, bottom-up, cost estimate has not been included in this report. A summary of the costs used for Zink can be found in the Appendix.)
    - Modification to the existing Dam
    - New Big Water Recreation Feature
    - West Bank Improvements
    - East Bank Trail
    - Island
    - Recreational Flume

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- **South Tulsa/Jenks**

- Low Water Dam

- Rock Anchors will be required (143 each)
- Concrete will need to be cooled for mass placement
- The river will be diverted using the sand material excavated from the dam footprint, constructing a temporary earthen coffer dam in conjunction with a portable cofferdam system.
- Dewatering will be required and can be handled using 3 each dewatering pumps (6" dia.) and piping discharging the water downstream of the dam.
- Rock excavation for the dam will be required. Typically 4' depth.
- Grouted Rock will be placed on the downstream side of the dam for ballast and scour protection.
- Dam will include 26 each Obermeyer Gates for water control (16 each Crest Gates, and 10 each Full Gates). Gate Equipment will be housed in new Maintenance Structure constructed as part of the West Bank Public Access Area.
- Soldier pile retaining walls with cast in place concrete facing will extend up and down river on each bank from midpoint of dam.
  - Up river – 30' High wall extending 300 linear feet.
  - Down river – 15' high wall extending 200 linear feet.
- A 20' wide Pedestrian Bridge will be constructed over the new Low Water Dam.
  - Bridge construction assumed 100 linear foot spans, typical, using Type U40 Prestressed Concrete Beams with Prestressed Concrete Deck Panels.
  - Bridge includes concrete curbs, metal handrails, and 2" Asphalt topping.
- New Structures:
  - 1 each – 20'x40' Dam Control Building

- West Bank Public Access

- The estimate assumes that the 18.21 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
- Site includes 8,000 linear feet of trail and sidewalks with 2 each 12 foot wide pedestrian bridges.
- Asphalt roads are included for Entry Roads.
- 10,000 square foot concrete Emergency Boat Ramp
- New 5,100 square yard asphalt Parking Lot with concrete curb and gutters.
- New Structures:
  - 1 each – 30'x50' Steel Structure with Stone Columns
  - 1 each – 20'x30' Restroom Structure
- Special Features:
  - 1,100 square foot, 6' wide ADA concrete access ramp



- 
- 3,000 square foot concrete dock structure
  - 1,900 square foot Splash Pad with Plaza Area
  - 7,600 square foot colored and stamped concrete
  - 16,200 square foot safety surface
  - 10,500 square foot Overlook with Shade Structure
  - 1,700 square foot steel powder coated Arbor Structure
  - Misc. Splash Pad and Playground equipment
  - Retaining Walls
    - 2,100 linear feet of 2' to 5' high stone faced retaining walls. Estimate assumes 5,000 cy of excavation and backfill behind retaining walls will be required.
  - The site will be moderately landscaped with seeded areas with 120 planted shade trees (3"-4" caliper). There will be 218,000 square feet of grass sod area and 3,700 square feet of extensive planting areas.
  - Estimate includes 6,500 cubic yards of Rip Rap Shoreline protection.
  - Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 3" PVC water service
    - 2" PVC forcemain sewer
  - East Bank Public Access
    - The estimate assumes that the 14.89 acre site will need to be rough graded, but assumes import of 20,000 cubic yards of fill material for mound feature.
    - Site includes 7,000 linear feet of trail and sidewalks.
    - Asphalt roads are included for Entry Roads.
    - 4,000 square foot concrete Boat Ramp.
    - New 2,600 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 16 each – 10'x10' Steel Structure with Stone Columns
      - 1 each – 20'x30' Restroom Structure
      - 1 each – 36'x12' Cantilevered Shade Structure
    - Special Features:
      - 4,700 square feet of colored concrete sidewalk
      - 2,000 square feet of colored and stamped concrete pavement
      - 5,000 square feet of safety surface
      - 3,500 square feet of colored shotcrete landing
      - Cascading Waterfall feature with 3 Pools

- 
- 4 each – Benches
  - Playground Equipment
  - Fountain, Splash Pad, and Waterfall feature
  - Amphitheater
  - Shade Sails at playground (4 each)
  - Retaining Walls
    - 1,300 linear feet of 2' to 5' high stone faced retaining walls. Estimate assumes 5,000 cy of excavation and backfill behind retaining walls will be required.
  - The site will be moderately landscaped with seeded areas with 300 planted shade trees (3"-4" caliper). There will be 148,000 square feet of grass sod area and 2,300 square feet of extensive planting areas.
  - Estimate includes 6,800 cubic yards of Rip Rap Shoreline protection.
  - Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 3" PVC water service
    - 2" PVC forcemain sewer
  - Vensel Creek Public Access
    - The estimate assumes that the 9.83 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 4,200 linear feet of trail and sidewalks.
    - Asphalt roads are included for Entry Roads.
    - 4,200 square foot concrete Boat Ramp
    - New 2,000 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 1 each – 30'x50' Steel Structure with Stone Columns
    - Special Features:
      - 1,000 square foot concrete channel lined with boulders
      - 6,400 square foot colored shotcrete landing
      - Lighthouse feature with decorative concrete plaza
      - 450 linear feet of floating dock and gangway ramp
    - Retaining Walls
      - 700 linear feet of 21' high stone faced seawall. Estimate assumes 12,000 cy of excavation and backfill behind retaining walls will be required.
    - The site will be moderately landscaped with seeded areas with 75 planted shade trees (3"-4" caliper).
    - Estimate includes 4,100 cubic yards of Rip Rap Shoreline protection.

- 
- Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 3" PVC water service
  - **Bixby**
    - Low Water Dam
      - Rock Anchors will be required (290 each)
      - Concrete will need to be cooled for mass placement
      - The river will be diverted using the sand material excavated from the dam footprint, constructing a temporary earthen coffer dam in conjunction with a portable cofferdam system.
      - Dewatering will be required and can be handled using 3 each dewatering pumps (6" dia.) and piping discharging the water downstream of the dam.
      - Rock excavation for the dam will be required. Typically 4' depth.
      - Grouted Rock will be placed on the downstream side of the dam for ballast and scour protection.
      - Dam will include 5 each Obermeyer Gates for water control (5 each Full Gates). Gate Equipment will be housed in new Maintenance Structure constructed as part of the North Bank Public Access Area.
      - Soldier pile retaining walls with cast in place concrete facing will extend up and down river on each bank from midpoint of dam.
        - Up river – 18' High wall extending 100 linear feet.
        - Down river – 10' high wall extending 100 linear feet.
      - New Structures:
        - 1 each – 20'x40' Dam Control Building
    - North Bank Public Access
      - The estimate assumes that the 7.35 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
      - Site includes 2,800 linear feet of trail and sidewalks.
      - Asphalt roads are included for maintenance and Entry Roads.
      - 800 square foot concrete driveway
      - 6,500 square foot concrete Emergency Boat Ramp
      - New 4,800 square yard asphalt Parking Lot with concrete curb and gutters.
      - New Structures:
        - 9 each – 10'x10' Steel Structure with Stone Columns
        - 1 each – 20'x30' Steel Structure with Stone Columns
        - 1 each – 20'x30' Restroom Structure

- 
- Special Features:
    - 500 square foot colored concrete sidewalk
    - 2,600 square foot colored artificial turf
    - 8,600 square foot colored and stamped concrete
    - 2,200 square foot safety surface
    - 8,900 square foot colored shotcrete landing
    - 600 square foot recirculating waterfall feature
    - 8 each benches
    - Locking double pole gate
    - 6,600 square foot Overlook with shade structure
    - 1 each sand volleyball court
    - 750 square foot steel powder coated Arbor Structure
  - Retaining Walls
    - 1,000 linear feet of 2' to 5' high stone faced retaining walls. Estimate assumes 1,800 cubic yards of excavation and backfill behind retaining walls will be required.
  - The site will be moderately landscaped with seeded areas with 265 planted shade trees (3"-4" caliper). There will be 32,000 square feet of grass sod area and 8,500 square feet of extensive planting areas.
  - Estimate includes 3,500 cubic yards of Rip Rap Shoreline protection.
  - Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 3" PVC water service
    - 2" PVC forcemain sewer
  - South Bank Public Access
    - The estimate assumes that the 7.67 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 4,500 linear feet of trail and sidewalks with a 15' wide pedestrian bridge with overlook.
    - Portions of existing pavement to be topped with 2" of Asphalt. The estimate assumes that milling will not be required.
    - 10,300 square foot concrete Emergency Boat Ramp
    - New 1,800 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 1 each – 20'x30' Restroom Structure
    - Special Features:
      - 1,300 square foot, 8' wide ADA concrete access ramp

- 
- 4,000 square foot colored and stamped concrete
  - Interactive Recirculating Fountain
  - Historical Signage
  - Retaining Walls
    - 1,300 linear feet of 2' to 5' high stone faced retaining walls. Estimate assumes 2,500 cubic yards of excavation and backfill behind retaining walls will be required.
  - The site will be moderately landscaped with seeded areas with 76 planted shade trees (3"-4" caliper). There will be 122,000 square feet of grass sod area and 2,500 square feet of extensive planting areas.
  - Estimate includes 3,200 cubic yards of Rip Rap Shoreline protection.
  - Utilities:
    - Electrical Service by Public Service Company of Oklahoma (PSO)
    - 3" PVC water service
    - 2" PVC forcemain sewer
  - Memorial Public Access
    - The estimate assumes that the 6.66 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 2,900 linear feet of trail and sidewalks.
    - 11,200 square foot concrete Emergency Boat Ramp
    - New 2,800 square yard asphalt Parking Lot with concrete curb and gutters.
    - New Structures:
      - 1 each – 10'x20' Steel Structure with Stone Columns
      - 1 each – 20'x20' Steel Structure with Stone Columns
      - 1 each – 20'x30' Restroom Structure
    - Special Features:
      - 6,000 square foot colored shotcrete landing
      - Dog Park for Large Dogs
      - Dog Park for Small Dogs
    - The site will be moderately landscaped with seeded areas with 82 planted shade trees (3"-4" caliper). There will be 28,000 square feet of grass sod area.
    - Estimate includes 1,900 cubic yards of Rip Rap Shoreline protection.
    - Utilities:
      - Electrical Service by Public Service Company of Oklahoma (PSO)
      - 3" PVC water service
      - 2" PVC forcemain sewer

- 
- Memorial to Dam Trail
    - The estimate assumes that the 7.70 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Site includes 4,200 linear feet of trail and sidewalks.
    - The site will be moderately landscaped with seeded areas with 82 planted shade trees (3"-4" caliper). There will be 84,000 square feet of grass sod area.
    - Estimate includes 9,100 cubic yards of Rip Rap Shoreline protection.
  - Irving North Park Access
    - The estimate assumes that the 6.27 acre site will need to be rough graded, but assumes the site cut/fill will be balanced to the greatest extent possible.
    - Asphalt roads are included for Entry Roads.
    - 38,000 square feet of existing parking lot to be fog sealed and restriped.

The following is a list of other additional costs that are only captured on the Overall Estimate Summary. The Estimate Summary attempts to capture all capital expenditure for the project with the exception of O&M costs and any Financing charges:

- Bank Stabilization, Outfall Protection, and Mitigation Costs.
  - These costs are considered construction costs but fall outside of the Public Access area.
- Permitting
- Overall EIS.
- Escalation
- An Owner's Reserve for Changes (5%)
  - This Reserve is for scope changes to the project at the Owner's discretion.
- Engineering
- Administration/Legal

## 3.4 Exclusions

The cost estimate excludes the following costs:

- Operation and Maintenance (O&M) costs
- Financing costs
- Any work outside of the limits of construction as shown on the drawings unless noted otherwise.
- Material Adjustment allowances above and beyond what is included at the time of the cost estimate.



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## 3.5 Project Delivery and Methodology

It is assumed that this project will be procured using the traditional Design/Bid/Build method. The general contractor will contract directly with the owner.

The estimate is based on the assumption the work will be done on a competitive bid basis and the contractor will have a reasonable amount of time to complete the work. All contractors are equal, with a reasonable project schedule, no overtime, constructed as under a single contract, no liquidated damages.

## 3.6 Labor, Material, Subcontracts and Other Direct Costs

### 3.6.1 Labor

The estimate has been adjusted for local area labor rates, based upon 2015 national rates. A Location Adjustment Factor of 87.5 was used based on RS Means 2015 City Cost Index for Tulsa, Oklahoma, Site & Infrastructure work.

Labor unit prices reflect a burdened rate, including: workers compensation, unemployment taxes, Fringe Benefits, and medical insurance.

### 3.6.2 Material

Materials pricing is national average as determined by RS Means or other data sources. Quotes on certain items may have been obtained and included in this estimate. Many quotes given for engineering estimates are budgetary and may not reflect actual contractor pricing.

### 3.6.3 Subcontracts

It is assumed that General Contractors will subcontract a portion of the work. Items listed in the cost estimate as subcontractor includes all anticipated markups that a general contractor would receive.

### 3.6.4 Construction Equipment

Equipment items listed in this cost estimate are for the construction equipment necessary for the installation of the work. Equipment rates in this estimate are assumed to be 75% of 2014 Blue Book value. This is to account for contractor owned equipment or discounted rental equipment. A Location Adjustment Factor of 87.5 was used based on RS Means 2015 City Cost Index for Tulsa, Oklahoma, Site & Infrastructure work.

## 3.7 Escalation Costs

This estimate includes Escalation with the assumption that construction will be phased and staggered assuming construction starting in 2018 and going through 2022. Estimated midpoint of construction for each area is shown in the Estimate Summary.

This CH2M escalation forecast is based upon economic data from Global Insight, Inc. and the United States Bureau of Labor Statistics. For the anticipated start dates for the project, escalation varied from 2.68% to 3.29% per year. Due to the level of design and uncertainty of the schedule an average factor of 3.00% per year was used.

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## 3.8 Markups, Taxes, and Other Indirect Costs

The following typical contractor markups were applied to the cost estimate:

TABLE NUMBER 3.8

### Markups, Taxes, and Other Indirect Costs

Item	Unit	Comments
General Conditions	5.00%	[Comments can describe how the markup is applied]
Home Office Overhead	10.00%	
Profit	5.00%	
Mobilization	3.00%	
Builder's Risk & General Liability	1.00%	
Flood Insurance	1.00%	
Payment & Performance Bonds	1.16%	
Estimate Contingency (Dam)	15.00%	
Estimate Contingency (Public Access)	20.00%	
Escalation	3.00%/yr	Escalation varies depending on construction phasing. (See estimate summary for escalation factor that was used)
Sales Tax	8.51%	Sales tax only applied to Construction Equipment and Material not incorporated into the project (2% was applied to all materials to account for taxes on unincorporated material as an allowance)

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## 3.9 Market Conditions

During volatile economic conditions, an estimate may have a Market Conditions amount applied. This adjustment is done to account for the current volatility in the construction market and/or the location of a project.

However, based on the current construction market, and the location of the work proposed in this estimate, a Market Conditions adjustment was not applied.

## 3.10 Cost Resources

The following is a list of the various cost resources used in the development of the cost estimate:

- R.S. Means 2014/2015 Data
- CH2M Historical Data
- Vendor Quotes where available
- Estimator Judgment

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## 3.11 Disclaimer

The opinions of cost (estimates) shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project evaluation and implementation from the information available at the time the opinion was prepared. The final costs of the project and resulting feasibility will depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. The recent increases or decreases in material pricing may have a significant impact which is not predictable and careful review or consideration must be used in evaluation of material prices. As a result, the final project costs will vary from the opinions of cost presented herein.

**Appendix A:  
Cost Estimate**

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Project: **Ark River Low Water Dams & Public Access/Recreational Improvements**

Estimator: **Tom Jones/CVO**

Client: **Tulsa County**

Estimate Date: **4/24/2015**

Location: **Sand Springs-Tulsa Zink-South Tulsa/Jenks-Bixby**

Revision: **2**

**ESTIMATE SUMMARY**

Description	Sand Springs	Zink	South Tulsa / Jenks	Bixby	Total
<b>Low Water Dams / Bridges</b>	\$45,940,000	\$28,200,000	\$34,700,000	\$32,620,000	\$141,460,000
<b>Public Access</b>					
<b>Sand Springs</b>					
North Bank Public Access	\$6,630,000				\$6,630,000
South Bank Public Access	\$3,470,000				\$3,470,000
Franklin Creek Landing Public Access	\$10,260,000				\$10,260,000
Franklin Creek Landing Lazy River	\$2,520,000				\$2,520,000
<b>Zink</b>					
Big Water Recreation Feature		\$3,080,000			\$3,080,000
East Bank		\$1,230,000			\$1,230,000
Island		\$6,030,000			\$6,030,000
Recreational Flume / Cut Off Wall		\$3,450,000			\$3,450,000
<b>South Tulsa / Jenks</b>					
West Bank Public Access			\$8,170,000		\$8,170,000
East Bank Public Access			\$9,350,000		\$9,350,000
Vensel Creek Public Access			\$4,220,000		\$4,220,000
<b>Bixby</b>					
North Bank Public Access				\$5,100,000	\$5,100,000
South Bank Public Access				\$3,620,000	\$3,620,000
Memorial Public Access				\$1,910,000	\$1,910,000
Memorial to Dam Trail				\$1,750,000	\$1,750,000
Irving North Park Access				\$920,000	\$920,000
Bank Stabilization	\$2,690,000	\$400,000	\$1,180,000	\$1,220,000	\$5,490,000
Outfall Protection	\$40,000	\$280,000	\$140,000	\$40,000	\$500,000
Mitigation	\$3,680,000	\$1,260,000	\$620,000	\$580,000	\$6,140,000
<b>Total Construction Cost (2015)</b>	<b>\$75,230,000</b>	<b>\$43,930,000</b>	<b>\$58,380,000</b>	<b>\$47,760,000</b>	<b>\$225,300,000</b>
Permitting	\$610,000	\$130,000	\$180,000	\$610,000	\$1,530,000
Overall EIS	\$130,000	\$130,000	\$130,000	\$130,000	\$520,000
<b>Subtotal Project Costs</b>	<b>\$75,970,000</b>	<b>\$44,190,000</b>	<b>\$58,690,000</b>	<b>\$48,500,000</b>	<b>\$227,350,000</b>
<b>Escalation</b>					
Anticipated Midpoint of Construction	October-21	February-20	April-20	July-21	
Years of Escalation	6.48	4.80	4.98	6.23	
Escalation per Year	3.00%	3.00%	3.00%	3.00%	
Escalation Factor	19.45%	14.40%	14.94%	18.69%	
Total Escalation	\$14,780,000	\$6,360,000	\$8,770,000	\$9,060,000	\$38,970,000
<b>Subtotal Project Costs</b>	<b>\$90,750,000</b>	<b>\$50,550,000</b>	<b>\$67,460,000</b>	<b>\$57,560,000</b>	<b>\$266,320,000</b>
Owner's Reserve for Scope Changes (%)	5.00%	5.00%	5.00%	5.00%	
Total Owner's Reserve for Scope Changes	\$4,540,000	\$2,530,000	\$3,370,000	\$2,880,000	\$13,320,000
<b>Subtotal Project Costs</b>	<b>\$95,290,000</b>	<b>\$53,080,000</b>	<b>\$70,830,000</b>	<b>\$60,440,000</b>	<b>\$279,640,000</b>
Total Engineering	\$10,670,000	\$6,100,000	\$7,650,000	\$6,350,000	\$30,770,000
Total Admin. / Legal	\$1,910,000	\$1,060,000	\$1,420,000	\$1,210,000	\$5,600,000
<b>Total Capital Costs</b>	<b>\$107,870,000</b>	<b>\$60,240,000</b>	<b>\$79,900,000</b>	<b>\$68,000,000</b>	<b>\$316,010,000</b>







Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Estimate Summary**

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
<b>SS00</b>		<b>Low Water Dam &amp; Pedestrian Bridge</b>			
	010	Low Water Dam	1,908.00 LF	21,669.08 /LF	41,344,611
	020	Pedestrian Bridges	1.00 EA	3,614,330.75 /EA	3,614,331
	060	Structures	1.00 EA	118,201.42 /EA	118,201
	080	Retaining Walls	1,000.00 LF	612.52 /LF	612,519
	110	Utilities	1.00 LS	251,178.04 /LS	251,178
		<b>SS00 Low Water Dam &amp; Pedestrian Bridge</b>	<b>1,908.00 LF</b>	<b>24,078.01 /LF</b>	<b>45,940,840</b>
<b>SS01</b>		<b>North Bank Public Access</b>			
	005	Overall Site Grading	1,358,126.00 SF	0.24 /SF	327,385
	030	Paths/Trails	8,441.00 LF	64.55 /LF	544,847
	040	Roads	149,524.00 SF	5.36 /SF	801,192
	050	Parking Lots	45,302.00 SF	5.52 /SF	250,166
	060	Structures	12.00 EA	63,264.70 /EA	759,176
	070	Special Features	1.00 LS	1,475,253.28 /LS	1,475,253
	090	Landscaping	900,749.00 SF	1.75 /SF	1,576,574
	100	Bank Stabilization	1,000.00 LF	228.31 /LF	228,314
	110	Utilities	1.00 LS	662,515.71 /LS	662,516
		<b>SS01 North Bank Public Access</b>	<b>1,358,126.00 SF</b>	<b>4.88 /SF</b>	<b>6,625,424</b>
<b>SS02</b>		<b>South Bank Public Access</b>			
	005	Overall Site Grading	673,854.00 SF	0.24 /SF	162,437
	020	Pedestrian Bridges	2.00 EA	190,617.77 /EA	381,236
	030	Paths/Trails	3,314.00 LF	81.79 /LF	271,040
	040	Roads	75,652.00 SF	3.64 /SF	275,522
	050	Parking Lots	23,092.00 SF	5.54 /SF	127,873
	060	Structures	3.00 EA	182,792.97 /EA	548,379
	070	Special Features	1.00 LS	226,912.76 /LS	226,913
	090	Landscaping	480,169.00 SF	1.64 /SF	787,235
	100	Bank Stabilization	1,500.00 LF	94.16 /LF	141,245
	110	Utilities	1.00 LS	546,062.10 /LS	546,062
		<b>SS02 South Bank Public Access</b>	<b>673,854.00 SF</b>	<b>5.15 /SF</b>	<b>3,467,942</b>
<b>SS03</b>		<b>Franklin Creek Landing Public Access</b>			
	005	Overall Site Grading	1,465,337.00 SF	0.24 /SF	353,229
	020	Pedestrian Bridges	2.00 EA	140,786.60 /EA	281,573
	030	Paths/Trails	8,230.00 LF	92.03 /LF	757,420
	040	Roads	91,873.00 SF	4.96 /SF	455,934



Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Estimate Summary**

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
	050	Parking Lots	225,596.00 SF	5.41 /SF	1,220,295
	060	Structures	1.00 EA	328,416.34 /EA	328,416
	070	Special Features	1.00 LS	1,539,774.49 /LS	1,539,774
	080	Retaining Walls	2,374.00 LF	1,104.35 /LF	2,621,721
	090	Landscaping	736,619.00 SF	1.91 /SF	1,405,941
	100	Bank Stabilization	4,494.00 LF	52.30 /LF	235,051
	110	Utilities	1.00 LS	1,060,591.53 /LS	1,060,592
		<b>SS03 Franklin Creek Landing Public Access</b>	<b>1,465,337.00 SF</b>	<b>7.00 /SF</b>	<b>10,259,946</b>
<b>SS03a</b>		<b>Franklin Creek Landing Lazy River</b>			
	070	Special Features	1.00 LS	2,218,685.20 /LS	2,218,685
	110	Utilities	1.00 LS	305,503.55 /LS	305,504
		<b>SS03a Franklin Creek Landing Lazy River</b>	<b>1.00 LS</b>	<b>2,524,188.75 /LS</b>	<b>2,524,189</b>

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	13,720,645		
Material	27,247,652		
Subcontract	23,918,356		
Equipment	3,931,689		
Other			
<b>Construction Total</b>	<b>68,818,342</b>	<b>68,818,342</b>	



Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>SS00</b>			<b>Low Water Dam &amp; Pedestrian Bridge</b>										
	03.0		Concrete Work										
		03-10	Cast-In-Place Concrete Work										
			Concrete Wing Walls @ Dam Ends		1,943.7	83,126	100,273	20,222			/CY	203,622	292,469
			Pier Support Columns for Pedestrian Bridge		1,274.2	55,162	38,296	7,325			/CY	100,783	142,779
			Rock Bolts - 1.75" dia x 15' Bonded		632.8	28,058	79,920		17,357		/EA	125,335	182,583
			Rock Bolts - 2.5" dia x 20' Bonded		895.4	39,358	87,120		26,508		/EA	152,987	221,806
			Dental Concrete Allowance		2,324.1	89,242	217,413	24,720			/CY	331,375	482,805
			Concrete Gravity Dam		100,874.0	4,232,245	8,853,058	1,818,214			/CY	14,903,517	21,668,242
			03-10 Cast-In-Place Concrete Work		107,944.2	4,527,191	9,376,080	1,870,481	43,865		/CY	15,817,617	22,990,684
			03.0 Concrete Work		107,944.2	4,527,191	9,376,080	1,870,481	43,865		/CY	15,817,617	22,990,684
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			20x40 Dam Control Building					80,000			/EA	80,000	118,201
			13-34 Fabricated Engineered Structures					80,000			/EA	80,000	118,201
			13.0 Special Construction					80,000			/LS	80,000	118,201
	26.0		Electrical Work										
		26-10	Site Electrical										
			Site Lighting					170,000			/LS	170,000	251,178
			26-10 Site Electrical					170,000			/LS	170,000	251,178
			26.0 Electrical Work					170,000			/LS	170,000	251,178
	31.0		Site/Civil										
		31-10	Temporary Works										
			Coffer Dam		2,275.8	102,243	5,000	270,000	184,954		/lf	562,198	810,597
			31-10 Temporary Works		2,275.8	102,243	5,000	270,000	184,954		/LS	562,198	810,597
		31-15	Site Preparation										
			Foundation Cleanup		111.3	4,739			9,912		/SY	14,651	20,660
			31-15 Site Preparation		111.3	4,739			9,912		/LS	14,651	20,660
		31-20	Earthworks, Site										
			Dewatering		12,792.0	506,803	7,950	4,500	509,206		/DAY	1,028,459	1,436,058
			Mass Common Excavation		712.1	29,937	405		133,787		/CY	164,129	233,432
			Mass Rock Excavation		2,008.5	86,819	49,469		172,370		/CY	308,657	439,305
			31-20 Earthworks, Site		15,512.7	623,559	57,824	4,500	815,363		/LS	1,501,245	2,108,795
		31-30	Site Specialties										
			Downstream Grouted Rock Fill		32,318.2	1,340,269	2,585,457		488,421		/CY	4,414,147	6,386,668
			31-30 Site Specialties		32,318.2	1,340,269	2,585,457		488,421		/LS	4,414,147	6,386,668
			31.0 Site/Civil		50,218.0	2,070,810	2,648,281	274,500	1,498,650		/LS	6,492,241	9,326,720
	32.0		Exterior Improvements										
		32-32	Retaining Walls										
			Retaining Wall - Sea Wall 10' Ht.		1,630.3	75,208	58,109		20,430		/LF	153,746	218,109
			Retaining Wall - Sea Wall 20' Ht.		2,540.6	118,503	99,569		38,843		/LF	256,915	365,226
			32-32 Retaining Walls		4,170.8	193,711	157,677		59,273		/LF	410,662	583,334
		32-34	Fabricated Bridges										
			Pedestrian Bridge @ Low Dam Crossing		4,209.7	226,733	271,221	1,946,160	18,103		/SF	2,462,218	3,614,331
			32-34 Fabricated Bridges		4,209.7	226,733	271,221	1,946,160	18,103		/EA	2,462,218	3,614,331
			32.0 Exterior Improvements		8,380.5	420,444	428,899	1,946,160	77,377		/LS	2,872,879	4,197,665
	35.0		Water and Marine Construction Equipment										
		35-10	Water Control Gates										
			Obermeyer Gates					6,129,464			/EA	6,129,464	9,056,392
			35-10 Water Control Gates					6,129,464			/EA	6,129,464	9,056,392
			35.0 Water and Marine Construction Equipment					6,129,464			/LS	6,129,464	9,056,392
			<b>SS00 Low Water Dam &amp; Pedestrian Bridge</b>	<b>1,908.00 LF</b>	<b>166,542.7</b>	<b>7,018,445</b>	<b>12,453,259</b>	<b>10,470,605</b>	<b>1,619,892</b>		<b>16,542.03 /LF</b>	<b>31,562,201</b>	<b>45,940,840</b>



Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>SS01</b>			<b>North Bank Public Access</b>										
	13.0		<b>Special Construction</b>										
		13-34	<b>Fabricated Engineered Structures</b>										
			12x24 Steel Structure w/ Stone Columns					102,000			/EA	102,000	155,807
			20x30 Steel Structure w/ Stone Columns					180,000			/EA	180,000	274,953
			20x30 Restroom Structure					215,000			/EA	215,000	328,416
			13-34 Fabricated Engineered Structures					497,000			/EA	497,000	759,176
			13.0 Special Construction					497,000			/LS	497,000	759,176
	26.0		<b>Electrical Work</b>										
		26-10	<b>Site Electrical</b>										
			Electrical Service					50,000			/LS	50,000	76,376
			Site Lighting					290,000			/LS	290,000	442,980
			26-10 Site Electrical					340,000			/LS	340,000	519,356
			26.0 Electrical Work					340,000			/LS	340,000	519,356
	31.0		<b>Site/Civil</b>										
		31-00	<b>Site/Civil</b>										
			Mass Grading		2,012.0	94,305			131,163		/SY	225,468	327,385
			31-00 Site/Civil		2,012.0	94,305			131,163		/LS	225,468	327,385
		31-30	<b>Site Specialties</b>										
			Bank Stabilization		779.2	34,790	89,074		28,016		/CY	151,880	228,314
			31-30 Site Specialties		779.2	34,790	89,074		28,016		/LS	151,880	228,314
			31.0 Site/Civil		2,791.2	129,095	89,074		159,179		/LS	377,348	555,699
	32.0		<b>Exterior Improvements</b>										
		32-12	<b>Flexible Paving</b>										
			New 4" Thick, 10' Wide Crushed Rock Trail w/ Binder		73.2	3,090	46,784		1,903		/LF	51,777	79,564
			New 6" Thick, Asphalt Bridge Access		25.3	1,085	14,981		721		/SY	16,788	25,778
			New 6" Thick, Asphalt Entry Road		730.0	31,263	431,479		20,760		/SY	483,502	742,451
			New 6" Thick, Asphalt Parking Lot		210.4	9,009	124,336		5,982		/SY	139,327	213,946
			32-12 Flexible Paving		1,038.9	44,448	617,580		29,366		/SF	691,394	1,061,741
		32-13	<b>Rigid Paving</b>										
			New 6" Thick, Concrete Emergency Boat Ramp		166.8	7,405	14,439		156		/SY	22,000	32,962
			32-13 Rigid Paving		166.8	7,405	14,439		156		/SF	22,000	32,962
		32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
			New 4" Thick, 12' Wide Concrete Trail		3,537.8	151,979	161,112		1,886		/LF	314,977	465,283
			Parking Lot Curb and Gutter		317.0	14,417	10,257		85		/LF	24,759	36,220
			32-16 Curbs, Gutters, Sidewalks, and Driveways		3,854.8	166,396	171,369		1,971		/SF	339,736	501,503
		32-17	<b>Paving Specialties</b>										
			New 6" Thick, Colored Shotcrete Landing		454.6	18,924	17,952		3,094		/SF	39,970	58,925
			New 8" Thick, Colored Shotcrete Recirculating Waterfall		7,338.7	305,585	347,982	20,000	50,203		/SF	723,771	1,072,331
			32-17 Paving Specialties		7,793.3	324,509	365,934	20,000	53,298		/SF	763,741	1,131,256
		32-33	<b>Site Furnishings</b>										
			Locking Double Pole Gate w/ Signage					2,500			/EA	2,500	3,819
			Monument Sign - 4' high CIP Concrete					10,000			/EA	10,000	15,275
			Overlook w/ Shade Structure					212,700			/SF	212,700	324,903
			32-33 Site Furnishings					225,200			/LS	225,200	343,997
		32-92	<b>Turf and Grasses</b>										
			Large Shade Tree					122,000			/EA	122,000	186,357
			Landscape - Extensive					14,049			/SF	14,049	21,460
			Landscape - Light					896,066			/SF	896,066	1,368,757
			32-92 Turf and Grasses					1,032,115			/SF	1,032,115	1,576,574
			32.0 Exterior Improvements		12,853.7	542,758	1,169,323	1,277,315	84,790		/LS	3,074,186	4,648,033
	33.0		<b>Buried Piping</b>										
		33-11	<b>Water Utility Distribuion Piping</b>										
			3" PVC Water		648.0	30,826	8,700		15,768		/LF	55,294	80,154
			33-11 Water Utility Distribuion Piping		648.0	30,826	8,700		15,768		/LF	55,294	80,154
		33-31	<b>Sanitary Utility Sewerage Piping</b>										
			2" PVC Sewer (Force Main)		358.3	17,136	16,787		8,735		/LF	42,658	63,006



Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			33-31 Sanitary Utility Sewerage Piping		358.3	17,136	16,787		8,735		/LF	42,658	63,006
			33.0 Buried Piping		1,006.3	47,962	25,487		24,502		/LF	97,952	143,160
			<b>SS01 North Bank Public Access</b>	<b>1,358,126.00 SF</b>	<b>16,651.2</b>	<b>719,815</b>	<b>1,283,884</b>	<b>2,114,315</b>	<b>268,471</b>		<b>3.23 /SF</b>	<b>4,386,486</b>	<b>6,625,424</b>
<b>SS02</b>			<b>South Bank Public Access</b>										
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			40x60 Steel Shelter w/ Stone Columns					144,000			/EA	144,000	219,963
			20x30 Restroom Structure					215,000			/EA	215,000	328,416
			13-34 Fabricated Engineered Structures					359,000			/EA	359,000	548,379
			13.0 Special Construction					359,000			/LS	359,000	548,379
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					76,400			/LS	76,400	116,702
			Site Lighting					160,000			/LS	160,000	244,403
			26-10 Site Electrical					236,400			/LS	236,400	361,105
			26.0 Electrical Work					236,400			/LS	236,400	361,105
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		998.3	46,791			65,079		/SY	111,869	162,437
			31-00 Site/Civil		998.3	46,791			65,079		/LS	111,869	162,437
		31-30	Site Specialties										
			Bank Stabilization		482.0	21,523	55,105		17,332		/CY	93,959	141,245
			31-30 Site Specialties		482.0	21,523	55,105		17,332		/LS	93,959	141,245
			31.0 Site/Civil		1,480.3	68,314	55,105		82,410		/LS	205,829	303,682
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			2" Thick Asphalt Overlay		55.5	2,354	30,420		1,315		/SF	34,088	52,332
			New 6" Thick, 16' Wide Asphalt Maintenance Road		13.6	584	8,065		388		/SY	9,038	13,878
			New 6" Thick, Asphalt Entry Road		205.8	8,814	121,643		5,853		/SY	136,309	209,312
			New 6" Thick, Asphalt Parking Lot		107.2	4,589	63,335		3,047		/SY	70,972	108,982
			32-12 Flexible Paving		382.1	16,341	223,463		10,603		/SF	250,406	384,504
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 12' Wide Concrete Trail		2,060.9	88,532	93,852		1,098		/LF	183,483	271,040
			Parking Lot Curb and Gutter		168.0	7,609	5,261		53		/LF	12,922	18,891
			32-16 Curbs, Gutters, Sidewalks, and Driveways		2,228.9	96,141	99,114		1,151		/SF	196,405	289,931
		32-33	Site Furnishings										
			Overlook w/ Shade Structure					148,550			/SF	148,550	226,913
			32-33 Site Furnishings					148,550			/LS	148,550	226,913
		32-34	Fabricated Bridges										
			Pedestrian Bridge, 16' Wide		1,018.5	49,458	193,148		8,718		/LF	251,325	381,236
			32-34 Fabricated Bridges		1,018.5	49,458	193,148		8,718		/EA	251,325	381,236
		32-92	Turf and Grasses										
			Large Shade Tree					35,200			/EA	35,200	53,769
			Landscape - Light					480,169			/SF	480,169	733,467
			32-92 Turf and Grasses					515,369			/SF	515,369	787,235
			32.0 Exterior Improvements		3,629.5	161,940	515,725	663,919	20,472		/LS	1,362,055	2,069,819
	33.0		Buried Piping										
		33-11	Water Utility Distribuiton Piping										
			3" PVC Water		848.0	40,334	11,094		20,350		/LF	71,778	104,010
			33-11 Water Utility Distribuiton Piping		848.0	40,334	11,094		20,350		/LF	71,778	104,010
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer (Force Main)		511.6	24,368	18,017		12,698		/LF	55,082	80,947
			33-31 Sanitary Utility Sewerage Piping		511.6	24,368	18,017		12,698		/LF	55,082	80,947
			33.0 Buried Piping		1,359.6	64,702	29,111		33,047		/LF	126,860	184,957
			<b>SS02 South Bank Public Access</b>	<b>673,854.00 SF</b>	<b>6,469.4</b>	<b>294,956</b>	<b>599,940</b>	<b>1,259,319</b>	<b>135,929</b>		<b>3.40 /SF</b>	<b>2,290,144</b>	<b>3,467,942</b>





Project: **Sand Springs**  
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 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>SS03</b>			<b>Franklin Creek Landing Public Access</b>										
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			20x30 Restroom Structure					215,000			/EA	215,000	328,416
			13-34 Fabricated Engineered Structures					215,000			/EA	215,000	328,416
			13.0 Special Construction					215,000			/LS	215,000	328,416
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					76,400			/LS	76,400	116,702
			Site Lighting					460,000			/LS	460,000	702,658
			26-10 Site Electrical					536,400			/LS	536,400	819,361
			26.0 Electrical Work					536,400			/LS	536,400	819,361
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		2,170.9	101,749			141,518		/SY	243,267	353,229
			31-00 Site/Civil		2,170.9	101,749			141,518		/LS	243,267	353,229
		31-30	Site Specialties										
			Bank Stabilization		545.7	24,363	62,377		19,619		/CY	106,359	159,885
			31-30 Site Specialties		545.7	24,363	62,377		19,619		/LS	106,359	159,885
			31.0 Site/Civil		2,716.5	126,113	62,377		161,137		/LS	349,626	513,114
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			2" Thick Asphalt Overlay		56.4	2,393	30,918		1,336		/SF	34,647	53,190
			New 4" Thick, 05' Wide Crushed Granite Trail w/ Binder		4.3	183	2,771		113		/LF	3,067	4,713
			New 6" Thick, 26' Wide Asphalt Entry Road		102.8	4,404	60,782		2,924		/SF	68,110	104,588
			New 6" Thick, Asphalt Parking Lot		1,094.3	46,866	646,818		31,120		/SY	724,804	1,112,987
			New 8" Thick, Asphalt Park Road		231.6	9,906	150,898		6,426		/SF	167,229	256,969
			32-12 Flexible Paving		1,489.5	63,751	892,186		41,919		/SF	997,857	1,532,446
		32-13	Rigid Paving										
			New 6" Thick, Concrete Boat Ramp		216.7	9,605	17,712		206		/SF	27,523	41,187
			32-13 Rigid Paving		216.7	9,605	17,712		206		/SF	27,523	41,187
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 12' Wide Concrete Trail		3,703.2	159,085	168,646		1,974		/LF	329,704	487,038
			New 4" Thick, 20' Wide Concrete Trail		2,020.0	86,778	91,993		1,077		/LF	179,847	265,669
			Parking Lot Curb and Gutter		954.3	43,220	29,885		299		/LF	73,403	107,308
			32-16 Curbs, Gutters, Sidewalks, and Driveways		6,677.6	289,082	290,523		3,349		/SF	582,955	860,015
		32-17	Paving Specialties										
			8" Gunite Concrete Channel Lined w/ Boulders		280.3	11,696	22,309		2,477		/SF	36,482	54,612
			Stone Cascade at Terminus of Franklin Creek		164.3	6,876	19,660		1,861		/SF	28,398	42,837
			32-17 Paving Specialties		444.6	18,572	41,970		4,338		/SF	64,879	97,449
		32-32	Retaining Walls										
			Mass Common Excavation		361.4	15,166	271		62,968		/CY	78,405	115,362
			Seawall w/ Pipe Railing and Stone (12' ht)		18,138.0	886,020	659,972		162,933		/LF	1,708,925	2,506,359
			32-32 Retaining Walls		18,499.4	901,186	660,243		225,901		/LF	1,787,330	2,621,721
		32-33	Site Furnishings										
			Lighthouse Feature w/ Decorative Concrete Plaza					285,000			/LS	285,000	435,343
			32-33 Site Furnishings					285,000			/LS	285,000	435,343
		32-34	Fabricated Bridges										
			Pedestrian Bridge, 16' Wide		535.2	25,967	103,884		4,645		/LF	134,495	204,091
			30' Long, 20' Wide Concrete Bridge		370.2	19,420	28,260		4,378		/LF	52,058	77,483
			32-34 Fabricated Bridges		905.4	45,386	132,144		9,023		/EA	186,553	281,573
		32-50	Site Improvements										
			Floating Dock		3,547.0	174,080	397,264		46,849		/LF	618,192	928,616
			Floating Dock - Gangway Ramp		52.7	2,026	48,804				/LF	50,830	78,367
			Stabilize Stream Bank with Large Stone Boulders and Rip Rap		53.9	2,301	44,900		1,650		/LF	48,851	75,166
			32-50 Site Improvements		3,653.5	178,407	490,968		48,499		/LS	717,874	1,082,148
		32-92	Turf and Grasses										



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			Large Shade Tree					170,000			/EA	170,000	259,678
			Landscape - Extensive					20,685			/SF	20,685	31,597
			Landscape - Light					729,724			/SF	729,724	1,114,666
			32-92 Turf and Grasses					920,409			/SF	920,409	1,405,941
			32.0 Exterior Improvements		31,886.7	1,505,989	2,525,746	1,205,409	333,235		/LS	5,570,379	8,357,824
	33.0		Buried Piping										
		33-00	Yard Piping										
			8'x3' x 20' long Box Culvert		16.6	698	6,300		494		/LF	7,493	11,464
			33-00 Yard Piping		16.6	698	6,300		494		/LF	7,493	11,464
		33-11	Water Utility Distribuion Piping										
			3" PVC Water		528.0	25,120	7,264		13,019		/LF	45,403	65,840
			33-11 Water Utility Distribuion Piping		528.0	25,120	7,264		13,019		/LF	45,403	65,840
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer (Force Main)		1,244.9	59,350	24,650		28,597		/LF	112,597	163,927
			33-31 Sanitary Utility Sewerage Piping		1,244.9	59,350	24,650		28,597		/LF	112,597	163,927
			33.0 Buried Piping		1,789.5	85,169	38,214		42,110		/LF	165,493	241,231
			<b>SS03 Franklin Creek Landing Public Access</b>	<b>1,465,337.00 SF</b>	<b>36,392.7</b>	<b>1,717,271</b>	<b>2,626,337</b>	<b>1,956,809</b>	<b>536,481</b>		<b>4.67 /SF</b>	<b>6,836,898</b>	<b>10,259,946</b>



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>SS03a</b>			<b>Franklin Creek Landing Lazy River</b>										
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					200,000			/LS	200,000	305,504
			26-10 Site Electrical					200,000			/LS	200,000	305,504
			26.0 Electrical Work					200,000			/LS	200,000	305,504
	32.0		Exterior Improvements										
		32-17	Paving Specialties										
			Mass Common Excavation		91.0	3,794	54		16,487		/CY	20,335	29,931
			New 8" Thick, Colored Shotcrete Lazy River		5,305.7	221,719	536,406		53,976		/SF	812,101	1,221,359
			Lazy River Equipment		1,186.0	57,075	509,809		66,152		/LS	633,036	967,396
			32-17 Paving Specialties		6,582.6	282,588	1,046,269		136,615		/SF	1,465,472	2,218,685
			32.0 Exterior Improvements		6,582.6	282,588	1,046,269		136,615		/LS	1,465,472	2,218,685
			<b>SS03a Franklin Creek Landing Lazy River</b>	<b>1.00 LS</b>	<b>6,582.6</b>	<b>282,588</b>	<b>1,046,269</b>	<b>200,000</b>	<b>136,615</b>		<b>/LS</b>	<b>1,665,471.81</b>	<b>2,524,189</b>



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**Summary Detail**

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	10,033,075		
Material	18,009,689		
Subcontract	16,001,048		
Equipment	2,697,389		
Other			
Total Before Markups	<b>46,741,201</b>	<b>46,741,201</b>	
Estimate Contingency Dam	4,734,330		15.000 %
Estimate Contingency Parks	3,035,800		20.000 %
	<b>7,770,130</b>	<b>54,511,331</b>	
Tulsa Location Fac. Site	(1,591,308)		(12.500) %
Adjusted Raw Total	<b>(1,591,308)</b>	<b>52,920,023</b>	
General Conditions	2,646,001		5.000 %
Total General Conditions	<b>2,646,001</b>	<b>55,566,024</b>	
Material Sales & Use Tax - %	360,194		2.000 %
Construction Equip Tax - %	229,548		8.510 %
Total Taxes	<b>589,742</b>	<b>56,155,766</b>	
Project Staff & Home Office OH	5,615,577		10.000 %
Profit on Previous Subtotal	2,807,788		5.000 %
Mobilization/Demobilization	2,064,550		3.000 %
Blder's Risk & Gen Liab Ins -%	688,183		1.000 %
Flood Insurance	688,183		1.000 %
Payment & Performance Bonds	798,293		1.160 %
Total Bonds and Insurances	<b>12,662,574</b>	<b>68,818,340</b>	
<b>Construction Total</b>		<b>68,818,340</b>	





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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
SS00				<b>Low Water Dam &amp; Pedestrian Bridge</b>										
		010		<b>Low Water Dam</b>										
		03.0		<b>Concrete Work</b>										
			03-10	<b>Cast-In-Place Concrete Work</b>										
				<b>Concrete Wing Walls @ Dam Ends</b>										
				Concrete pumping, subcontract, all inclusive price	388.89		-	-	4,667	-	-	12.00 /cy	4,667	6,895
				Forms in place, structural walls, > 16' high, hand set	7,000.00	1,190.0	53,759	9,450	-	-	-	9.03 /sf	63,209	86,862
				Forms in place, wall bulkheads	210.00	63.0	2,846	263	-	-	-	14.80 /sf	3,109	4,243
				Reinforcing in place, A615 Gr 60, priced per lbs.	77,777.78		-	38,889	15,556	-	-	0.70 /lb	54,444	81,220
				Concrete, ready mix, 4000 psi	388.89		-	48,611	-	-	-	125.00 /CY	48,611	72,796
				Add for concrete waste, 4000 psi	19.44		-	2,431	-	-	-	125.00 /cy	2,431	3,640
				Placing concrete, concrete pump, for structural wall >24" thick	388.89	291.7	11,200	-	-	-	-	28.80 /cy	11,200	15,148
				Patch & plug tieholes	7,000.00	105.0	4,032	140	-	-	-	0.60 /sf	4,172	5,663
				Sack rub	7,000.00	280.0	10,752	210	-	-	-	1.57 /sf	10,962	14,856
				Curing, membrane spray	7,000.00	14.0	538	280	-	-	-	0.12 /sf	818	1,146
				<b>Concrete Wing Walls @ Dam Ends</b>	<b>388.89</b>	<b>CY</b>	<b>1,943.7</b>	<b>83,126</b>	<b>100,273</b>	<b>20,222</b>		<b>523.60 /CY</b>	<b>203,622</b>	<b>292,469</b>
				<b>Pier Support Columns for Pedestrian Bridge</b>										
				Concrete pumping, subcontract, all inclusive price	118.14		-	-	1,418	-	-	12.00 /cy	1,418	2,095
				Forms in place, columns, round, > 18" dia.	5,110.35	919.9	41,556	7,666	-	-	-	9.63 /sf	49,221	67,684
				Reinforcing in place, A615 Gr 60, priced per lbs.	29,535.00		-	14,768	5,907	-	-	0.70 /lb	20,675	30,842
				Concrete, ready mix, 4000 psi	118.14		-	14,768	-	-	-	125.00 /CY	14,768	22,115
				Add for concrete waste, 4000 psi	5.90		-	738	-	-	-	125.00 /cy	738	1,104
				Placing concrete, concrete pump	118.14	88.6	3,402	-	-	-	-	28.80 /cy	3,402	4,602
				Stone rub	5,110.35	255.5	9,812	153	-	-	-	1.95 /sf	9,965	13,500
				Curing, membrane spray	5,110.35	10.2	392	204	-	-	-	0.12 /sf	597	837
				<b>Pier Support Columns for Pedestrian Bridge</b>	<b>118.14</b>	<b>CY</b>	<b>1,274.2</b>	<b>55,162</b>	<b>38,296</b>	<b>7,325</b>		<b>853.08 /CY</b>	<b>100,783</b>	<b>142,779</b>
				<b>Rock Bolts - 1.75" dia x 15' Bonded</b>										
				Rock bolts, super high-tensile, 1.75" dia, 15' L, ASTM A-108	148.00	125.8	6,179	79,920	-	-	-	581.75 /ea	86,099	128,038
				Rock bolts, drill hole, 2.5" dia, 15' long, for 1.75" bolt	148.00	507.0	21,879	-	-	17,357	-	265.11 /ea	39,236	54,544
				<b>Rock Bolts - 1.75" dia x 15' Bonded</b>	<b>148.00</b>	<b>EA</b>	<b>632.8</b>	<b>28,058</b>	<b>79,920</b>	<b>17,357</b>		<b>846.86 /EA</b>	<b>125,335</b>	<b>182,583</b>
				<b>Rock Bolts - 2.5" dia x 20' Bonded</b>										
				Rock bolts, super high-tensile, 2.25" dia, 20' L, ASTM A-108	121.00	121.0	5,943	87,120	-	-	-	769.12 /ea	93,063	138,502
				Rock bolts, drill hole, 3.5" dia, 10' long, for 2.25" bolt	121.00	774.4	33,415	-	-	26,508	-	495.24 /ea	59,924	83,304
				<b>Rock Bolts - 2.5" dia x 20' Bonded</b>	<b>121.00</b>	<b>EA</b>	<b>895.4</b>	<b>39,358</b>	<b>87,120</b>	<b>26,508</b>		<b>1,264.35 /EA</b>	<b>152,987</b>	<b>221,806</b>
				<b>Dental Concrete Allowance</b>										
				Fine grade, for slab on grade, by hand	111,296.00	779.1	29,916	1,113	-	-	-	0.28 /sf	31,029	42,128
				Concrete pumping, subcontract, all inclusive price	2,060.00		-	-	24,720	-	-	12.00 /cy	24,720	36,524
				Concrete, ready mix, 2000 psi	2,060.00		-	216,300	-	-	-	105.00 /CY	216,300	323,913
				Placing concrete, concrete pump	2,060.00	1,545.0	59,326	-	-	-	-	28.80 /cy	59,326	80,240
				<b>Dental Concrete Allowance</b>	<b>2,060.00</b>	<b>CY</b>	<b>2,324.1</b>	<b>89,242</b>	<b>217,413</b>	<b>24,720</b>		<b>160.86 /CY</b>	<b>331,375</b>	<b>482,805</b>
				<b>Concrete Gravity Dam</b>										
				Concrete pumping, subcontract, all inclusive price	46,030.74		-	-	552,369	-	-	12.00 /cy	552,369	816,135
				Concrete Cooling	46,030.74		-	-	345,231	-	-	7.50 /cy	345,231	510,084
				Base slab edge forms, 24" to 36"	48,104.00	12,026.0	543,287	60,130	-	-	-	12.54 /sf	603,417	824,851
				Base slab bulkhead form	116,812.88	35,043.9	1,583,142	146,016	-	-	-	14.80 /sf	1,729,158	2,359,889
				Waterstop, PVC, ribbed, w/center bulb, 3/8" thick, 9" wide	2,114.00	131.1	6,375	9,471	-	-	-	7.50 /lf	15,846	22,805
				Reinforcing in place, A615 Gr 60, priced per lbs.	4,603,074.00		-	2,301,537	920,615	-	-	0.70 /lb	3,222,152	4,806,817
				Concrete, ready mix, 4000 psi	46,030.74		-	5,753,843	-	-	-	125.00 /CY	5,753,843	8,616,482
				Add for concrete waste, 4000 psi	4,603.07		-	575,384	-	-	-	125.00 /cy	575,384	861,647
				Placing concrete, concrete pump, for base slab 24" to 36"	46,030.74	46,030.7	1,767,534	-	-	-	-	38.40 /cy	1,767,534	2,390,622
				Finishing floors, monolithic, broom finish	111,296.00	7,419.7	323,359	2,226	-	-	-	2.93 /sf	325,585	440,683
				Curing, membrane spray	111,296.00	222.6	8,547	4,452	-	-	-	0.12 /sf	12,999	18,227
				<b>Concrete Gravity Dam</b>	<b>46,030.74</b>	<b>CY</b>	<b>100,874.0</b>	<b>4,232,245</b>	<b>8,853,058</b>	<b>1,818,214</b>		<b>323.77 /CY</b>	<b>14,903,517</b>	<b>21,668,242</b>
				<b>03-10 Cast-In-Place Concrete Work</b>	<b>48,597.77</b>	<b>CY</b>	<b>107,944.2</b>	<b>4,527,191</b>	<b>9,376,080</b>	<b>1,870,481</b>	<b>43,865</b>	<b>325.48 /CY</b>	<b>15,817,617</b>	<b>22,990,684</b>
				<b>03.0 Concrete Work</b>	<b>48,597.77</b>	<b>CY</b>	<b>107,944.2</b>	<b>4,527,191</b>	<b>9,376,080</b>	<b>1,870,481</b>	<b>43,865</b>	<b>325.48 /CY</b>	<b>15,817,617</b>	<b>22,990,684</b>
		31.0		<b>Site/Civil</b>										
			31-10	<b>Temporary Works</b>										
				<b>Coffer Dam</b>										
				Porta-dam, mob	1.00	24.0	-	-	15,000	-	-	15,000.00 /ea	15,000	22,163
				Porta-dam, installation	2,500.00	600.0	28,746	5,000	-	25,281	-	23.61 /lf	59,027	82,711
				Porta-dam, rental	24.00	mo	-	-	240,000	-	-	10,000.00 /mo	240,000	354,604
				Porta-dam, removal	2,500.00	750.0	35,932	-	-	12,641	-	19.43 /lf	48,573	66,771
				Porta-dam, demob	1.00	24.0	-	-	15,000	-	-	15,000.00 /ea	15,000	22,163
				BkFill, strl, no compact, 300 HP dozer, 50' haul, common earth	32,976.59	261.7	12,035	-	-	32,277	-	1.34 /cy	44,312	62,679
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	32,976.59	253.7	11,326	-	-	30,852	-	1.28 /bcy	42,178	59,672
				Hauling,excavated borrow material,loose cubic yards, 1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	23,976.59	263.5	10,006	-	-	80,532	-	3.78 /cy	90,538	129,308



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Coffer Dam</b>										
				Compaction, structural, rock fill, wheel roller	32,976.59 ecy	98.9	4,199	-	-	3,372	-	0.23 /ecy	7,570	10,526
				<b>Coffer Dam</b>	<b>2,500.00 lf</b>	<b>2,275.8</b>	<b>102,243</b>	<b>5,000</b>	<b>270,000</b>	<b>184,954</b>	-	<b>224.88 /lf</b>	<b>562,198</b>	<b>810,597</b>
				<b>31-10 Temporary Works</b>	<b>1.00 LS</b>	<b>2,275.8</b>	<b>102,243</b>	<b>5,000</b>	<b>270,000</b>	<b>184,954</b>	-	<b>562,197.53 /LS</b>	<b>562,198</b>	<b>810,597</b>
				<b>31-15 Site Preparation</b>										
				<b>Foundation Cleanup</b>										
				Final Clean-up	12,366.22 sy	111.3	4,739	-	-	9,912	-	1.19 /sy	14,651	20,660
				<b>Foundation Cleanup</b>	<b>12,366.22 SY</b>	<b>111.3</b>	<b>4,739</b>	-	-	<b>9,912</b>	-	<b>1.19 /SY</b>	<b>14,651</b>	<b>20,660</b>
				<b>31-15 Site Preparation</b>	<b>1.00 LS</b>	<b>111.3</b>	<b>4,739</b>	-	-	<b>9,912</b>	-	<b>14,651.46 /LS</b>	<b>14,651</b>	<b>20,660</b>
				<b>31-20 Earthworks, Site</b>										
				<b>Dewatering</b>										
				Dewatering Minor, Large Generator and 3 Pumps, Rental, Monthly	24.00 mo	-	-	-	-	331,641	-	13,818.39 /mo	331,641	476,773
				Dewatering Minor, Generator and Pumps, Operation - Labor to maintain / check pumps/ fuel and lube	24.00 mo	12,480.0	491,225	-	-	171,076	-	27,595.88 /mo	662,301	910,333
				Bypass Pumping, Pumps and Piping, Mob	3.00 ea	24.0	1,198	-	4,500	927	-	2,208.44 /ea	6,625	9,602
				Bypass Pumping, Set-up Pumps	12.00 ea	192.0	9,586	6,000	-	3,708	-	1,607.86 /ea	19,294	27,282
				Bypass Pumping, Install Suction Piping	3.00 ea	24.0	1,198	450	-	464	-	703.93 /ea	2,112	2,961
				Bypass Pumping, Install Discharge Piping	3.00 ea	72.0	3,595	1,500	-	1,391	-	2,161.80 /ea	6,485	9,107
				<b>Dewatering</b>	<b>720.00 DAY</b>	<b>12,792.0</b>	<b>506,803</b>	<b>7,950</b>	<b>4,500</b>	<b>509,206</b>	-	<b>1,428.42 /DAY</b>	<b>1,028,459</b>	<b>1,436,058</b>
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	10.72 HR	10.7	481	283	-	755	-	141.58 /HR	1,518	2,159
				Dust Control Operations	57.44 HR	86.2	4,026	-	-	4,696	-	151.83 /HR	8,722	12,196
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	5.36 HR	5.4	224	59	-	363	-	120.47 /HR	646	913
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	32,976.59 bcy	253.7	11,326	-	-	30,852	-	1.28 /bcy	42,178	59,672
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	23,976.59 lcy	263.5	10,006	-	-	80,532	-	3.78 /lcy	90,538	129,308
				<b>Mass Common Excavation</b>	<b>32,976.59 CY</b>	<b>619.4</b>	<b>26,062</b>	<b>342</b>	-	<b>117,198</b>	-	<b>4.36 /CY</b>	<b>143,602</b>	<b>204,247</b>
				<b>Mass Rock Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	28.76 HR	28.8	1,289	758	-	2,025	-	141.58 /HR	4,071	5,789
				Dust Control Operations	169.34 HR	254.0	11,868	-	-	13,843	-	151.83 /HR	25,711	35,953
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	12.78 HR	12.8	534	141	-	865	-	120.47 /HR	1,540	2,176
				BkFill, strl, no compact, 300 HP dozer, 50' haul, common earth	16,806.30 cy	133.4	6,134	-	-	16,450	-	1.34 /cy	22,583	31,944
				Drilling & blasting only, rock, open face, over 1500 CY	16,806.30 cy	1,008.4	42,833	48,570	-	54,321	-	8.67 /cy	145,725	208,761
				Excavate and load blasted rock to stockpile	16,806.30 cy	336.1	15,008	-	-	26,698	-	2.48 /cy	41,707	58,681
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	16,806.30 lcy	184.7	7,013	-	-	56,449	-	3.78 /lcy	63,462	90,638
				Compaction, structural, rock fill, wheel roller	16,806.30 ecy	50.4	2,140	-	-	1,718	-	0.23 /ecy	3,858	5,365
				<b>Mass Rock Excavation</b>	<b>16,806.30 CY</b>	<b>2,008.5</b>	<b>86,819</b>	<b>49,469</b>	-	<b>172,370</b>	-	<b>18.37 /CY</b>	<b>308,657</b>	<b>439,305</b>
				<b>31-20 Earthworks, Site</b>	<b>1.00 LS</b>	<b>15,419.9</b>	<b>619,684</b>	<b>57,760</b>	<b>4,500</b>	<b>798,774</b>	-	<b>1,480,718.02 /LS</b>	<b>1,480,718</b>	<b>2,079,611</b>
				<b>31-30 Site Specialties</b>										
				<b>Downstream Grouted Rock Fill</b>										
				Rip-rap and rock lining, random, broken stone, 3/8 to 1/4 C.Y. pieces, machine placed for slope protection, grouted	46,168.88 sy	32,318.2	1,340,269	2,585,457	-	488,421	-	95.61 /sy	4,414,147	6,386,668
				<b>Downstream Grouted Rock Fill</b>	<b>23,084.44 CY</b>	<b>32,318.2</b>	<b>1,340,269</b>	<b>2,585,457</b>	-	<b>488,421</b>	-	<b>191.22 /CY</b>	<b>4,414,147</b>	<b>6,386,668</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>32,318.2</b>	<b>1,340,269</b>	<b>2,585,457</b>	<b>4,500</b>	<b>488,421</b>	-	<b>4,414,146.60 /LS</b>	<b>4,414,147</b>	<b>6,386,668</b>
				31.0 Site/Civil	1.00 LS	50,125.2	2,066,935	2,648,217	274,500	1,482,062	-	6,471,713.61 /LS	6,471,714	9,297,535
				<b>35.0 Water and Marine Construction Equipment</b>										
				<b>35-10 Water Control Gates</b>										
				<b>Obermeyer Gates</b>										
				Air Supply Equip/Mechanical/PLC Allowance	1.00 ls	-	-	-	328,760	-	-	328,760.00 /ls	328,760	485,749
				Obermeyer Crest Gates (14 Each)	2,112.00 sf	-	-	-	1,113,024	-	-	527.00 /sf	1,113,024	1,644,513
				Obermeyer Full Gates (12 Each)	6,080.00 sf	-	-	-	4,687,680	-	-	771.00 /sf	4,687,680	6,926,131
				<b>Obermeyer Gates</b>	<b>26.00 EA</b>	-	-	-	<b>6,129,464</b>	-	-	<b>235,748.61 /EA</b>	<b>6,129,464</b>	<b>9,056,392</b>
				<b>35-10 Water Control Gates</b>	<b>26.00 EA</b>	-	-	-	<b>6,129,464</b>	-	-	<b>235,748.61 /EA</b>	<b>6,129,464</b>	<b>9,056,392</b>
				<b>35.0 Water and Marine Construction Equipment</b>	<b>1.00 LS</b>	-	-	-	<b>6,129,464</b>	-	-	<b>6,129,464.00 /LS</b>	<b>6,129,464</b>	<b>9,056,392</b>
				<b>010 Low Water Dam</b>	<b>1,908.00 LF</b>	<b>158,069.4</b>	<b>6,594,126</b>	<b>12,024,297</b>	<b>8,274,445</b>	<b>1,525,927</b>	-	<b>14,894.55 /LF</b>	<b>28,418,795</b>	<b>41,344,611</b>
				<b>Pedestrian Bridges</b>										
				<b>32-34 Exterior Improvements</b>										
				<b>Fabricated Bridges</b>										
				<b>Pedestrian Bridge @ Low Dam Crossing</b>										
				Curbs, curb and gutter, steel forms, 24" wide, straight	3,816.00 lf	263.3	12,301	41,785	-	-	-	14.17 /lf	54,086	79,211
				Cable railing, 1-3/4" diam posts x 42" high, cable @ 4" O.C., stainless steel, field fabricated, incl posts, base plate, cables & cable fittings	3,816.00 lf	2,442.2	144,415	129,744	-	-	-	71.84 /lf	274,159	389,617
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,240.00 sy	64.2	2,723	35,192	-	1,521	-	9.30 /sy	39,436	58,571



Project:  
Project No.:  
Design Stage:

Sand Springs  
386594  
Schematic Design

Estimator:  
Rev No. / Date:  
Estimate Class:

Jones T  
02 - 04/24/2014  
Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Pedestrian Bridge @ Low Dam Crossing</b>										
				Fabricated highway bridges, concrete in place, no reinforcing, beams, includes shoring	150.00 cy	1,440.0	67,294	64,500	-	16,582	-	989.18 /cy	148,376	211,445
				Prestressed Concrete Beams (Type U40)	3,816.00 lf		-	-	1,411,920	-	-	370.00 /lf	1,411,920	2,086,137
				Prestressed Concrete Deck Panels	38,160.00 sf		-	-	534,240	-	-	14.00 /sf	534,240	789,349
				<b>Pedestrian Bridge @ Low Dam Crossing</b>	<b>38,160.00 SF</b>	<b>4,209.7</b>	<b>226,733</b>	<b>271,221</b>	<b>1,946,160</b>	<b>18,103</b>	<b>-</b>	<b>64.52 /SF</b>	<b>2,462,218</b>	<b>3,614,331</b>
				<b>32-34 Fabricated Bridges</b>	<b>1.00 EA</b>	<b>4,209.7</b>	<b>226,733</b>	<b>271,221</b>	<b>1,946,160</b>	<b>18,103</b>	<b>-</b>	<b>2,462,217.53 /EA</b>	<b>2,462,218</b>	<b>3,614,331</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>4,209.7</b>	<b>226,733</b>	<b>271,221</b>	<b>1,946,160</b>	<b>18,103</b>	<b>-</b>	<b>2,462,217.53 /LS</b>	<b>2,462,218</b>	<b>3,614,331</b>
				<b>020 Pedestrian Bridges</b>	<b>1.00 EA</b>	<b>4,209.7</b>	<b>226,733</b>	<b>271,221</b>	<b>1,946,160</b>	<b>18,103</b>	<b>-</b>	<b>2,462,217.53 /EA</b>	<b>2,462,218</b>	<b>3,614,331</b>
				<b>060 Structures</b>										
				<b>Special Construction</b>										
				<b>13.0</b>										
				<b>13-34 Fabricated Engineered Structures</b>										
				<b>20x40 Dam Control Building</b>										
				20x40 Dam Control Building (Allowance)	1.00 EA				80,000	-	-	80,000.00 /EA	80,000	118,201
				<b>20x40 Dam Control Building</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>118,201</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>118,201</b>
				<b>13.0 Special Construction</b>	<b>1.00 LS</b>				<b>80,000</b>			<b>80,000.00 /LS</b>	<b>80,000</b>	<b>118,201</b>
				<b>060 Structures</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>118,201</b>
				<b>080 Retaining Walls</b>										
				<b>31.0 Site/Civil</b>										
				<b>31-20 Earthworks, Site</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	2.00 HR	2.0	90	53	-	134	-	137.96 /HR	276	392
				Dust Control Operations	10.00 HR	15.0	701		-	817	-	151.83 /HR	1,518	2,123
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	1.00 HR	1.0	42	11	-	65	-	117.71 /HR	118	166
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	4,000.00 bcy	30.8	1,374	-	-	3,539	-	1.23 /bcy	4,913	6,946
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	4,000.00 lcy	44.0	1,669	-	-	12,033	-	3.43 /lcy	13,702	19,556
				<b>Mass Common Excavation</b>	<b>4,000.00 CY</b>	<b>92.7</b>	<b>3,875</b>	<b>64</b>		<b>16,588</b>		<b>5.13 /CY</b>	<b>20,527</b>	<b>29,185</b>
				<b>31-20 Earthworks, Site</b>	<b>1.00 LS</b>	<b>92.7</b>	<b>3,875</b>	<b>64</b>		<b>16,588</b>		<b>20,527.40 /LS</b>	<b>20,527</b>	<b>29,185</b>
				<b>31.0 Site/Civil</b>	<b>1.00 LS</b>	<b>92.7</b>	<b>3,875</b>	<b>64</b>		<b>16,588</b>		<b>20,527.40 /LS</b>	<b>20,527</b>	<b>29,185</b>
				<b>32.0 Exterior Improvements</b>										
				<b>32-32 Retaining Walls</b>										
				<b>Retaining Wall - Sea Wall 10' Ht.</b>										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	2,000.00 sf	540.0	25,487	30,200	-	17,364	-	36.53 /sf	73,051	104,660
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	30.00 ea	720.0	31,914	16,650	-	2,017	-	1,686.05 /ea	50,581	70,998
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	74.07 cy	370.3	17,806	11,259	-	1,049	-	406.56 /cy	30,114	42,451
				<b>Retaining Wall - Sea Wall 10' Ht.</b>	<b>200.00 LF</b>	<b>1,630.3</b>	<b>75,208</b>	<b>58,109</b>		<b>20,430</b>		<b>768.73 /LF</b>	<b>153,746</b>	<b>218,109</b>
				<b>Retaining Wall - Sea Wall 20' Ht.</b>										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	4,000.00 sf	1,080.0	50,975	60,400	-	34,727	-	36.53 /sf	146,102	209,319
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	30.00 ea	720.0	31,914	16,650	-	2,017	-	1,686.05 /ea	50,581	70,998
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	148.15 cy	740.6	35,615	22,519	-	2,098	-	406.56 /cy	60,231	84,908
				<b>Retaining Wall - Sea Wall 20' Ht.</b>	<b>200.00 LF</b>	<b>2,540.6</b>	<b>118,503</b>	<b>99,569</b>		<b>38,843</b>		<b>1,284.58 /LF</b>	<b>256,915</b>	<b>365,225</b>
				<b>32-32 Retaining Walls</b>	<b>400.00 LF</b>	<b>4,170.8</b>	<b>193,711</b>	<b>157,677</b>		<b>59,273</b>		<b>1,026.65 /LF</b>	<b>410,662</b>	<b>583,334</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>4,170.8</b>	<b>193,711</b>	<b>157,677</b>		<b>59,273</b>		<b>410,661.53 /LS</b>	<b>410,662</b>	<b>583,334</b>
				<b>080 Retaining Walls</b>	<b>1,000.00 LF</b>	<b>4,263.5</b>	<b>197,586</b>	<b>157,741</b>		<b>75,862</b>		<b>431.19 /LF</b>	<b>431,189</b>	<b>612,519</b>
				<b>110 Utilities</b>										
				<b>26.0 Electrical Work</b>										
				<b>26-10 Site Electrical</b>										
				<b>Site Lighting</b>										
				Site Lighting - Pedestrian Bridge	1.00 ls				170,000	-	-	170,000.00 /ls	170,000	251,178
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>251,178</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>251,178</b>
				<b>26.0 Electrical Work</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>251,178</b>
				<b>110 Utilities</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>251,178</b>
				<b>SS00 Low Water Dam &amp; Pedestrian Bridge</b>	<b>1,908.00 LF</b>	<b>166,542.7</b>	<b>7,018,445</b>	<b>12,453,259</b>	<b>10,470,605</b>	<b>1,619,892</b>	<b>-</b>	<b>16,542.03 /LF</b>	<b>31,562,201</b>	<b>45,940,840</b>





Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
SS01				<b>North Bank Public Access</b>										
		005		<b>Overall Site Grading</b>										
		31.0		Site/Civil										
			31-00	Site/Civil										
				<b>Mass Grading</b>										
				Rough Site Grading, Small Crew	150,902.89 sy	2,012.0	94,305	-	-	131,163	-	1.49 /sy	225,468	327,385
				<b>Mass Grading</b>	150,902.89 SY	2,012.0	94,305			131,163		1.49 /SY	225,468	327,385
				<b>31-00 Site/Civil</b>	1.00 LS	2,012.0	94,305			131,163		225,468.37 /LS	225,468	327,385
				31.0 Site/Civil	1.00 LS	2,012.0	94,305			131,163		225,468.37 /LS	225,468	327,385
				<b>005 Overall Site Grading</b>	1,358,126.00 SF	2,012.0	94,305			131,163		0.17 /SF	225,468	327,385
		030		<b>Paths/Trails</b>										
		32.0		Exterior Improvements										
			32-12	<b>Flexible Paving</b>										
				<b>New 4" Thick, 10' Wide Crushed Rock Trail w/ Binder</b>										
				Fine grading, grade subgrade for base course, roadways	3,057.78 sy	14.0	616	-	-	493	-	0.36 /sy	1,109	1,598
				Asphalt Paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 4" thick	3,057.78 sy	59.2	2,474	46,784	-	1,410	-	16.57 /sy	50,668	77,967
				<b>New 4" Thick, 10' Wide Crushed Rock Trail w/ Binder</b>	2,752.00 LF	73.2	3,090	46,784		1,903		18.81 /LF	51,777	79,565
				<b>32-12 Flexible Paving</b>	27,520.00 SF	73.2	3,090	46,784		1,903		1.88 /SF	51,777	79,565
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>New 4" Thick, 12' Wide Concrete Trail</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	7,585.33 sy	151.7	6,310	-	-	826	-	0.94 /sy	7,136	10,078
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	68,268.00 sf	2,730.7	119,873	126,296	-	-	-	3.61 /sf	246,169	363,569
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	68,268.00 sf	655.4	25,796	34,817	-	1,060	-	0.90 /sf	61,672	91,635
				<b>New 4" Thick, 12' Wide Concrete Trail</b>	5,689.00 LF	3,537.8	151,979	161,112		1,886		55.37 /LF	314,977	465,283
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	68,268.00 SF	3,537.8	151,979	161,112		1,886		4.61 /SF	314,977	465,283
				32.0 Exterior Improvements	1.00 LS	3,611.0	155,069	207,897		3,789		366,754.60 /LS	366,755	544,847
				030 Paths/Trails	8,441.00 LF	3,611.0	155,069	207,897		3,789		43.45 /LF	366,755	544,847
		040		<b>Roads</b>										
		32.0		Exterior Improvements										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Bridge Access</b>										
				Fine grading, grade subgrade for base course, roadways	547.56 sy	2.5	110	-	-	88	-	0.36 /sy	199	286
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	547.56 sy	2.9	137	2,333	-	159	-	4.80 /sy	2,628	4,038
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	547.56 sy	11.6	486	8,104	-	277	-	16.20 /sy	8,868	13,636
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	547.56 sy	8.3	352	4,545	-	196	-	9.30 /sy	5,093	7,819
				<b>New 6" Thick, Asphalt Bridge Access</b>	547.56 SY	25.3	1,085	14,981		721		30.66 /SY	16,788	25,778
				<b>New 6" Thick, Asphalt Entry Road</b>										
				Fine grading, grade subgrade for base course, roadways	15,770.44 sy	72.1	3,179	-	-	2,543	-	0.36 /sy	5,722	8,242
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	15,770.44 sy	84.1	3,944	67,182	-	4,570	-	4.80 /sy	75,696	116,295
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	15,770.44 sy	335.3	14,011	233,403	-	7,989	-	16.20 /sy	255,403	392,730
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	15,770.44 sy	238.6	10,129	130,895	-	5,658	-	9.30 /sy	146,681	225,184
				<b>New 6" Thick, Asphalt Entry Road</b>	15,770.44 SY	730.0	31,263	431,479		20,760		30.66 /SY	483,502	742,451
				<b>32-12 Flexible Paving</b>	146,862.00 SF	755.4	32,349	446,460		21,481		3.41 /SF	500,290	768,230
			32-13	<b>Rigid Paving</b>										
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	316.00 lf	38.6	1,772	7,110	-	22	-	28.18 /lf	8,904	13,521
				Fine grading, grade subgrade for base course, roadways	295.78 sy	1.4	60	-	-	48	-	0.36 /sy	107	155
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	2,662.00 sf	125.3	5,499	6,069	-	-	-	4.35 /sf	11,569	17,105
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	295.78 sy	1.6	74	1,260	-	86	-	4.80 /sy	1,420	2,181
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>	295.78 SY	166.8	7,405	14,439		156		74.38 /SY	22,000	32,962
				<b>32-13 Rigid Paving</b>	2,662.00 SF	166.8	7,405	14,439		156		8.26 /SF	22,000	32,962
				32.0 Exterior Improvements	1.00 LS	922.1	39,754	460,900		21,636		522,289.62 /LS	522,290	801,192
				040 Roads	149,524.00 SF	922.1	39,754	460,900		21,636		3.49 /SF	522,290	801,192
		050		<b>Parking Lots</b>										



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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
		32.0		<b>Exterior Improvements</b>										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	4,544.44 sy	20.8	916	-	-	733	-	0.36 /sy	1,649	2,375
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,544.44 sy	24.2	1,137	19,359	-	1,317	-	4.80 /sy	21,813	33,512
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	4,544.44 sy	96.6	4,037	67,258	-	2,302	-	16.20 /sy	73,597	113,170
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,544.44 sy	68.8	2,919	37,719	-	1,630	-	9.30 /sy	42,268	64,890
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>4,544.44 SY</b>	<b>210.4</b>	<b>9,009</b>	<b>124,336</b>		<b>5,982</b>		<b>30.66 /SY</b>	<b>139,327</b>	<b>213,946</b>
				<b>32-12 Flexible Paving</b>	<b>40,900.00 SF</b>	<b>210.4</b>	<b>9,009</b>	<b>124,336</b>		<b>5,982</b>		<b>3.41 /SF</b>	<b>139,327</b>	<b>213,946</b>
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	244.56 sy	10.6	416	-	-	17	-	1.77 /sy	433	609
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,402.00 sf	42.3	1,663	2,245	-	68	-	0.90 /sf	3,977	5,909
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	2,201.00 lf	264.1	12,338	8,012	-	-	-	9.25 /lf	20,349	29,702
				<b>Parking Lot Curb and Gutter</b>	<b>2,201.00 LF</b>	<b>317.0</b>	<b>14,417</b>	<b>10,257</b>		<b>85</b>		<b>11.25 /LF</b>	<b>24,759</b>	<b>36,220</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>4,402.00 SF</b>	<b>317.0</b>	<b>14,417</b>	<b>10,257</b>		<b>85</b>		<b>5.63 /SF</b>	<b>24,759</b>	<b>36,220</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>527.3</b>	<b>23,426</b>	<b>134,593</b>		<b>6,068</b>		<b>164,086.11 /LS</b>	<b>164,086</b>	<b>250,166</b>
				<b>050 Parking Lots</b>	<b>45,302.00 SF</b>	<b>527.3</b>	<b>23,426</b>	<b>134,593</b>		<b>6,068</b>		<b>3.62 /SF</b>	<b>164,086</b>	<b>250,166</b>
		060		<b>Structures</b>										
			13-34	<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>12x24 Steel Structure w/ Stone Columns</b>										
				12x24 Steel Structure w/ Stone Columns (Allowance)	6.00 EA				102,000	-	-	17,000.00 /EA	102,000	155,807
				<b>12x24 Steel Structure w/ Stone Columns</b>	<b>6.00 EA</b>				<b>102,000</b>			<b>17,000.00 /EA</b>	<b>102,000</b>	<b>155,807</b>
				<b>20x30 Steel Structure w/ Stone Columns</b>										
				20x30 Steel Structure w/ Stone Columns (Allowance)	5.00 EA				180,000	-	-	36,000.00 /EA	180,000	274,953
				<b>20x30 Steel Structure w/ Stone Columns</b>	<b>5.00 EA</b>				<b>180,000</b>			<b>36,000.00 /EA</b>	<b>180,000</b>	<b>274,953</b>
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	328,416
				<b>20x30 Restroom Structure</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,416</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>12.00 EA</b>				<b>497,000</b>			<b>41,416.67 /EA</b>	<b>497,000</b>	<b>759,176</b>
				<b>13.0 Special Construction</b>	<b>1.00 LS</b>				<b>497,000</b>			<b>497,000.00 /LS</b>	<b>497,000</b>	<b>759,176</b>
				<b>060 Structures</b>	<b>12.00 EA</b>				<b>497,000</b>			<b>41,416.67 /EA</b>	<b>497,000</b>	<b>759,176</b>
		070		<b>Special Features</b>										
			32-17	<b>Exterior Improvements</b>										
				<b>Paving Specialties</b>										
				<b>New 6" Thick, Colored Shotcrete Landing</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 2" thick	3,520.00 sf	187.7	7,849	5,386	-	1,362	-	4.15 /sf	14,597	21,369
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	3,520.00 sf	225.3	9,419	10,771	-	1,635	-	6.20 /sf	21,825	32,312
				Fine grading, fine grade granular base for sidewalks and bikeways	391.11 sy	7.8	325	-	-	43	-	0.94 /sy	368	520
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	3,520.00 sf	33.8	1,330	1,795	-	55	-	0.90 /sf	3,180	4,725
				<b>New 6" Thick, Colored Shotcrete Landing</b>	<b>3,520.00 SF</b>	<b>454.6</b>	<b>18,924</b>	<b>17,952</b>		<b>3,094</b>		<b>11.36 /SF</b>	<b>39,970</b>	<b>58,925</b>
				<b>New 8" Thick, Colored Shotcrete Recirculating Waterfall</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	104,972.00 sf	6,718.2	280,902	321,214	-	48,753	-	6.20 /sf	650,869	963,581
				Waterfall Feature (Allowance)	1.00 LS				20,000	-	-	20,000.00 /LS	20,000	30,550
				Fine grading, fine grade granular base for sidewalks and bikeways	5,831.78 sy	116.6	4,851	-	-	635	-	0.94 /sy	5,486	7,749
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	52,486.00 sf	503.9	19,833	26,768	-	815	-	0.90 /sf	47,415	70,451
				<b>New 8" Thick, Colored Shotcrete Recirculating Waterfall</b>	<b>52,486.00 SF</b>	<b>7,338.7</b>	<b>305,585</b>	<b>347,982</b>	<b>20,000</b>	<b>50,203</b>		<b>13.79 /SF</b>	<b>723,771</b>	<b>1,072,331</b>
				<b>32-17 Paving Specialties</b>	<b>56,006.00 SF</b>	<b>7,793.3</b>	<b>324,509</b>	<b>365,934</b>	<b>20,000</b>	<b>53,298</b>		<b>13.64 /SF</b>	<b>763,741</b>	<b>1,131,256</b>
			32-33	<b>Site Furnishings</b>										
				<b>Locking Double Pole Gate w/ Signage</b>										
				Locking Double Pole Gate w/ Signage	1.00 EA				2,500	-	-	2,500.00 /EA	2,500	3,819
				<b>Locking Double Pole Gate w/ Signage</b>	<b>1.00 EA</b>				<b>2,500</b>			<b>2,500.00 /EA</b>	<b>2,500</b>	<b>3,819</b>
				<b>Monument Sign - 4' high CIP Concrete</b>										
				Monument Sign - 4' high CIP Concrete	1.00 EA				10,000	-	-	10,000.00 /EA	10,000	15,275
				<b>Monument Sign - 4' high CIP Concrete</b>	<b>1.00 EA</b>				<b>10,000</b>			<b>10,000.00 /EA</b>	<b>10,000</b>	<b>15,275</b>
				<b>Overlook w/ Shade Structure</b>										
				Overlook w/ Shade Structure (Allowance)	4,254.00 SF				212,700	-	-	50.00 /SF	212,700	324,903
				<b>Overlook w/ Shade Structure</b>	<b>4,254.00 SF</b>				<b>212,700</b>			<b>50.00 /SF</b>	<b>212,700</b>	<b>324,903</b>



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				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>				<b>225,200</b>			<b>225,200.00 /LS</b>	<b>225,200</b>	<b>343,997</b>
				32.0 Exterior Improvements	1.00 LS	7,793.3	324,509	365,934	245,200	53,298		988,940.88 /LS	988,941	1,475,253
				<b>070 Special Features</b>	<b>1.00 LS</b>	<b>7,793.3</b>	<b>324,509</b>	<b>365,934</b>	<b>245,200</b>	<b>53,298</b>		<b>988,940.88 /LS</b>	<b>988,941</b>	<b>1,475,253</b>
				Landscaping										
				Exterior Improvements										
				<b>Turf and Grasses</b>										
				Large Shade Tree										
				Large Shade Tree	305.00 EA				122,000	-	-	400.00 /EA	122,000	186,357
				Large Shade Tree	305.00 EA				122,000			400.00 /EA	122,000	186,357
				Landscape - Extensive										
				Landscape - Extensive	4,683.00 SF				14,049	-	-	3.00 /SF	14,049	21,460
				Landscape - Extensive	4,683.00 SF				14,049			3.00 /SF	14,049	21,460
				Landscape - Light										
				Landscape - Light	896,066.00 SF				896,066	-	-	1.00 /SF	896,066	1,368,757
				Landscape - Light	896,066.00 SF				896,066			1.00 /SF	896,066	1,368,757
				<b>32-92 Turf and Grasses</b>	<b>900,749.00 SF</b>				<b>1,032,115</b>			<b>1.15 /SF</b>	<b>1,032,115</b>	<b>1,576,574</b>
				32.0 Exterior Improvements	1.00 LS				1,032,115			1,032,115.00 /LS	1,032,115	1,576,574
				090 Landscaping	900,749.00 SF				1,032,115			1.15 /SF	1,032,115	1,576,574
				Bank Stabilization										
				Site/Civil										
				<b>Site Specialties</b>										
				Bank Stabilization										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	3,797.00 lcy	779.2	34,790	89,074	-	28,016	-	40.00 /lcy	151,880	228,314
				Bank Stabilization	4,747.50 CY	779.2	34,790	89,074		28,016		31.99 /CY	151,880	228,314
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>779.2</b>	<b>34,790</b>	<b>89,074</b>	<b>28,016</b>	<b>28,016</b>		<b>151,879.83 /LS</b>	<b>151,880</b>	<b>228,314</b>
				31.0 Site/Civil	1.00 LS	779.2	34,790	89,074	28,016			151,879.83 /LS	151,880	228,314
				100 Bank Stabilization	1,000.00 LF	779.2	34,790	89,074		28,016		151.88 /LF	151,880	228,314
				Utilities										
				Electrical Work										
				<b>Site Electrical</b>										
				Electrical Service										
				PSO Quote for Electrical to Site	1.00 LS				50,000	-	-	50,000.00 /LS	50,000	76,376
				Electrical Service	1.00 LS				50,000			50,000.00 /LS	50,000	76,376
				Site Lighting										
				Site Lighting - North Bank Public Access	1.00 ls				290,000			290,000.00 /ls	290,000	442,980
				Site Lighting	1.00 LS				290,000			290,000.00 /LS	290,000	442,980
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>340,000</b>			<b>340,000.00 /LS</b>	<b>340,000</b>	<b>519,356</b>
				26.0 Electrical Work	1.00 LS				340,000			340,000.00 /LS	340,000	519,356
				Buried Piping										
				<b>Water Utility Distribution Piping</b>										
				3" PVC Water										
				Bedding Stone, Material Only	245.91 tn			3,443	-	-	-	14.00 /tn	3,443	5,328
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,500.00 LF	600.0	28,526	3,135	-	13,745	-	30.27 /LF	45,406	65,307
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea			14	-	-	-	13.78 /ea	14	21
				3" PVC, Sch. 80, socket joint, coupling	75.00 ea			603	-	-	-	8.04 /ea	603	933
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				3" PVC Water	1,500.00 LF	648.0	30,826	8,700		15,768		36.86 /LF	55,294	80,154
				<b>33-11 Water Utility Distribution Piping</b>	<b>1,500.00 LF</b>	<b>648.0</b>	<b>30,826</b>	<b>8,700</b>		<b>15,768</b>		<b>36.86 /LF</b>	<b>55,294</b>	<b>80,154</b>
				<b>Sanitary Utility Sewerage Piping</b>										
				2" PVC Sewer (Force Main)										
				Bedding Stone, Material Only	107.55 tn			1,506	-	-	-	14.00 /tn	1,506	2,330
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	650.00 LF	260.0	12,361	676	-	5,956	-	29.22 /LF	18,994	27,244
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea			4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	33.00 ea			94	-	-	-	2.84 /ea	94	145
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				Pump sewage ejector, duplex system, coated steel tank, 268 gpm, 1 hp, 15 head, 135 gallon, 2" dschr, includes operating and level controls, tank, cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,783
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,159
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	100.00 lf	5.3	230	7	-	302	-	5.39 /lf	539	783
				2" PVC Sewer (Force Main)	650.00 LF	358.3	17,136	16,787		8,735		65.63 /LF	42,658	63,006



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				33-31 Sanitary Utility Sewerage Piping	650.00 LF	358.3	17,136	16,787		8,735		65.63 /LF	42,658	63,006
				33.0 Buried Piping	2,150.00 LF	1,006.3	47,962	25,487		24,502		45.56 /LF	97,952	143,160
				110 Utilities	1.00 LS	1,006.3	47,962	25,487	340,000	24,502		437,951.60 /LS	437,952	662,516
SS02				SS01 North Bank Public Access	1,358,126.00 SF	16,651.2	719,815	1,283,884	2,114,315	268,471		3.23 /SF	4,386,486	6,625,424
				South Bank Public Access										
	005			Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	74,872.67 sy	998.3	46,791	-	-	65,079	-	1.49 /sy	111,869	162,437
				Mass Grading	74,872.67 SY	998.3	46,791	-	-	65,079	-	1.49 /SY	111,869	162,437
				31-00 Site/Civil	1.00 LS	998.3	46,791	-	-	65,079	-	111,869.42 /LS	111,869	162,437
				31.0 Site/Civil	1.00 LS	998.3	46,791	-	-	65,079	-	111,869.42 /LS	111,869	162,437
				005 Overall Site Grading	673,854.00 SF	998.3	46,791	-	-	65,079	-	0.17 /SF	111,869	162,437
				Pedestrian Bridges										
		32.0		Exterior Improvements										
			32-34	Fabricated Bridges										
				Pedestrian Bridge, 16' Wide										
				Fabricated highway bridges, concrete in place, no reinforcing, abutment	120.00 cy	427.8	21,250	26,520	-	2,217	-	416.56 /cy	49,988	74,143
				Fabricated pedestrian bridges, wood, laminated type, complete in place, 130' span, includes erection, excludes foundations	4,448.00 sf	590.7	28,208	166,628	-	6,501	-	45.27 /sf	201,337	307,093
				Pedestrian Bridge, 16' Wide	278.00 LF	1,018.5	49,458	193,148		8,718		904.05 /LF	251,325	381,236
				32-34 Fabricated Bridges	2.00 EA	1,018.5	49,458	193,148		8,718		125,662.27 /EA	251,325	381,236
				32.0 Exterior Improvements	1.00 LS	1,018.5	49,458	193,148		8,718		251,324.53 /LS	251,325	381,236
				020 Pedestrian Bridges	2.00 EA	1,018.5	49,458	193,148		8,718		125,662.27 /EA	251,325	381,236
				Paths/Trails										
		32.0		Exterior Improvements										
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 12' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	4,418.66 sy	88.4	3,676	-	-	481	-	0.94 /sy	4,157	5,871
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	39,768.00 sf	1,590.7	69,829	73,571	-	-	-	3.61 /sf	143,400	211,789
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	39,768.00 sf	381.8	15,027	20,282	-	617	-	0.90 /sf	35,926	53,380
				New 4" Thick, 12' Wide Concrete Trail	3,314.00 LF	2,060.9	88,532	93,852		1,098		55.37 /LF	183,483	271,040
				32-16 Curbs, Gutters, Sidewalks, and Driveways	39,768.00 SF	2,060.9	88,532	93,852		1,098		4.61 /SF	183,483	271,040
				32.0 Exterior Improvements	1.00 LS	2,060.9	88,532	93,852		1,098		183,482.89 /LS	183,483	271,040
				030 Paths/Trails	3,314.00 LF	2,060.9	88,532	93,852		1,098		55.37 /LF	183,483	271,040
				Roads										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				2" Thick Asphalt Overlay										
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	3,665.00 sy	55.5	2,354	30,420	-	1,315	-	9.30 /sy	34,088	52,332
				2" Thick Asphalt Overlay	32,985.00 SF	55.5	2,354	30,420		1,315		1.03 /SF	34,088	52,332
				New 6" Thick, 16' Wide Asphalt Maintenance Road										
				Fine grading, grade subgrade for base course, roadways	294.78 sy	1.3	59	-	-	48	-	0.36 /sy	107	154
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	294.78 sy	1.6	74	1,256	-	85	-	4.80 /sy	1,415	2,174
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	294.78 sy	6.3	262	4,363	-	149	-	16.20 /sy	4,774	7,341
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	294.78 sy	4.5	189	2,447	-	106	-	9.30 /sy	2,742	4,209
				New 6" Thick, 16' Wide Asphalt Maintenance Road	294.78 SY	13.6	584	8,065		388		30.66 /SY	9,038	13,878
				New 6" Thick, Asphalt Entry Road										
				Fine grading, grade subgrade for base course, roadways	4,446.00 sy	20.3	896	-	-	717	-	0.36 /sy	1,613	2,323
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,446.00 sy	23.7	1,112	18,940	-	1,288	-	4.80 /sy	21,340	32,786
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	4,446.00 sy	94.5	3,950	65,801	-	2,252	-	16.20 /sy	72,003	110,718
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,446.00 sy	67.3	2,856	36,902	-	1,595	-	9.30 /sy	41,352	63,484
				New 6" Thick, Asphalt Entry Road	4,446.00 SY	205.8	8,814	121,643		5,853		30.66 /SY	136,309	209,312
				32-12 Flexible Paving	75,652.00 SF	274.9	11,752	160,127		7,555		2.37 /SF	179,435	275,522



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>274.9</b>	<b>11,752</b>	<b>160,127</b>		<b>7,555</b>		<b>179,434.69 /LS</b>	<b>179,435</b>	<b>275,522</b>
				<b>040 Roads</b>	<b>75,652.00 SF</b>	<b>274.9</b>	<b>11,752</b>	<b>160,127</b>		<b>7,555</b>		<b>2.37 /SF</b>	<b>179,435</b>	<b>275,522</b>
				<b>Parking Lots</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	2,314.89 sy	10.6	467	-	-	373	-	0.36 /sy	840	1,210
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	2,314.89 sy	12.3	579	9,861	-	671	-	4.80 /sy	11,111	17,071
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	2,314.89 sy	49.2	2,057	34,260	-	1,173	-	16.20 /sy	37,490	57,648
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	2,314.89 sy	35.0	1,487	19,214	-	830	-	9.30 /sy	21,531	33,054
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>2,314.89 SY</b>	<b>107.2</b>	<b>4,589</b>	<b>63,335</b>		<b>3,047</b>		<b>30.66 /SY</b>	<b>70,972</b>	<b>108,982</b>
				<b>32-12 Flexible Paving</b>	<b>20,834.00 SF</b>	<b>107.2</b>	<b>4,589</b>	<b>63,335</b>		<b>3,047</b>		<b>3.41 /SF</b>	<b>70,972</b>	<b>108,982</b>
				<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	250.89 sy	10.8	427	-	-	18	-	1.77 /sy	445	625
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,258.00 sf	21.7	853	1,152	-	35	-	0.90 /sf	2,040	3,031
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	1,129.00 lf	135.5	6,329	4,110	-	-	-	9.25 /lf	10,438	15,235
				<b>Parking Lot Curb and Gutter</b>	<b>1,129.00 LF</b>	<b>168.0</b>	<b>7,609</b>	<b>5,261</b>		<b>53</b>		<b>11.45 /LF</b>	<b>12,922</b>	<b>18,891</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>2,258.00 SF</b>	<b>168.0</b>	<b>7,609</b>	<b>5,261</b>		<b>53</b>		<b>5.72 /SF</b>	<b>12,922</b>	<b>18,891</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>275.2</b>	<b>12,198</b>	<b>68,597</b>		<b>3,100</b>		<b>83,894.13 /LS</b>	<b>83,894</b>	<b>127,873</b>
				<b>050 Parking Lots</b>	<b>23,092.00 SF</b>	<b>275.2</b>	<b>12,198</b>	<b>68,597</b>		<b>3,100</b>		<b>3.63 /SF</b>	<b>83,894</b>	<b>127,873</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>40x60 Steel Shelter w/ Stone Columns</b>										
				40x60 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				144,000	-	-	144,000.00 /EA	144,000	219,963
				<b>40x60 Steel Shelter w/ Stone Columns</b>	<b>1.00 EA</b>				<b>144,000</b>			<b>144,000.00 /EA</b>	<b>144,000</b>	<b>219,963</b>
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	328,416
				<b>20x30 Restroom Structure</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,416</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>2.00 EA</b>				<b>359,000</b>			<b>179,500.00 /EA</b>	<b>359,000</b>	<b>548,379</b>
				<b>13.0 Special Construction</b>	<b>1.00 LS</b>				<b>359,000</b>			<b>359,000.00 /LS</b>	<b>359,000</b>	<b>548,379</b>
				<b>060 Structures</b>	<b>3.00 EA</b>				<b>359,000</b>			<b>119,666.67 /EA</b>	<b>359,000</b>	<b>548,379</b>
				<b>Special Features</b>										
				<b>Exterior Improvements</b>										
				<b>Site Furnishings</b>										
				<b>Overlook w/ Shade Structure</b>										
				Overlook w/ Shade Structure (Allowance)	2,971.00 SF				148,550	-	-	50.00 /SF	148,550	226,913
				<b>Overlook w/ Shade Structure</b>	<b>2,971.00 SF</b>				<b>148,550</b>			<b>50.00 /SF</b>	<b>148,550</b>	<b>226,913</b>
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>				<b>148,550</b>			<b>148,550.00 /LS</b>	<b>148,550</b>	<b>226,913</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>				<b>148,550</b>			<b>148,550.00 /LS</b>	<b>148,550</b>	<b>226,913</b>
				<b>070 Special Features</b>	<b>1.00 LS</b>				<b>148,550</b>			<b>148,550.00 /LS</b>	<b>148,550</b>	<b>226,913</b>
				<b>Landscaping</b>										
				<b>Exterior Improvements</b>										
				<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	88.00 EA				35,200	-	-	400.00 /EA	35,200	53,769
				<b>Large Shade Tree</b>	<b>88.00 EA</b>				<b>35,200</b>			<b>400.00 /EA</b>	<b>35,200</b>	<b>53,769</b>
				<b>Landscape - Light</b>										
				Landscape - Light	480,169.00 SF				480,169	-	-	1.00 /SF	480,169	733,467
				<b>Landscape - Light</b>	<b>480,169.00 SF</b>				<b>480,169</b>			<b>1.00 /SF</b>	<b>480,169</b>	<b>733,467</b>
				<b>32-92 Turf and Grasses</b>	<b>480,169.00 SF</b>				<b>515,369</b>			<b>1.07 /SF</b>	<b>515,369</b>	<b>787,235</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>				<b>515,369</b>			<b>515,369.00 /LS</b>	<b>515,369</b>	<b>787,235</b>
				<b>090 Landscaping</b>	<b>480,169.00 SF</b>				<b>515,369</b>			<b>1.07 /SF</b>	<b>515,369</b>	<b>787,235</b>
				<b>Bank Stabilization</b>										
				<b>Site/Civil</b>										
				<b>Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	2,349.00 lcy	482.0	21,523	55,105	-	17,332	-	40.00 /lcy	93,959	141,245



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				Bank Stabilization	2,349.00 CY	482.0	21,523	55,105		17,332		40.00 /CY	93,959	141,245
				31-30 Site Specialties	1.00 LS	482.0	21,523	55,105		17,332		93,959.45 /LS	93,959	141,245
				31.0 Site/Civil	1.00 LS	482.0	21,523	55,105		17,332		93,959.45 /LS	93,959	141,245
				100 Bank Stabilization	1,500.00 LF	482.0	21,523	55,105		17,332		62.64 /LF	93,959	141,245
110				Utilities										
		26.0		Electrical Work										
			26-10	Site Electrical										
				Electrical Service										
				PSO Quote for Electrical to Site	1.00 LS				76,400	-	-	76,400.00 /LS	76,400	116,702
				Electrical Service	1.00 LS				76,400			76,400.00 /LS	76,400	116,702
				Site Lighting										
				Site Lighting - South Bank Public Access	1.00 ls				160,000			160,000.00 /ls	160,000	244,403
				Site Lighting	1.00 LS				160,000			160,000.00 /LS	160,000	244,403
				26-10 Site Electrical	1.00 LS				236,400			236,400.00 /LS	236,400	361,105
				26.0 Electrical Work	1.00 LS				236,400			236,400.00 /LS	236,400	361,105
		33.0		Buried Piping										
			33-11	Water Utility Distribuion Piping										
				3" PVC Water										
				Bedding Stone, Material Only	327.88 tn		-	4,590	-	-	-	14.00 /tn	4,590	7,104
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	2,000.00 LF	800.0	38,035	4,180	-	18,327	-	30.27 /LF	60,542	87,077
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea		-	6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea		-	14	-	-	-	13.78 /ea	14	21
				3" PVC, Sch. 80, socket joint, coupling	100.00 ea		-	804	-	-	-	8.04 /ea	804	1,244
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				3" PVC Water	2,000.00 LF	848.0	40,334	11,094		20,350		35.89 /LF	71,778	104,010
				33-11 Water Utility Distribuion Piping	2,000.00 LF	848.0	40,334	11,094		20,350		35.89 /LF	71,778	104,010
			33-31	Sanitary Utility Sewerage Piping										
				2" PVC Sewer (Force Main)										
				Bedding Stone, Material Only	165.46 tn		-	2,316	-	-	-	14.00 /tn	2,316	3,585
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,000.00 LF	400.0	19,017	1,040	-	9,164	-	29.22 /LF	29,221	41,913
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea		-	4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	50.00 ea		-	142	-	-	-	2.84 /ea	142	220
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				Pump,sewage ejector,duplex system,coated steel tank,268 gpm,1 hp, 15'head,135 gallon,2" dschr,includes operating and level controls,tank,cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,783
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	2.00 ea	16.0	690	-	-	907	-	798.68 /ea	1,597	2,318
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	200.00 lf	10.7	460	14	-	605	-	5.39 /lf	1,079	1,567
				2" PVC Sewer (Force Main)	1,000.00 LF		511.6	24,368	18,017		12,698	55.08 /LF	55,082	80,947
				33-31 Sanitary Utility Sewerage Piping	1,000.00 LF		511.6	24,368	18,017		12,698	55.08 /LF	55,082	80,947
				33.0 Buried Piping	3,000.00 LF		1,359.6	64,702	29,111		33,047	42.29 /LF	126,860	184,957
				110 Utilities	1.00 LS		1,359.6	64,702	29,111	236,400		363,260.07 /LS	363,260	546,062
				SS02 South Bank Public Access	673,854.00 SF		6,469.4	294,956	599,940	1,259,319	135,929	3.40 /SF	2,290,144	3,467,942



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
SS03				<b>Franklin Creek Landing Public Access</b>										
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	162,815.22 SY	2,170.9	101,749	-	-	141,518	-	1.49 /sy	243,267	353,229
				Mass Grading	162,815.22 SY	2,170.9	101,749	-	-	141,518	-	1.49 /SY	243,267	353,229
				31-00 Site/Civil	1.00 LS	2,170.9	101,749	-	-	141,518	-	243,266.92 /LS	243,267	353,229
				31.0 Site/Civil	1.00 LS	2,170.9	101,749	-	-	141,518	-	243,266.92 /LS	243,267	353,229
				005 Overall Site Grading	1,465,337.00 SF	2,170.9	101,749	-	-	141,518	-	0.17 /SF	243,267	353,229
		020		Pedestrian Bridges										
		32.0		Exterior Improvements										
			32-34	Fabricated Bridges										
				Pedestrian Bridge, 16' Wide										
				Fabricated highway bridges, concrete in place, no reinforcing, abutment	60.00 cy	213.9	10,625	13,260	-	1,109	-	416.56 /cy	24,994	37,071
				Fabricated pedestrian bridges, wood, laminated type, complete in place, 130' span, includes erection, excludes foundations	1,024.00 sf	321.3	15,341	90,624	-	3,536	-	106.94 /sf	109,502	167,019
				Pedestrian Bridge, 16' Wide	64.00 LF	535.2	25,967	103,884	-	4,645	-	2,101.49 /LF	134,495	204,091
				30' Long, 20' Wide Concrete Bridge										
				Fabricated highway bridges, concrete in place, no reinforcing, abutment	60.00 cy	213.9	10,625	13,260	-	1,109	-	416.56 /cy	24,994	37,071
				Fabricated pedestrian bridges, precast concrete, complete in place, 8' wide, 60' span, includes erection, excludes foundations	600.00 sf	156.3	8,795	15,000	-	3,270	-	45.11 /sf	27,064	40,411
				30' Long, 20' Wide Concrete Bridge	30.00 LF	370.2	19,420	28,260	-	4,378	-	1,735.27 /LF	52,058	77,483
				32-34 Fabricated Bridges	2.00 EA	905.4	45,386	132,144	-	9,023	-	93,276.70 /EA	186,553	281,573
				32.0 Exterior Improvements	1.00 LS	905.4	45,386	132,144	-	9,023	-	186,553.39 /LS	186,553	281,573
				020 Pedestrian Bridges	2.00 EA	905.4	45,386	132,144	-	9,023	-	93,276.70 /EA	186,553	281,573
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				New 4" Thick, 05' Wide Crushed Granite Trail w/ Binder										
				Fine grading, grade subgrade for base course, roadways	181.11 sy	0.8	37	-	-	29	-	0.36 /sy	66	95
				Asphalt Paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 4" thick	181.11 sy	3.5	147	2,771	-	84	-	16.57 /sy	3,001	4,618
				New 4" Thick, 05' Wide Crushed Granite Trail w/ Binder	326.00 LF	4.3	183	2,771	-	113	-	9.41 /LF	3,067	4,713
				32-12 Flexible Paving	1,630.00 SF	4.3	183	2,771	-	113	-	1.88 /SF	3,067	4,713
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 12' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	7,940.00 sy	158.8	6,605	-	-	865	-	0.94 /sy	7,469	10,550
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	71,460.00 sf	2,858.4	125,478	132,201	-	-	-	3.61 /sf	257,679	380,569
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	71,460.00 sf	686.0	27,002	36,445	-	1,109	-	0.90 /sf	64,556	95,920
				New 4" Thick, 12' Wide Concrete Trail	5,955.00 LF	3,703.2	159,085	168,646	-	1,974	-	55.37 /LF	329,704	487,038
				New 4" Thick, 20' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	4,331.11 sy	86.6	3,603	-	-	472	-	0.94 /sy	4,074	5,755
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	38,980.00 sf	1,559.2	68,446	72,113	-	-	-	3.61 /sf	140,559	207,593
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	38,980.00 sf	374.2	14,729	19,880	-	605	-	0.90 /sf	35,214	52,322
				New 4" Thick, 20' Wide Concrete Trail	1,949.00 LF	2,020.0	86,778	91,993	-	1,077	-	92.28 /LF	179,847	265,669
				32-16 Curbs, Gutters, Sidewalks, and Driveways	110,440.00 SF	5,723.2	245,863	260,638	-	3,051	-	4.61 /SF	509,552	752,707
				32.0 Exterior Improvements	1.00 LS	5,727.6	246,046	263,409	-	3,163	-	512,618.38 /LS	512,618	757,420
				030 Paths/Trails	8,230.00 LF	5,727.6	246,046	263,409	-	3,163	-	62.29 /LF	512,618	757,420
		040		Roads										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				2" Thick Asphalt Overlay										
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	3,725.11 sy	56.4	2,393	30,918	-	1,336	-	9.30 /sy	34,647	53,190
				2" Thick Asphalt Overlay	33,526.00 SF	56.4	2,393	30,918	-	1,336	-	1.03 /SF	34,647	53,190
				New 6" Thick, 26' Wide Asphalt Entry Road										
				Fine grading, grade subgrade for base course, roadways	2,221.55 sy	10.2	448	-	-	358	-	0.36 /sy	806	1,161
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	2,221.55 sy	11.8	556	9,464	-	644	-	4.80 /sy	10,663	16,382





Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>New 6" Thick, 26' Wide Asphalt Entry Road</b>										
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	2,221.55 sy	47.2	1,974	32,879	-	1,125	-	16.20 /sy	35,978	55,323
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	2,221.55 sy	33.6	1,427	18,439	-	797	-	9.30 /sy	20,663	31,721
				<b>New 6" Thick, 26' Wide Asphalt Entry Road</b>	<b>19,994.00 SF</b>	<b>102.8</b>	<b>4,404</b>	<b>60,782</b>		<b>2,924</b>		<b>3.41 /SF</b>	<b>68,110</b>	<b>104,588</b>
				<b>New 8" Thick, Asphalt Park Road</b>										
				Fine grading, grade subgrade for base course, roadways	4,261.44 sy	19.5	859	-	-	687	-	0.36 /sy	1,546	2,227
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,261.44 sy	22.7	1,066	18,154	-	1,235	-	4.80 /sy	20,454	31,425
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	4,261.44 sy	90.6	3,786	63,069	-	2,159	-	16.20 /sy	69,014	106,122
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 4" thick, no hauling included	4,261.44 sy	98.8	4,195	69,675	-	2,345	-	17.89 /sy	76,214	117,194
				<b>New 8" Thick, Asphalt Park Road</b>	<b>38,353.00 SF</b>	<b>231.6</b>	<b>9,906</b>	<b>150,898</b>		<b>6,426</b>		<b>4.36 /SF</b>	<b>167,229</b>	<b>256,969</b>
				<b>32-12 Flexible Paving</b>	<b>91,873.00 SF</b>	<b>390.8</b>	<b>16,702</b>	<b>242,598</b>		<b>10,686</b>		<b>2.94 /SF</b>	<b>269,986</b>	<b>414,747</b>
			32-13	<b>Rigid Paving</b>										
				<b>New 6" Thick, Concrete Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	343.00 lf	41.8	1,924	7,718	-	24	-	28.18 /lf	9,665	14,677
				Fine grading, grade subgrade for base course, roadways	403.33 sy	1.8	81	-	-	65	-	0.36 /sy	146	211
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	3,630.00 sf	170.8	7,499	8,276	-	-	-	4.35 /sf	15,775	23,325
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	403.33 sy	2.1	101	1,718	-	117	-	4.80 /sy	1,936	2,974
				<b>New 6" Thick, Concrete Boat Ramp</b>	<b>3,630.00 SF</b>	<b>216.7</b>	<b>9,605</b>	<b>17,712</b>		<b>206</b>		<b>7.58 /SF</b>	<b>27,523</b>	<b>41,187</b>
				<b>32-13 Rigid Paving</b>	<b>3,630.00 SF</b>	<b>216.7</b>	<b>9,605</b>	<b>17,712</b>		<b>206</b>		<b>7.58 /SF</b>	<b>27,523</b>	<b>41,187</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>607.5</b>	<b>26,307</b>	<b>260,310</b>		<b>10,892</b>		<b>297,509.24 /LS</b>	<b>297,509</b>	<b>455,934</b>
				<b>040 Roads</b>	<b>91,873.00 SF</b>	<b>607.5</b>	<b>26,307</b>	<b>260,310</b>		<b>10,892</b>		<b>3.24 /SF</b>	<b>297,509</b>	<b>455,934</b>
				<b>Parking Lots</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	23,641.00 sy	108.0	4,765	-	-	3,812	-	0.36 /sy	8,578	12,355
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	23,641.00 sy	126.0	5,913	100,711	-	6,851	-	4.80 /sy	113,474	174,335
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	23,641.00 sy	502.6	21,003	349,887	-	11,976	-	16.20 /sy	382,867	588,730
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	23,641.00 sy	357.7	15,184	196,220	-	8,481	-	9.30 /sy	219,886	337,567
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>23,641.00 SY</b>	<b>1,094.3</b>	<b>46,866</b>	<b>646,818</b>		<b>31,120</b>		<b>30.66 /SY</b>	<b>724,804</b>	<b>1,112,987</b>
				<b>32-12 Flexible Paving</b>	<b>212,770.00 SF</b>	<b>1,094.3</b>	<b>46,866</b>	<b>646,818</b>		<b>31,120</b>		<b>3.41 /SF</b>	<b>724,804</b>	<b>1,112,987</b>
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	1,425.11 sy	61.6	2,425	-	-	100	-	1.77 /sy	2,525	3,550
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	12,826.00 sf	123.1	4,847	6,541	-	199	-	0.90 /sf	11,587	17,216
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	6,413.00 lf	769.6	35,948	23,343	-	-	-	9.25 /lf	59,291	86,541
				<b>Parking Lot Curb and Gutter</b>	<b>6,413.00 LF</b>	<b>954.3</b>	<b>43,220</b>	<b>29,885</b>		<b>299</b>		<b>11.45 /LF</b>	<b>73,403</b>	<b>107,308</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>12,826.00 SF</b>	<b>954.3</b>	<b>43,220</b>	<b>29,885</b>		<b>299</b>		<b>5.72 /SF</b>	<b>73,403</b>	<b>107,308</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>2,048.7</b>	<b>90,085</b>	<b>676,702</b>		<b>31,419</b>		<b>798,206.58 /LS</b>	<b>798,207</b>	<b>1,220,295</b>
				<b>050 Parking Lots</b>	<b>225,596.00 SF</b>	<b>2,048.7</b>	<b>90,085</b>	<b>676,702</b>		<b>31,419</b>		<b>3.54 /SF</b>	<b>798,207</b>	<b>1,220,295</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>13-34 Fabricated Engineered Structures</b>										
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	328,416
				<b>20x30 Restroom Structure</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,416</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,416</b>
				13.0 Special Construction	1.00 LS				215,000			215,000.00 /LS	215,000	328,416
				<b>060 Structures</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,416</b>
				<b>Special Features</b>										
				<b>Exterior Improvements</b>										
				<b>Paving Specialties</b>										
				<b>8" Gunite Concrete Channel Lined w/ Boulders</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	3,864.00 sf	247.3	10,340	11,824	-	1,795	-	6.20 /sf	23,958	35,469





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				<b>8" Gunite Concrete Channel Lined w/ Boulders</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	214.66 sy	4.3	179	-	-	23	-	0.94 /sy	202	285
				Rip-rap and rock lining, random, broken stone, 300 lb. average, dumped	380.00 ton	10.1	447	9,500	-	629	-	27.83 /ton	10,576	16,264
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,932.00 sf	18.5	730	985	-	30	-	0.90 /sf	1,745	2,593
				<b>8" Gunite Concrete Channel Lined w/ Boulders</b>	<b>1,932.00 SF</b>	<b>280.3</b>	<b>11,696</b>	<b>22,309</b>		<b>2,477</b>		<b>18.88 /SF</b>	<b>36,482</b>	<b>54,612</b>
				<b>Stone Cascade at Terminus of Franklin Creek</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	2,160.00 sf	138.2	5,780	6,610	-	1,003	-	6.20 /sf	13,393	19,828
				Fine grading, fine grade granular base for sidewalks and bikeways	120.00 sy	2.4	100	-	-	13	-	0.94 /sy	113	159
				Rip-rap and rock lining, random, broken stone, 300 lb. average, dumped	500.00 ton	13.3	588	12,500	-	828	-	27.83 /ton	13,916	21,401
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,080.00 sf	10.4	408	551	-	17	-	0.90 /sf	976	1,450
				<b>Stone Cascade at Terminus of Franklin Creek</b>	<b>1,080.00 SF</b>	<b>164.3</b>	<b>6,876</b>	<b>19,660</b>		<b>1,861</b>		<b>26.29 /SF</b>	<b>28,398</b>	<b>42,837</b>
				<b>32-17 Paving Specialties</b>	<b>38,669.00 SF</b>	<b>444.6</b>	<b>18,572</b>	<b>41,970</b>		<b>4,338</b>		<b>1.68 /SF</b>	<b>64,879</b>	<b>97,449</b>
		32-33		<b>Site Furnishings</b>										
				<b>Lighthouse Feature w/ Decorative Concrete Plaza</b>										
				Lighthouse Feature w/ Decorative Concrete Plaza	1.00 LS				285,000	-	-	285,000.00 /LS	285,000	435,343
				Lighthouse Feature w/ Decorative Concrete Plaza	1.00 LS				285,000	-	-	285,000.00 /LS	285,000	435,343
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>				<b>285,000</b>			<b>285,000.00 /LS</b>	<b>285,000</b>	<b>435,343</b>
		32-50		<b>Site Improvements</b>										
				<b>Floating Dock</b>										
				Jetties, docks, floating, polystyrene flotation, galvanized steel frame and wood deck, 8' wide, includes docks, maximum	14,188.00 sf	3,547.0	174,080	397,264	-	46,849	-	43.57 /sf	618,192	928,616
				<b>Floating Dock</b>	<b>1,182.00 LF</b>	<b>3,547.0</b>	<b>174,080</b>	<b>397,264</b>		<b>46,849</b>		<b>523.01 /LF</b>	<b>618,192</b>	<b>928,616</b>
				<b>Floating Dock - Gangway Ramp</b>										
				Jetties, floating dock accessories, gangway, aluminum, one end rolling, no hand rails, 8' wide, maximum	79.00 lf	52.7	2,026	37,604	-	-	-	501.65 /lf	39,630	61,034
				Jetties, floating dock accessories, gangway, for handrails, add	160.00 lf			11,200	-	-	-	70.00 /lf	11,200	17,332
				<b>Floating Dock - Gangway Ramp</b>	<b>79.00 LF</b>	<b>52.7</b>	<b>2,026</b>	<b>48,804</b>				<b>643.42 /LF</b>	<b>50,830</b>	<b>78,367</b>
				<b>32-50 Site Improvements</b>	<b>1.00 LS</b>	<b>3,599.7</b>	<b>176,106</b>	<b>446,068</b>		<b>46,849</b>		<b>669,022.49 /LS</b>	<b>669,022</b>	<b>1,006,983</b>
				32.0 Exterior Improvements	1.00 LS	4,044.3	194,678	488,037	285,000	51,187	-	1,018,901.90 /LS	1,018,902	1,539,774
				<b>070 Special Features</b>	<b>1.00 LS</b>	<b>4,044.3</b>	<b>194,678</b>	<b>488,037</b>	<b>285,000</b>	<b>51,187</b>		<b>1,018,901.90 /LS</b>	<b>1,018,902</b>	<b>1,539,774</b>
				<b>Retaining Walls</b>										
		32.0		<b>Exterior Improvements</b>										
			32-32	<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	8.51 HR	8.5	381	224	-	568	-	137.95 /HR	1,174	1,727
				Dust Control Operations	45.59 HR	68.4	3,195		-	3,727	-	151.83 /HR	6,922	10,025
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	4.26 HR	4.3	178	47	-	276	-	117.71 /HR	501	733
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	15,000.00 boy	115.4	5,152	-	-	13,273	-	1.23 /bcy	18,425	26,971
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	15,000.00 lcy	164.8	6,260	-	-	45,124	-	3.43 /lcy	51,383	75,906
				<b>Mass Common Excavation</b>	<b>15,000.00 CY</b>	<b>361.4</b>	<b>15,166</b>	<b>271</b>		<b>62,968</b>		<b>5.23 /CY</b>	<b>78,405</b>	<b>115,362</b>
				<b>Seawall w/ Pipe Railing and Stone (12' ht)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	28,488.00 sf	7,012.3	328,408	178,050	-	81,557	-	20.64 /sf	588,015	857,459
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	2,374.00 lf	474.8	28,432	128,196	-	1,580	-	66.64 /lf	158,207	240,612
				Concrete seawalls, reinforced concrete, to 12' high, include footing and tie-backs, maximum	2,374.00 lf	10,650.9	529,181	353,726	-	79,796	-	405.52 /lf	962,703	1,408,289
				<b>Seawall w/ Pipe Railing and Stone (12' ht)</b>	<b>2,374.00 LF</b>	<b>18,138.0</b>	<b>886,020</b>	<b>659,972</b>		<b>162,933</b>		<b>719.85 /LF</b>	<b>1,708,925</b>	<b>2,506,359</b>
				<b>32-32 Retaining Walls</b>	<b>2,374.00 LF</b>	<b>18,499.4</b>	<b>901,186</b>	<b>660,243</b>		<b>225,901</b>		<b>752.88 /LF</b>	<b>1,787,330</b>	<b>2,621,721</b>
				32.0 Exterior Improvements	1.00 LS	18,499.4	901,186	660,243		225,901		1,787,329.64 /LS	1,787,330	2,621,721
				<b>080 Retaining Walls</b>	<b>2,374.00 LF</b>	<b>18,499.4</b>	<b>901,186</b>	<b>660,243</b>		<b>225,901</b>		<b>752.88 /LF</b>	<b>1,787,330</b>	<b>2,621,721</b>
				<b>Landscaping</b>										
				<b>Exterior Improvements</b>										
				<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	425.00 EA				170,000	-	-	400.00 /EA	170,000	259,678
				<b>Large Shade Tree</b>	<b>425.00 EA</b>				<b>170,000</b>			<b>400.00 /EA</b>	<b>170,000</b>	<b>259,678</b>
				<b>Landscape - Extensive</b>										
				Landscape - Extensive	6,895.00 SF				20,685	-	-	3.00 /SF	20,685	31,597
				<b>Landscape - Extensive</b>	<b>6,895.00 SF</b>				<b>20,685</b>			<b>3.00 /SF</b>	<b>20,685</b>	<b>31,597</b>
				<b>Landscape - Light</b>										
				Landscape - Light	729,724.00 SF				729,724	-	-	1.00 /SF	729,724	1,114,666



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				Landscape - Light	729,724.00 SF				729,724			1.00 /SF	729,724	1,114,666
				32-92 Turf and Grasses	736,619.00 SF				920,409			1.25 /SF	920,409	1,405,941
				32.0 Exterior Improvements	1.00 LS				920,409			920,409.00 /LS	920,409	1,405,941
				090 Landscaping	736,619.00 SF				920,409			1.25 /SF	920,409	1,405,941
				Bank Stabilization										
				Site/Civil										
				Site Specialties										
				Bank Stabilization										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	2,659.00 lcy	545.7	24,363	62,377	-	19,619	-	40.00 /lcy	106,359	159,885
				Bank Stabilization	2,659.00 CY	545.7	24,363	62,377	-	19,619	-	40.00 /CY	106,359	159,885
				31-30 Site Specialties	1.00 LS	545.7	24,363	62,377	-	19,619	-	106,359.37 /LS	106,359	159,885
				31.0 Site/Civil	1.00 LS	545.7	24,363	62,377	-	19,619	-	106,359.37 /LS	106,359	159,885
				Exterior Improvements										
				Site Improvements										
				Stabilize Stream Bank with Large Stone Boulders and Rip Rap										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,496.67 sy	29.9	1,245	-	-	163	-	0.94 /sy	1,408	1,989
				Rip-rap and rock lining, random, broken stone, 300 lb. average, dumped	898.00 cy	23.9	1,056	44,900	-	1,487	-	52.83 /cy	47,443	73,177
				Stabilize Stream Bank with Large Stone Boulders and Rip Rap	2,694.00 LF	53.9	2,301	44,900	-	1,650	-	18.13 /LF	48,851	75,166
				32-50 Site Improvements	1.00 LS	53.9	2,301	44,900	-	1,650	-	48,851.29 /LS	48,851	75,166
				32.0 Exterior Improvements	1.00 LS	53.9	2,301	44,900	-	1,650	-	48,851.29 /LS	48,851	75,166
				100 Bank Stabilization	4,494.00 LF	599.5	26,665	107,277	-	21,269	-	34.54 /LF	155,211	235,051
				Utilities										
				Electrical Work										
				Site Electrical										
				Electrical Service										
				PSO Quote for Electrical to Site	1.00 LS				76,400	-	-	76,400.00 /LS	76,400	116,702
				Electrical Service	1.00 LS				76,400	-	-	76,400.00 /LS	76,400	116,702
				Site Lighting										
				Site Lighting - Franklin Creek Landing	1.00 ls				460,000	-	-	460,000.00 /ls	460,000	702,658
				Site Lighting	1.00 LS				460,000	-	-	460,000.00 /LS	460,000	702,658
				26-10 Site Electrical	1.00 LS				536,400	-	-	536,400.00 /LS	536,400	819,361
				26.0 Electrical Work	1.00 LS				536,400	-	-	536,400.00 /LS	536,400	819,361
				Buried Piping										
				Yard Piping										
				8'x3' x 20' long Box Culvert										
				Excavating, trench or continuous footing, common earth, 1 C.Y. excavator, 6' to 10' deep, excludes sheeting or dewatering	100.00 bcy	4.0	179	-	-	162	-	3.41 /bcy	341	492
				Backfill, structural, sand and gravel, 80 H.P. dozer, 50' haul, from existing stockpile, excludes compaction	80.00 lcy	0.9	40	-	-	26	-	0.83 /lcy	66	95
				Compaction, structural, common fill, 8" lifts, vibratory plate	80.00 ecy	3.2	123	-	-	12	-	1.69 /ecy	135	191
				Public Storm Utility Drainage Piping, concrete, box culvert, precast, base price, 8' long, 8' x 3', excludes excavation or backfill	20.00 lf	8.5	357	6,300	-	294	-	347.50 /lf	6,950	10,686
				8'x3' x 20' long Box Culvert	20.00 LF	16.6	698	6,300	-	494	-	374.63 /LF	7,493	11,464
				33-00 Yard Piping	20.00 LF	16.6	698	6,300	-	494	-	374.63 /LF	7,493	11,464
				Water Utility Distribution Piping										
				3" PVC Water										
				Bedding Stone, Material Only	196.73 tn			2,754	-	-	-	14.00 /tn	2,754	4,262
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,200.00 LF	480.0	22,821	2,508	-	10,996	-	30.27 /LF	36,325	52,246
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea			14	-	-	-	13.78 /ea	14	21
				3" PVC, Sch. 80, socket joint, coupling	60.00 ea			482	-	-	-	8.04 /ea	482	747
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				3" PVC Water	1,200.00 LF	528.0	25,120	7,264	-	13,019	-	37.84 /LF	45,403	65,840
				33-11 Water Utility Distribution Piping	1,200.00 LF	528.0	25,120	7,264	-	13,019	-	37.84 /LF	45,403	65,840
				Sanitary Utility Sewerage Piping										
				2" PVC Sewer (Force Main)										
				Bedding Stone, Material Only	479.83 tn			6,718	-	-	-	14.00 /tn	6,718	10,396
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	2,900.00 LF	1,160.0	55,150	3,016	-	26,574	-	29.22 /LF	84,741	121,549
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea			4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	145.00 ea			412	-	-	-	2.84 /ea	412	637
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,555
				Pump, sewage ejector, duplex system, coated steel tank, 268 gpm, 1 hp, 15" head, 135 gallon, 2" dschr, includes operating and level controls, tank cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,783



Project: Sand Springs  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				2" PVC Sewer (Force Main)	2,900.00 LF	1,244.9	59,350	24,650		28,597		38.83 /LF	112,597	163,927
				33-31 Sanitary Utility Sewerage Piping	2,900.00 LF	1,244.9	59,350	24,650		28,597		38.83 /LF	112,597	163,927
				33.0 Buried Piping	4,120.00 LF	1,789.5	85,169	38,214		42,110		40.17 /LF	165,493	241,231
				110 Utilities	1.00 LS	1,789.5	85,169	38,214	536,400	42,110		701,892.64 /LS	701,893	1,060,592
				<b>SS03 Franklin Creek Landing Public Access</b>	<b>1,465,337.00 SF</b>	<b>36,392.7</b>	<b>1,717,271</b>	<b>2,626,337</b>	<b>1,956,809</b>	<b>536,481</b>		<b>4.67 /SF</b>	<b>6,836,898</b>	<b>10,259,946</b>
<b>SS03a</b>				<b>Franklin Creek Landing Lazy River</b>										
				Special Features										
				Exterior Improvements										
				Paving Specialties										
				Mass Common Excavation										
				Maintain Haul Roads w/Grader & Operator	1.70 HR	1.7	76	45	-	114	-	137.95 /HR	235	345
				Dust Control Operations	9.12 HR	13.7	639	-	-	745	-	151.83 /HR	1,384	2,005
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	0.85 HR	0.9	36	9	-	55	-	117.71 /HR	100	147
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	4,000.00 bcy	30.8	1,374	-	-	3,539	-	1.23 /bcy	4,913	7,192
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	4,000.00 lcy	44.0	1,669	-	-	12,033	-	3.43 /lcy	13,702	20,242
				Mass Common Excavation	4,000.00 CY	91.0	3,794	54		16,487		5.08 /CY	20,335	29,931
				New 8" Thick, Colored Shotcrete Lazy River										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	71,314.00 sf	4,564.1	190,834	218,221	-	33,121	-	6.20 /sf	442,176	654,620
				Fine grading, fine grade granular base for sidewalks and bikeways	3,961.88 sy	79.2	3,296	-	-	432	-	0.94 /sy	3,727	5,264
				Rip-rap and rock lining, random, broken stone, 300 lb. average, dumped	12,000.00 ton	320.0	14,116	300,000	-	19,870	-	27.83 /ton	333,986	513,613
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	35,657.00 sf	342.3	13,474	18,185	-	553	-	0.90 /sf	32,212	47,862
				New 8" Thick, Colored Shotcrete Lazy River	35,657.00 SF	5,305.7	221,719	536,406		53,976		22.78 /SF	812,101	1,221,359
				Lazy River Equipment										
				48" pipe, RCP, Class III B & S, excav/bkfill included, 0-8'	50.00 LF	28.0	1,349	4,809	-	1,576	-	154.67 /LF	7,733	11,678
				Install PVC water distribution pipe, excav/bkfill included, 30"	2,000.00 LF	1,120.0	53,951	220,000	-	63,043	-	168.50 /LF	336,994	509,905
				Intake Structure	1.00 ea	8.0	338	10,000	-	269	-	10,606.89 /ea	10,607	16,349
				Manholes, precast, 10' inside dia, 25' deep	1.00 ea	30.0	1,437	25,000	-	1,264	-	27,701.33 /ea	27,701	42,584
				100hp Pump Station Pump	2.00 EA	-	-	200,000	-	-	-	100,000.00 /EA	200,000	309,504
				50hp Pump Station Pump	1.00 EA	-	-	50,000	-	-	-	50,000.00 /EA	50,000	77,376
				Lazy River Equipment	1.00 LS	1,186.0	57,075	509,809		66,152		633,035.65 /LS	633,036	967,396
				32-17 Paving Specialties	35,657.00 SF	6,582.6	282,588	1,046,269		136,615		41.10 /SF	1,465,472	2,218,685
				32.0 Exterior Improvements	1.00 LS	6,582.6	282,588	1,046,269		136,615		1,465,471.81 /LS	1,465,472	2,218,685
				070 Special Features	1.00 LS	6,582.6	282,588	1,046,269		136,615		1,465,471.81 /LS	1,465,472	2,218,685
				Utilities										
				Electrical Work										
				Site Electrical										
				Electrical Service										
				Electrical for Lazy River Equipment (Allowance)	1.00 LS				200,000	-	-	200,000.00 /LS	200,000	305,504
				Electrical Service	1.00 LS				200,000			200,000.00 /LS	200,000	305,504
				26-10 Site Electrical	1.00 LS				200,000			200,000.00 /LS	200,000	305,504
				26.0 Electrical Work	1.00 LS				200,000			200,000.00 /LS	200,000	305,504
				110 Utilities	1.00 LS				200,000			200,000.00 /LS	200,000	305,504
				<b>SS03a Franklin Creek Landing Lazy River</b>	<b>1.00 LS</b>	<b>6,582.6</b>	<b>282,588</b>	<b>1,046,269</b>	<b>200,000</b>	<b>136,615</b>		<b>1,665,471.81 /LS</b>	<b>1,665,472</b>	<b>2,524,189</b>



Project: **Sand Springs**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	10,033,075		
Material	18,009,689		
Subcontract	16,001,048		
Equipment	2,697,389		
Other			
Total Before Markups	<b>46,741,201</b>	<b>46,741,201</b>	
Estimate Contingency Dam	4,734,330		15.000 %
Estimate Contingency Parks	3,035,800		20.000 %
	<b>7,770,130</b>	<b>54,511,331</b>	
Tulsa Location Fac. Site	(1,591,308)		(12.500) %
Adjusted Raw Total	<b>(1,591,308)</b>	<b>52,920,023</b>	
General Conditions	2,646,001		5.000 %
Total General Conditions	<b>2,646,001</b>	<b>55,566,024</b>	
Material Sales & Use Tax - %	360,194		2.000 %
Construction Equip Tax - %	229,548		8.510 %
Total Taxes	<b>589,742</b>	<b>56,155,766</b>	
Project Staff & Home Office OH	5,615,577		10.000 %
Profit on Previous Subtotal	2,807,788		5.000 %
Mobilization/Demobilization	2,064,550		3.000 %
Blder's Risk & Gen Liab Ins -%	688,183		1.000 %
Flood Insurance	688,183		1.000 %
Payment & Performance Bonds	798,293		1.160 %
Total Bonds and Insurances	<b>12,662,574</b>	<b>68,818,340</b>	
<b>Construction Total</b>		<b>68,818,340</b>	



Zink Dam Modifications					DATE:	4/27/2015	Rev 1	
Preliminary Design Report					PROJECT NO.:	386594.02.2D.03		
Budget Level (Class 3) Estimate					ESTIMATE BY:	Robert Lawson/RDD		
					REVIEW BY:	Murry Fleming/TUL		
					MODIFIED BY:	Tom Jones/CVO		
Bid Item	CSI	Description	QTY	UNIT	TOTAL UNIT COST	TOTAL COST	GRAND TOTAL	
<b>02</b>		<b>Zink Dam</b>						<b>\$28,200,000</b>
		<b>Demolition</b>						
		Demolish Existing Concrete; Includes Disposal	5,535	CY	\$197.89	\$1,095,316	\$1,429,561	
		<b>Extra Items for Concrete Work</b>						
		Sandblast Surface of Existing Concrete	45,000	SF	\$17.16	\$772,312	\$1,007,989	
		Bonding Agent (80 SF/Gallon)	570	GAL	\$69.17	\$39,425	\$51,456	
		Dywidag Anchor, Battered	46	EA	\$1,180.72	\$54,313	\$70,887	
		<b>Reinforced Concrete</b>						
		Side Forms for Slabs & Bulk Reinforced Concrete	6,008	SFCA	\$14.64	\$87,947	\$114,785	
		Wall Forms for Face of Walls & Formed Placements	16,531	SFCA	\$21.35	\$352,881	\$460,566	
		Reinforcement Steel	515.4	TN	\$2,152.61	\$1,109,400	\$1,447,943	
		Concrete, 4000 PSI, Direct Place, Includes Finish	5,890	CY	\$447.75	\$2,637,271	\$3,442,057	
		<b>Mass/Bulk Fill Concrete</b>						
		Side Forms for Slabs & Bulk Concrete	2,367	SFCA	\$14.64	\$34,649	\$45,222	
		Wall Forms for Face of Bulk Concrete	272	SFCA	\$21.35	\$5,806	\$7,578	
		Reinforcement Steel	61.8	TN	\$2,152.61	\$132,924	\$173,486	
		Concrete, 3000 PSI, Direct Place, Includes Finish	4,940	CY	\$382.30	\$1,888,537	\$2,464,840	
		<b>Dam Control Building</b>						
		Compressor Building	600	SF	\$300.00	\$180,000	\$234,929	
		Air Compressor Equipment & Gate Control System	1	EA	\$102,903.26	\$102,903	\$134,305	
		Electrical Service	1	LS	\$19,960.21	\$19,960	\$26,051	
		<b>Coffer Dams</b>						
		Construct Cofferdam with Loose Sand & Rock w/Dozer, 1st Half of Dam	10,000	CY	\$6.01	\$60,099	\$78,438	
		Construct Cofferdam with Loose Sand & Rock w/Dozer, 2nd Half of Dam	10,000	CY	\$6.01	\$60,099	\$78,438	
		<b>Obermeyer Gates</b>						
		Full Height Obermeyer Gate, 10' x 48'	7	EA	\$107,490.96	\$752,437	\$982,049	
		Full Height Obermeyer Gate, 10' x 16'	1	EA	\$53,745.48	\$53,745	\$70,146	
		Crest Obermeyer Gate, 3' x 20' <i>reduce number for 20 to 17</i>	17	EA	\$21,498.19	\$365,469	\$476,995	
		Additional full-height gate length - 10' x 16'	1	EA				
		Direct Purchase of Obermeyer Gates & Equipment <i>Add full-height and decrease crest gates</i>	25	EA	\$142,270.08	\$3,556,752	\$4,642,125	
		<b>Encased In Concrete 2" Air Piping to Gates</b>						
		2-inch BSP, Threaded, Air Pipe	10,245	LF	\$40.09	\$410,730	\$536,067	
		2-inch BSP, Threaded, 90 Elbow	45	EA	\$124.26	\$5,592	\$7,298	
		2-inch BSP, Threaded, Tee	5	EA	\$199.06	\$995	\$1,299	
		<b>Condensation/Air Purge at Gate Assemblies</b>						
		Main Line 2" x 1/2" Tee, 1/2" Riser Pipe & Fittings, 1/2" Blowoff Valve	15	EA	\$300.32	\$4,505	\$5,880	
		<b>Buried 2" Air Piping; Bldg to Dam - 225 LF</b>						
		Trench Excavation	225	CY	\$9.32	\$2,097	\$2,737	
		Imported Bed & Zone	119	CY	\$65.84	\$7,838	\$10,230	
		Backfill w/Native	124	CY	\$59.10	\$7,314	\$9,546	
		Load, Haul & Dispose of Excess Excavated Material	101	CY	\$14.05	\$1,423	\$1,857	
		2-inch BSP, Threaded, Air Pipe w/Tapecoat for buried service	3,375	LF	\$40.59	\$136,994	\$178,799	
		2-inch BSP, Threaded, 90 Elbow w/Tapecoat for buried service	45	EA	\$125.76	\$5,659	\$7,386	
		2-inch BSP, Threaded, 45 Elbow w/Tapecoat for buried service	15	EA	\$127.76	\$1,916	\$2,501	
		<b>Bridge Enhancements</b>						
		Allowance for Bridge Enhancements	1	LS	\$7,661,904.67	\$7,661,905	\$10,000,000	
<b>03</b>		<b>Big Water Recreation Features</b>						<b>\$3,080,000</b>
		<b>Waveshaper Actuator Enclosure Slabs</b>	<b>546</b>	<b>SF</b>				
		Side Forms for Footing Slab	240	SFCA	\$14.64	\$3,513	\$4,585	
		Reinforcement Steel	2.5	TN	\$2,152.61	\$5,441	\$7,102	
		Concrete, 4000 PSI, Direct Place, Includes Finish	40	CY	\$447.75	\$18,109	\$23,635	
		<b>Waveshaper Main Side Enclosure Walls</b>	<b>258</b>	<b>LF</b>				
		Side & End Walls for Shaft Supports	3,424	SFCA	\$14.64	\$50,122	\$65,417	
		Reinforcement Steel	8.3	TN	\$2,152.61	\$17,914	\$23,381	
		Concrete, 4000 PSI, Direct Place, Includes Finish	95	CY	\$447.75	\$42,586	\$55,582	
		<b>Waveshaper Actuator Enclosure Walls</b>	<b>116</b>	<b>LF</b>				
		Side & End Walls for Shaft Supports	2,668	SFCA	\$14.64	\$39,055	\$50,973	
		Reinforcement Steel	4.3	TN	\$2,152.61	\$9,306	\$12,146	
		Concrete, 4000 PSI, Direct Place, Includes Finish	49	CY	\$447.75	\$22,122	\$28,873	

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Budget Level (Class 3) Estimate					ESTIMATE BY:	Robert Lawson/RDD		
					REVIEW BY:	Murry Fleming/TUL		
					MODIFIED BY:	Tom Jones/CVO		
Bid Item	CSI	Description	QTY	UNIT	TOTAL UNIT COST	TOTAL COST	GRAND TOTAL	
		<b>Waveshaper Shaft Support Walls</b>						
		Drill & Dowel Existing Concrete; Epoxy Cartridge & Rebar Dowel	320	EA	\$67.83	\$21,706	\$28,329	
		Side & End Walls for Shaft Supports	1,460	SFCA	\$14.64	\$21,372	\$27,894	
		Reinforcement Steel	2.2	TN	\$2,152.61	\$4,813	\$6,282	
		Concrete, 4000 PSI, Direct Place, Includes Finish	26	CY	\$447.75	\$11,443	\$14,934	
		<b>Big Water Gate Shaft and Supports</b>						
		Non-Shrink Grout Under Steel Bearing Saddles, 1"	91	SF	\$10.83	\$986	\$1,286	
		<b>Big Water Gate Shaft and Supports</b>						
		20-inch Sch 80 Steel Pipe	224	LF	\$81.20	\$18,190	\$23,741	
		20-inch Steel Pipe, Slip-On Flange	16	EA	\$6,408.38	\$102,534	\$133,823	
		20-inch Steel Pipe, 1/2" End Closure Plate	8	EA	\$1,564.09	\$12,513	\$16,331	
		20-inch Steel Pipe, Bolt, Nut, Gasket Set	8	EA	\$1,360.56	\$10,884	\$14,206	
		20-inch Sch 80 Steel Pipe, Welded End Butt-Joint	4	EA	\$4,713.53	\$18,854	\$24,608	
		20-inch Steel Pipe, Intermediate Bearing Strap w/HDPE Sleeve	20	EA	\$932.05	\$18,641	\$24,329	
		20-inch Steel Pipe, End Wall Bearing Strap w/HDPE Sleeve	8	EA	\$1,183.81	\$9,470	\$12,360	
		Chemical Anchor w/SST Rod & Epoxy Cartridge; 1-1/4" Dia x 14" Long	56	EA	\$312.58	\$17,505	\$22,846	
		<b>Waveshaper Actuator Enclosure Cover Plates</b>	<b>414</b>	<b>SF</b>				
		Aluminum Checker Plate w/Access Hatch	414	SF	\$125.21	\$51,839	\$67,658	
		Embedded Support SST Angles w/Anchor Bars	192.0	LF	\$45.46	\$8,728	\$11,392	
		Removable Aluminum Support Channels	132	LF	\$61.13	\$8,069	\$10,532	
		Chemical Anchors, 4 per Channel	96	EA	\$215.11	\$20,650	\$26,952	
		<b>Big Water Gates</b>						
		Big Water Gate, 10' x 48'	1	EA	\$107,490.96	\$107,491	\$140,293	
		Big Water Gate, 8' x 48'	1	EA	\$85,992.77	\$85,993	\$112,234	
		Big Water Gate Hydraulic & Actuator System	2	EA	\$78,281.89	\$156,564	\$204,341	
		Direct Purchase of Obermeyer Gates & Equipment <i>Add full-height and decrease crest gates</i>	4	EA	\$360,000.00	\$1,440,000	\$1,879,428	
<b>06</b>		<b>East Bank</b>						<b>\$1,230,000</b>
		<b>Eastbank - Above Dam &amp; Gates</b>						
		Electrical Service (Drop, Xformer, Meter, Panelboards, Etc.)	1	LS	\$44,880.64	\$44,881	\$58,576	
		Pedestrian Pole Light w/Fixture, Footing, & Connections	8	EA	\$3,496.02	\$27,968	\$36,503	
		<b>Capped Stone Retaining Wall</b>	<b>198</b>	<b>LF</b>				
		Side Forms for Footing Slab	396	SFCA	\$14.64	\$5,797	\$7,566	
		Reinforcement Steel	0.6	TN	\$2,152.61	\$1,292	\$1,686	
		Concrete, 4000 PSI, Direct Place, Includes Finish	18	CY	\$447.75	\$8,060	\$10,519	
		CMU Backup for Stone Wall, 6"x8"x16" w/Grout & Reinforcing	396	SF	\$11.52	\$4,562	\$5,954	
		CMU Starter Curb for Stone Wall, 6"x4"x16" w/Grout & Reinforcing	65	SF	\$11.52	\$749	\$977	
		4-inch Perforated PVC Underdrain Piping	762	LF	\$38.89	\$29,635	\$38,679	
		4-inch PVC Underdrain Piping (@ 50' oc)	200	LF	\$17.07	\$3,414	\$4,456	
		4-inch PVC Underdrain 90 Elbow (@ 50' oc)	20	EA	\$213.52	\$4,270	\$5,574	
		Geotextile Fabric Wrap for Drainage Aggregate	914	SY	\$4.04	\$3,689	\$4,815	
		Drainage Aggregate for Underdrain Envelope	85	CY	\$44.75	\$3,804	\$4,964	
		Structural Backfill for Cover of Drainage Aggregate	203	CY	\$19.10	\$3,878	\$5,061	
		Limestone Veneer Wall w/Mortared Joints, Exterior to Appear Dry Stacked	1,273	SF	\$59.42	\$75,638	\$98,720	
		Surface Plate Limestone Wall Cap at 14" Wide, Shaped	762	LF	\$98.17	\$74,806	\$97,634	
		<b>Decorative Integral Color Concrete Beach Paving</b>	<b>3,168</b>	<b>SF</b>				
		Side Forms for Footing Slab	80	SFCA	\$14.64	\$1,171	\$1,528	
		Reinforcement Steel	7.3	TN	\$2,152.61	\$15,786	\$20,603	
		Concrete, 4000 PSI, Direct Place, Includes Finish	117	CY	\$447.75	\$52,536	\$68,568	
		Integral Concrete, Average based on 2.5 LB per Bag of Cement	1,760	LB	\$3.13	\$5,509	\$7,190	
		Control Joint, 1/4" w x 4" d	130	LF	\$9.58	\$1,246	\$1,626	
		Expansion Joint, 1/2" PJF x 12"	80	LF	\$3.84	\$307	\$401	
		Backer Rod & Sealant	80	LF	\$5.53	\$442	\$577	
		Stamped Concrete Finish	3,168	SF	\$6.93	\$21,944	\$28,640	
		<b>Integral Color Concrete Trail</b>	<b>13,291</b>	<b>SF</b>				
		Side Forms for Footing Slab	340	SFCA	\$14.64	\$4,977	\$6,496	
		Reinforcement Steel	38.5	TN	\$2,152.61	\$82,784	\$108,047	
		Concrete, 4000 PSI, Direct Place, Includes Finish	615	CY	\$447.75	\$275,514	\$359,589	
		Integral Concrete, Average based on 2.5 LB per Bag of Cement	9,230	LB	\$3.13	\$28,889	\$37,705	
		Control Joint, 1/4" w x 4" d	540	LF	\$9.58	\$5,175	\$6,754	
		<b>Eastbank - Below Dam &amp; Gates</b>						
		Pedestrian Pole Light w/Fixture, Footing, & Connections	17	EA	\$4,488.06	\$76,297	\$99,580	
		Underwater Light w/Fixture, Base, & Connections	44	EA	\$1,752.04	\$77,090	\$100,614	

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Budget Level (Class 3) Estimate					ESTIMATE BY:	Robert Lawson/RDD		
					REVIEW BY:	Murry Fleming/TUL		
					MODIFIED BY:	Tom Jones/CVO		
Bid Item	CSI	Description	QTY	UNIT	TOTAL UNIT COST	TOTAL COST	GRAND TOTAL	
<b>07</b>	<b>Island</b>							<b>\$6,030,000</b>
	<b>Island</b>							
		Pedestrian Pole Light w/Fixture, Footing, & Connections	17	EA	\$3,496.02	\$59,432	\$77,569	
		Underwater Light w/Fixture, Base, & Connections	55	EA	\$1,752.04	\$96,362	\$125,768	
	<b>Island</b>							
		Ripping Rock w/Dozer & Ripper Beam & Shanks	25,000	CY	\$20.01	\$500,322	\$653,000	
		Excavation of Loose Sand & Rock w/Dozer	25,000	CY	\$6.01	\$150,247	\$196,096	
	<b>Island</b>							
		<b>Capped Stone Retaining Wall</b>	<b>762</b>	<b>LF</b>				
		Side Forms for Footing Slab	1,524	SFCA	\$14.64	\$22,309	\$29,117	
		Reinforcement Steel	2.1	TN	\$2,152.61	\$4,520	\$5,900	
		Concrete, 4000 PSI, Direct Place, Includes Finish	71	CY	\$447.75	\$31,791	\$41,492	
		CMU Backup for Stone Wall, 6"x8"x16" w/Grout & Reinforcing	1,524	SF	\$11.52	\$17,556	\$22,913	
		CMU Starter Curb for Stone Wall, 6"x4"x16" w/Grout & Reinforcing	251	SF	\$11.52	\$2,891	\$3,774	
		4-inch Perforated PVC Underdrain Piping	762	LF	\$38.89	\$29,635	\$38,679	
		4-inch PVC Underdrain Piping (@ 50' oc)	200	LF	\$17.07	\$3,414	\$4,456	
		4-inch PVC Underdrain 90 Elbow (@ 50' oc)	20	EA	\$213.52	\$4,270	\$5,574	
		Geotextile Fabric Wrap for Drainage Aggregate	914	SY	\$4.04	\$3,689	\$4,815	
		Drainage Aggregate for Underdrain Envelope	85	CY	\$44.75	\$3,804	\$4,964	
		Structural Backfill for Cover of Drainage Aggregate	203	CY	\$19.10	\$3,878	\$5,061	
		Limestone Veneer Wall w/Mortared Joints, Exterior to Appear Dry Stacked	1,273	SF	\$59.42	\$75,638	\$98,720	
		Surface Plate Limestone Wall Cap at 14" Wide, Shaped	762	LF	\$98.17	\$74,806	\$97,634	
		<b>Decorative Integral Color Concrete Beach Paving</b>	<b>9,682</b>	<b>SF</b>				
		Side Forms for Footing Slab	250	SFCA	\$14.64	\$3,660	\$4,776	
		Reinforcement Steel	22.4	TN	\$2,152.61	\$48,244	\$62,966	
		Concrete, 4000 PSI, Direct Place, Includes Finish	359	CY	\$447.75	\$160,561	\$209,558	
		Integral Concrete, Average based on 2.5 LB per Bag of Cement	5,379	LB	\$3.13	\$16,836	\$21,974	
		Control Joint, 1/4"w x 4"d	390	LF	\$9.58	\$3,737	\$4,878	
		Expansion Joint, 1/2" PJF x 12"	250	LF	\$3.84	\$959	\$1,252	
		Backer Rod & Sealant	250	LF	\$5.53	\$1,383	\$1,805	
		Stamped Concrete Finish	9,682	SF	\$6.93	\$67,065	\$87,530	
		<b>Integral Color Concrete Trail</b>	<b>27,093</b>	<b>SF</b>				
		Side Forms for Footing Slab	680	SFCA	\$14.64	\$9,954	\$12,992	
		Reinforcement Steel	78.4	TN	\$2,152.61	\$168,752	\$220,248	
		Concrete, 4000 PSI, Direct Place, Includes Finish	1,254	CY	\$447.75	\$561,620	\$733,004	
		Integral Concrete, Average based on 2.5 LB per Bag of Cement	18,815	LB	\$3.13	\$58,890	\$76,860	
		Control Joint, 1/4"w x 4"d	1,090	LF	\$9.58	\$10,446	\$13,633	
		<b>Tree Includes Anchoring &amp; Soil Amendments</b>	<b>24</b>	<b>EA</b>				
		Tree, bagged, and burlapped	24	EA	\$1,777.83	\$42,668	\$55,688	
		Planting Mix	24	EA	\$327.83	\$7,868	\$10,269	
		<b>Landscaped Area</b>	<b>2,323</b>	<b>SF</b>				
		Landscaping; Includes Imported Soil, Plant Materials, & Amendments	2,323	SF	\$8.00	\$18,584	\$24,255	
		Geotextile Fabric Underlayment	310	SY	\$4.04	\$1,250	\$1,632	
		<b>Concrete Terrace</b>	<b>2,711</b>	<b>SF</b>				
		Side Forms for Footing Slab	70	SFCA	\$14.64	\$1,025	\$1,337	
		Wall Forms for Bench Supports at Face	410	SFCA	\$21.35	\$8,752	\$11,423	
		Reinforcement Steel	2.3	TN	\$2,152.61	\$4,969	\$6,485	
		Concrete, 4000 PSI, Direct Place, Includes Finish	37	CY	\$447.75	\$16,536	\$21,582	
		<b>Artificial Turf Area</b>	<b>3,243</b>	<b>SF</b>				
		Artificial Turf & Safety Padding Over 4" Concrete Slab w/6" Footing	3,243	SF	\$20.00	\$64,860	\$84,653	
		<b>Stacked Shale (On Concrete Grout Bedding)</b>	<b>5,552</b>	<b>SF</b>				
		Stacked Mortared Shale; Overlaps at 50%	8,328	SF	\$29.01	\$241,566	\$315,282	
		Mass Grout Fill Bedding and Mortaring	123	CY	\$168.70	\$20,814	\$27,166	
		<b>Stairs w/Landings &amp; Handrailing</b>	<b>30</b>	<b>RSR</b>				
		Cast-In Place Concrete Stairway, Elevated	30	RSR	\$1,576.02	\$47,280	\$61,709	
		Cast-In Place Concrete Stairway Safety Nosing	345	LF	\$25.39	\$8,760	\$11,433	
		Steel 3-Rail Handrailing	180	LF	\$73.14	\$13,165	\$17,182	
		<b>Obervation Deck Structure</b>	<b>3,024</b>	<b>SF</b>				
		Wood deck, Overhead Shade Structure w/Metal Roofing	3,024	SF	\$75.00	\$226,800	\$296,010	
		<b>Grouted Rock; 2' to 3' Boulders</b>	<b>39,006</b>	<b>SF</b>				
		Boulders, Delivered to project	7,314	TN	\$25.00	\$182,841	\$238,636	
		Boulders, Placement	4,334	SY	\$163.10	\$706,891	\$922,605	
		Mass Grout Fill Bedding and Mortaring	1,084	CY	\$168.70	\$182,792	\$238,572	



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Bid Item	CSI	Description	QTY	UNIT	TOTAL UNIT COST	TOTAL COST	GRAND TOTAL	
		<b>Slanted Rock Retaining Wall (Various Heights)</b>	<b>246</b>	<b>LF</b>				
		Side Forms for Footing Slab	738	SFCA	\$14.64	\$10,803	\$14,100	
		Reinforcement Steel	2.6	TN	\$2,152.61	\$5,516	\$7,199	
		Concrete, 4000 PSI, Direct Place, Includes Finish	41	CY	\$447.75	\$18,358	\$23,960	
		Slanted Stone, 2' wide, various thickness	2,214	SF	\$95.11	\$210,569	\$274,826	
		<b>Large Feature Boulders</b>	<b>362</b>	<b>EA</b>				
		Boulders, Delivered to project	679	TN	\$30.00	\$20,363	\$26,576	
		Boulders, Placement	362	SY	\$163.10	\$59,044	\$77,061	
		Mass Grout Fill Bedding and Mortaring	251	CY	\$168.70	\$42,411	\$55,352	
		<b>30" Angular Rip-Rap</b>	<b>9,386</b>	<b>SF</b>				
		Boulders, Delivered to project	1,760	TN	\$25.00	\$43,997	\$57,423	
		Boulders, Placement	1,043	SY	\$163.10	\$170,099	\$222,006	
		Mass Grout Fill Bedding and Mortaring	261	CY	\$168.70	\$43,985	\$57,408	
<b>08</b>		<b>Recreational Flume</b>						<b>\$3,450,000</b>
		<b>Recreational Flume</b>						
		Ripping Rock w/Dozer & Ripper Beam & Shanks	2,000	CY	\$20.01	\$40,026	\$52,240	
		Excavation of Loose Sand & Rock w/Dozer	2,000	CY	\$6.01	\$12,020	\$15,688	
		Imported Borrow Material; Load & Haul to Site	9,000	CY	\$3.09	\$27,776	\$36,252	
		Embankment Constructed w/Borrow Material	9,000	CY	\$6.01	\$54,089	\$70,595	
		<b>Cut-Off Walls</b>						
		Sheet Piling, Cross Channel (Running East - West)	5,840	SF	\$71.63	\$418,303	\$545,951	
		Sheet Piling, Centered On Island (Running North - South)	5,904	SF	\$71.63	\$422,887	\$551,934	
		<b>Recreational Flume</b>						
		<b>Recreational Flume (Includes the Listed Items)</b>	<b>1,000</b>	<b>LF</b>				
		Geotextile Fabric Underlayment	6,700	SY	\$4.04	\$27,044	\$35,297	
		Granular Fill (Under Faux Rock and Concrete Slab)	1,400	CY	\$65.84	\$92,181	\$120,311	
		Underdrain System; 8" Perforated Piping	2,600	LF	\$28.67	\$74,551	\$97,301	
		Underdrain System; 8" Piping Fittings (Elbows or Tees)	44	EA	\$80.46	\$3,540	\$4,621	
		Extra Geotextile Fabric for Underdrain Trench	2,800	SY	\$4.04	\$11,302	\$14,751	
		Extra Granular Fill for Underdrain Trench	580	CY	\$65.84	\$38,189	\$49,843	
		Reinforcement Steel for Concrete Slab	15.0	TN	\$2,152.61	\$32,289	\$42,142	
		Concrete Slab, 4000 PSI, Direct Place, Includes Finish	300	CY	\$447.75	\$134,326	\$175,317	
		Reinforcement Steel for Faux Rock Covered Area	26.3	TN	\$2,152.61	\$56,506	\$73,749	
		Faux Rock Concrete, 4000 PSI, Direct Place, Includes Finish	700	CY	\$447.75	\$313,428	\$409,073	
		Faux Rock , Additional for Coloring & Sculpturing	3,889	SY	\$30.00	\$116,667	\$152,268	
		Large Faux Rock Boulders	2,700	SF	\$30.00	\$81,000	\$105,718	
		Mass Grout Fill Bedding for Large Faux Boulders	80	CY	\$168.70	\$13,496	\$17,615	
		Boulders, Delivered to project	3,563	TN	\$25.00	\$89,063	\$116,241	
		Boulders, Placement	2,111	SY	\$163.10	\$344,330	\$449,405	
		Mass Grout Fill Bedding and Mortaring	528	CY	\$168.70	\$89,039	\$116,210	
		Pool Blocks, Eddy Blocks, Crest Blocks Allowance	1	LS	\$100,000.00	\$100,000	\$130,516	
		<b>Recreational Flume</b>						
		Waveshaper Gate, 4' x 20'	2	EA	\$26,872.74	\$53,745	\$70,146	
		<b>SUBTOTAL (ROUNDED)</b>				<b>\$32,180,000</b>	<b>\$41,990,000</b>	<b>\$41,990,000</b>
		<b>Mobilization</b>						
		Mobilization (Includes Insurance & Bonds)	1	LS	\$1,000,000.00	\$1,000,000		
		<b>SUBTOTAL (ROUNDED)</b>				<b>\$33,180,000</b>		
		<b>CONTINGENCY</b>	<b>15.0%</b>			<b>\$4,980,000</b>		
		<b>CONSTRUCTION TOTAL W/O SALES TAX</b>				<b>\$38,160,000</b>		
		<b>SALES TAX</b>	<b>0.0%</b>			<b>\$0</b>		
		<b>CONSTRUCTION TOTAL INCLUDING SALES TAX (ROUNDED)</b>				<b>\$38,160,000</b>		
		<b>ESCALATION FROM 2012 TO 2015</b>	<b>10.00%</b>			<b>\$3,820,000</b>		
		<b>CONSTRUCTION TOTAL WITH SALES TAX AT MIDPOINT (ROUNDED)</b>				<b>\$42,000,000</b>		
		(Markup Factor)					1.31	



Project: South Tulsa/Jenks Estimator: Jones T  
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 Design Stage: Schematic Design Estimate Class: Class 3

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
<b>J00</b>		<b>Low Water Dam &amp; Pedestrian Bridge</b>			
	001	Land Acquisition	1.00 LS	5,800,000.01 /LS	5,800,000
	010	Low Water Dam	1,858.00 LF	12,045.20 /LF	22,379,978
	020	Pedestrian Bridges	1.00 EA	3,567,186.96 /EA	3,567,187
	060	Structures	1.00 EA	119,558.06 /EA	119,558
	080	Retaining Walls	1,000.00 LF	2,577.38 /LF	2,577,381
	110	Utilities	1.00 LS	254,060.93 /LS	254,061
		<b>J00 Low Water Dam &amp; Pedestrian Bridge</b>	<b>1,858.00 LF</b>	<b>18,675.01 /LF</b>	<b>34,698,165</b>
<b>J01</b>		<b>West Bank Public Access</b>			
	005	Overall Site Grading	783,285.00 SF	0.24 /SF	191,021
	020	Pedestrian Bridges	2.00 EA	53,843.27 /EA	107,687
	030	Paths/Trails	8,022.00 LF	99.40 /LF	797,362
	040	Roads	49,189.00 SF	6.56 /SF	322,483
	050	Parking Lots	51,179.00 SF	5.60 /SF	286,355
	060	Structures	3.00 EA	157,021.72 /EA	471,065
	070	Special Features	1.00 LS	2,269,437.46 /LS	2,269,437
	080	Retaining Walls	1,334.00 LF	945.74 /LF	1,261,612
	090	Landscaping	420,088.00 SF	2.46 /SF	1,034,999
	100	Bank Stabilization	2,000.00 LF	208.03 /LF	416,049
	110	Utilities	1.00 LS	1,008,326.23 /LS	1,008,326
		<b>J01 West Bank Public Access</b>	<b>783,285.00 SF</b>	<b>10.43 /SF</b>	<b>8,166,397</b>
<b>J02</b>		<b>East Bank Public Access</b>			
	001	Land Acquisition	1.00 LS	2,500,000.01 /LS	2,500,000
	005	Overall Site Grading	648,853.00 SF	1.12 /SF	726,348
	030	Paths/Trails	6,980.00 LF	76.75 /LF	535,729
	040	Roads	11,040.00 SF	10.10 /SF	111,549
	050	Parking Lots	73,940.00 SF	5.51 /SF	407,576
	060	Structures	19.00 EA	36,986.14 /EA	702,737
	070	Special Features	1.00 LS	2,577,853.37 /LS	2,577,853
	090	Landscaping	283,279.00 SF	2.94 /SF	833,582
	100	Bank Stabilization	1,900.00 LF	208.03 /LF	395,253
	110	Utilities	1.00 LS	563,537.13 /LS	563,537
		<b>J02 East Bank Public Access</b>	<b>648,853.00 SF</b>	<b>14.42 /SF</b>	<b>9,354,164</b>
<b>J03</b>		<b>Vensel Creek Public Access</b>			
	005	Overall Site Grading	428,466.00 SF	0.24 /SF	104,491



Project: **South Tulsa/Jenks** Estimator: Jones T  
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 Design Stage: Schematic Design Estimate Class: Class 3

**Estimate Summary**

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
	030	Paths/Trails	4,186.00 LF	70.00 /LF	292,999
	040	Roads	16,721.00 SF	8.88 /SF	148,528
	050	Parking Lots	18,118.00 SF	5.51 /SF	99,885
	060	Structures	3.00 EA	46,334.28 /EA	139,003
	070	Special Features	1.00 LS	1,001,416.89 /LS	1,001,417
	080	Retaining Walls	479.00 LF	2,923.80 /LF	1,400,499
	090	Landscaping	118,559.00 SF	1.94 /SF	229,446
	100	Bank Stabilization	1,200.00 LF	208.67 /LF	250,408
	110	Utilities	1.00 LS	551,318.22 /LS	551,318
		<b>J03 Vensel Creek Public Access</b>	<b>428,466.00 SF</b>	<b>9.84 /SF</b>	<b>4,217,994</b>

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	10,222,248		
Material	16,250,541		
Subcontract	18,593,642		
Equipment	3,070,289		
Other	8,300,000		
<b>Construction Total w/ Land</b>	<b>56,436,720</b>	<b>56,436,720</b>	



Project: **South Tulsa/Jenks**  
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 Design Stage: Schematic Design

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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total			
<b>J00</b>			<b>Low Water Dam &amp; Pedestrian Bridge</b>													
	01.0		General Conditions													
		01-10	Land Acquisition													
			Land Acquisition - Low Water Dam							0	/LS	0	5,800,000			
			01-10 Land Acquisition							0	/LS	0	5,800,000			
			01.0 General Conditions							0	/LS	0	5,800,000			
	03.0		Concrete Work													
		03-10	Cast-In-Place Concrete Work													
			Concrete Wing Walls @ Dam Ends		1,943.7	83,126	100,273	20,222			/CY	203,622	295,922			
			Pier Support Columns for Pedestrian Bridge		1,686.2	72,999	50,729	9,705			/CY	133,433	191,302			
			Rock Bolts - 1.75" dia x 12' Bonded		422.3	18,790	51,480		11,190		/EA	81,460	119,975			
			Dental Concrete Allowance		1,940.3	74,506	181,529	20,640			/CY	276,675	407,801			
			Concrete Gravity Dam		56,021.7	2,356,509	4,654,766	953,795			/CY	7,965,069	11,702,136			
			03-10 Cast-In-Place Concrete Work		62,014.1	2,605,930	5,038,777	1,004,362	11,190		/CY	8,660,259	12,717,137			
			03.0 Concrete Work		62,014.1	2,605,930	5,038,777	1,004,362	11,190		/CY	8,660,259	12,717,137			
	13.0		Special Construction													
		13-34	Fabricated Engineered Structures													
			20x40 Dam Control Building					80,000			/EA	80,000	119,558			
			13-34 Fabricated Engineered Structures					80,000			/EA	80,000	119,558			
			13.0 Special Construction					80,000			/LS	80,000	119,558			
	26.0		Electrical Work													
		26-10	Site Electrical													
			Site Lighting					170,000			/LS	170,000	254,061			
			26-10 Site Electrical					170,000			/LS	170,000	254,061			
			26.0 Electrical Work					170,000			/LS	170,000	254,061			
	31.0		Site/Civil													
		31-10	Temporary Works													
			Coffer Dam		2,169.4	97,313	5,000	270,000	177,920		/lf	550,233	803,147			
			31-10 Temporary Works		2,169.4	97,313	5,000	270,000	177,920		/LS	550,233	803,147			
		31-15	Site Preparation													
			Foundation Cleanup		92.9	3,956			7,945		/SY	11,901	16,974			
			31-15 Site Preparation		92.9	3,956			7,945		/LS	11,901	16,974			
		31-20	Earthworks, Site													
			Dewatering		12,792.0	506,803	7,950	4,500	509,206		/DAY	1,028,459	1,453,499			
			Mass Common Excavation		790.5	32,840	398		146,928		/CY	180,167	259,295			
			Mass Rock Excavation		1,593.4	68,876	39,242		125,327		/CY	233,445	336,053			
			31-20 Earthworks, Site		15,175.9	608,519	47,591	4,500	781,462		/LS	1,442,071	2,048,847			
		31-30	Site Specialties													
			Downstream Grouted Rock Fill		9,101.0	377,429	728,083		137,543		/CY	1,243,055	1,819,610			
			31-30 Site Specialties		9,101.0	377,429	728,083		137,543		/LS	1,243,055	1,819,610			
			31.0 Site/Civil		26,539.2	1,087,216	780,673	274,500	1,104,870		/LS	3,247,260	4,688,579			
	32.0		Exterior Improvements													
		32-32	Retaining Walls													
			Retaining Wall - Sea Wall 15' Ht.		5,610.8	257,539	190,977		63,308		/LF	511,824	734,011			
			Retaining Wall - Sea Wall 30' Ht.		12,512.5	581,133	473,032		177,819		/LF	1,231,985	1,770,895			
			32-32 Retaining Walls		18,123.3	838,672	664,010		241,128		/LF	1,743,809	2,504,906			
		32-34	Fabricated Bridges													
			Pedestrian Bridge @ Low Dam Crossing		4,138.5	222,615	266,579	1,895,160	18,097		/SF	2,402,450	3,567,187			
			32-34 Fabricated Bridges		4,138.5	222,615	266,579	1,895,160	18,097		/EA	2,402,450	3,567,187			
			32.0 Exterior Improvements		22,261.8	1,061,286	930,588	1,895,160	259,225		/LS	4,146,259	6,072,093			
	35.0		Water and Marine Construction Equipment													
		35-10	Water Control Gates													
			Obermeyer Gates					3,376,928			/EA	3,376,928	5,046,738			
			35-10 Water Control Gates					3,376,928			/EA	3,376,928	5,046,738			
			35.0 Water and Marine Construction Equipment					3,376,928			/LS	3,376,928	5,046,738			
			<b>J00 Low Water Dam &amp; Pedestrian Bridge</b>		<b>1,858.00</b>	<b>LF</b>	<b>110,815.2</b>	<b>4,754,433</b>	<b>6,750,038</b>	<b>6,800,950</b>	<b>1,375,285</b>	<b>0</b>	<b>10,592.41</b>	<b>LF</b>	<b>19,680,706</b>	<b>34,698,165</b>



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>J01</b>			<b>West Bank Public Access</b>										
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures					90,000			/EA	90,000	139,003
			30x50 Steel Shelter w/ Stone Columns					215,000			/EA	215,000	332,062
			20x30 Restroom Structure					305,000			/EA	305,000	471,065
			13-34 Fabricated Engineered Structures					305,000			/LS	305,000	471,065
	26.0		Electrical Work										
		26-10	Site Electrical					158,000			/LS	158,000	244,027
			Electrical Service					360,000			/LS	360,000	556,011
			Site Lighting					518,000			/LS	518,000	800,039
			26-10 Site Electrical					518,000			/LS	518,000	800,039
			26.0 Electrical Work					518,000			/LS	518,000	800,039
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		1,160.4	54,389			75,647		/SY	130,037	191,021
			31-00 Site/Civil		1,160.4	54,389			75,647		/LS	130,037	191,021
		31-30	Site Specialties										
			Bank Stabilization		1,404.0	62,691	160,505		50,483		/CY	273,678	416,049
			31-30 Site Specialties		1,404.0	62,691	160,505		50,483		/LS	273,678	416,049
			31.0 Site/Civil		2,564.5	117,080	160,505		126,130		/LS	403,715	607,071
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			New 6" Thick, Asphalt Entry Road		201.3	8,619	118,955		5,723		/SY	133,298	206,948
			New 6" Thick, Asphalt Parking Lot		237.8	10,185	140,567		6,763		/SY	157,515	244,546
			32-12 Flexible Paving		439.1	18,804	259,522		12,486		/SF	290,812	451,494
		32-13	Rigid Paving										
			New 6" Thick, 06' Wide Concrete ADA Ramp		907.7	44,375	34,596		7,442		/SF	86,413	128,311
			New 6" Thick, Concrete Emergency Boat Ramp		600.7	26,630	49,138		571		/SY	76,339	115,535
			32-13 Rigid Paving		1,508.4	71,005	83,734		8,013		/SF	162,752	243,846
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 05' Wide Concrete Sidewalk		99.0	4,252	4,508		53		/LF	8,812	13,167
			New 4" Thick, 08' Wide Concrete Trail		216.4	9,297	9,855		115		/LF	19,267	28,788
			New 4" Thick, 10' Wide Concrete Trail		441.0	18,945	20,084		235		/LF	39,264	58,666
			New 4" Thick, 12' Wide Concrete Trail		1,886.7	81,052	85,923		1,006		/LF	167,980	250,989
			New 4" Thick, 20' Wide Concrete Trail		3,350.8	143,947	152,598		1,786		/LF	298,330	445,751
			Concrete Dock		1,054.7	50,452	32,023		5,643		/SF	88,118	130,204
			Splash Pad with Plaza Area & 4 Tables		189.9	8,242	4,489		53		/SF	12,783	18,801
			New 4" Thick, Concrete Stamped & Colored		756.8	32,851	17,891		209		/SF	50,951	74,936
			New 4" Thick, Concrete w/ Safety Surface		932.5	40,628	167,915		448		/SF	208,990	321,043
			Parking Lot Curb and Gutter		367.6	16,646	11,510		115		/LF	28,272	41,809
			32-16 Curbs, Gutters, Sidewalks, and Driveways		9,295.3	406,312	506,795		9,662		/SF	922,769	1,384,155
		32-32	Retaining Walls										
			Mass Common Excavation		120.5	5,055	90		20,989		/CY	26,135	38,897
			Retaining Wall - 08" Concrete w/ Seating (2' HT)		249.4	12,115	7,960		1,840		/LF	21,915	32,419
			Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)		1,226.2	60,899	54,527		10,027		/LF	125,453	186,837
			Retaining Wall - 12" Concrete w/ Stone Railing (4' HT)		6,070.0	300,431	232,500		50,340		/LF	583,271	865,935
			Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)		768.4	37,915	28,864		6,520		/LF	73,298	108,785
			New 8" Thick, Concrete Steps w/ Handrail & Stone Veneer		130.1	6,500	11,877		619		/EA	18,996	28,739
			32-32 Retaining Walls		8,564.6	422,915	335,817		90,335		/LF	849,067	1,261,612
		32-33	Site Furnishings										
			Overlook w/ Shade Structure					528,650			/SF	528,650	816,487
			Steel Powdercoated Arbor Structure					109,802			/SF	109,802	169,587
			Playground and Splash Pad Equipment					395,000			/LS	395,000	610,068
			32-33 Site Furnishings					1,033,452			/LS	1,033,452	1,596,142
		32-34	Fabricated Bridges										
			20' Long, 12' Wide Concrete Bridge		552.9	28,286	38,520		4,833		/LF	71,639	107,687



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			32-34 Fabricated Bridges		552.9	28,286	38,520		4,833		/EA	71,639	107,687
		32-92	Turf and Grasses					48,000			/EA	48,000	74,135
			Large Shade Tree								/SF	422,172	637,414
			Landscape - U3 Bermuda Sod		3,709.2	157,596	261,020		3,556		/SF	11,178	17,264
			Landscape - Extensive					11,178			/SF	198,246	306,186
			Landscape - Light					198,246			/SF	679,596	1,034,999
			32-92 Turf and Grasses		3,709.2	157,596	261,020	257,424	3,556		/SF	4,010,088	6,079,935
			32.0 Exterior Improvements		24,069.4	1,104,918	1,485,408	1,290,876	128,886		/LS		
		33.0	Buried Piping										
		33-11	Water Utility Distribuiton Piping										
			3" PVC Water		328.0	15,612	4,875		8,437		/LF	28,923	42,481
			33-11 Water Utility Distribuiton Piping		328.0	15,612	4,875		8,437		/LF	28,923	42,481
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer		1,244.9	59,350	24,631		28,597		/LF	112,578	165,807
			33-31 Sanitary Utility Sewerage Piping		1,244.9	59,350	24,631		28,597		/LF	112,578	165,807
			33.0 Buried Piping		1,572.9	74,962	29,506		37,034		/LF	141,501	208,288
			<b>J01 West Bank Public Access</b>	<b>783,285.00 SF</b>	<b>28,206.8</b>	<b>1,296,960</b>	<b>1,675,419</b>	<b>2,113,876</b>	<b>292,049</b>		<b>6.87 /SF</b>	<b>5,378,304</b>	<b>8,166,397</b>



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>J02</b>			<b>East Bank Public Access</b>										
	01.0		General Conditions										
		01-10	Land Acquisition										
			Land Acquisition - East Bank							0	/LS	0	2,500,000
			01-10 Land Acquisition							0	/LS	0	2,500,000
			01.0 General Conditions							0	/LS	0	2,500,000
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			10x10 Steel Shelter w/ Stone Columns					160,000			/EA	160,000	247,116
			20x30 Restroom Structure					215,000			/EA	215,000	332,062
			36x12 Cantilevered Shade Structure					80,000			/EA	80,000	123,558
			13-34 Fabricated Engineered Structures					455,000			/EA	455,000	702,737
			13.0 Special Construction					455,000			/LS	455,000	702,737
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					25,400			/LS	25,400	39,230
			Site Lighting					300,000			/LS	300,000	463,343
			26-10 Site Electrical					325,400			/LS	325,400	502,572
			26.0 Electrical Work					325,400			/LS	325,400	502,572
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		1,561.3	73,177	300,000		101,778		/SY	474,955	726,348
			31-00 Site/Civil		1,561.3	73,177	300,000		101,778		/LS	474,955	726,348
		31-30	Site Specialties										
			Bank Stabilization		1,333.9	59,557	152,482		47,959		/CY	259,998	395,253
			31-30 Site Specialties		1,333.9	59,557	152,482		47,959		/LS	259,998	395,253
			31.0 Site/Civil		2,895.1	132,734	452,482		149,737		/LS	734,953	1,121,601
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			New 6" Thick, Asphalt Entry Road		56.8	2,432	33,561		1,615		/SY	37,608	58,387
			New 6" Thick, Asphalt Parking Lot		353.5	15,140	208,951		10,053		/SY	234,144	363,516
			32-12 Flexible Paving		410.3	17,571	242,513		11,668		/SF	271,752	421,903
		32-13	Rigid Paving										
			New 8" Thick, Boat Ramp		296.4	13,109	21,873		222		/SF	35,204	53,162
			32-13 Rigid Paving		296.4	13,109	21,873		222		/SF	35,204	53,162
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 06' Wide Concrete Sidewalk		339.5	14,586	15,463		181		/LF	30,230	45,168
			New 4" Thick, 06' Wide Concrete Sidewalk Colored		471.4	20,462	11,144		130		/SF	31,736	46,676
			New 4" Thick, 08' Wide Concrete Trail		184.5	7,925	8,402		98		/LF	16,425	24,542
			New 4" Thick, 10' Wide Concrete Trail		452.9	19,457	20,626		241		/LF	40,325	60,252
			New 4" Thick, 12' Wide Concrete Trail		2,406.0	103,358	109,570		1,282		/LF	214,211	320,064
			New 4" Thick, 16' Wide Concrete Trail		325.0	13,963	14,802		173		/LF	28,938	43,238
			New 4" Thick, 20' Wide Concrete Trail		319.2	13,713	14,538		170		/LF	28,421	42,466
			New 4" Thick, Concrete Stamped & Colored		201.7	8,758	4,770		56		/SF	13,583	19,977
			New 4" Thick, Concrete w/ Safety Surface		287.7	12,533	51,800		138		/SF	64,471	99,038
			Parking Lot Curb and Gutter		387.3	17,543	12,130		121		/LF	29,794	44,061
			32-16 Curbs, Gutters, Sidewalks, and Driveways		5,375.3	232,299	263,244		2,592		/SF	498,135	745,481
		32-17	Paving Specialties										
			New 6" Thick, Colored Shotcrete Landing		454.6	18,924	17,952		3,094		/SF	39,970	59,603
			Cascading Waterfall w/ 3 Pools		228.3	9,508	10,827	20,000	1,562		/EA	41,896	63,674
			32-17 Paving Specialties		682.9	28,432	28,779	20,000	4,656		/SF	81,867	123,277
		32-33	Site Furnishings										
			Site Amenities		16.0	591	3,720				/EA	4,311	6,658
			Playground Equipment/Hillside Slide/Climbing Wall					345,000			/LS	345,000	532,844
			Fountain/Splash Pad/Waterfall					330,000			/LS	330,000	509,677
			Amphitheater					475,000			/LS	475,000	733,626
			Fishing Overlook					280,000			/LS	280,000	432,453



Project: **South Tulsa/Jenks**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			Shade Sail		160.0	7,783	40,000				/EA	47,783	73,626
			32-33 Site Furnishings		176.0	8,373	43,720	1,430,000			/LS	1,482,093	2,288,885
		32-92	Turf and Grasses										
			Large Shade Tree					120,000			/EA	120,000	185,337
			Landscape - U3 Bermuda Sod		2,512.3	106,742	176,792		2,409		/SF	285,942	431,728
			Landscape - Extensive					6,963			/SF	6,963	10,754
			Landscape - Light					133,225			/SF	133,225	205,763
			32-92 Turf and Grasses		2,512.3	106,742	176,792	260,188	2,409		/SF	546,130	833,582
			32.0 Exterior Improvements		9,453.3	406,525	776,920	1,710,188	21,548		/LS	2,915,181	4,466,290
		33.0	Buried Piping										
		33-11	Water Utility Distribuion Piping										
			3" PVC Water		158.7	7,514	2,725		4,918		/LF	15,158	22,329
			33-11 Water Utility Distribuion Piping		158.7	7,514	2,725		4,918		/LF	15,158	22,329
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer		144.9	7,052	15,030		3,397		/LF	25,479	38,635
			33-31 Sanitary Utility Sewerage Piping		144.9	7,052	15,030		3,397		/LF	25,479	38,635
			33.0 Buried Piping		303.6	14,567	17,755		8,315		/LF	40,637	60,965
			<b>J02 East Bank Public Access</b>	<b>648,853.00 SF</b>	<b>12,652.0</b>	<b>553,826</b>	<b>1,247,157</b>	<b>2,490,588</b>	<b>179,599</b>	<b>0</b>	<b>6.89 /SF</b>	<b>4,471,170</b>	<b>9,354,164</b>





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**Summary Detail**

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<b>J03</b>			<b>Vensel Creek Public Access</b>										
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures					90,000			/EA	90,000	139,003
			30x50 Steel Shelter w/ Stone Columns					90,000			/EA	90,000	139,003
			13-34 Fabricated Engineered Structures					90,000			/LS	90,000	139,003
	26.0		13.0 Special Construction										
			Electrical Work										
		26-10	Site Electrical										
			Electrical Service					150,000			/LS	150,000	231,671
			Site Lighting					180,000			/LS	180,000	278,006
			26-10 Site Electrical					330,000			/LS	330,000	509,677
			26.0 Electrical Work					330,000			/LS	330,000	509,677
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading	634.8	29,752				41,380		/SY	71,131	104,491
			31-00 Site/Civil	634.8	29,752				41,380		/LS	71,131	104,491
		31-30	Site Specialties										
			Bank Stabilization	845.1	37,732	96,603			30,384		/CY	164,719	250,408
			31-30 Site Specialties	845.1	37,732	96,603			30,384		/LS	164,719	250,408
			31.0 Site/Civil	1,479.8	67,483	96,603			71,764		/LS	235,851	354,899
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			New 6" Thick, Asphalt Entry Road	86.0	3,683	50,832			2,446		/SY	56,960	88,433
			New 6" Thick, Asphalt Parking Lot	86.6	3,709	51,187			2,463		/SY	57,359	89,051
			32-12 Flexible Paving	172.6	7,392	102,019			4,908		/SF	114,319	177,484
		32-13	Rigid Paving										
			New 8" Thick, Boat Ramp	325.9	14,428	25,088			243		/SF	39,759	60,096
			32-13 Rigid Paving	325.9	14,428	25,088			243		/SF	39,759	60,096
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 08' Wide Concrete Trail	105.7	4,541	4,814			56		/LF	9,412	14,063
			New 4" Thick, 10' Wide Concrete Trail	1,738.6	74,689	79,178			927		/LF	154,794	231,286
			New 4" Thick, 12' Wide Concrete Trail	358.2	15,388	16,312			191		/LF	31,891	47,650
			Parking Lot Curb and Gutter	95.2	4,313	2,982			30		/LF	7,325	10,833
			32-16 Curbs, Gutters, Sidewalks, and Driveways	2,297.8	98,932	103,287			1,204		/SF	203,423	303,832
		32-17	Paving Specialties										
			8" Gunite Concrete Channel Lined w/ Boulders	147.5	6,156	11,743			1,304		/SF	19,203	29,072
			New 8" Thick, Colored Shotcrete Landing	893.0	37,187	42,346			6,109		/SF	85,642	128,226
			32-17 Paving Specialties	1,040.6	43,343	54,089			7,413		/SF	104,845	157,298
		32-32	Retaining Walls										
			Mass Common Excavation	305.3	12,883	271			51,289		/CY	64,443	95,879
			Retaining Wall - 12" Concrete w/ Stone Railing (21' HT)	6,333.1	308,571	213,647			57,298		/LF	579,516	858,463
			Retaining Wall - 12" Concrete w/ Stone Railing (21' HT) Battered to 12	3,297.3	161,059	110,991			29,175		/LF	301,224	446,156
			32-32 Retaining Walls	9,935.7	482,513	324,909			137,761		/LF	945,183	1,400,499
		32-33	Site Furnishings										
			Lighthouse Feature w/ Decorative Concrete Plaza					285,000			/LS	285,000	440,176
			32-33 Site Furnishings					285,000			/LS	285,000	440,176
		32-50	Site Improvements										
			Floating Dock	570.0	27,974	63,840			7,529		/LF	99,343	150,913
			Floating Dock - Gangway Ramp	168.7	6,489	155,847					/LF	162,336	253,030
			32-50 Site Improvements	738.7	34,464	219,687			7,529		/LS	261,679	403,943
		32-92	Turf and Grasses										
			Large Shade Tree					30,000			/EA	30,000	46,334
			Landscape - Light					118,559			/SF	118,559	183,112
			32-92 Turf and Grasses					148,559			/SF	148,559	229,446
			32.0 Exterior Improvements	14,511.2	681,072	829,078		433,559	159,058		/LS	2,102,767	3,172,774
	33.0		Buried Piping										
		33-11	Water Utility Distribuiton Piping										



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			3" PVC Water		318.7	15,121	4,642		8,583		/LF	28,347	41,641
			33-11 Water Utility Distribuion Piping		318.7	15,121	4,642		8,583		/LF	28,347	41,641
			33.0 Buried Piping		318.7	15,121	4,642		8,583		/LF	28,347	41,641
			<b>J03 Vensel Creek Public Access</b>	<b>428,466.00 SF</b>	<b>16,309.7</b>	<b>763,677</b>	<b>930,324</b>	<b>853,559</b>	<b>239,405</b>		<b>6.51 /SF</b>	<b>2,786,964</b>	<b>4,217,994</b>



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**Summary Detail**

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	7,368,895		
Material	10,602,939		
Subcontract	12,258,973		
Equipment	2,086,338		
Other			
<b>Total Before Markups</b>	<b>32,317,145</b>	<b>32,317,145</b>	
Estimate Contingency Dam	2,952,106		15.000 %
Estimate Contingency Parks	2,527,288		20.000 %
	<b>5,479,394</b>	<b>37,796,539</b>	
Tulsa Location Fac. Site	(1,181,904)		(12.500) %
<b>Adjusted Raw Total</b>	<b>(1,181,904)</b>	<b>36,614,635</b>	
General Conditions	1,830,732		5.000 %
<b>Total General Conditions</b>	<b>1,830,732</b>	<b>38,445,367</b>	
Material Sales & Use Tax - %	212,059		2.000 %
Construction Equip Tax - %	177,547		8.510 %
<b>Total Taxes</b>	<b>389,606</b>	<b>38,834,973</b>	
Project Staff & Home Office OH	3,883,497		10.000 %
Profit on Previous Subtotal	1,941,749		5.000 %
Mobilization/Demobilization	1,693,102		3.000 %
Blder's Risk & Gen Liab Ins -%	564,367		1.000 %
Flood Insurance	564,367		1.000 %
Payment & Performance Bonds	654,666		1.160 %
<b>Total Bonds and Insurances</b>	<b>9,301,748</b>	<b>48,136,721</b>	
<b>Construction Total</b>		<b>48,136,721</b>	
Land Acquisition - Dam	5,800,000		
Land Acquisition - East Bank	2,500,000		
<b>Construction Total w/ Land</b>	<b>8,300,000</b>	<b>56,436,721</b>	



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<b>J00</b>				<b>Low Water Dam &amp; Pedestrian Bridge</b>										
		001		Land Acquisition										
		01.0		General Conditions										
			01-10	Land Acquisition										
				Land Acquisition - Low Water Dam										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	5,800,000
				Land Acquisition - Low Water Dam	1.00 LS				0	0	0	0.01 /LS	0	5,800,000
				01-10 Land Acquisition	1.00 LS				0	0	0	0.01 /LS	0	5,800,000
				01.0 General Conditions	1.00 LS				0	0	0	0.01 /LS	0	5,800,000
				001 Land Acquisition	1.00 LS				0	0	0	0.01 /LS	0	5,800,000
		010		Low Water Dam										
		03.0		Concrete Work										
			03-10	Cast-In-Place Concrete Work										
				Concrete Wing Walls @ Dam Ends										
				Concrete pumping, subcontract, all inclusive price	388.89 cy		-	-	4,667	-	-	12.00 /cy	4,667	6,974
				Forms in place, structural walls, > 16' high, hand set	7,000.00 sf	1,190.0	53,759	9,450	-	-	-	9.03 /sf	63,209	87,934
				Forms in place, wall bulkheads	210.00 sf	63.0	2,846	263	-	-	-	14.80 /sf	3,109	4,295
				Reinforcing in place, A615 Gr 60, priced per lbs.	77,777.78 lb		-	38,889	15,556	-	-	0.70 /lb	54,444	82,144
				Concrete, ready mix, 4000 psi	388.89 CY		-	48,611	-	-	-	125.00 /CY	48,611	73,620
				Add for concrete waste, 4000 psi	19.44 cy		-	2,431	-	-	-	125.00 /cy	2,431	3,681
				Placing concrete, concrete pump, for structural wall >24" thick	388.89 cy	291.7	11,200	-	-	-	-	28.80 /cy	11,200	15,338
				Patch & plug tieholes	7,000.00 sf	105.0	4,032	140	-	-	-	0.60 /sf	4,172	5,734
				Sack rub	7,000.00 sf	280.0	10,752	210	-	-	-	1.57 /sf	10,962	15,042
				Curing, membrane spray	7,000.00 sf	14.0	538	280	-	-	-	0.12 /sf	818	1,160
				Concrete Wing Walls @ Dam Ends	388.89 CY	1,943.7	83,126	100,273	20,222			523.60 /CY	203,622	295,922
				Pier Support Columns for Pedestrian Bridge										
				Concrete pumping, subcontract, all inclusive price	156.53 cy		-	-	1,878	-	-	12.00 /cy	1,878	2,807
				Forms in place, columns, round, > 18" dia.	6,762.28 sf	1,217.2	54,989	10,143	-	-	-	9.63 /sf	65,132	90,668
				Reinforcing in place, A615 Gr 60, priced per lbs.	39,133.55 lb		-	19,567	7,827	-	-	0.70 /lb	27,393	41,330
				Concrete, ready mix, 4000 psi	156.53 CY		-	19,567	-	-	-	125.00 /CY	19,567	29,633
				Add for concrete waste, 4000 psi	7.83 cy		-	978	-	-	-	125.00 /cy	978	1,482
				Placing concrete, concrete pump	156.53 cy	117.4	4,508	-	-	-	-	28.80 /cy	4,508	6,174
				Stone rub	6,762.28 sf	338.1	12,983	203	-	-	-	1.95 /sf	13,186	18,087
				Curing, membrane spray	6,762.28 sf	13.5	519	270	-	-	-	0.12 /sf	790	1,121
				Pier Support Columns for Pedestrian Bridge	156.53 CY	1,686.2	72,999	50,729	9,705			852.44 /CY	133,433	191,302
				Rock Bolts - 1.75" dia x 12' Bonded										
				Rock bolts, super high-tensile, 1.75" dia, 12' L, ASTM A-108	143.00 ea	95.4	4,685	51,480	-	-	-	392.76 /ea	56,165	84,381
				Rock bolts, drill hole, 1.75" dia, 12' long, for 1" bolt	143.00 ea	326.9	14,106	-	-	-	11,190	176.89 /ea	25,296	35,594
				Rock Bolts - 1.75" dia x 12' Bonded	143.00 EA	422.3	18,790	51,480			11,190	569.65 /EA	81,460	119,975
				Dental Concrete Allowance										
				Fine grade, for slab on grade, by hand	92,900.00 sf	650.3	24,971	929	-	-	-	0.28 /sf	25,900	35,604
				Concrete pumping, subcontract, all inclusive price	1,720.00 cy		-	-	20,640	-	-	12.00 /cy	20,640	30,846
				Concrete, ready mix, 2000 psi	1,720.00 CY		-	180,600	-	-	-	105.00 /CY	180,600	273,514
				Placing concrete, concrete pump	1,720.00 cy	1,290.0	49,535	-	-	-	-	28.80 /cy	49,535	67,837
				Dental Concrete Allowance	1,720.00 CY	1,940.3	74,506	181,529	20,640			160.86 /CY	276,675	407,801
				Concrete Gravity Dam										
				Concrete pumping, subcontract, all inclusive price	24,146.70 cy		-	-	289,760	-	-	12.00 /cy	289,760	433,040
				Concrete Cooling	24,146.70 cy		-	-	181,100	-	-	7.50 /cy	181,100	270,650
				Base slab edge forms, 24" to 36"	31,337.00 sf	7,834.3	353,920	39,171	-	-	-	12.54 /sf	393,091	544,009
				Base slab bulkhead form	58,435.00 sf	17,530.5	791,958	73,044	-	-	-	14.80 /sf	865,002	1,195,190
				Waterstop, PVC, ribbed, w/center bulb, 3/8" thick, 9" wide	2,114.00 lf	131.1	6,375	9,471	-	-	-	7.50 /lf	15,846	23,074
				Reinforcing in place, A615 Gr 60, priced per lbs.	2,414,670.00 lb		-	1,207,335	482,934	-	-	0.70 /lb	1,690,269	2,550,213
				Concrete, ready mix, 4000 psi	24,146.70 CY		-	3,018,338	-	-	-	125.00 /CY	3,018,338	4,571,200
				Add for concrete waste, 4000 psi	2,414.67 cy		-	301,834	-	-	-	125.00 /cy	301,834	457,120
				Placing concrete, concrete pump, for base slab 24" to 36"	24,146.70 cy	24,146.7	927,209	-	-	-	-	38.40 /cy	927,209	1,269,791
				Finishing floors, monolithic, broom finish	92,900.00 sf	6,193.3	269,912	1,858	-	-	-	2.93 /sf	271,770	372,451
				Curing, membrane spray	92,900.00 sf	185.8	7,135	3,716	-	-	-	0.12 /sf	10,851	15,398
				Concrete Gravity Dam	24,146.70 CY	56,021.7	2,356,509	4,654,766	953,795			329.86 /CY	7,965,069	11,702,136
				03-10 Cast-In-Place Concrete Work	26,412.12 CY	62,014.1	2,605,930	5,038,777	1,004,362	11,190		327.89 /CY	8,660,259	12,717,137
				03.0 Concrete Work	26,412.12 CY	62,014.1	2,605,930	5,038,777	1,004,362	11,190		327.89 /CY	8,660,259	12,717,137
		31.0		Site/Civil										
			31-10	Temporary Works										
				Coffer Dam										
				Porta-dam, mob	1.00 ea	24.0	-	-	15,000	-	-	15,000.00 /ea	15,000	22,417
				Porta-dam, installation	2,500.00 lf	600.0	28,746	5,000	-	25,281	-	23.61 /lf	59,027	83,712
				Porta-dam, rental	24.00 mo		-	-	240,000	-	-	10,000.00 /mo	240,000	358,674
				Porta-dam, removal	2,500.00 lf	750.0	35,932	-	-	12,641	-	19.43 /lf	48,573	67,595



Project:  
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Design Stage:

South Tulsa/Jenks  
386594  
Schematic Design

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Jones T  
02 - 04/24/2014  
Class 3

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				<b>Coffer Dam</b>										
				Porta-dam, demob	1.00 ea	24.0			15,000			15,000.00 /ea	15,000	22,417
				BkFill, strl, no compact, 300 HP dozer, 50' haul, common earth	26,044.44 cy	206.7	9,505			25,492		1.34 /cy	34,997	50,096
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	26,044.44 bcy	200.3	8,945			24,367		1.28 /bcy	33,312	47,693
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	26,044.44 lcy	286.2	10,869			87,478		3.78 /lcy	98,346	142,127
				Compaction, structural, rock fill, wheel roller	26,044.44 ecy	78.1	3,316			2,663		0.23 /ecy	5,979	8,415
				<b>Coffer Dam</b>	<b>2,500.00 lf</b>	<b>2,169.4</b>	<b>97,313</b>	<b>5,000</b>	<b>270,000</b>	<b>177,920</b>		<b>220.09 /lf</b>	<b>550,233</b>	<b>803,147</b>
				<b>31-10 Temporary Works</b>	<b>1.00 LS</b>	<b>2,169.4</b>	<b>97,313</b>	<b>5,000</b>	<b>270,000</b>	<b>177,920</b>		<b>550,233.08 /LS</b>	<b>550,233</b>	<b>803,147</b>
		31-15		<b>Site Preparation</b>										
				<b>Foundation Cleanup</b>										
				Final Clean-up	10,322.22 sy	92.9	3,956			7,945		1.15 /sy	11,901	16,974
				<b>Foundation Cleanup</b>	<b>10,322.22 SY</b>	<b>92.9</b>	<b>3,956</b>			<b>7,945</b>		<b>1.15 /SY</b>	<b>11,901</b>	<b>16,974</b>
				<b>31-15 Site Preparation</b>	<b>1.00 LS</b>	<b>92.9</b>	<b>3,956</b>			<b>7,945</b>		<b>11,901.02 /LS</b>	<b>11,901</b>	<b>16,974</b>
		31-20		<b>Earthworks, Site</b>										
				<b>Dewatering</b>										
				Dewatering Minor, Large Generator and 3 Pumps, Rental, Monthly	24.00 mo					331,641		13,818.39 /mo	331,641	482,397
				Dewatering Minor, Generator and Pumps, Operation - Labor to maintain / check pumps/ fuel and lube	24.00 mo	12,480.0	491,225			171,076		27,595.88 /mo	662,301	921,564
				Bypass Pumping, Pumps and Piping, Mob	3.00 ea	24.0	1,198		4,500	927		2,208.44 /ea	6,625	9,715
				Bypass Pumping, Set-up Pumps	12.00 ea	192.0	9,586	6,000		3,708		1,607.86 /ea	19,294	27,609
				Bypass Pumping, Install Suction Piping	3.00 ea	24.0	1,198	450		464		703.93 /ea	2,112	2,997
				Bypass Pumping, Install Discharge Piping	3.00 ea	72.0	3,595	1,500		1,391		2,161.80 /ea	6,485	9,217
				<b>Dewatering</b>	<b>720.00 DAY</b>	<b>12,792.0</b>	<b>506,803</b>	<b>7,950</b>	<b>4,500</b>	<b>509,206</b>		<b>1,428.42 /DAY</b>	<b>1,028,459</b>	<b>1,453,499</b>
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	8.51 HR	8.5	381	224		568		137.95 /HR	1,174	1,689
				Dust Control Operations	45.59 HR	68.4	3,195			3,727		151.83 /HR	6,922	9,797
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	4.26 HR	4.3	178	47		276		117.71 /HR	501	716
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	26,044.44 bcy	200.3	8,945			23,046		1.23 /bcy	31,991	45,772
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	26,044.44 lcy	286.2	10,869			78,348		3.43 /lcy	89,217	128,847
				<b>Mass Common Excavation</b>	<b>26,044.44 CY</b>	<b>567.7</b>	<b>23,568</b>	<b>271</b>		<b>105,965</b>		<b>4.98 /CY</b>	<b>129,804</b>	<b>186,821</b>
				<b>Mass Rock Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	22.82 HR	22.8	1,023	601		1,524		137.95 /HR	3,148	4,528
				Dust Control Operations	134.40 HR	201.6	9,419			10,987		151.83 /HR	20,406	28,880
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	10.14 HR	10.1	424	112		658		117.71 /HR	1,194	1,707
				BkFill, strl, no compact, 300 HP dozer, 50' haul, common earth	13,331.89 cy	105.8	4,866			12,020		1.27 /cy	16,886	24,147
				Drilling & blasting only, rock, open face, over 1500 CY	13,331.89 cy	799.9	33,978	38,529		39,236		8.38 /cy	111,743	161,956
				Excavate and load blasted rock to stockpile	13,331.89 cy	266.6	11,905			19,473		2.35 /cy	31,378	44,629
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	13,331.89 lcy	146.5	5,564			40,106		3.43 /lcy	45,669	65,956
				Compaction, structural, rock fill, wheel roller	13,331.89 ecy	40.0	1,698			1,323		0.23 /ecy	3,021	4,250
				<b>Mass Rock Excavation</b>	<b>13,331.89 CY</b>	<b>1,593.4</b>	<b>68,876</b>	<b>39,242</b>		<b>125,327</b>		<b>17.51 /CY</b>	<b>233,445</b>	<b>336,053</b>
				<b>31-20 Earthworks, Site</b>	<b>1.00 LS</b>	<b>14,953.1</b>	<b>599,247</b>	<b>47,463</b>	<b>4,500</b>	<b>740,499</b>		<b>1,391,708.52 /LS</b>	<b>1,391,709</b>	<b>1,976,372</b>
		31-30		<b>Site Specialties</b>										
				<b>Downstream Grouted Rock Fill</b>										
				Rip-rap and rock lining, random, broken stone, 3/8 to 1/4 C.Y. pieces, machine placed for slope protection, grouted	13,001.48 sy	9,101.0	377,429	728,083		137,543		95.61 /sy	1,243,055	1,819,610
				<b>Downstream Grouted Rock Fill</b>	<b>6,500.74 CY</b>	<b>9,101.0</b>	<b>377,429</b>	<b>728,083</b>		<b>137,543</b>		<b>191.22 /CY</b>	<b>1,243,055</b>	<b>1,819,610</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>9,101.0</b>	<b>377,429</b>	<b>728,083</b>		<b>137,543</b>		<b>1,243,054.60 /LS</b>	<b>1,243,055</b>	<b>1,819,610</b>
				31.0 Site/Civil	1.00 LS	26,316.4	1,077,944	780,546	274,500	1,063,907		3,196,897.22 /LS	3,196,897	4,616,104
		35.0		<b>Water and Marine Construction Equipment</b>										
				<b>Water Control Gates</b>										
				<b>Obermeyer Gates</b>										
				Air Supply Equip/Mechanical/PLC Allowance	1.00 ls				298,208			298,208.00 /ls	298,208	445,665
				Obermeyer Crest Gates (16 Each)	2,160.00 sf				1,138,320			527.00 /sf	1,138,320	1,701,192
				Obermeyer Full Gates (10 Each)	3,528.00 sf				1,940,400			550.00 /sf	1,940,400	2,899,881
				<b>Obermeyer Gates</b>	<b>26.00 EA</b>				<b>3,376,928</b>			<b>129,881.85 /EA</b>	<b>3,376,928</b>	<b>5,046,738</b>
				<b>35-10 Water Control Gates</b>	<b>26.00 EA</b>				<b>3,376,928</b>			<b>129,881.85 /EA</b>	<b>3,376,928</b>	<b>5,046,738</b>
				35.0 Water and Marine Construction Equipment	1.00 LS				3,376,928			3,376,928.00 /LS	3,376,928	5,046,738
		020		<b>010 Low Water Dam</b>	<b>1,858.00 LF</b>	<b>88,330.6</b>	<b>3,683,874</b>	<b>5,819,323</b>	<b>4,655,790</b>	<b>1,075,097</b>		<b>8,199.18 /LF</b>	<b>15,234,084</b>	<b>22,379,978</b>
				<b>Pedestrian Bridges</b>										
				<b>Exterior Improvements</b>										
				<b>Fabricated Bridges</b>										
		32.0	32-34	<b>Pedestrian Bridge @ Low Dam Crossing</b>										



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Pedestrian Bridge @ Low Dam Crossing</b>										
				Curbs, curb and gutter, steel forms, 24" wide, straight	3,716.00 lf	256.4	11,979	40,690	-	-	-	14.17 /lf	52,669	78,029
				Cable railing, 1-3/4" diam posts x 42" high, cable @ 4" O.C., stainless steel, field fabricated, incl posts, base plate, cables & cable fittings	3,716.00 lf	2,378.2	140,630	126,344	-	-	-	71.84 /lf	266,974	383,934
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,222.22 sy	63.9	2,712	35,044	-	1,515	-	9.30 /sy	39,271	58,991
				Fabricated highway bridges, concrete in place, no reinforcing, beams, includes shoring	150.00 cy	1,440.0	67,294	64,500	-	16,582	-	989.18 /cy	148,376	213,962
				Prestressed Concrete Beams (Type U40)	3,716.00 lf	-	-	-	1,374,920	-	-	370.00 /lf	1,374,920	2,054,785
				Prestressed Concrete Deck Panels	37,160.00 sf	-	-	-	520,240	-	-	14.00 /sf	520,240	777,486
				<b>Pedestrian Bridge @ Low Dam Crossing</b>	<b>37,160.00 SF</b>	<b>4,138.5</b>	<b>222,615</b>	<b>266,579</b>	<b>1,895,160</b>	<b>18,097</b>		<b>64.65 /SF</b>	<b>2,402,450</b>	<b>3,567,187</b>
				<b>32-34 Fabricated Bridges</b>	<b>1.00 EA</b>	<b>4,138.5</b>	<b>222,615</b>	<b>266,579</b>	<b>1,895,160</b>	<b>18,097</b>		<b>2,402,450.35 /EA</b>	<b>2,402,450</b>	<b>3,567,187</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>4,138.5</b>	<b>222,615</b>	<b>266,579</b>	<b>1,895,160</b>	<b>18,097</b>		<b>2,402,450.35 /LS</b>	<b>2,402,450</b>	<b>3,567,187</b>
				<b>020 Pedestrian Bridges</b>	<b>1.00 EA</b>	<b>4,138.5</b>	<b>222,615</b>	<b>266,579</b>	<b>1,895,160</b>	<b>18,097</b>		<b>2,402,450.35 /EA</b>	<b>2,402,450</b>	<b>3,567,187</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>20x40 Dam Control Building</b>										
				20x40 Dam Control Building (Allowance)	1.00 EA				80,000	-	-	80,000.00 /EA	80,000	119,558
				<b>20x40 Dam Control Building</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>119,558</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>119,558</b>
				<b>13.0 Special Construction</b>	<b>1.00 LS</b>				<b>80,000</b>			<b>80,000.00 /LS</b>	<b>80,000</b>	<b>119,558</b>
				<b>060 Structures</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>119,558</b>
				<b>Retaining Walls</b>										
				<b>Site/Civil</b>										
				<b>Earthworks, Site</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	4.00 HR	4.0	179	105	-	267	-	137.95 /HR	552	794
				Dust Control Operations	20.00 HR	30.0	1,402		-	1,635	-	151.83 /HR	3,037	4,298
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	2.00 HR	2.0	84	22	-	130	-	117.72 /HR	235	337
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	10,000.00 bcy	76.9	3,435	-	-	8,849	-	1.23 /bcy	12,283	17,575
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	10,000.00 lcy	109.9	4,173	-	-	30,082	-	3.43 /lcy	34,256	49,472
				<b>Mass Common Excavation</b>	<b>10,000.00 CY</b>	<b>222.8</b>	<b>9,272</b>	<b>127</b>		<b>40,963</b>		<b>5.04 /CY</b>	<b>50,363</b>	<b>72,475</b>
				<b>31-20 Earthworks, Site</b>	<b>1.00 LS</b>	<b>222.8</b>	<b>9,272</b>	<b>127</b>		<b>40,963</b>		<b>50,362.52 /LS</b>	<b>50,363</b>	<b>72,475</b>
				<b>31.0 Site/Civil</b>	<b>1.00 LS</b>	<b>222.8</b>	<b>9,272</b>	<b>127</b>		<b>40,963</b>		<b>50,362.52 /LS</b>	<b>50,363</b>	<b>72,475</b>
				<b>Exterior Improvements</b>										
				<b>Retaining Walls</b>										
				<b>Retaining Wall - Sea Wall 15' Ht.</b>										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	6,000.00 sf	1,620.0	76,462	90,600	-	52,091	-	36.53 /sf	219,153	317,695
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	120.00 ea	2,880.0	127,656	66,600	-	8,070	-	1,686.05 /ea	202,326	287,424
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	222.22 cy	1,110.8	53,421	33,777	-	3,147	-	406.56 /cy	90,345	128,891
				<b>Retaining Wall - Sea Wall 15' Ht.</b>	<b>400.00 LF</b>	<b>5,610.8</b>	<b>257,539</b>	<b>190,977</b>		<b>63,308</b>		<b>1,279.56 /LF</b>	<b>511,824</b>	<b>734,010</b>
				<b>Retaining Wall - Sea Wall 30' Ht.</b>										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	18,000.00 sf	4,860.0	229,387	271,800	-	156,273	-	36.53 /sf	657,460	953,086
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	180.00 ea	4,320.0	191,484	99,900	-	12,105	-	1,686.05 /ea	303,489	431,136
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	666.66 cy	3,332.5	160,262	101,332	-	9,442	-	406.56 /cy	271,036	386,673
				<b>Retaining Wall - Sea Wall 30' Ht.</b>	<b>600.00 LF</b>	<b>12,512.5</b>	<b>581,133</b>	<b>473,032</b>		<b>177,819</b>		<b>2,053.31 /LF</b>	<b>1,231,985</b>	<b>1,770,895</b>
				<b>32-32 Retaining Walls</b>	<b>1,000.00 LF</b>	<b>18,123.3</b>	<b>838,672</b>	<b>664,010</b>		<b>241,128</b>		<b>1,743.81 /LF</b>	<b>1,743,809</b>	<b>2,504,906</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>18,123.3</b>	<b>838,672</b>	<b>664,010</b>		<b>241,128</b>		<b>1,743,809.00 /LS</b>	<b>1,743,809</b>	<b>2,504,906</b>
				<b>080 Retaining Walls</b>	<b>1,000.00 LF</b>	<b>18,346.1</b>	<b>847,944</b>	<b>664,137</b>		<b>282,090</b>		<b>1,794.17 /LF</b>	<b>1,794,172</b>	<b>2,577,381</b>
				<b>Utilities</b>										
				<b>Electrical Work</b>										
				<b>Site Electrical</b>										
				<b>Site Lighting</b>										
				Site Lighting - Pedestrian Bridge	1.00 ls				170,000	-	-	170,000.00 /ls	170,000	254,061
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>254,061</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>254,061</b>
				<b>26.0 Electrical Work</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>254,061</b>
				<b>110 Utilities</b>	<b>1.00 LS</b>				<b>170,000</b>			<b>170,000.00 /LS</b>	<b>170,000</b>	<b>254,061</b>



Project: South Tulsa/Jenks  
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Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
J01				<b>J00 Low Water Dam &amp; Pedestrian Bridge</b>	<b>1,858.00 LF</b>	<b>110,815.2</b>	<b>4,754,433</b>	<b>6,750,038</b>	<b>6,800,950</b>	<b>1,375,285</b>	<b>0</b>	<b>10,592.41 /LF</b>	<b>19,680,706</b>	<b>34,698,165</b>
				<b>West Bank Public Access</b>										
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	87,031.67 sy	1,160.4	54,389	-	-	75,647	-	1.49 /sy	130,037	191,021
				Mass Grading	87,031.67 SY	1,160.4	54,389			75,647		1.49 /SY	130,037	191,021
				31-00 Site/Civil	1.00 LS	1,160.4	54,389			75,647		130,036.53 /LS	130,037	191,021
				31.0 Site/Civil	1.00 LS	1,160.4	54,389			75,647		130,036.53 /LS	130,037	191,021
				005 Overall Site Grading	783,285.00 SF	1,160.4	54,389			75,647		0.17 /SF	130,037	191,021
		020		Pedestrian Bridges										
		32.0		Exterior Improvements										
			32-34	Fabricated Bridges										
				20' Long, 12' Wide Concrete Bridge										
				Fabricated highway bridges, concrete in place, no reinforcing, abutment	120.00 cy	427.8	21,250	26,520	-	2,217	-	416.56 /cy	49,988	74,990
				Fabricated pedestrian bridges, precast concrete, complete in place, 8' wide, 60' span, includes erection, excludes foundations	480.00 sf	125.0	7,036	12,000	-	2,616	-	45.11 /sf	21,651	32,696
				20' Long, 12' Wide Concrete Bridge	40.00 LF	552.9	28,286	38,520		4,833		1,790.98 /LF	71,639	107,687
				32-34 Fabricated Bridges	2.00 EA	552.9	28,286	38,520		4,833		35,819.50 /EA	71,639	107,687
				32.0 Exterior Improvements	1.00 LS	552.9	28,286	38,520		4,833		71,639.00 /LS	71,639	107,687
				020 Pedestrian Bridges	2.00 EA	552.9	28,286	38,520		4,833		35,819.50 /EA	71,639	107,687
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 05' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	212.22 sy	4.2	177	-	-	23	-	0.94 /sy	200	285
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	1,910.00 sf	76.4	3,354	3,534	-	-	-	3.61 /sf	6,887	10,289
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,910.00 sf	18.3	722	974	-	30	-	0.90 /sf	1,725	2,593
				New 4" Thick, 05' Wide Concrete Sidewalk	382.00 LF	99.0	4,252	4,508		53		23.07 /LF	8,812	13,167
				New 4" Thick, 08' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	464.00 sy	9.3	386	-	-	51	-	0.94 /sy	437	624
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	4,176.00 sf	167.0	7,333	7,726	-	-	-	3.61 /sf	15,058	22,495
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,176.00 sf	40.1	1,578	2,130	-	65	-	0.90 /sf	3,773	5,669
				New 4" Thick, 08' Wide Concrete Trail	522.00 LF	216.4	9,297	9,855		115		36.91 /LF	19,267	28,788
				New 4" Thick, 10' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	945.56 sy	18.9	787	-	-	103	-	0.94 /sy	890	1,271
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	8,510.00 sf	340.4	14,943	15,744	-	-	-	3.61 /sf	30,686	45,841
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	8,510.00 sf	81.7	3,216	4,340	-	132	-	0.90 /sf	7,688	11,553
				New 4" Thick, 10' Wide Concrete Trail	851.00 LF	441.0	18,945	20,084		235		46.14 /LF	39,264	58,666
				New 4" Thick, 12' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	4,045.33 sy	80.9	3,365	-	-	441	-	0.94 /sy	3,806	5,439
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	36,408.00 sf	1,456.3	63,930	67,355	-	-	-	3.61 /sf	131,284	196,121
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	36,408.00 sf	349.5	13,757	18,568	-	565	-	0.90 /sf	32,890	49,428
				New 4" Thick, 12' Wide Concrete Trail	3,034.00 LF	1,886.7	81,052	85,923		1,006		55.37 /LF	167,980	250,989
				New 4" Thick, 20' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	7,184.44 sy	143.7	5,976	-	-	783	-	0.94 /sy	6,759	9,660
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	64,660.00 sf	2,586.4	113,538	119,621	-	-	-	3.61 /sf	233,159	348,308
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	64,660.00 sf	620.7	24,433	32,977	-	1,004	-	0.90 /sf	58,413	87,783
				New 4" Thick, 20' Wide Concrete Trail	3,233.00 LF	3,350.8	143,947	152,598		1,786		92.28 /LF	298,330	445,751
				32-16 Curbs, Gutters, Sidewalks, and Driveways	115,664.00 SF	5,994.0	257,492	272,967		3,195		4.61 /SF	533,654	797,362



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>32.0 Exterior Improvements</b>	1.00 LS	5,994.0	257,492	272,967		3,195		533,654.32 /LS	533,654	797,362
				<b>030 Paths/Trails</b>	8,022.00 LF	5,994.0	257,492	272,967		3,195		66.52 /LF	533,654	797,362
	040			<b>Roads</b>										
		32.0		<b>Exterior Improvements</b>										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Entry Road</b>										
				Fine grading, grade subgrade for base course, roadways	4,347.78 sy	19.9	876	-	-	701	-	0.36 /sy	1,578	2,299
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,347.78 sy	23.2	1,087	18,522	-	1,260	-	4.80 /sy	20,869	32,416
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	4,347.78 sy	92.4	3,863	64,347	-	2,203	-	16.20 /sy	70,412	109,466
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,347.78 sy	65.8	2,793	36,087	-	1,560	-	9.30 /sy	40,439	62,767
				<b>New 6" Thick, Asphalt Entry Road</b>	4,347.78 SY	201.3	8,619	118,955		5,723		30.66 /SY	133,298	206,948
				<b>32-12 Flexible Paving</b>	39,130.00 SF	201.3	8,619	118,955		5,723		3.41 /SF	133,298	206,948
			32-13	<b>Rigid Paving</b>										
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	953.00 lf	116.3	5,345	21,443	-	67	-	28.18 /lf	26,854	41,233
				Fine grading, grade subgrade for base course, roadways	1,117.66 sy	5.1	225	-	-	180	-	0.36 /sy	406	591
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	10,059.00 sf	473.4	20,780	22,935	-	-	-	4.35 /sf	43,715	65,378
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,117.66 sy	6.0	280	4,761	-	324	-	4.80 /sy	5,365	8,333
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>	1,117.66 SY	600.7	26,630	49,138		571		68.30 /SY	76,339	115,535
				<b>32-13 Rigid Paving</b>	10,059.00 SF	600.7	26,630	49,138		571		7.59 /SF	76,339	115,535
				<b>32.0 Exterior Improvements</b>	1.00 LS	802.0	35,249	168,094		6,294		209,636.47 /LS	209,636	322,483
				<b>040 Roads</b>	49,189.00 SF	802.0	35,249	168,094		6,294		4.26 /SF	209,636	322,483
	050			<b>Parking Lots</b>										
		32.0		<b>Exterior Improvements</b>										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	5,137.67 sy	23.5	1,036	-	-	829	-	0.36 /sy	1,864	2,717
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	5,137.67 sy	27.4	1,285	21,886	-	1,489	-	4.80 /sy	24,660	38,305
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	5,137.67 sy	109.2	4,564	76,038	-	2,603	-	16.20 /sy	83,205	129,354
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	5,137.67 sy	77.7	3,300	42,643	-	1,843	-	9.30 /sy	47,786	74,171
				<b>New 6" Thick, Asphalt Parking Lot</b>	5,137.67 SY	237.8	10,185	140,567		6,763		30.66 /SY	157,515	244,546
				<b>32-12 Flexible Paving</b>	46,239.00 SF	237.8	10,185	140,567		6,763		3.41 /SF	157,515	244,546
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	548.89 sy	23.7	934	-	-	38	-	1.77 /sy	973	1,384
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,940.00 sf	47.4	1,867	2,519	-	77	-	0.90 /sf	4,463	6,707
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	2,470.00 lf	296.4	13,845	8,991	-	-	-	9.25 /lf	22,836	33,719
				<b>Parking Lot Curb and Gutter</b>	2,470.00 LF	367.6	16,646	11,510		115		11.45 /LF	28,272	41,810
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	4,940.00 SF	367.6	16,646	11,510		115		5.72 /SF	28,272	41,810
				<b>32.0 Exterior Improvements</b>	1.00 LS	605.4	26,831	152,077		6,878		185,786.08 /LS	185,786	286,355
				<b>050 Parking Lots</b>	51,179.00 SF	605.4	26,831	152,077		6,878		3.63 /SF	185,786	286,355
	060			<b>Structures</b>										
		13.0		<b>Special Construction</b>										
			13-34	<b>Fabricated Engineered Structures</b>										
				<b>30x50 Steel Shelter w/ Stone Columns</b>										
				30x50 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				90,000	-	-	90,000.00 /EA	90,000	139,003
				<b>30x50 Steel Shelter w/ Stone Columns</b>	1.00 EA				90,000			90,000.00 /EA	90,000	139,003
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	332,062
				<b>20x30 Restroom Structure</b>	1.00 EA				215,000			215,000.00 /EA	215,000	332,062
				<b>13-34 Fabricated Engineered Structures</b>	2.00 EA				305,000			152,500.00 /EA	305,000	471,065
				<b>13.0 Special Construction</b>	1.00 LS				305,000			305,000.00 /LS	305,000	471,065
				<b>060 Structures</b>	3.00 EA				305,000			101,666.67 /EA	305,000	471,065
	070			<b>Special Features</b>										
		32.0		<b>Exterior Improvements</b>										
			32-13	<b>Rigid Paving</b>										





Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>New 6" Thick, 06' Wide Concrete ADA Ramp</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	1,128.00 sf	277.7	13,004	7,050	-	3,229	-	20.64 /sf	23,283	34,346
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	188.00 lf	37.6	2,252	10,152	-	125	-	66.64 /lf	12,529	19,267
				Fine grading, grade subgrade for base course, roadways	125.33 sy	0.6	25	-	-	20	-	0.36 /sy	45	66
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	1,128.00 sf	53.1	2,330	2,572	-	-	-	4.35 /sf	4,902	7,331
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	125.33 sy	0.7	31	534	-	36	-	4.80 /sy	602	934
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	188.00 lf	538.1	26,733	14,288	-	4,031	-	239.64 /lf	45,053	66,366
				<b>New 6" Thick, 06' Wide Concrete ADA Ramp</b>	<b>1,128.00 SF</b>	<b>907.7</b>	<b>44,375</b>	<b>34,596</b>		<b>7,442</b>		<b>76.61 /SF</b>	<b>86,413</b>	<b>128,311</b>
				<b>32-13 Rigid Paving</b>	<b>1,128.00 SF</b>	<b>907.7</b>	<b>44,375</b>	<b>34,596</b>		<b>7,442</b>		<b>76.61 /SF</b>	<b>86,413</b>	<b>128,311</b>
		<b>32-16</b>		<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Concrete Dock</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	324.66 sy	6.5	270	-	-	35	-	0.94 /sy	305	437
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	2,922.00 sf	137.5	6,036	7,510	-	-	-	4.64 /sf	13,546	20,317
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,922.00 sf	28.1	1,104	1,490	-	45	-	0.90 /sf	2,640	3,967
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	2,922.00 sf	140.3	6,157	-	-	-	-	2.11 /sf	6,157	8,740
				Cast-in place retaining walls, concrete gravity wall with vertical face, level embankment, 6' high, includes excavation & backfill, excludes reinforcing	322.00 lf	742.4	36,885	23,023	-	5,562	-	203.32 /lf	65,470	96,744
				<b>Concrete Dock</b>	<b>2,922.00 SF</b>	<b>1,054.7</b>	<b>50,452</b>	<b>32,023</b>		<b>5,643</b>		<b>30.16 /SF</b>	<b>88,118</b>	<b>130,204</b>
				<b>Splash Pad with Plaza Area &amp; 4 Tables</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	211.33 sy	4.2	176	-	-	23	-	0.94 /sy	199	284
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	1,902.00 sf	76.1	3,340	3,519	-	-	-	3.61 /sf	6,858	10,246
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,902.00 sf	18.3	719	970	-	30	-	0.90 /sf	1,718	2,582
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	1,902.00 sf	91.3	4,008	-	-	-	-	2.11 /sf	4,008	5,689
				<b>Splash Pad with Plaza Area &amp; 4 Tables</b>	<b>1,902.00 SF</b>	<b>189.9</b>	<b>8,242</b>	<b>4,489</b>		<b>53</b>		<b>6.72 /SF</b>	<b>12,783</b>	<b>18,801</b>
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	842.33 sy	16.8	701	-	-	92	-	0.94 /sy	792	1,133
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	7,581.00 sf	303.2	13,312	14,025	-	-	-	3.61 /sf	27,336	40,837
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	7,581.00 sf	72.8	2,865	3,866	-	118	-	0.90 /sf	6,849	10,292
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	7,581.00 sf	363.9	15,974	-	-	-	-	2.11 /sf	15,974	22,675
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>	<b>7,581.00 SF</b>	<b>756.8</b>	<b>32,851</b>	<b>17,891</b>		<b>209</b>		<b>6.72 /SF</b>	<b>50,951</b>	<b>74,936</b>
				<b>New 4" Thick, Concrete w/ Safety Surface</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,800.89 sy	36.0	1,498	-	-	196	-	0.94 /sy	1,694	2,422
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	16,208.00 sf	648.3	28,460	29,985	-	-	-	3.61 /sf	58,445	87,309
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	16,208.00 sf	155.6	6,124	8,266	-	252	-	0.90 /sf	14,642	22,004
				Playground protective surfacing, resilient rubber surface, colors, 2" thick, poured in place	16,208.00 sf	92.5	4,545	129,664	-	-	-	8.28 /sf	134,209	209,308
				<b>New 4" Thick, Concrete w/ Safety Surface</b>	<b>16,208.00 SF</b>	<b>932.5</b>	<b>40,628</b>	<b>167,915</b>		<b>448</b>		<b>12.89 /SF</b>	<b>208,990</b>	<b>321,043</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>25,691.00 SF</b>	<b>2,933.8</b>	<b>132,173</b>	<b>222,318</b>		<b>6,352</b>		<b>14.05 /SF</b>	<b>360,843</b>	<b>544,984</b>
		<b>32-33</b>		<b>Site Furnishings</b>										
				<b>Overlook w/ Shade Structure</b>										
				Overlook w/ Shade Structure (Allowance)	10,573.00 SF				528,650	-	-	50.00 /SF	528,650	816,487
				<b>Overlook w/ Shade Structure</b>	<b>10,573.00 SF</b>				<b>528,650</b>			<b>50.00 /SF</b>	<b>528,650</b>	<b>816,487</b>
				<b>Steel Powdercoated Arbor Structure</b>										
				Steel Powdercoated Arbor Structure (Allowance)	1,771.00 sf				109,802	-	-	62.00 /sf	109,802	169,587
				<b>Steel Powdercoated Arbor Structure</b>	<b>1,771.00 SF</b>				<b>109,802</b>			<b>62.00 /SF</b>	<b>109,802</b>	<b>169,587</b>
				<b>Playground and Splash Pad Equipment</b>										
				Playground and Splash Pad Equipment (Allowance)	1.00 LS				395,000	-	-	395,000.00 /LS	395,000	610,068



Project:  
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386594  
Schematic Design

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Jones T  
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Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Playground and Splash Pad Equipment</b>	1.00 LS				395,000			395,000.00 /LS	395,000	610,068
				<b>32-33 Site Furnishings</b>	1.00 LS				1,033,452			1,033,452.00 /LS	1,033,452	1,596,142
				<b>32.0 Exterior Improvements</b>	1.00 LS	3,841.4	176,549	256,913	1,033,452	13,794		1,480,708.16 /LS	1,480,708	2,269,437
				<b>070 Special Features</b>	1.00 LS	3,841.4	176,549	256,913	1,033,452	13,794		1,480,708.16 /LS	1,480,708	2,269,437
080				<b>Retaining Walls</b>										
		32.0		<b>Exterior Improvements</b>										
			32-32	<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	2.84 HR	2.8	127	75	-	189	-	137.95 /HR	391	582
				Dust Control Operations	15.20 HR	22.8	1,065		-	1,242	-	151.83 /HR	2,307	3,381
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	1.42 HR	1.4	59	16	-	92	-	117.72 /HR	167	247
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	5,000.00 bcy	38.5	1,717	-	-	4,424	-	1.23 /bcy	6,142	9,094
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	5,000.00 lcy	54.9	2,087	-	-	15,041	-	3.43 /lcy	17,128	25,592
				<b>Mass Common Excavation</b>	5,000.00 CY	120.5	5,055	90		20,989		5.23 /CY	26,135	38,897
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>										
				Precast window sill, concrete, 12" wall, 3-1/2" tapers to 2-1/2", 13" wide	80.00 lf	25.6	1,107	1,240	-	-	-	29.33 /lf	2,347	3,511
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	160.00 sf	39.4	1,844	1,000	-	458	-	20.64 /sf	3,303	4,872
				Cast-in place retaining walls,concrete gravity wall with vertical face,level embankment,6 high,includes excavation&backfill,excludes reinforcing	80.00 lf	184.4	9,164	5,720	-	1,382	-	203.32 /lf	16,266	24,036
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>	80.00 LF	249.4	12,115	7,960		1,840		273.94 /LF	21,915	32,419
				<b>Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	1,134.00 sf	279.1	13,073	7,088	-	3,246	-	20.64 /sf	23,407	34,529
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	378.00 lf	75.6	4,527	20,412	-	252	-	66.64 /lf	25,191	38,739
				Cast-in place retaining walls,concrete gravity wall with vertical face,level embankment,6 high,includes excavation&backfill,excludes reinforcing	378.00 lf	871.5	43,300	27,027	-	6,529	-	203.32 /lf	76,856	113,569
				<b>Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)</b>	378.00 LF	1,226.2	60,899	54,527		10,027		331.89 /LF	125,453	186,837
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (4' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	6,000.00 sf	1,476.9	69,168	37,500	-	17,177	-	20.64 /sf	123,845	182,694
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	1,500.00 lf	300.0	17,964	81,000	-	998	-	66.64 /lf	99,963	153,724
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	1,500.00 lf	4,293.1	213,299	114,000	-	32,165	-	239.64 /lf	359,463	529,517
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (4' HT)</b>	1,500.00 LF	6,070.0	300,431	232,500		50,340		388.85 /LF	583,271	865,935
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	895.00 sf	220.3	10,318	5,594	-	2,562	-	20.64 /sf	18,474	27,252
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	179.00 lf	35.8	2,144	9,666	-	119	-	66.64 /lf	11,929	18,344
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	179.00 lf	512.3	25,454	13,604	-	3,838	-	239.64 /lf	42,896	63,189
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>	179.00 LF	768.4	37,915	28,864		6,520		409.49 /LF	73,298	108,785
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>										
				Structural concrete, in place, stair landing (3500 psi), cast on ground, includes forms(4 uses), reinforcing steel, concrete, placing and finishing	504.00 sf	50.9	2,408	1,739	-	26	-	8.28 /sf	4,173	6,178
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	164.00 sf	40.4	1,891	1,025	-	470	-	20.64 /sf	3,385	4,994
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	164.00 lf	32.8	1,964	8,856	-	109	-	66.64 /lf	10,929	16,807
				Fine grading, fine grade granular base for sidewalks and bikeways	56.00 sy	1.1	47	-	-	6	-	0.94 /sy	53	75
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	504.00 sf	4.8	190	257	-	8	-	0.90 /sf	455	684
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>	3.00 EA	130.1	6,500	11,877		619		6,331.88 /EA	18,996	28,739
				<b>32-32 Retaining Walls</b>	2,137.00 LF	8,564.6	422,915	335,817		90,335		397.32 /LF	849,067	1,261,612
				<b>32.0 Exterior Improvements</b>	1.00 LS	8,564.6	422,915	335,817		90,335		849,067.45 /LS	849,067	1,261,612
				<b>080 Retaining Walls</b>	1,334.00 LF	8,564.6	422,915	335,817		90,335		636.48 /LF	849,067	1,261,612
090				<b>Landscaping</b>										
		32.0		<b>Exterior Improvements</b>										
			32-92	<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	120.00 EA				48,000	-	-	400.00 /EA	48,000	74,135
				<b>Large Shade Tree</b>	120.00 EA				48,000			400.00 /EA	48,000	74,135
				<b>Landscape - U3 Bermuda Sod</b>										



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Landscape - U3 Bermuda Sod</b>										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	218,116.00 sf	2,907.5	124,754	106,877	-	-	-	1.06 /sf	231,631	344,292
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	4,039.18 cy	359.0	14,933	98,960	-	1,954	-	28.68 /cy	115,847	178,958
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow	218.12 msf	6.5	309	-	-	177	-	2.23 /msf	486	705
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	218.12 msf	436.2	17,600	55,183	-	1,425	-	340.22 /msf	74,208	113,459
				<b>Landscape - U3 Bermuda Sod</b>	<b>218,116.00 SF</b>	<b>3,709.2</b>	<b>157,596</b>	<b>261,020</b>				<b>1.94 /SF</b>	<b>422,172</b>	<b>637,414</b>
				<b>Landscape - Extensive</b>										
				Landscape - Extensive	3,726.00 SF				11,178	-	-	3.00 /SF	11,178	17,264
				<b>Landscape - Extensive</b>	<b>3,726.00 SF</b>				<b>11,178</b>			<b>3.00 /SF</b>	<b>11,178</b>	<b>17,264</b>
				<b>Landscape - Light</b>										
				Landscape - Light	198,246.00 SF				198,246	-	-	1.00 /SF	198,246	306,186
				<b>Landscape - Light</b>	<b>198,246.00 SF</b>				<b>198,246</b>			<b>1.00 /SF</b>	<b>198,246</b>	<b>306,186</b>
				<b>32-92 Turf and Grasses</b>	<b>420,088.00 SF</b>	<b>3,709.2</b>	<b>157,596</b>	<b>261,020</b>	<b>257,424</b>	<b>3,556</b>		<b>1.62 /SF</b>	<b>679,596</b>	<b>1,034,999</b>
				32.0 Exterior Improvements	1.00 LS	3,709.2	157,596	261,020	257,424	3,556	-	679,596.40 /LS	679,596	1,034,999
				<b>090 Landscaping</b>	<b>420,088.00 SF</b>	<b>3,709.2</b>	<b>157,596</b>	<b>261,020</b>	<b>257,424</b>	<b>3,556</b>		<b>1.62 /SF</b>	<b>679,596</b>	<b>1,034,999</b>
				<b>Bank Stabilization</b>										
				Site/Civil										
				<b>31-30 Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	6,842.00 lcy	1,404.0	62,691	160,505	-	50,483	-	40.00 /lcy	273,678	416,049
				<b>Bank Stabilization</b>	<b>6,842.00 CY</b>	<b>1,404.0</b>	<b>62,691</b>	<b>160,505</b>		<b>50,483</b>		<b>40.00 /CY</b>	<b>273,678</b>	<b>416,049</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>1,404.0</b>	<b>62,691</b>	<b>160,505</b>		<b>50,483</b>		<b>273,678.39 /LS</b>	<b>273,678</b>	<b>416,049</b>
				31.0 Site/Civil	1.00 LS	1,404.0	62,691	160,505		50,483		273,678.39 /LS	273,678	416,049
				<b>100 Bank Stabilization</b>	<b>2,000.00 LF</b>	<b>1,404.0</b>	<b>62,691</b>	<b>160,505</b>		<b>50,483</b>		<b>136.84 /LF</b>	<b>273,678</b>	<b>416,049</b>
				<b>Utilities</b>										
				<b>Electrical Work</b>										
				<b>Site Electrical</b>										
				<b>Electrical Service</b>										
				PSO Quote for Electrical to Site	1.00 LS				158,000	-	-	158,000.00 /LS	158,000	244,027
				<b>Electrical Service</b>	<b>1.00 LS</b>				<b>158,000</b>			<b>158,000.00 /LS</b>	<b>158,000</b>	<b>244,027</b>
				<b>Site Lighting</b>										
				Site Lighting - West Bank Public Access	1.00 ls				360,000	-	-	360,000.00 /ls	360,000	556,011
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>360,000</b>			<b>360,000.00 /LS</b>	<b>360,000</b>	<b>556,011</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>518,000</b>			<b>518,000.00 /LS</b>	<b>518,000</b>	<b>800,039</b>
				26.0 Electrical Work	1.00 LS				518,000			518,000.00 /LS	518,000	800,039
				<b>33-0 Buried Piping</b>										
				<b>33-11 Water Utility Distribuiton Piping</b>										
				<b>3" PVC Water</b>										
				Bedding Stone, Material Only	115.04 tn			1,611	-	-	-	14.00 /tn	1,611	2,520
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	700.00 LF	280.0	13,312	1,463	-	6,414	-	30.27 /LF	21,190	30,836
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea			14	-	-	-	13.78 /ea	14	22
				3" PVC, Sch. 80, socket joint, coupling	35.00 ea			281	-	-	-	8.04 /ea	281	440
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,654
				<b>3" PVC Water</b>	<b>700.00 LF</b>	<b>328.0</b>	<b>15,612</b>	<b>4,875</b>		<b>8,437</b>		<b>41.32 /LF</b>	<b>28,923</b>	<b>42,481</b>
				<b>33-11 Water Utility Distribuiton Piping</b>	<b>700.00 LF</b>	<b>328.0</b>	<b>15,612</b>	<b>4,875</b>		<b>8,437</b>		<b>41.32 /LF</b>	<b>28,923</b>	<b>42,481</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>										
				<b>2" PVC Sewer</b>										
				Bedding Stone, Material Only	478.50 tn			6,699	-	-	-	14.00 /tn	6,699	10,480
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	2,900.00 LF	1,160.0	55,150	3,016	-	26,574	-	29.22 /LF	84,741	122,986
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea			4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	145.00 ea			412	-	-	-	2.84 /ea	412	644
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,654
				Pump, sewage ejector, duplex system, coated steel tank, 268 gpm, 1 hp, 15" head, 135 gallon, 2" dschr, includes operating and level controls, tank, cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	23,035
				<b>2" PVC Sewer</b>	<b>2,900.00 LF</b>	<b>1,244.9</b>	<b>59,350</b>	<b>24,631</b>		<b>28,597</b>		<b>38.82 /LF</b>	<b>112,578</b>	<b>165,807</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>	<b>2,900.00 LF</b>	<b>1,244.9</b>	<b>59,350</b>	<b>24,631</b>		<b>28,597</b>		<b>38.82 /LF</b>	<b>112,578</b>	<b>165,807</b>
				33.0 Buried Piping	3,600.00 LF	1,572.9	74,962	29,506		37,034		39.31 /LF	141,501	208,288
				<b>110 Utilities</b>	<b>1.00 LS</b>	<b>1,572.9</b>	<b>74,962</b>	<b>29,506</b>	<b>518,000</b>	<b>37,034</b>		<b>659,501.35 /LS</b>	<b>659,501</b>	<b>1,008,326</b>
				<b>J01 West Bank Public Access</b>	<b>783,285.00 SF</b>	<b>28,206.8</b>	<b>1,296,960</b>	<b>1,675,419</b>	<b>2,113,876</b>	<b>292,049</b>		<b>6.87 /SF</b>	<b>5,378,304</b>	<b>8,166,397</b>



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
J02				<b>East Bank Public Access</b>										
		001		Land Acquisition										
		01.0		General Conditions										
			01-10	Land Acquisition										
				Land Acquisition - East Bank										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	2,500,000
				Land Acquisition - East Bank	1.00 LS				0		0	0.01 /LS	0	2,500,000
				01-10 Land Acquisition	1.00 LS				0		0	0.01 /LS	0	2,500,000
				01.0 General Conditions	1.00 LS				0		0	0.01 /LS	0	2,500,000
				001 Land Acquisition	1.00 LS				0		0	0.01 /LS	0	2,500,000
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	72,094.78 sy	961.3	45,055	-	-	62,664	-	1.49 /sy	107,719	158,237
				Import Fill - Medium Crew	20,000.00 cy	600.0	28,122	300,000	-	39,114	-	18.36 /cy	367,236	568,111
				Mass Grading	72,094.78 SY	1,561.3	73,177	300,000		101,778		6.59 /SY	474,955	726,348
				31-00 Site/Civil	1.00 LS	1,561.3	73,177	300,000		101,778		474,954.69 /LS	474,955	726,348
				31.0 Site/Civil	1.00 LS	1,561.3	73,177	300,000		101,778		474,954.69 /LS	474,955	726,348
				005 Overall Site Grading	648,853.00 SF	1,561.3	73,177	300,000		101,778		0.73 /SF	474,955	726,348
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 06' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	728.00 sy	14.6	606	-	-	79	-	0.94 /sy	685	979
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	6,552.00 sf	262.1	11,505	12,121	-	-	-	3.61 /sf	23,626	35,294
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	6,552.00 sf	62.9	2,476	3,342	-	102	-	0.90 /sf	5,919	8,895
				New 4" Thick, 06' Wide Concrete Sidewalk	1,092.00 LF	339.5	14,586	15,463		181		27.68 /LF	30,230	45,168
				New 4" Thick, 08' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	395.55 sy	7.9	329	-	-	43	-	0.94 /sy	372	532
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	3,560.00 sf	142.4	6,251	6,586	-	-	-	3.61 /sf	12,837	19,177
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	3,560.00 sf	34.2	1,345	1,816	-	55	-	0.90 /sf	3,216	4,833
				New 4" Thick, 08' Wide Concrete Trail	445.00 LF	184.5	7,925	8,402		98		36.91 /LF	16,425	24,542
				New 4" Thick, 10' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	971.11 sy	19.4	808	-	-	106	-	0.94 /sy	914	1,306
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	8,740.00 sf	349.6	15,347	16,169	-	-	-	3.61 /sf	31,516	47,080
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	8,740.00 sf	83.9	3,303	4,457	-	136	-	0.90 /sf	7,896	11,865
				New 4" Thick, 10' Wide Concrete Trail	874.00 LF	452.9	19,457	20,626		241		46.14 /LF	40,325	60,252
				New 4" Thick, 12' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	5,158.66 sy	103.2	4,291	-	-	562	-	0.94 /sy	4,853	6,937
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	46,428.00 sf	1,857.1	81,524	85,892	-	-	-	3.61 /sf	167,416	250,097
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	46,428.00 sf	445.7	17,544	23,678	-	721	-	0.90 /sf	41,942	63,031
				New 4" Thick, 12' Wide Concrete Trail	3,869.00 LF	2,406.0	103,358	109,570		1,282		55.37 /LF	214,211	320,064
				New 4" Thick, 16' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	696.88 sy	13.9	580	-	-	76	-	0.94 /sy	656	937
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	6,272.00 sf	250.9	11,013	11,603	-	-	-	3.61 /sf	22,616	33,786
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	6,272.00 sf	60.2	2,370	3,199	-	97	-	0.90 /sf	5,666	8,515
				New 4" Thick, 16' Wide Concrete Trail	392.00 LF	325.0	13,963	14,802		173		73.82 /LF	28,938	43,238
				New 4" Thick, 20' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	684.44 sy	13.7	569	-	-	75	-	0.94 /sy	644	920



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				<b>New 4" Thick, 20' Wide Concrete Trail</b>										
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	6,160.00 sf	246.4	10,816	11,396	-	-	-	3.61 /sf	22,212	33,182
				Sidewalks, driveways, and patios, sidewalk, concrete, excludes base, for 4" thick bank run gravel base, add	6,160.00 sf	59.1	2,328	3,142	-	96	-	0.90 /sf	5,565	8,363
				<b>New 4" Thick, 20' Wide Concrete Trail</b>	<b>308.00 LF</b>	<b>319.2</b>	<b>13,713</b>	<b>14,538</b>		<b>170</b>		<b>92.28 /LF</b>	<b>28,421</b>	<b>42,466</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>77,712.00 SF</b>	<b>4,027.2</b>	<b>173,003</b>	<b>183,400</b>		<b>2,147</b>		<b>4.61 /SF</b>	<b>358,550</b>	<b>535,729</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>4,027.2</b>	<b>173,003</b>	<b>183,400</b>		<b>2,147</b>		<b>358,550.10 /LS</b>	<b>358,550</b>	<b>535,729</b>
				<b>030 Paths/Trails</b>	<b>6,980.00 LF</b>	<b>4,027.2</b>	<b>173,003</b>	<b>183,400</b>		<b>2,147</b>		<b>51.37 /LF</b>	<b>358,550</b>	<b>535,729</b>
				<b>Roads</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Entry Road</b>										
				Fine grading, grade subgrade for base course, roadways	1,226.66 sy	5.6	247	-	-	198	-	0.36 /sy	445	649
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,226.66 sy	6.5	307	5,226	-	355	-	4.80 /sy	5,888	9,146
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	1,226.66 sy	26.1	1,090	18,155	-	621	-	16.20 /sy	19,866	30,884
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,226.66 sy	18.6	788	10,181	-	440	-	9.30 /sy	11,409	17,709
				<b>New 6" Thick, Asphalt Entry Road</b>	<b>1,226.66 SY</b>	<b>56.8</b>	<b>2,432</b>	<b>33,561</b>		<b>1,615</b>		<b>30.66 /SY</b>	<b>37,608</b>	<b>58,387</b>
				<b>32-12 Flexible Paving</b>	<b>11,040.00 SF</b>	<b>56.8</b>	<b>2,432</b>	<b>33,561</b>		<b>1,615</b>		<b>3.41 /SF</b>	<b>37,608</b>	<b>58,387</b>
				<b>Rigid Paving</b>										
				<b>New 8" Thick, Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	353.00 lf	43.1	1,980	7,943	-	25	-	28.18 /lf	9,947	15,273
				Fine grading, grade subgrade for base course, roadways	438.33 sy	2.0	88	-	-	71	-	0.36 /sy	159	232
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 8" thick, excludes base	3,945.00 sf	249.0	10,931	12,063	-	-	-	5.83 /sf	22,994	34,388
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	438.33 sy	2.3	110	1,867	-	127	-	4.80 /sy	2,104	3,268
				<b>New 8" Thick, Boat Ramp</b>	<b>3,945.00 SF</b>	<b>296.4</b>	<b>13,109</b>	<b>21,873</b>		<b>222</b>		<b>8.92 /SF</b>	<b>35,204</b>	<b>53,162</b>
				<b>32-13 Rigid Paving</b>	<b>3,945.00 SF</b>	<b>296.4</b>	<b>13,109</b>	<b>21,873</b>		<b>222</b>		<b>8.92 /SF</b>	<b>35,204</b>	<b>53,162</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>353.2</b>	<b>15,540</b>	<b>55,434</b>		<b>1,837</b>		<b>72,811.76 /LS</b>	<b>72,812</b>	<b>111,549</b>
				<b>040 Roads</b>	<b>11,040.00 SF</b>	<b>353.2</b>	<b>15,540</b>	<b>55,434</b>		<b>1,837</b>		<b>6.60 /SF</b>	<b>72,812</b>	<b>111,549</b>
				<b>Parking Lots</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	7,637.11 sy	34.9	1,539	-	-	1,232	-	0.36 /sy	2,771	4,038
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	7,637.11 sy	40.7	1,910	32,534	-	2,213	-	4.80 /sy	36,657	56,940
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	7,637.11 sy	162.4	6,785	113,029	-	3,869	-	16.20 /sy	123,683	192,284
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	7,637.11 sy	115.5	4,905	63,388	-	2,740	-	9.30 /sy	71,033	110,254
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>7,637.11 SY</b>	<b>353.5</b>	<b>15,140</b>	<b>208,951</b>		<b>10,053</b>		<b>30.66 /SY</b>	<b>234,144</b>	<b>363,516</b>
				<b>32-12 Flexible Paving</b>	<b>68,734.00 SF</b>	<b>353.5</b>	<b>15,140</b>	<b>208,951</b>		<b>10,053</b>		<b>3.41 /SF</b>	<b>234,144</b>	<b>363,516</b>
				<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	578.44 sy	25.0	984	-	-	40	-	1.77 /sy	1,025	1,458
				Sidewalks, driveways, and patios, sidewalk, concrete, excludes base, for 4" thick bank run gravel base, add	5,206.00 sf	50.0	1,967	2,655	-	81	-	0.90 /sf	4,703	7,068
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	2,603.00 lf	312.4	14,591	9,475	-	-	-	9.25 /lf	24,066	35,535
				<b>Parking Lot Curb and Gutter</b>	<b>2,603.00 LF</b>	<b>387.3</b>	<b>17,543</b>	<b>12,130</b>		<b>121</b>		<b>11.45 /LF</b>	<b>29,794</b>	<b>44,061</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>5,206.00 SF</b>	<b>387.3</b>	<b>17,543</b>	<b>12,130</b>		<b>121</b>		<b>5.72 /SF</b>	<b>29,794</b>	<b>44,061</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>740.9</b>	<b>32,682</b>	<b>221,081</b>		<b>10,174</b>		<b>263,938.12 /LS</b>	<b>263,938</b>	<b>407,576</b>
				<b>050 Parking Lots</b>	<b>73,940.00 SF</b>	<b>740.9</b>	<b>32,682</b>	<b>221,081</b>		<b>10,174</b>		<b>3.57 /SF</b>	<b>263,938</b>	<b>407,576</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>10x10 Steel Shelter w/ Stone Columns</b>										
				10x10 Steel Fabricated Shelter (Allowance)	16.00 EA				160,000	-	-	10,000.00 /EA	160,000	247,116
				<b>10x10 Steel Shelter w/ Stone Columns</b>	<b>16.00 EA</b>				<b>160,000</b>			<b>10,000.00 /EA</b>	<b>160,000</b>	<b>247,116</b>
				<b>20x30 Restroom Structure</b>										



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

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				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	332,062
				<b>20x30 Restroom Structure</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>332,062</b>
				<b>36x12 Cantilevered Shade Structure</b>										
				36x12 Cantilevered Shade Structure (Allowance)	2.00 EA				80,000	-	-	40,000.00 /EA	80,000	123,558
				<b>36x12 Cantilevered Shade Structure</b>	<b>2.00 EA</b>				<b>80,000</b>			<b>40,000.00 /EA</b>	<b>80,000</b>	<b>123,558</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>19.00 EA</b>				<b>455,000</b>			<b>23,947.37 /EA</b>	<b>455,000</b>	<b>702,737</b>
				13.0 Special Construction	1.00 LS				455,000			455,000.00 /LS	455,000	702,737
				<b>060 Structures</b>	<b>19.00 EA</b>				<b>455,000</b>			<b>23,947.37 /EA</b>	<b>455,000</b>	<b>702,737</b>
				<b>Special Features</b>										
				<b>Exterior Improvements</b>										
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>New 4" Thick, 06' Wide Concrete Sidewalk Colored</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	524.66 sy	10.5	436	-	-	57	-	0.94 /sy	494	705
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	4,722.00 sf	188.9	8,291	8,736	-	-	-	3.61 /sf	17,027	25,436
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,722.00 sf	45.3	1,784	2,408	-	73	-	0.90 /sf	4,266	6,411
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	4,722.00 sf	226.7	9,950	-	-	-	-	2.11 /sf	9,950	14,123
				<b>New 4" Thick, 06' Wide Concrete Sidewalk Colored</b>	<b>4,722.00 SF</b>	<b>471.4</b>	<b>20,462</b>	<b>11,144</b>		<b>130</b>		<b>6.72 /SF</b>	<b>31,736</b>	<b>46,676</b>
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	224.55 sy	4.5	187	-	-	24	-	0.94 /sy	211	302
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	2,021.00 sf	80.8	3,549	3,739	-	-	-	3.61 /sf	7,288	10,887
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,021.00 sf	19.4	764	1,031	-	31	-	0.90 /sf	1,826	2,744
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	2,021.00 sf	97.0	4,258	-	-	-	-	2.11 /sf	4,258	6,045
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>	<b>2,021.00 SF</b>	<b>201.7</b>	<b>8,758</b>	<b>4,770</b>		<b>56</b>		<b>6.72 /SF</b>	<b>13,583</b>	<b>19,977</b>
				<b>New 4" Thick, Concrete w/ Safety Surface</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	555.55 sy	11.1	462	-	-	61	-	0.94 /sy	523	747
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	5,000.00 sf	200.0	8,780	9,250	-	-	-	3.61 /sf	18,030	26,934
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	5,000.00 sf	48.0	1,889	2,550	-	78	-	0.90 /sf	4,517	6,788
				Playground protective surfacing, resilient rubber surface, colors, 2" thick, poured in place	5,000.00 sf	28.6	1,402	40,000	-	-	-	8.28 /sf	41,402	64,569
				<b>New 4" Thick, Concrete w/ Safety Surface</b>	<b>5,000.00 SF</b>	<b>287.7</b>	<b>12,533</b>	<b>51,800</b>		<b>138</b>		<b>12.89 /SF</b>	<b>64,471</b>	<b>99,038</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>4,722.00 SF</b>	<b>960.8</b>	<b>41,753</b>	<b>67,713</b>		<b>324</b>		<b>23.25 /SF</b>	<b>109,791</b>	<b>165,691</b>
				<b>32-17 Paving Specialties</b>										
				<b>New 6" Thick, Colored Shotcrete Landing</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 2" thick	3,520.00 sf	187.7	7,849	5,386	-	1,362	-	4.15 /sf	14,597	21,617
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	3,520.00 sf	225.3	9,419	10,771	-	1,635	-	6.20 /sf	21,825	32,682
				Fine grading, fine grade granular base for sidewalks and bikeways	391.11 sy	7.8	325	-	-	43	-	0.94 /sy	368	526
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	3,520.00 sf	33.8	1,330	1,795	-	55	-	0.90 /sf	3,180	4,779
				<b>New 6" Thick, Colored Shotcrete Landing</b>	<b>3,520.00 SF</b>	<b>454.6</b>	<b>18,924</b>	<b>17,952</b>		<b>3,094</b>		<b>11.36 /SF</b>	<b>39,970</b>	<b>59,603</b>
				<b>Cascading Waterfall w/ 3 Pools</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	3,266.00 sf	209.0	8,740	9,994	-	1,517	-	6.20 /sf	20,251	30,323
				Waterfall Feature (Allowance)	1.00 LS				20,000	-	-	20,000.00 /LS	20,000	30,889
				Fine grading, fine grade granular base for sidewalks and bikeways	181.44 sy	3.6	151	-	-	20	-	0.94 /sy	171	244
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,633.00 sf	15.7	617	833	-	25	-	0.90 /sf	1,475	2,217
				<b>Cascading Waterfall w/ 3 Pools</b>	<b>1.00 EA</b>	<b>228.3</b>	<b>9,508</b>	<b>10,827</b>	<b>20,000</b>	<b>1,562</b>		<b>41,896.44 /EA</b>	<b>41,896</b>	<b>63,674</b>
				<b>32-17 Paving Specialties</b>	<b>5,153.00 SF</b>	<b>682.9</b>	<b>28,432</b>	<b>28,779</b>	<b>20,000</b>	<b>4,656</b>		<b>15.89 /SF</b>	<b>81,867</b>	<b>123,277</b>
				<b>32-33 Site Furnishings</b>										
				<b>Site Amenities</b>										
				Benches, park, precast conc., w/back, wood rails, 8' long	4.00 ea	16.0	591	3,720	-	-	-	1,077.67 /ea	4,311	6,658
				<b>Site Amenities</b>	<b>4.00 EA</b>	<b>16.0</b>	<b>591</b>	<b>3,720</b>				<b>1,077.67 /EA</b>	<b>4,311</b>	<b>6,658</b>
				<b>Playground Equipment/Hillside Slide/Climbing Wall</b>										
				Playground Equipment/Hillside Slide/Climbing Wall (Allowance)	1.00 LS				345,000	-	-	345,000.00 /LS	345,000	532,844
				<b>Playground Equipment/Hillside Slide/Climbing Wall</b>	<b>1.00 LS</b>				<b>345,000</b>			<b>345,000.00 /LS</b>	<b>345,000</b>	<b>532,844</b>
				<b>Fountain/Splash Pad/Waterfall</b>										
				Fountain/Splash Pad/Waterfall (Allowance)	1.00 LS				330,000	-	-	330,000.00 /LS	330,000	509,677



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				Fountain/Splash Pad/Waterfall	1.00 LS				330,000			330,000.00 /LS	330,000	509,677
				Amphitheater										
				Amphitheater (Allowance)	1.00 LS				475,000			475,000.00 /LS	475,000	733,626
				Amphitheater	1.00 LS				475,000			475,000.00 /LS	475,000	733,626
				Fishing Overlook										
				Fishing Overlook (Allowance)	1.00 LS				280,000			280,000.00 /LS	280,000	432,453
				Fishing Overlook	1.00 LS				280,000			280,000.00 /LS	280,000	432,453
				Shade Sail										
				Shade Sail (Allowance)	4.00 ea	160.0	7,783	40,000				11,945.64 /ea	47,783	73,626
				Shade Sail	4.00 EA	160.0	7,783	40,000				11,945.64 /EA	47,783	73,626
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>	<b>176.0</b>	<b>8,373</b>	<b>43,720</b>	<b>1,430,000</b>			<b>1,482,093.23 /LS</b>	<b>1,482,093</b>	<b>2,288,885</b>
				32.0 Exterior Improvements	1.00 LS	1,819.7	78,558	140,212	1,450,000	4,981		1,673,750.59 /LS	1,673,751	2,577,853
				070 Special Features	1.00 LS	1,819.7	78,558	140,212	1,450,000	4,981		1,673,750.59 /LS	1,673,751	2,577,853
				Landscaping										
090				Exterior Improvements										
				Turf and Grasses										
				Large Shade Tree										
				Large Shade Tree	300.00 EA				120,000			400.00 /EA	120,000	185,337
				Large Shade Tree	300.00 EA				120,000			400.00 /EA	120,000	185,337
				Landscape - U3 Bermuda Sod										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	147,733.00 sf	1,969.3	84,498	72,389				1.06 /sf	156,887	233,194
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	2,735.79 cy	243.2	10,114	67,027		1,324		28.68 /cy	78,465	121,211
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow\	147.73 msf	4.4	209			120		2.23 /msf	329	477
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	147.73 msf	295.5	11,920	37,376		965		340.22 /msf	50,261	76,846
				Landscape - U3 Bermuda Sod	147,733.00 SF	2,512.3	106,742	176,792		2,409		1.94 /SF	285,942	431,728
				Landscape - Extensive										
				Landscape - Extensive	2,321.00 SF				6,963			3.00 /SF	6,963	10,754
				Landscape - Extensive	2,321.00 SF				6,963			3.00 /SF	6,963	10,754
				Landscape - Light										
				Landscape - Light	133,225.00 SF				133,225			1.00 /SF	133,225	205,763
				Landscape - Light	133,225.00 SF				133,225			1.00 /SF	133,225	205,763
				<b>32-92 Turf and Grasses</b>	<b>283,279.00 SF</b>	<b>2,512.3</b>	<b>106,742</b>	<b>176,792</b>	<b>260,188</b>	<b>2,409</b>		<b>1.93 /SF</b>	<b>546,130</b>	<b>833,582</b>
				32.0 Exterior Improvements	1.00 LS	2,512.3	106,742	176,792	260,188	2,409		546,130.12 /LS	546,130	833,582
				090 Landscaping	283,279.00 SF	2,512.3	106,742	176,792	260,188	2,409		1.93 /SF	546,130	833,582
				Bank Stabilization										
100				Site/Civil										
				Site Specialties										
				Bank Stabilization										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	6,500.00 lcy	1,333.9	59,557	152,482		47,959		40.00 /lcy	259,998	395,253
				Bank Stabilization	6,500.00 CY	1,333.9	59,557	152,482		47,959		40.00 /CY	259,998	395,253
				31-30 Site Specialties	1.00 LS	1,333.9	59,557	152,482		47,959		259,998.47 /LS	259,998	395,253
				31.0 Site/Civil	1.00 LS	1,333.9	59,557	152,482		47,959		259,998.47 /LS	259,998	395,253
				100 Bank Stabilization	1,900.00 LF	1,333.9	59,557	152,482		47,959		136.84 /LF	259,998	395,253
				Utilities										
				Electrical Work										
				Site Electrical										
				Electrical Service										
				PSO Quote for Electrical to Site	1.00 LS				25,400			25,400.00 /LS	25,400	39,230
				Electrical Service	1.00 LS				25,400			25,400.00 /LS	25,400	39,230
				Site Lighting										
				Site Lighting - East Bank Public Access - South	1.00 ls				300,000			300,000.00 /ls	300,000	463,343
				Site Lighting	1.00 LS				300,000			300,000.00 /LS	300,000	463,343
				26-10 Site Electrical	1.00 LS				325,400			325,400.00 /LS	325,400	502,572
				26.0 Electrical Work	1.00 LS				325,400			325,400.00 /LS	325,400	502,572
				Buried Piping										
				Water Utility Distribuion Piping										
				3" PVC Water										
				Bedding Stone, Material Only	41.08 tn			575				14.00 /tn	575	900
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	250.00 LF	100.0	4,754	523		2,291		30.27 /LF	7,568	11,013
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6				5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea			14				13.78 /ea	14	22
				3" PVC, Sch. 80, socket joint, coupling	13.00 ea			105				8.04 /ea	105	164



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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>3" PVC Water</b>										
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,654
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,172
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	50.00 lf	2.7	115	4	-	151	-	5.39 /lf	270	396
				<b>3" PVC Water</b>	<b>250.00 LF</b>	<b>158.7</b>	<b>7,514</b>	<b>2,725</b>		<b>4,918</b>		<b>60.63 /LF</b>	<b>15,158</b>	<b>22,329</b>
				<b>33-11 Water Utility Distribution Piping</b>	<b>250.00 LF</b>	<b>158.7</b>	<b>7,514</b>	<b>2,725</b>		<b>4,918</b>		<b>60.63 /LF</b>	<b>15,158</b>	<b>22,329</b>
		33-31		<b>Sanitary Utility Sewerage Piping</b>										
				<b>2" PVC Sewer</b>										
				Bedding Stone, Material Only	24.75 tn		-	347	-	-	-	14.00 /tn	347	542
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	150.00 LF	60.0	2,853	156	-	1,375	-	29.22 /LF	4,383	6,361
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea		-	4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	8.00 ea		-	23	-	-	-	2.84 /ea	23	36
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,654
				Pump,sewage ejector,duplex system,coated steel tank,268 gpm,1 hp, 15'head,135 gallon,2" dschr,includes operating and level controls,tank,cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	23,035
				<b>2" PVC Sewer</b>	<b>150.00 LF</b>	<b>144.9</b>	<b>7,052</b>	<b>15,030</b>		<b>3,397</b>		<b>169.86 /LF</b>	<b>25,479</b>	<b>38,635</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>	<b>150.00 LF</b>	<b>144.9</b>	<b>7,052</b>	<b>15,030</b>		<b>3,397</b>		<b>169.86 /LF</b>	<b>25,479</b>	<b>38,635</b>
				<b>33.0 Buried Piping</b>	<b>400.00 LF</b>	<b>303.6</b>	<b>14,567</b>	<b>17,755</b>		<b>8,315</b>		<b>101.59 /LF</b>	<b>40,637</b>	<b>60,965</b>
				<b>110 Utilities</b>	<b>1.00 LS</b>	<b>303.6</b>	<b>14,567</b>	<b>17,755</b>	<b>325,400</b>	<b>8,315</b>		<b>366,036.54 /LS</b>	<b>366,037</b>	<b>563,537</b>
				<b>J02 East Bank Public Access</b>	<b>648,853.00 SF</b>	<b>12,652.0</b>	<b>553,826</b>	<b>1,247,157</b>	<b>2,490,588</b>	<b>179,599</b>	<b>0</b>	<b>6.89 /SF</b>	<b>4,471,170</b>	<b>9,354,164</b>





Project:  
Project No.:  
Design Stage:

South Tulsa/Jenks  
386594  
Schematic Design

Estimator:  
Rev No. / Date:  
Estimate Class:

Jones T  
02 - 04/24/2014  
Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
J03				<b>Vensel Creek Public Access</b>										
		005		<b>Overall Site Grading</b>										
		31.0		Site/Civil										
			31-00	Site/Civil										
				<b>Mass Grading</b>										
				Rough Site Grading, Small Crew	47,607.33 sy	634.8	29,752	-	-	41,380	-	1.49 /sy	71,131	104,491
				<b>Mass Grading</b>	47,607.33 SY	634.8	29,752			41,380		1.49 /SY	71,131	104,491
				<b>31-00 Site/Civil</b>	1.00 LS	634.8	29,752			41,380		71,131.49 /LS	71,131	104,491
				31.0 Site/Civil	1.00 LS	634.8	29,752			41,380		71,131.49 /LS	71,131	104,491
				<b>005 Overall Site Grading</b>	428,466.00 SF	634.8	29,752			41,380		0.17 /SF	71,131	104,491
		030		<b>Paths/Trails</b>										
		32.0		Exterior Improvements										
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>New 4" Thick, 08' Wide Concrete Trail</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	226.66 sy	4.5	189	-	-	25	-	0.94 /sy	213	305
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	2,040.00 sf	81.6	3,582	3,774	-	-	-	3.61 /sf	7,356	10,989
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,040.00 sf	19.6	771	1,040	-	32	-	0.90 /sf	1,843	2,770
				<b>New 4" Thick, 08' Wide Concrete Trail</b>	255.00 LF	105.7	4,541	4,814		56		36.91 /LF	9,412	14,063
				<b>New 4" Thick, 10' Wide Concrete Trail</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	3,727.77 sy	74.6	3,101	-	-	406	-	0.94 /sy	3,507	5,012
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	33,550.00 sf	1,342.0	58,911	62,068	-	-	-	3.61 /sf	120,979	180,726
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	33,550.00 sf	322.1	12,677	17,111	-	521	-	0.90 /sf	30,309	45,548
				<b>New 4" Thick, 10' Wide Concrete Trail</b>	3,355.00 LF	1,738.6	74,689	79,178		927		46.14 /LF	154,794	231,286
				<b>New 4" Thick, 12' Wide Concrete Trail</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	768.00 sy	15.4	639	-	-	84	-	0.94 /sy	722	1,033
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	6,912.00 sf	276.5	12,137	12,787	-	-	-	3.61 /sf	24,924	37,233
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	6,912.00 sf	66.4	2,612	3,525	-	107	-	0.90 /sf	6,244	9,384
				<b>New 4" Thick, 12' Wide Concrete Trail</b>	576.00 LF	358.2	15,388	16,312		191		55.37 /LF	31,891	47,650
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	42,502.00 SF	2,202.5	94,618	100,305		1,174		4.61 /SF	196,097	292,999
				32.0 Exterior Improvements	1.00 LS	2,202.5	94,618	100,305		1,174		196,097.10 /LS	196,097	292,999
				030 Paths/Trails	4,186.00 LF	2,202.5	94,618	100,305		1,174		46.85 /LF	196,097	292,999
		040		<b>Roads</b>										
		32.0		Exterior Improvements										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Entry Road</b>										
				Fine grading, grade subgrade for base course, roadways	1,857.88 sy	8.5	374	-	-	300	-	0.36 /sy	674	982
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,857.88 sy	9.9	465	7,915	-	538	-	4.80 /sy	8,918	13,852
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	1,857.88 sy	39.5	1,651	27,497	-	941	-	16.20 /sy	30,088	46,777
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,857.88 sy	28.1	1,193	15,420	-	667	-	9.30 /sy	17,280	26,822
				<b>New 6" Thick, Asphalt Entry Road</b>	1,857.88 SY	86.0	3,683	50,832		2,446		30.66 /SY	56,960	88,432
				<b>32-12 Flexible Paving</b>	16,721.00 SF	86.0	3,683	50,832		2,446		3.41 /SF	56,960	88,432
			32-13	<b>Rigid Paving</b>										
				<b>New 8" Thick, Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	454.00 lf	55.4	2,546	10,215	-	32	-	28.18 /lf	12,793	19,643
				Fine grading, grade subgrade for base course, roadways	468.00 sy	2.1	94	-	-	75	-	0.36 /sy	170	247
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 8" thick, excludes base	4,212.00 sf	265.9	11,671	12,879	-	-	-	5.83 /sf	24,550	36,716
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	468.00 sy	2.5	117	1,994	-	136	-	4.80 /sy	2,246	3,489
				<b>New 8" Thick, Boat Ramp</b>	4,212.00 SF	325.9	14,428	25,088		243		9.44 /SF	39,759	60,096
				<b>32-13 Rigid Paving</b>	4,212.00 SF	325.9	14,428	25,088		243		9.44 /SF	39,759	60,096
				32.0 Exterior Improvements	1.00 LS	411.9	18,111	75,920		2,689		96,719.61 /LS	96,720	148,528
				040 Roads	16,721.00 SF	411.9	18,111	75,920		2,689		5.78 /SF	96,720	148,528
		050		<b>Parking Lots</b>										



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Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
		32.0		<b>Exterior Improvements</b>										
			32-12	<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	1,870.88 sy	8.5	377	-	-	302	-	0.36 /sy	679	989
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,870.88 sy	10.0	468	7,970	-	542	-	4.80 /sy	8,980	13,949
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	1,870.88 sy	39.8	1,662	27,689	-	948	-	16.20 /sy	30,299	47,104
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,870.88 sy	28.3	1,202	15,528	-	671	-	9.30 /sy	17,401	27,009
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>1,870.88 SY</b>	<b>86.6</b>	<b>3,709</b>	<b>51,187</b>		<b>2,463</b>		<b>30.66 /SY</b>	<b>57,359</b>	<b>89,051</b>
				<b>32-12 Flexible Paving</b>	<b>16,838.00 SF</b>	<b>86.6</b>	<b>3,709</b>	<b>51,187</b>		<b>2,463</b>		<b>3.41 /SF</b>	<b>57,359</b>	<b>89,051</b>
			32-16	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	142.22 sy	6.1	242	-	-	10	-	1.77 /sy	252	359
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,280.00 sf	12.3	484	653	-	20	-	0.90 /sf	1,156	1,738
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	640.00 lf	76.8	3,587	2,330	-	-	-	9.25 /lf	5,917	8,737
				<b>Parking Lot Curb and Gutter</b>	<b>640.00 LF</b>	<b>95.2</b>	<b>4,313</b>	<b>2,982</b>		<b>30</b>		<b>11.45 /LF</b>	<b>7,325</b>	<b>10,833</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>1,280.00 SF</b>	<b>95.2</b>	<b>4,313</b>	<b>2,982</b>		<b>30</b>		<b>5.72 /SF</b>	<b>7,325</b>	<b>10,833</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>181.8</b>	<b>8,022</b>	<b>54,170</b>		<b>2,493</b>		<b>64,684.26 /LS</b>	<b>64,684</b>	<b>99,884</b>
				<b>050 Parking Lots</b>	<b>18,118.00 SF</b>	<b>181.8</b>	<b>8,022</b>	<b>54,170</b>		<b>2,493</b>		<b>3.57 /SF</b>	<b>64,684</b>	<b>99,884</b>
		060		<b>Structures</b>										
			13.0	<b>Special Construction</b>										
			13-34	<b>Fabricated Engineered Structures</b>										
				<b>30x50 Steel Shelter w/ Stone Columns</b>										
				30x50 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				90,000	-	-	90,000.00 /EA	90,000	139,003
				<b>30x50 Steel Shelter w/ Stone Columns</b>	<b>1.00 EA</b>				<b>90,000</b>			<b>90,000.00 /EA</b>	<b>90,000</b>	<b>139,003</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>1.00 EA</b>				<b>90,000</b>			<b>90,000.00 /EA</b>	<b>90,000</b>	<b>139,003</b>
				13.0 Special Construction	1.00 LS				90,000			90,000.00 /LS	90,000	139,003
				<b>060 Structures</b>	<b>3.00 EA</b>				<b>90,000</b>			<b>30,000.00 /EA</b>	<b>90,000</b>	<b>139,003</b>
		070		<b>Special Features</b>										
			32.0	<b>Exterior Improvements</b>										
			32-17	<b>Paving Specialties</b>										
				<b>8" Gunite Concrete Channel Lined w/ Boulders</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	2,034.00 sf	130.2	5,443	6,224	-	945	-	6.20 /sf	12,612	18,885
				Fine grading, fine grade granular base for sidewalks and bikeways	113.00 sy	2.3	94	-	-	12	-	0.94 /sy	106	152
				Rip-rap and rock lining, random, broken stone, 300 lb. average, dumped	200.00 ton	5.3	235	5,000	-	331	-	27.83 /ton	5,566	8,655
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,017.00 sf	9.8	384	519	-	16	-	0.90 /sf	919	1,381
				<b>8" Gunite Concrete Channel Lined w/ Boulders</b>	<b>1,017.00 SF</b>	<b>147.5</b>	<b>6,156</b>	<b>11,743</b>		<b>1,304</b>		<b>18.88 /SF</b>	<b>19,203</b>	<b>29,072</b>
				<b>New 8" Thick, Colored Shotcrete Landing</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	12,774.00 sf	817.5	34,183	39,088	-	5,933	-	6.20 /sf	79,204	118,601
				Fine grading, fine grade granular base for sidewalks and bikeways	709.66 sy	14.2	590	-	-	77	-	0.94 /sy	668	954
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	6,387.00 sf	61.3	2,413	3,257	-	99	-	0.90 /sf	5,770	8,671
				<b>New 8" Thick, Colored Shotcrete Landing</b>	<b>6,387.00 SF</b>	<b>893.0</b>	<b>37,187</b>	<b>42,346</b>		<b>6,109</b>		<b>13.41 /SF</b>	<b>85,642</b>	<b>128,226</b>
				<b>32-17 Paving Specialties</b>	<b>1,017.00 SF</b>	<b>1,040.6</b>	<b>43,343</b>	<b>54,089</b>		<b>7,413</b>		<b>103.09 /SF</b>	<b>104,845</b>	<b>157,298</b>
			32-33	<b>Site Furnishings</b>										
				<b>Lighthouse Feature w/ Decorative Concrete Plaza</b>										
				Lighthouse Feature w/ Decorative Concrete Plaza	1.00 LS				285,000	-	-	285,000.00 /LS	285,000	440,176
				<b>Lighthouse Feature w/ Decorative Concrete Plaza</b>	<b>1.00 LS</b>				<b>285,000</b>			<b>285,000.00 /LS</b>	<b>285,000</b>	<b>440,176</b>
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>				<b>285,000</b>			<b>285,000.00 /LS</b>	<b>285,000</b>	<b>440,176</b>
			32-50	<b>Site Improvements</b>										
				<b>Floating Dock</b>										
				Jetties, docks, floating, polystyrene flotation, galvanized steel frame and wood deck, 8' wide, includes anchors, maximum	2,280.00 sf	570.0	27,974	63,840	-	7,529	-	43.57 /sf	99,343	150,913
				<b>Floating Dock</b>	<b>190.00 LF</b>	<b>570.0</b>	<b>27,974</b>	<b>63,840</b>		<b>7,529</b>		<b>522.86 /LF</b>	<b>99,343</b>	<b>150,913</b>
				<b>Floating Dock - Gangway Ramp</b>										
				Jetties, floating dock accessories, gangway, aluminum, one end rolling, no hand rails, 8' wide, maximum	253.00 lf	168.7	6,489	120,427	-	-	-	501.65 /lf	126,916	197,617
				Jetties, floating dock accessories, gangway, for handrails, add	506.00 lf			35,420	-	-	-	70.00 /lf	35,420	55,414
				<b>Floating Dock - Gangway Ramp</b>	<b>253.00 LF</b>	<b>168.7</b>	<b>6,489</b>	<b>155,847</b>				<b>641.65 /LF</b>	<b>162,336</b>	<b>253,031</b>
				<b>32-50 Site Improvements</b>	<b>1.00 LS</b>	<b>738.7</b>	<b>34,464</b>	<b>219,687</b>		<b>7,529</b>		<b>261,679.47 /LS</b>	<b>261,679</b>	<b>403,943</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>1,779.2</b>	<b>77,807</b>	<b>273,776</b>	<b>285,000</b>	<b>14,942</b>		<b>651,524.16 /LS</b>	<b>651,524</b>	<b>1,001,417</b>



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				<b>070 Special Features</b>										
		080		<b>Retaining Walls</b>	1.00 LS	1,779.2	77,807	273,776	285,000	14,942		651,524.16 /LS	651,524	1,001,417
		32.0		<b>Exterior Improvements</b>										
			32-32	<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	8.51 HR	8.5	381	224	-	568	-	137.95 /HR	1,174	1,747
				Dust Control Operations	45.59 HR	68.4	3,195	-	-	3,727	-	151.83 /HR	6,922	10,143
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	4.26 HR	4.3	178	47	-	-	-	117.71 /HR	501	741
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	12,000.00 bcy	92.3	4,122	-	-	10,618	-	1.23 /bcy	14,740	21,826
				Hauling, excavated borrow material, loose cubic yards, 1 mile round trip, 2.6 loads/hr, base wd rate, 16.5 cy dump trailer, off-highway, excludes loading	12,000.00 lcy	131.9	5,008	-	-	36,099	-	3.43 /lcy	41,107	61,422
				<b>Mass Common Excavation</b>	12,000.00 CY	305.3	12,883	271		51,289		5.37 /CY	64,443	95,879
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (21' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	10,061.00 sf	2,476.5	115,983	62,881	-	28,803	-	20.64 /sf	207,667	306,347
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	479.00 lf	95.8	5,737	25,866	-	319	-	66.64 /lf	31,921	49,089
				Concrete seawalls, reinforced concrete, to 21' high, include footing and tie-backs, maximum	479.00 lf	3,760.8	186,852	124,900	-	28,176	-	709.66 /lf	339,927	503,027
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (21' HT)</b>	479.00 LF	6,333.1	308,571	213,647		57,298		1,209.85 /LF	579,516	858,463
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (21' HT) Battered to 12</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	4,567.00 sf	1,124.2	52,648	28,544	-	13,075	-	20.64 /sf	94,266	139,060
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	217.00 lf	43.4	2,599	11,718	-	144	-	66.64 /lf	14,461	22,239
				Concrete seawalls, reinforced concrete, to 21' high (12' batter), include footing and tie-backs, maximum	217.00 lf	2,129.7	105,812	70,729	-	15,956	-	887.08 /lf	192,496	284,857
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (21' HT) Battered to 12</b>	217.00 LF	3,297.3	161,059	110,991		29,175		1,388.13 /LF	301,224	446,156
				<b>32-32 Retaining Walls</b>	696.00 LF	9,935.7	482,513	324,909		137,761		1,358.02 /LF	945,183	1,400,499
				<b>32.0 Exterior Improvements</b>	1.00 LS	9,935.7	482,513	324,909		137,761		945,182.76 /LS	945,183	1,400,499
				<b>080 Retaining Walls</b>	479.00 LF	9,935.7	482,513	324,909		137,761		1,973.24 /LF	945,183	1,400,499
		090		<b>Landscaping</b>										
		32.0		<b>Exterior Improvements</b>										
			32-92	<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	75.00 EA				30,000	-	-	400.00 /EA	30,000	46,334
				<b>Large Shade Tree</b>	75.00 EA				30,000			400.00 /EA	30,000	46,334
				<b>Landscape - Light</b>										
				Landscape - Light	118,559.00 SF				118,559	-	-	1.00 /SF	118,559	183,112
				<b>Landscape - Light</b>	118,559.00 SF				118,559			1.00 /SF	118,559	183,112
				<b>32-92 Turf and Grasses</b>	118,559.00 SF				148,559			1.25 /SF	148,559	229,446
				<b>32.0 Exterior Improvements</b>	1.00 LS				148,559			148,559.00 /LS	148,559	229,446
				<b>090 Landscaping</b>	118,559.00 SF				148,559			1.25 /SF	148,559	229,446
		100		<b>Bank Stabilization</b>										
		31.0		<b>Site/Civil</b>										
			31-30	<b>Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	4,118.00 lcy	845.1	37,732	96,603	-	30,384	-	40.00 /lcy	164,719	250,408
				<b>Bank Stabilization</b>	4,118.00 CY	845.1	37,732	96,603		30,384		40.00 /CY	164,719	250,408
				<b>31-30 Site Specialties</b>	1.00 LS	845.1	37,732	96,603		30,384		164,719.04 /LS	164,719	250,408
				<b>31.0 Site/Civil</b>	1.00 LS	845.1	37,732	96,603		30,384		164,719.04 /LS	164,719	250,408
				<b>100 Bank Stabilization</b>	1,200.00 LF	845.1	37,732	96,603		30,384		137.27 /LF	164,719	250,408
		110		<b>Utilities</b>										
		26.0		<b>Electrical Work</b>										
			26-10	<b>Site Electrical</b>										
				<b>Electrical Service</b>										
				PSO Quote for Electrical to Site	1.00 LS				150,000	-	-	150,000.00 /LS	150,000	231,671
				<b>Electrical Service</b>	1.00 LS				150,000			150,000.00 /LS	150,000	231,671
				<b>Site Lighting</b>										
				Site Lighting - East Bank Public Access - North	1.00 ls				180,000	-	-	180,000.00 /ls	180,000	278,006
				<b>Site Lighting</b>	1.00 LS				180,000			180,000.00 /LS	180,000	278,006



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>330,000</b>			<b>330,000.00 /LS</b>	<b>330,000</b>	<b>509,677</b>
				26.0 Electrical Work	1.00 LS				330,000			330,000.00 /LS	330,000	509,677
		33.0		Buried Piping										
			33-11	<b>Water Utility Distribuion Piping</b>										
				3" PVC Water										
				Bedding Stone, Material Only	106.80 tn		-	1,495	-	-	-	14.00 /tn	1,495	2,339
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	650.00 LF	260.0	12,361	1,359	-	5,956	-	30.27 /LF	19,676	28,634
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea		-	6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea		-	14	-	-	-	13.78 /ea	14	22
				3" PVC, Sch. 80, socket joint, coupling	33.00 ea		-	265	-	-	-	8.04 /ea	265	415
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,654
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,172
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	50.00 lf	2.7	115	4	-	151	-	5.39 /lf	270	396
				3" PVC Water	650.00 LF	318.7	15,121	4,642		8,583		43.61 /LF	28,347	41,641
				<b>33-11 Water Utility Distribuion Piping</b>	<b>650.00 LF</b>	<b>318.7</b>	<b>15,121</b>	<b>4,642</b>		<b>8,583</b>		<b>43.61 /LF</b>	<b>28,347</b>	<b>41,641</b>
				33.0 Buried Piping	650.00 LF	318.7	15,121	4,642		8,583		43.61 /LF	28,347	41,641
				110 Utilities	1.00 LS	318.7	15,121	4,642	330,000	8,583		358,346.79 /LS	358,347	551,318
				<b>J03 Vensel Creek Public Access</b>	<b>428,466.00 SF</b>	<b>16,309.7</b>	<b>763,677</b>	<b>930,324</b>	<b>853,559</b>	<b>239,405</b>		<b>6.51 /SF</b>	<b>2,786,964</b>	<b>4,217,994</b>



Project: South Tulsa/Jenks  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Estimate Totals**

Construction Costs	Amount	Totals	Rate
Labor	7,368,895		
Material	10,602,939		
Subcontract	12,258,973		
Equipment	2,086,338		
Other			
<b>Total Before Markups</b>	<b>32,317,145</b>	<b>32,317,145</b>	
Estimate Contingency Dam	2,952,106		15.000 %
Estimate Contingency Parks	2,527,288		20.000 %
	<b>5,479,394</b>	<b>37,796,539</b>	
Tulsa Location Fac. Site	(1,181,904)		(12.500) %
<b>Adjusted Raw Total</b>	<b>(1,181,904)</b>	<b>36,614,635</b>	
General Conditions	1,830,732		5.000 %
<b>Total General Conditions</b>	<b>1,830,732</b>	<b>38,445,367</b>	
Material Sales & Use Tax - %	212,059		2.000 %
Construction Equip Tax - %	177,547		8.510 %
<b>Total Taxes</b>	<b>389,606</b>	<b>38,834,973</b>	
Project Staff & Home Office OH	3,883,497		10.000 %
Profit on Previous Subtotal	1,941,749		5.000 %
Mobilization/Demobilization	1,693,102		3.000 %
Blder's Risk & Gen Liab Ins -%	564,367		1.000 %
Flood Insurance	564,367		1.000 %
Payment & Performance Bonds	654,666		1.160 %
<b>Total Bonds and Insurances</b>	<b>9,301,748</b>	<b>48,136,721</b>	
<b>Construction Total</b>		<b>48,136,721</b>	
Land Acquisition - Dam	5,800,000		
Land Acquisition - East Bank	2,500,000		
<b>Construction Total w/ Land</b>	<b>8,300,000</b>	<b>56,436,721</b>	



Project: **Bixby** Estimator: Jones T  
 Project No.: 386594 Rev No. / Date: 02 - 04/24/2014  
 Design Stage: Schematic Design Estimate Class: Class 3

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
<b>01</b>		<b>Bixby Low Water Dam</b>			
	010	Low Water Dam	2,855.00 LF	11,178.80 /LF	31,915,471
	060	Structures	1.00 EA	118,171.24 /EA	118,171
	080	Retaining Walls	1,000.00 LF	582.94 /LF	582,938
		<b>01 Bixby Low Water Dam</b>	<b>2,855.00 LF</b>	<b>11,424.37 /LF</b>	<b>32,616,580</b>
<b>02</b>		<b>North Bank Public Access</b>			
	001	Land Acquisition	1.00 LS	218,000.01 /LS	218,000
	005	Overall Site Grading	320,179.00 SF	0.24 /SF	77,161
	030	Paths/Trails	2,832.00 LF	53.66 /LF	151,956
	040	Roads	42,461.00 SF	6.17 /SF	262,049
	050	Parking Lots	47,608.00 SF	5.53 /SF	263,437
	060	Structures	13.00 EA	47,928.71 /EA	623,073
	070	Special Features	1.00 LS	1,236,323.78 /LS	1,236,324
	080	Retaining Walls	969.00 LF	506.19 /LF	490,498
	090	Landscaping	141,361.00 SF	3.17 /SF	447,613
	100	Bank Stabilization	900.00 LF	238.17 /LF	214,351
	110	Utilities	1.00 LS	1,113,050.01 /LS	1,113,050
		<b>02 North Bank Public Access</b>	<b>320,179.00 SF</b>	<b>15.92 /SF</b>	<b>5,097,513</b>
<b>03</b>		<b>South Bank Public Access</b>			
	001	Land Acquisition	1.00 LS	4,000.01 /LS	4,000
	005	Overall Site Grading	334,443.00 SF	0.24 /SF	80,599
	020	Pedestrian Bridges	1.00 EA	381,127.67 /EA	381,128
	030	Paths/Trails	4,514.00 LF	57.85 /LF	261,125
	040	Roads	22,111.00 SF	6.46 /SF	142,736
	050	Parking Lots	18,414.00 SF	5.55 /SF	102,148
	060	Structures	1.00 EA	328,335.17 /EA	328,335
	070	Special Features	1.00 LS	442,133.56 /LS	442,134
	080	Retaining Walls	1,340.00 LF	517.06 /LF	692,857
	090	Landscaping	195,764.00 SF	2.79 /SF	546,421
	100	Bank Stabilization	800.00 LF	238.17 /LF	190,534
	110	Utilities	1.00 LS	451,750.91 /LS	451,751
		<b>03 South Bank Public Access</b>	<b>334,443.00 LS</b>	<b>10.84 /LS</b>	<b>3,623,768</b>
<b>04</b>		<b>Memorial Public Access</b>			
	001	Land Acquisition	1.00 LS	40,000.01 /LS	40,000
	005	Overall Site Grading	290,354.00 SF	0.24 /SF	69,974



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

## Estimate Summary

Bid Item	Area	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
	030	Paths/Trails	2,881.00 LF	72.75 /LF	209,605
	040	Roads	11,226.00 SF	11.30 /SF	126,839
	050	Parking Lots	27,950.00 SF	5.52 /SF	154,175
	060	Structures	3.00 EA	127,770.73 /EA	383,312
	070	Special Features	1.00 LS	142,526.29 /LS	142,526
	080	Retaining Walls	60.00 LF	282.23 /LF	16,934
	090	Landscaping	166,854.00 SF	2.38 /SF	396,429
	100	Bank Stabilization	500.00 LF	228.72 /LF	114,362
	110	Utilities	1.00 LS	254,448.52 /LS	254,449
		<b>04 Memorial Public Access</b>	<b>290,354.00 SF</b>	<b>6.57 /SF</b>	<b>1,908,605</b>
<b>05</b>		<b>Memorial to Dam Trail</b>			
	001	Land Acquisition	1.00 LS	256,000.01 /LS	256,000
	005	Overall Site Grading	335,783.00 SF	0.24 /SF	80,922
	030	Paths/Trails	4,228.00 LF	56.96 /LF	240,838
	090	Landscaping	254,420.00 SF	2.43 /SF	618,481
	100	Bank Stabilization	3,000.00 LF	182.97 /LF	548,907
		<b>05 Memorial to Dam Trail</b>	<b>335,783.00 SF</b>	<b>5.20 /SF</b>	<b>1,745,147</b>
<b>06</b>		<b>Irving North Park Access</b>			
	001	Land Acquisition	1.00 LS	237,000.02 /LS	237,000
	005	Overall Site Grading	273,526.00 SF	0.24 /SF	65,918
	040	Roads	114,960.00 SF	5.23 /SF	601,204
	050	Parking Lots	38,074.00 SF	0.49 /SF	18,793
		<b>06 Irving North Park Access</b>	<b>273,526.00 SF</b>	<b>3.37 /SF</b>	<b>922,915</b>

### Estimate Totals

Construction Costs	Amount	Totals	Rate
Labor	10,616,292		
Material	22,039,983		
Subcontract	9,291,422		
Equipment	3,211,831		
Other	755,000		
<b>Construction Total w/ Land</b>	<b>45,914,528</b>	<b>45,914,528</b>	



Project: **Bixby**  
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 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>01</b>			<b>Bixby Low Water Dam</b>										
	<b>03.0</b>		<b>Concrete Work</b>										
		<b>03-10</b>	<b>Cast-In-Place Concrete Work</b>										
			Concrete Wing Walls @ Dam Ends		1,943.7	83,126	100,273	20,222			/CY	203,622	292,392
			Rock Bolts - 1.75" dia x 12' Bonded		767.8	34,164	93,600		20,346		/EA	148,110	215,568
			Rock Bolts - 1.75" dia x 15' Bonded		128.3	5,687	16,200		3,518		/EA	25,406	37,000
			Dental Concrete Allowance		2,972.4	114,136	278,098	31,620			/CY	423,854	617,387
			Concrete Gravity Dam		84,504.2	3,506,380	8,312,127	1,716,944			/CY	13,535,451	19,721,704
			03-10 Cast-In-Place Concrete Work		90,316.3	3,743,494	8,800,298	1,768,786	23,864		/CY	14,336,442	20,884,052
			<b>03.0 Concrete Work</b>		<b>90,316.3</b>	<b>3,743,494</b>	<b>8,800,298</b>	<b>1,768,786</b>	<b>23,864</b>		<b>/CY</b>	<b>14,336,442</b>	<b>20,884,052</b>
	<b>13.0</b>		<b>Special Construction</b>										
		<b>13-34</b>	<b>Fabricated Engineered Structures</b>										
			20x40 Dam Control Building					80,000			/EA	80,000	118,171
			13-34 Fabricated Engineered Structures					80,000			/EA	80,000	118,171
			<b>13.0 Special Construction</b>					<b>80,000</b>			<b>/LS</b>	<b>80,000</b>	<b>118,171</b>
	<b>31.0</b>		<b>Site/Civil</b>										
		<b>31-10</b>	<b>Temporary Works</b>										
			Coffer Dam		2,275.8	102,243	5,000	270,000	184,954		/lf	562,198	810,384
			31-10 Temporary Works		2,275.8	102,243	5,000	270,000	184,954		/LS	562,198	810,384
		<b>31-15</b>	<b>Site Preparation</b>										
			Foundation Cleanup		142.3	6,059			12,171		/SY	18,230	25,685
			31-15 Site Preparation		142.3	6,059			12,171		/LS	18,230	25,685
		<b>31-20</b>	<b>Earthworks, Site</b>										
			Dewatering		12,792.0	506,803	7,950	4,500	509,206		/DAY	1,028,459	1,435,670
			Mass Common Excavation		1,011.1	41,996	500		188,096		/CY	230,593	327,873
			Mass Rock Excavation		2,574.9	111,296	63,450		202,562		/CY	377,308	536,611
			31-20 Earthworks, Site		16,378.0	660,095	71,900	4,500	899,865		/LS	1,636,360	2,300,154
		<b>31-30</b>	<b>Site Specialties</b>										
			Downstream Grouted Rock Fill		35,183.6	1,459,097	2,814,684		531,724		/CY	4,805,506	6,951,096
			31-30 Site Specialties		35,183.6	1,459,097	2,814,684		531,724		/LS	4,805,506	6,951,096
			<b>31.0 Site/Civil</b>		<b>53,979.6</b>	<b>2,227,495</b>	<b>2,891,584</b>	<b>274,500</b>	<b>1,628,713</b>		<b>/LS</b>	<b>7,022,292</b>	<b>10,087,320</b>
	<b>32.0</b>		<b>Exterior Improvements</b>										
		<b>32-32</b>	<b>Retaining Walls</b>										
			Retaining Wall - Sea Wall 10' Ht.		1,630.3	75,208	58,109		20,430		/LF	153,746	218,051
			Retaining Wall - Sea Wall 18' Ht.		2,358.5	109,843	91,276		35,160		/LF	236,280	335,711
			32-32 Retaining Walls		3,988.7	185,051	149,385		55,591		/LF	390,026	553,762
			<b>32.0 Exterior Improvements</b>		<b>3,988.7</b>	<b>185,051</b>	<b>149,385</b>		<b>55,591</b>		<b>/LS</b>	<b>390,026</b>	<b>553,762</b>
	<b>35.0</b>		<b>Water and Marine Construction Equipment</b>										
		<b>35-10</b>	<b>Water Control Gates</b>										
			Obermeyer Gates					658,892			/EA	658,892	973,276
			35-10 Water Control Gates					658,892			/EA	658,892	973,276
			<b>35.0 Water and Marine Construction Equipment</b>					<b>658,892</b>			<b>/LS</b>	<b>658,892</b>	<b>973,276</b>
			<b>01 Bixby Low Water Dam</b>	<b>2,855.00 LF</b>	<b>148,284.7</b>	<b>6,156,040</b>	<b>11,841,267</b>	<b>2,782,178</b>	<b>1,708,168</b>		<b>7,876.59 /LF</b>	<b>22,487,652</b>	<b>32,616,580</b>





Project: **Bixby**  
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 Design Stage: Schematic Design

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 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Summary Detail

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
02			<b>North Bank Public Access</b>										
	01.0		General Conditions										
		01-10	Land Acquisition										
			Land Acquisition - North Bank Public Access							0	/LS	0	218,000
			01-10 Land Acquisition							0	/LS	0	218,000
			01.0 General Conditions							0	/LS	0	218,000
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			10x10 Steel Shelter w/ Stone Columns					90,000			/EA	90,000	137,443
			20x30 Steel Shelter w/ Stone Columns					83,000			/EA	83,000	126,753
			20x30 Restroom Structure					235,000			/EA	235,000	358,878
			13-34 Fabricated Engineered Structures					408,000			/EA	408,000	623,073
			13.0 Special Construction					408,000			/LS	408,000	623,073
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					405,800			/LS	405,800	619,713
			Site Lighting					210,000			/LS	210,000	320,699
			26-10 Site Electrical					615,800			/LS	615,800	940,413
			26.0 Electrical Work					615,800			/LS	615,800	940,413
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		474.3	22,232			30,922		/SY	53,154	77,161
			31-00 Site/Civil		474.3	22,232			30,922		/LS	53,154	77,161
		31-30	Site Specialties										
			Bank Stabilization		731.7	32,671	83,647		26,309		/CY	142,627	214,351
			31-30 Site Specialties		731.7	32,671	83,647		26,309		/LS	142,627	214,351
			31.0 Site/Civil		1,206.1	54,904	83,647		57,231		/LS	195,781	291,512
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			New 6" Thick, 16' Wide Asphalt Maintenance Road		63.9	2,735	37,748		1,816		/SY	42,299	64,937
			New 6" Thick, Asphalt Entry Road		116.8	5,004	69,057		3,323		/SY	77,383	118,797
			New 6" Thick, Asphalt Parking Lot		221.1	9,470	130,702		6,288		/SY	146,460	224,845
			32-12 Flexible Paving		401.8	17,209	237,506		11,427		/SF	266,142	408,579
		32-13	Rigid Paving										
			New 6" Thick, Concrete Drive		38.0	1,672	2,175		40		/SY	3,886	5,768
			New 6" Thick, Concrete Emergency Boat Ramp		385.6	17,087	31,051		368		/SY	48,507	72,547
			32-13 Rigid Paving		423.7	18,759	33,226		408		/SF	52,393	78,315
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 04' Wide Concrete Sidewalk		88.3	3,793	4,021		47		/LF	7,862	11,611
			New 4" Thick, 05' Wide Concrete Sidewalk		26.4	1,135	1,204		14		/LF	2,353	3,475
			New 4" Thick, 06' Wide Concrete Sidewalk		588.3	25,272	26,791		314		/LF	52,376	77,350
			New 4" Thick, 06' Wide Concrete Sidewalk Colored		54.3	2,357	1,284		15		/SF	3,656	5,314
			New 4" Thick, Concrete w/ Color Art. Turf		206.5	9,251	41,660		72		/SF	50,983	77,532
			New 4" Thick, Concrete Stamped & Colored		857.6	37,227	20,275		237		/SF	57,740	83,919
			New 4" Thick, Concrete w/ Safety Surface		126.1	5,492	22,699		61		/SF	28,251	42,909
			New 6" Thick, 16' Wide Concrete Trail		423.7	18,119	21,820		240		/LF	40,178	59,520
			Parking Lot Curb and Gutter		343.3	15,548	10,751		107		/LF	26,406	38,593
			32-16 Curbs, Gutters, Sidewalks, and Driveways		2,714.5	118,195	150,504		1,106		/SF	269,805	400,222
		32-17	Paving Specialties										
			New 6" Thick, Colored Shotcrete Landing		1,144.8	47,654	45,206		7,792		/SF	100,652	148,347
			New 8" Thick, Colored Shotcrete Recirculating Waterfall		83.5	3,476	3,958	150,000	571		/SF	158,005	240,918
			32-17 Paving Specialties		1,228.3	51,130	49,165	150,000	8,363		/SF	258,657	389,264
		32-32	Retaining Walls										
			Mass Common Excavation		41.6	1,736	37		7,466		/CY	9,240	13,596
			Retaining Wall - 08" Concrete w/ Seating (2' HT)		798.2	38,768	25,472		5,888		/LF	70,128	102,524
			Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)		363.6	18,056	16,162		2,974		/LF	37,192	54,745
			Retaining Wall - 12" Concrete (5' HT)		669.7	33,275	17,784		5,018		/LF	56,076	81,633



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)		1,211.1	59,755	45,485		10,277		/LF	115,517	169,441
			Retaining Wall - 12" Concrete w/ Stone Railing (6' HT)		385.6	18,973	14,231		3,336		/LF	36,540	53,582
			New 8" Thick, Concrete Steps w/ Handrail & Stone Veneer		88.2	4,255	5,592		242		/EA	10,089	14,978
			32-32 Retaining Walls		3,557.9	174,818	124,763		35,201		/LF	334,783	490,498
		32-33	Site Furnishings										
			Bench		32.0	1,181	7,440				/EA	8,621	13,167
			Locking Double Pole Gate w/ Signage					7,500			/EA	7,500	11,454
			Monument Sign - 4' high CIP Concrete					20,000			/EA	20,000	30,543
			Overlook w/ Shade Structure					329,750			/SF	329,750	503,574
			Sand Volleyball Court					5,000			/EA	5,000	7,636
			Steel Powdercoated Arbor Structure					46,500			/SF	46,500	71,012
			32-33 Site Furnishings		32.0	1,181	7,440	408,750			/LS	417,371	637,386
		32-92	Turf and Grasses										
			Large Shade Tree					106,000			/EA	106,000	161,877
			Landscape - U3 Bermuda Sod		547.8	23,275	38,549		525		/SF	62,349	93,057
			Landscape - Extensive					25,533			/SF	25,533	38,992
			Landscape - Light					100,637			/SF	100,637	153,687
			32-92 Turf and Grasses		547.8	23,275	38,549	232,170	525		/SF	294,519	447,613
			32.0 Exterior Improvements		8,906.0	404,567	641,153	790,920	57,031		/LS	1,893,671	2,851,878
		33.0	Buried Piping										
		33-11	Water Utility Distribuion Piping										
			3" PVC Water		698.7	33,188	9,183		17,289		/LF	59,659	86,453
			33-11 Water Utility Distribuion Piping		698.7	33,188	9,183		17,289		/LF	59,659	86,453
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer		564.9	27,021	18,703		13,019		/LF	58,742	86,184
			33-31 Sanitary Utility Sewerage Piping		564.9	27,021	18,703		13,019		/LF	58,742	86,184
			33.0 Buried Piping		1,263.6	60,208	27,885		30,307		/LF	118,401	172,637
			<b>02 North Bank Public Access</b>	<b>320,179.00 SF</b>	<b>11,375.6</b>	<b>519,679</b>	<b>752,685</b>	<b>1,814,720</b>	<b>144,569</b>	<b>0</b>	<b>10.09 /SF</b>	<b>3,231,653</b>	<b>5,097,513</b>



Project: **Bixby**  
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Summary Detail

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>03</b>			<b>South Bank Public Access</b>										
	01.0		General Conditions										
		01-10	Land Acquisition										
			Land Acquisition - South Bank Public Access							0	/LS	0	4,000
			01-10 Land Acquisition							0	/LS	0	4,000
			01.0 General Conditions							0	/LS	0	4,000
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			20x30 Restroom Structure					215,000			/EA	215,000	328,335
			13-34 Fabricated Engineered Structures					215,000			/EA	215,000	328,335
			13.0 Special Construction					215,000			/LS	215,000	328,335
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					50,000			/LS	50,000	76,357
			Site Lighting					160,000			/LS	160,000	244,342
			26-10 Site Electrical					210,000			/LS	210,000	320,699
			26.0 Electrical Work					210,000			/LS	210,000	320,699
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading	495.5	23,223				32,299		/SY	55,522	80,599
			31-00 Site/Civil	495.5	23,223				32,299		/LS	55,522	80,599
		31-30	Site Specialties										
			Bank Stabilization	650.4	29,041	74,353			23,386		/CY	126,779	190,534
			31-30 Site Specialties	650.4	29,041	74,353			23,386		/LS	126,779	190,534
			31.0 Site/Civil	1,145.9	52,264	74,353			55,685		/LS	182,302	271,132
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			2" Thick Asphalt Overlay	19.8	842	10,880			470		/SF	12,193	18,713
			New 3" Thick, 20' Wide Asphalt Upper Trail	54.7	2,359	30,157			1,724		/LF	34,240	52,528
			New 6" Thick, Asphalt Parking Lot	85.1	3,645	50,306			2,420		/SY	56,371	86,540
			32-12 Flexible Paving	159.6	6,846	91,343			4,615		/SF	102,803	157,782
		32-13	Rigid Paving										
			New 6" Thick, 08' Wide Concrete ADA Ramp	802.7	39,166	30,896			6,469		/SF	76,531	112,337
			New 6" Thick, Concrete Emergency Boat Ramp	635.6	28,210	54,023			597		/SY	82,830	124,023
			32-13 Rigid Paving	1,438.3	67,377	84,918			7,066		/SF	159,361	236,360
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 06' Wide Concrete Sidewalk	226.7	9,737	10,323			121		/LF	20,181	29,804
			New 4" Thick, 08' Wide Concrete Trail	574.2	24,666	26,149			306		/LF	51,121	75,497
			New 4" Thick, 10' Wide Concrete Trail	785.6	33,749	35,778			419		/LF	69,946	103,297
			New 4" Thick, Concrete Stamped & Colored	405.1	17,585	9,577			112		/SF	27,274	39,640
			Parking Lot Curb and Gutter	138.8	6,288	4,348			43		/LF	10,679	15,608
			32-16 Curbs, Gutters, Sidewalks, and Driveways	2,130.4	92,026	86,174			1,001		/SF	179,200	263,845
		32-32	Retaining Walls										
			Mass Common Excavation	54.7	2,269	37			10,191		/CY	12,498	18,396
			Retaining Wall - 08" Concrete w/ Seating (2' HT)	2,166.7	105,239	69,146			15,981		/LF	190,366	278,306
			Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)	2,769.1	136,632	104,013			23,496		/LF	264,140	387,443
			New 8" Thick, Concrete Steps w/ Handrail & Stone Veneer	44.6	2,192	3,482			170		/EA	5,843	8,712
			32-32 Retaining Walls	5,035.1	246,331	176,678			49,838		/LF	472,847	692,857
		32-33	Site Furnishings										
			Interactive Recirculating Fountain					180,000			/EA	180,000	274,885
			Historical Signage					10,000			/LS	10,000	15,271
			32-33 Site Furnishings					190,000			/LS	190,000	290,157
		32-34	Fabricated Bridges										
			Pedestrian Bridge, 15' Wide w/ Overlook	875.9	42,237	199,995			8,395		/LF	250,627	381,128
			32-34 Fabricated Bridges	875.9	42,237	199,995			8,395		/EA	250,627	381,128
		32-92	Turf and Grasses										
			Large Shade Tree					30,400			/EA	30,400	46,425



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			Landscape - U3 Bermuda Sod		2,077.5	88,266	146,192		1,992		/SF	236,449	352,902
			Landscape - Extensive					7,401			/SF	7,401	11,302
			Landscape - Light					88,919			/SF	88,919	135,791
			32-92 Turf and Grasses		2,077.5	88,266	146,192	126,720	1,992		/SF	363,169	546,421
			32.0 Exterior Improvements		11,716.7	543,082	785,299	316,720	72,906		/LS	1,718,007	2,568,549
	33.0		Buried Piping										
		33-11	Water Utility Distribuion Piping										
			3" PVC Water		148.0	7,054	2,707		4,313		/LF	14,074	20,493
			33-11 Water Utility Distribuion Piping		148.0	7,054	2,707		4,313		/LF	14,074	20,493
		33-31	Sanitary Utility Sewerage Piping										
			2" PVC Sewer		775.6	36,989	20,437		18,205		/LF	75,631	110,558
			33-31 Sanitary Utility Sewerage Piping		775.6	36,989	20,437		18,205		/LF	75,631	110,558
			33.0 Buried Piping		923.6	44,043	23,143		22,518		/LF	89,705	131,051
			<b>03 South Bank Public Access</b>	<b>334,443.00 LS</b>	<b>13,786.2</b>	<b>639,390</b>	<b>882,795</b>	<b>741,720</b>	<b>151,109</b>	<b>0</b>	<b>7.22 /LS</b>	<b>2,415,014</b>	<b>3,623,768</b>



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Summary Detail

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>04</b>			<b>Memorial Public Access</b>										
	01.0		General Conditions										
		01-10	Land Acquisition										
			Land Acquisition - Memorial Public Access							0	/LS	0	40,000
			01-10 Land Acquisition							0	/LS	0	40,000
			01.0 General Conditions							0	/LS	0	40,000
	13.0		Special Construction										
		13-34	Fabricated Engineered Structures										
			10x20 Steel Shelter w/ Stone Columns					12,000			/EA	12,000	18,326
			20x20 Steel Shelter w/ Stone Columns					24,000			/EA	24,000	36,651
			20x30 Restroom Structure					215,000			/EA	215,000	328,335
			13-34 Fabricated Engineered Structures					251,000			/EA	251,000	383,312
			13.0 Special Construction					251,000			/LS	251,000	383,312
	26.0		Electrical Work										
		26-10	Site Electrical										
			Electrical Service					50,000			/LS	50,000	76,357
			Site Lighting					80,000			/LS	80,000	122,171
			26-10 Site Electrical					130,000			/LS	130,000	198,528
			26.0 Electrical Work					130,000			/LS	130,000	198,528
	31.0		Site/Civil										
		31-00	Site/Civil										
			Mass Grading		430.2	20,161			28,041		/SY	48,203	69,974
			31-00 Site/Civil		430.2	20,161			28,041		/LS	48,203	69,974
		31-30	Site Specialties										
			Bank Stabilization		390.4	17,431	44,628		14,037		/CY	76,096	114,362
			31-30 Site Specialties		390.4	17,431	44,628		14,037		/LS	76,096	114,362
			31.0 Site/Civil		820.5	37,592	44,628		42,078		/LS	124,298	184,336
	32.0		Exterior Improvements										
		32-12	Flexible Paving										
			New 3" Thick, 20' Wide Asphalt Upper Trail		33.4	1,442	18,432		1,054		/LF	20,927	32,105
			New 6" Thick, Asphalt Parking Lot		130.6	5,594	77,204		3,714		/SY	86,512	132,813
			32-12 Flexible Paving		164.0	7,035	95,636		4,768		/SF	107,439	164,918
		32-13	Rigid Paving										
			New 6" Thick, Concrete Emergency Boat Ramp		668.6	29,638	54,511		636		/SY	84,785	126,839
			32-13 Rigid Paving		668.6	29,638	54,511		636		/SF	84,785	126,839
		32-16	Curbs, Gutters, Sidewalks, and Driveways										
			New 4" Thick, 06' Wide Concrete Sidewalk		225.4	9,684	10,266		120		/LF	20,070	29,640
			New 4" Thick, 08' Wide Concrete Trail		366.9	15,762	16,709		196		/LF	32,666	48,242
			New 4" Thick, 20' Wide Concrete Trail		757.6	32,547	34,503		404		/LF	67,454	99,618
			Parking Lot Curb and Gutter		190.0	8,606	5,951		59		/LF	14,616	21,362
			32-16 Curbs, Gutters, Sidewalks, and Driveways		1,540.0	66,599	67,429		779		/SF	134,807	198,862
		32-17	Paving Specialties										
			New 8" Thick, Colored Shotcrete Landing		835.9	34,805	39,634		5,718		/SF	80,157	118,625
			32-17 Paving Specialties		835.9	34,805	39,634		5,718		/SF	80,157	118,625
		32-32	Retaining Walls										
			Mass Common Excavation		5.4	233	37		603		/CY	873	1,281
			New 8" Thick, Concrete Steps w/ Handrail & Stone Veneer		91.2	4,407	5,876		257		/EA	10,541	15,653
			32-32 Retaining Walls		96.6	4,640	5,914		860		/LF	11,413	16,934
		32-92	Turf and Grasses										
			Large Shade Tree					32,800			/EA	32,800	50,090
			Landscape - U3 Bermuda Sod		482.9	20,519	33,984		463		/SF	54,966	82,037
			Landscape - Light					173,070			/SF	173,070	264,302
			Dog Park - Large		82.2	3,438	6,511		210		/EA	10,158	15,205
			Dog Park - Small		46.0	1,919	3,751		136		/EA	5,806	8,696
			32-92 Turf and Grasses		611.1	25,875	44,246	205,870	809		/SF	276,800	420,330
			32.0 Exterior Improvements		3,916.2	168,592	307,370	205,870	13,570		/LS	695,402	1,046,508
	33.0		Buried Piping										
		33-11	Water Utility Distribuiton Piping										



Project: **Bixby**  
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## Summary Detail

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			<b>3" PVC Water</b>		<b>108.0</b>	<b>5,152</b>	<b>2,228</b>		<b>3,397</b>		<b>/LF</b>	<b>10,777</b>	<b>15,723</b>
			33-11 Water Utility Distributon Piping		108.0	5,152	2,228		3,397		/LF	10,777	15,723
		33-31	Sanitary Utility Sewerage Piping										
			<b>2" PVC Sewer</b>		<b>159.6</b>	<b>7,703</b>	<b>15,066</b>		<b>4,093</b>		<b>/LF</b>	<b>26,862</b>	<b>40,197</b>
			33-31 Sanitary Utility Sewerage Piping		159.6	7,703	15,066		4,093		/LF	26,862	40,197
			33.0 Buried Piping		267.6	12,855	17,294		7,490		/LF	37,639	55,920
			<b>04 Memorial Public Access</b>	<b>290,354.00 SF</b>	<b>5,004.3</b>	<b>219,040</b>	<b>369,292</b>	<b>586,870</b>	<b>63,138</b>	<b>0</b>	<b>4.27 /SF</b>	<b>1,238,339</b>	<b>1,908,605</b>



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**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>05</b>			<b>Memorial to Dam Trail</b>										
	<b>01.0</b>		<b>General Conditions</b>										
		<b>01-10</b>	<b>Land Acquisition</b>										
			Land Acquisition - Memorial to Dam Trail							0	/LS	0	256,000
			01-10 Land Acquisition							0	/LS	0	256,000
			01.0 General Conditions							0	/LS	0	256,000
	<b>31.0</b>		<b>Site/Civil</b>										
		<b>31-00</b>	<b>Site/Civil</b>										
			Mass Grading		497.5	23,316			32,429		/SY	55,745	80,922
			31-00 Site/Civil		497.5	23,316			32,429		/LS	55,745	80,922
		<b>31-30</b>	<b>Site Specialties</b>										
			Bank Stabilization		1,873.8	83,664	214,202		67,371		/CY	365,238	548,907
			31-30 Site Specialties		1,873.8	83,664	214,202		67,371		/LS	365,238	548,907
			31.0 Site/Civil		2,371.2	106,980	214,202		99,800		/LS	420,983	629,829
	<b>32.0</b>		<b>Exterior Improvements</b>										
		<b>32-12</b>	<b>Flexible Paving</b>										
			New 3" Thick, 20' Wide Asphalt Upper Trail		129.7	5,598	71,578		4,092		/LF	81,268	124,676
			32-12 Flexible Paving		129.7	5,598	71,578		4,092		/SF	81,268	124,676
		<b>32-16</b>	<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
			New 4" Thick, 08' Wide Concrete Trail		883.5	37,952	40,233		471		/LF	78,657	116,161
			32-16 Curbs, Gutters, Sidewalks, and Driveways		883.5	37,952	40,233		471		/SF	78,657	116,161
		<b>32-92</b>	<b>Turf and Grasses</b>										
			Large Shade Tree					32,800			/EA	32,800	50,090
			Landscape - U3 Bermuda Sod		1,435.6	60,996	101,026		1,376		/SF	163,398	243,873
			Landscape - Light					212,500			/SF	212,500	324,517
			32-92 Turf and Grasses		1,435.6	60,996	101,026	245,300	1,376		/SF	408,698	618,481
			32.0 Exterior Improvements		2,448.8	104,547	212,837	245,300	5,939		/LS	568,623	859,318
			<b>05 Memorial to Dam Trail</b>	<b>335,783.00 SF</b>	<b>4,820.1</b>	<b>211,527</b>	<b>427,039</b>	<b>245,300</b>	<b>105,740</b>	<b>0</b>	<b>2.95 /SF</b>	<b>989,606</b>	<b>1,745,147</b>



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

**Summary Detail**

Bid Item	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>06</b>			<b>Irving North Park Access</b>										
	<b>01.0</b>		General Conditions										
		<b>01-10</b>	Land Acquisition										
			Land Acquisition - Irving North Park Access							0	/LS	0	237,000
			01-10 Land Acquisition							0	/LS	0	237,000
			01.0 General Conditions							0	/LS	0	237,000
	<b>31.0</b>		Site/Civil										
		<b>31-00</b>	Site/Civil										
			Mass Grading		405.2	18,993			26,416		/SY	45,409	65,918
			31-00 Site/Civil		405.2	18,993			26,416		/LS	45,409	65,918
			31.0 Site/Civil		405.2	18,993			26,416		/LS	45,409	65,918
	<b>32.0</b>		Exterior Improvements										
		<b>32-12</b>	Flexible Paving										
			New 6" Thick, Asphalt Entry Road		591.3	25,322	349,478		16,814		/SY	391,614	601,204
			Fog Seal and Restripe Existing Pavement		28.5	1,025	5,753	4,500	1,065		/SF	12,343	18,793
			32-12 Flexible Paving		619.8	26,346	355,232	4,500	17,879		/SF	403,957	619,997
			32.0 Exterior Improvements		619.8	26,346	355,232	4,500	17,879		/LS	403,957	619,997
			<b>06 Irving North Park Access</b>	<b>273,526.00 SF</b>	<b>1,025.0</b>	<b>45,339</b>	<b>355,232</b>	<b>4,500</b>	<b>44,295</b>	<b>0</b>	<b>1.64 /SF</b>	<b>449,366</b>	<b>922,915</b>





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## Summary Detail

### Estimate Totals

Construction Costs	Amount	Totals	Rate
Labor	7,791,014		
Material	14,628,310		
Subcontract	6,175,288		
Equipment	2,217,019		
Other			
Total Before Markups	<b>30,811,631</b>	<b>30,811,631</b>	
Estimate Contingency Dam	3,373,148		15.000 %
Estimate Contingency Parks	1,664,796		20.000 %
	<b>5,037,944</b>	<b>35,849,575</b>	
Tulsa Location Fac. Site	(1,251,004)		(12.500) %
Adjusted Raw Total	<b>(1,251,004)</b>	<b>34,598,571</b>	
General Conditions	1,729,929		5.000 %
Total General Conditions	<b>1,729,929</b>	<b>36,328,500</b>	
Material Sales & Use Tax - %	292,566		2.000 %
Construction Equip Tax - %	188,668		8.510 %
Total Taxes	<b>481,234</b>	<b>36,809,734</b>	
Project Staff & Home Office OH	3,680,973		10.000 %
Profit on Previous Subtotal	1,840,487		5.000 %
Mobilization/Demobilization	1,377,436		3.000 %
Blder's Risk & Gen Liab Ins -%	459,145		1.000 %
Flood Insurance	459,145		1.000 %
Payment & Performance Bonds	532,609		1.160 %
Total Bonds and Insurances	<b>8,349,795</b>	<b>45,159,529</b>	
<b>Construction Total</b>		<b>45,159,529</b>	
Land Acquisition - North Bank	218,000		
Land Acquisition - South Bank	4,000		
Land Acquisition - Memorial	40,000		
Land Acquisition - Memorial Tr	256,000		
Land Acquisition - Irving	237,000		
<b>Construction Total w/ Land</b>	<b>755,000</b>	<b>45,914,529</b>	



Project: Bixby  
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 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
01				<b>Bixby Low Water Dam</b>										
		010		<b>Low Water Dam</b>										
		03.0		<b>Concrete Work</b>										
			03-10	<b>Cast-In-Place Concrete Work</b>										
				<b>Concrete Wing Walls @ Dam Ends</b>										
				Concrete pumping, subcontract, all inclusive price	388.89		-	-	4,667	-	-	12.00 /cy	4,667	6,893
				Forms in place, structural walls, > 16' high, hand set	7,000.00	1,190.0	53,759	9,450	-	-	-	9.03 /sf	63,209	86,838
				Forms in place, wall bulkheads	210.00	63.0	2,846	263	-	-	-	14.80 /sf	3,109	4,241
				Reinforcing in place, A615 Gr 60, priced per lbs.	77,777.78		-	38,889	15,556	-	-	0.70 /lb	54,444	81,200
				Concrete, ready mix, 4000 psi	388.89		-	48,611	-	-	-	125.00 /CY	48,611	72,778
				Add for concrete waste, 4000 psi	19.44		-	2,431	-	-	-	125.00 /cy	2,431	3,639
				Placing concrete, concrete pump, for structural wall >24" thick	388.89	291.7	11,200	-	-	-	-	28.80 /cy	11,200	15,144
				Patch & plug tieholes	7,000.00	105.0	4,032	140	-	-	-	0.60 /sf	4,172	5,661
				Sack rub	7,000.00	280.0	10,752	210	-	-	-	1.57 /sf	10,962	14,852
				Curing, membrane spray	7,000.00	14.0	538	280	-	-	-	0.12 /sf	818	1,146
				<b>Concrete Wing Walls @ Dam Ends</b>	<b>388.89</b>	<b>1,943.7</b>	<b>83,126</b>	<b>100,273</b>	<b>20,222</b>			<b>523.60 /CY</b>	<b>203,622</b>	<b>292,392</b>
				<b>Rock Bolts - 1.75" dia x 12' Bonded</b>										
				Rock bolts, super high-tensile, 1.75" dia, 12' L, ASTM A-108	260.00	173.4	8,518	93,600	-	-	-	392.76 /ea	102,118	151,649
				Rock bolts, drill hole, 1.75" dia, 12' long, for 1" bolt	260.00	594.4	25,647	-	-	20,346	-	176.89 /ea	45,992	63,919
				<b>Rock Bolts - 1.75" dia x 12' Bonded</b>	<b>260.00</b>	<b>EA</b>	<b>767.8</b>	<b>34,164</b>	<b>93,600</b>		<b>20,346</b>	<b>569.65 /EA</b>	<b>148,110</b>	<b>215,568</b>
				<b>Rock Bolts - 1.75" dia x 15' Bonded</b>										
				Rock bolts, super high-tensile, 1.75" dia, 15' L, ASTM A-108	30.00	ea	25.5	1,252	16,200	-	-	581.75 /ea	17,452	25,947
				Rock bolts, drill hole, 2.5" dia, 15' long, for 1.75" bolt	30.00	ea	102.8	4,435	-	-	3,518	265.11 /ea	7,953	11,053
				<b>Rock Bolts - 1.75" dia x 15' Bonded</b>	<b>30.00</b>	<b>EA</b>	<b>128.3</b>	<b>5,687</b>	<b>16,200</b>		<b>3,518</b>	<b>846.86 /EA</b>	<b>25,406</b>	<b>37,000</b>
				<b>Dental Concrete Allowance</b>										
				Fine grade, for slab on grade, by hand	142,302.50	sf	996.1	38,250	1,423	-	-	0.28 /sf	39,673	53,850
				Concrete pumping, subcontract, all inclusive price	2,635.00	cy	-	-	31,620	-	-	12.00 /cy	31,620	46,707
				Concrete, ready mix, 2000 psi	2,635.00	CY	-	276,675	-	-	-	105.00 /CY	276,675	414,221
				Placing concrete, concrete pump	2,635.00	cy	1,976.3	75,886	-	-	-	28.80 /cy	75,886	102,609
				<b>Dental Concrete Allowance</b>	<b>2,635.00</b>	<b>CY</b>	<b>2,972.4</b>	<b>114,136</b>	<b>278,098</b>	<b>31,620</b>		<b>160.86 /CY</b>	<b>423,854</b>	<b>617,387</b>
				<b>Concrete Gravity Dam</b>										
				Concrete pumping, subcontract, all inclusive price	43,466.94	cy	-	-	521,603	-	-	12.00 /cy	521,603	770,481
				Concrete Cooling	43,466.94	cy	-	-	326,002	-	-	7.50 /cy	326,002	481,551
				Base slab edge forms, 24" to 36"	68,822.50	sf	17,205.6	777,281	86,028	-	-	12.54 /sf	863,309	1,179,789
				Base slab bulkhead form	46,430.40	sf	13,929.1	629,262	58,038	-	-	14.80 /sf	687,300	937,741
				Waterstop, PVC, ribbed, w/center bulb, 3/8" thick, 9" wide	2,114.00	lf	131.1	6,375	9,471	-	-	7.50 /lf	15,846	22,799
				Reinforcing in place, A615 Gr 60, priced per lbs.	4,346.694	lb	-	2,173,347	869,339	-	-	0.70 /lb	3,042,686	4,537,941
				Concrete, ready mix, 4000 psi	43,466.94	CY	-	5,433,368	-	-	-	125.00 /CY	5,433,368	8,134,513
				Add for concrete waste, 4000 psi	4,346.70	cy	-	543,338	-	-	-	125.00 /cy	543,338	813,452
				Placing concrete, concrete pump, for base slab 24" to 36"	43,466.94	cy	43,466.9	1,669,087	-	-	-	38.40 /cy	1,669,087	2,256,840
				Finishing floors, monolithic, broom finish	142,302.50	sf	9,486.8	413,446	2,846	-	-	2.93 /sf	416,292	563,297
				Curing, membrane spray	142,302.50	sf	284.6	10,929	5,692	-	-	0.12 /sf	16,621	23,299
				<b>Concrete Gravity Dam</b>	<b>43,466.94</b>	<b>CY</b>	<b>84,504.2</b>	<b>3,506,380</b>	<b>8,312,127</b>	<b>1,716,944</b>		<b>311.40 /CY</b>	<b>13,535,451</b>	<b>19,721,704</b>
				<b>03-10 Cast-In-Place Concrete Work</b>	<b>46,490.83</b>	<b>CY</b>	<b>90,316.3</b>	<b>3,743,494</b>	<b>8,800,298</b>	<b>1,768,786</b>	<b>23,864</b>	<b>308.37 /CY</b>	<b>14,336,442</b>	<b>20,884,052</b>
				<b>03.0 Concrete Work</b>	<b>46,490.83</b>	<b>CY</b>	<b>90,316.3</b>	<b>3,743,494</b>	<b>8,800,298</b>	<b>1,768,786</b>	<b>23,864</b>	<b>308.37 /CY</b>	<b>14,336,442</b>	<b>20,884,052</b>
		31.0		<b>Site/Civil</b>										
			31-10	<b>Temporary Works</b>										
				<b>Coffer Dam</b>										
				Porta-dam, mob	1.00	ea	24.0	-	15,000	-	-	15,000.00 /ea	15,000	22,157
				Porta-dam, installation	2,500.00	lf	600.0	28,746	5,000	-	25,281	23.61 /lf	59,027	82,689
				Porta-dam, rental	24.00	mo	-	-	240,000	-	-	10,000.00 /mo	240,000	354,514
				Porta-dam, removal	2,500.00	lf	750.0	35,932	-	-	12,641	19.43 /lf	48,573	66,753
				Porta-dam, demob	1.00	ea	24.0	-	15,000	-	-	15,000.00 /ea	15,000	22,157
				BkFill, strl, no compact, 300 HP dozer, 50' haul, common earth	32,976.59	cy	261.7	12,035	-	-	32,277	1.34 /cy	44,312	62,662
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	32,976.59	bcy	253.7	11,326	-	-	30,852	1.28 /bcy	42,178	59,657
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr base wd rate,16.5 cy dump trailer,off-highway,excludes loading	23,976.59	lcy	263.5	10,006	-	-	80,532	3.78 /lcy	90,538	129,273
				Compaction, structural, rock fill, wheel roller	32,976.59	ecy	98.9	4,199	-	-	3,372	0.23 /ecy	7,570	10,523
				<b>Coffer Dam</b>	<b>2,500.00</b>	<b>lf</b>	<b>2,275.8</b>	<b>102,243</b>	<b>5,000</b>	<b>270,000</b>	<b>184,954</b>	<b>224.88 /lf</b>	<b>562,198</b>	<b>810,384</b>
				<b>31-10 Temporary Works</b>	<b>1.00</b>	<b>LS</b>	<b>2,275.8</b>	<b>102,243</b>	<b>5,000</b>	<b>270,000</b>	<b>184,954</b>	<b>562,197.53 /LS</b>	<b>562,198</b>	<b>810,384</b>
			31-15	<b>Site Preparation</b>										
				<b>Foundation Cleanup</b>										
				Final Clean-up	15,811.38	sy	142.3	6,059	-	-	12,171	1.15 /sy	18,230	25,685
				<b>Foundation Cleanup</b>	<b>15,811.38</b>	<b>SY</b>	<b>142.3</b>	<b>6,059</b>			<b>12,171</b>	<b>1.15 /SY</b>	<b>18,230</b>	<b>25,685</b>
				<b>31-15 Site Preparation</b>	<b>1.00</b>	<b>LS</b>	<b>142.3</b>	<b>6,059</b>			<b>12,171</b>	<b>18,229.76 /LS</b>	<b>18,230</b>	<b>25,685</b>
			31-20	<b>Earthworks, Site</b>										



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				<b>Dewatering</b>										
				Dewatering Minor, Large Generator and 3 Pumps, Rental, Monthly	24.00 mo		-	-	-	331,641	-	13,818.39 /mo	331,641	476,648
				Dewatering Minor, Generator and Pumps, Operation - Labor to maintain / check pumps/ fuel and lube	24.00 mo	12,480.0	491,225	-	-	171,076	-	27,595.88 /mo	662,301	910,083
				Bypass Pumping, Pumps and Piping, Mob	3.00 ea	24.0	1,198	-	4,500	927	-	2,208.44 /ea	6,625	9,600
				Bypass Pumping, Set-up Pumps	12.00 ea	192.0	9,586	6,000	-	3,708	-	1,607.86 /ea	19,294	27,274
				Bypass Pumping, Install Suction Piping	3.00 ea	24.0	1,198	450	-	464	-	703.93 /ea	2,112	2,960
				Bypass Pumping, Install Discharge Piping	3.00 ea	72.0	3,595	1,500	-	1,391	-	2,161.80 /ea	6,485	9,105
				<b>Dewatering</b>	<b>720.00 DAY</b>	<b>12,792.0</b>	<b>506,803</b>	<b>7,950</b>	<b>4,500</b>	<b>509,206</b>		<b>1,428.42 /DAY</b>	<b>1,028,459</b>	<b>1,435,670</b>
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	13.70 HR	13.7	614	361	-	915	-	137.95 /HR	1,890	2,686
				Dust Control Operations	73.40 HR	110.1	5,144	-	-	6,000	-	151.83 /HR	11,144	15,579
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	6.85 HR	6.9	286	75	-	445	-	117.71 /HR	806	1,139
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	42,163.70 bcy	324.3	14,482	-	-	37,309	-	1.23 /bcy	51,790	73,203
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	42,163.70 lcy	463.3	17,595	-	-	126,839	-	3.43 /lcy	144,434	206,089
				<b>Mass Common Excavation</b>	<b>42,163.70 CY</b>	<b>918.3</b>	<b>38,121</b>	<b>436</b>		<b>171,508</b>		<b>4.98 /CY</b>	<b>210,065</b>	<b>298,696</b>
				<b>Mass Rock Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	36.74 HR	36.7	1,647	968	-	2,454	-	137.95 /HR	5,069	7,203
				Dust Control Operations	216.38 HR	324.6	15,164	-	-	17,689	-	151.83 /HR	32,853	45,927
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	16.33 HR	16.3	683	180	-	1,060	-	117.72 /HR	1,922	2,715
				BkFill, strt, no compact, 300 HP dozer, 50' haul, common earth	21,557.69 cy	171.1	7,868	-	-	19,436	-	1.27 /cy	27,304	38,573
				Drilling & blasting only, rock, open face, over 1500 CY	21,557.69 cy	1,293.5	54,943	62,302	-	63,445	-	8.38 /cy	180,689	258,750
				Excavate and load blasted rock to stockpile	21,557.69 cy	431.2	19,251	-	-	31,488	-	2.35 /cy	50,739	71,286
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	21,557.69 lcy	236.9	8,996	-	-	64,851	-	3.43 /lcy	73,847	105,370
				Compaction, structural, rock fill, wheel roller	21,557.69 ecy	64.7	2,745	-	-	2,140	-	0.23 /ecy	4,885	6,787
				<b>Mass Rock Excavation</b>	<b>21,557.69 CY</b>	<b>2,574.9</b>	<b>111,296</b>	<b>63,450</b>		<b>202,562</b>		<b>17.50 /CY</b>	<b>377,308</b>	<b>536,611</b>
				<b>31-20 Earthworks, Site</b>	<b>1.00 LS</b>	<b>16,285.2</b>	<b>656,220</b>	<b>71,836</b>	<b>4,500</b>	<b>883,276</b>		<b>1,615,832.17 /LS</b>	<b>1,615,832</b>	<b>2,270,977</b>
		31-30		<b>Site Specialties</b>										
				<b>Downstream Grouted Rock Fill</b>										
				Rip-rap and rock lining, random, broken stone, 3/8 to 1/4 C.Y. pieces, machine placed for slope protection, grouted	50,262.22 sy	35,183.6	1,459,097	2,814,684	-	531,724	-	95.61 /sy	4,805,506	6,951,096
				<b>Downstream Grouted Rock Fill</b>	<b>25,131.11 CY</b>	<b>35,183.6</b>	<b>1,459,097</b>	<b>2,814,684</b>		<b>531,724</b>		<b>191.22 /CY</b>	<b>4,805,506</b>	<b>6,951,096</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>35,183.6</b>	<b>1,459,097</b>	<b>2,814,684</b>		<b>531,724</b>		<b>4,805,505.52 /LS</b>	<b>4,805,506</b>	<b>6,951,096</b>
				31.0 Site/Civil	1.00 LS	53,886.9	2,223,620	2,891,520	274,500	1,612,125		7,001,764.98 /LS	7,001,765	10,058,143
		35.0		<b>Water and Marine Construction Equipment</b>										
			35-10	<b>Water Control Gates</b>										
				<b>Obermeyer Gates</b>										
				Air Supply Equip/Mechanical/PLC Allowance	1.00 ls				131,892	-	-	131,892.00 /ls	131,892	194,823
				Obermeyer Full Gates (5 Each)	1,000.00 sf				527,000	-	-	527.00 /sf	527,000	778,453
				<b>Obermeyer Gates</b>	<b>5.00 EA</b>				<b>658,892</b>			<b>131,778.40 /EA</b>	<b>658,892</b>	<b>973,276</b>
				<b>35-10 Water Control Gates</b>	<b>5.00 EA</b>				<b>658,892</b>			<b>131,778.40 /EA</b>	<b>658,892</b>	<b>973,276</b>
				<b>35.0 Water and Marine Construction Equipment</b>	<b>1.00 LS</b>				<b>658,892</b>			<b>658,892.00 /LS</b>	<b>658,892</b>	<b>973,276</b>
				<b>010 Low Water Dam</b>	<b>2,855.00 LF</b>	<b>144,203.2</b>	<b>5,967,114</b>	<b>11,691,818</b>	<b>2,702,178</b>	<b>1,635,989</b>		<b>7,704.76 /LF</b>	<b>21,997,099</b>	<b>31,915,471</b>
		060		<b>Structures</b>										
			13.0	<b>Special Construction</b>										
				<b>13-34 Fabricated Engineered Structures</b>										
				<b>20x40 Dam Control Building</b>										
				20x40 Dam Control Building (Allowance)	1.00 EA				80,000	-	-	80,000.00 /EA	80,000	118,171
				<b>20x40 Dam Control Building</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>118,171</b>
				<b>13-34 Fabricated Engineered Structures</b>										
				13.0 Special Construction	1.00 LS				80,000			80,000.00 /LS	80,000	118,171
				<b>060 Structures</b>	<b>1.00 EA</b>				<b>80,000</b>			<b>80,000.00 /EA</b>	<b>80,000</b>	<b>118,171</b>
		080		<b>Retaining Walls</b>										
			31.0	<b>Site/Civil</b>										
				<b>Earthworks, Site</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	2.00 HR	2.0	90	53	-	134	-	137.96 /HR	276	392
				Dust Control Operations	10.00 HR	15.0	701	-	-	817	-	151.83 /HR	1,518	2,123
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	1.00 HR	1.0	42	11	-	65	-	117.71 /HR	118	166
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	4,000.00 bcy	30.8	1,374	-	-	3,539	-	1.23 /bcy	4,913	6,945
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	4,000.00 lcy	44.0	1,669	-	-	12,033	-	3.43 /lcy	13,702	19,551



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				Mass Common Excavation	4,000.00 CY	92.7	3,875	64		16,588		5.13 /CY	20,527	29,177
				31-20 Earthworks, Site	1.00 LS	92.7	3,875	64		16,588		20,527.40 /LS	20,527	29,177
				31.0 Site/Civil	1.00 LS	92.7	3,875	64		16,588		20,527.40 /LS	20,527	29,177
		32.0		Exterior Improvements										
			32-32	Retaining Walls										
				Retaining Wall - Sea Wall 10' Ht.										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	2,000.00 sf	540.0	25,487	30,200	-	17,364	-	36.53 /sf	73,051	104,632
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	30.00 ea	720.0	31,914	16,650	-	2,017	-	1,686.05 /ea	50,581	70,979
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	74.07 cy	370.3	17,806	11,259	-	1,049	-	406.56 /cy	30,114	42,440
				Retaining Wall - Sea Wall 10' Ht.	200.00 LF	1,630.3	75,208	58,109		20,430		768.73 /LF	153,746	218,051
				Retaining Wall - Sea Wall 18' Ht.										
				Soldier beams & lag, no hydrst head,L in place,15-22'D 2 line of brace	3,600.00 sf	972.0	45,877	54,360	-	31,255	-	36.53 /sf	131,492	188,338
				Soldier beams & lag, tie-back method, tie-backs only, typ avg, 25' lon	30.00 ea	720.0	31,914	16,650	-	2,017	-	1,686.05 /ea	50,581	70,979
				Structural concrete,place,free-standing wall (3000 psi),12"thick x 14'high,includes forms(4 uses),reinforcing steel,concrete,placing and finishing	133.33 cy	666.5	32,052	20,266	-	1,888	-	406.56 /cy	54,206	76,394
				Retaining Wall - Sea Wall 18' Ht.	200.00 LF	2,358.5	109,843	91,276		35,160		1,181.40 /LF	236,280	335,711
				32-32 Retaining Walls	400.00 LF	3,988.7	185,051	149,385		55,591		975.07 /LF	390,026	553,762
				32.0 Exterior Improvements	1.00 LS	3,988.7	185,051	149,385		55,591		390,026.12 /LS	390,026	553,762
				080 Retaining Walls	1,000.00 LF	4,081.5	188,926	149,449		72,179		410.55 /LF	410,554	582,938
				01 Bixby Low Water Dam	2,855.00 LF	148,284.7	6,156,040	11,841,267	2,782,178	1,708,168		7,876.59 /LF	22,487,652	32,616,580



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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>02</b>				<b>North Bank Public Access</b>										
		<b>001</b>		Land Acquisition										
			<b>01-0</b>	General Conditions										
			<b>01-10</b>	Land Acquisition										
				Land Acquisition - North Bank Public Access										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	218,000
				Land Acquisition - North Bank Public Access	1.00 LS				0		0	0.01 /LS	0	218,000
				<b>01-10 Land Acquisition</b>	<b>1.00 LS</b>				<b>0</b>		<b>0</b>	<b>0.01 /LS</b>	<b>0</b>	<b>218,000</b>
				01.0 General Conditions	1.00 LS				0		0	0.01 /LS	0	218,000
				001 Land Acquisition	1.00 LS				0		0	0.01 /LS	0	218,000
		<b>005</b>		Overall Site Grading										
			<b>31-0</b>	Site/Civil										
			<b>31-00</b>	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	35,575.44 sy	474.3	22,232	-	-	30,922	-	1.49 /sy	53,154	77,161
				Mass Grading	35,575.44 SY	474.3	22,232			30,922		1.49 /SY	53,154	77,161
				31-00 Site/Civil	1.00 LS	474.3	22,232			30,922		53,154.30 /LS	53,154	77,161
				31.0 Site/Civil	1.00 LS	474.3	22,232			30,922		53,154.30 /LS	53,154	77,161
				005 Overall Site Grading	320,179.00 SF	474.3	22,232			30,922		0.17 /SF	53,154	77,161
		<b>030</b>		Paths/Trails										
			<b>32-0</b>	Exterior Improvements										
			<b>32-16</b>	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 04' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	189.33 sy	3.8	157	-	-	21	-	0.94 /sy	178	251
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	1,704.00 sf	68.2	2,992	3,152	-	-	-	3.61 /sf	6,144	9,073
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	1,704.00 sf	16.4	644	869	-	26	-	0.90 /sf	1,539	2,287
				New 4" Thick, 04' Wide Concrete Sidewalk	426.00 LF	88.3	3,793	4,021		47		18.46 /LF	7,862	11,611
				New 4" Thick, 05' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	56.66 sy	1.1	47	-	-	6	-	0.94 /sy	53	75
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	510.00 sf	20.4	896	944	-	-	-	3.61 /sf	1,839	2,715
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	510.00 sf	4.9	193	260	-	8	-	0.90 /sf	461	684
				New 4" Thick, 05' Wide Concrete Sidewalk	102.00 LF	26.4	1,135	1,204		14		23.07 /LF	2,353	3,475
				New 4" Thick, 06' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,261.33 sy	25.2	1,049	-	-	137	-	0.94 /sy	1,187	1,675
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	11,352.00 sf	454.1	19,933	21,001	-	-	-	3.61 /sf	40,934	60,441
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	11,352.00 sf	109.0	4,290	5,790	-	176	-	0.90 /sf	10,255	15,234
				New 4" Thick, 06' Wide Concrete Sidewalk	1,892.00 LF	588.3	25,272	26,791		314		27.68 /LF	52,376	77,350
				New 6" Thick, 16' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	732.44 sy	14.6	609	-	-	80	-	0.94 /sy	689	973
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	6,592.00 sf	310.2	13,618	15,030	-	-	-	4.35 /sf	28,648	42,348
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 8" thick bank run gravel base, add	6,592.00 sf	98.9	3,892	6,790	-	160	-	1.65 /sf	10,842	16,200
				New 6" Thick, 16' Wide Concrete Trail	412.00 LF	423.7	18,119	21,820		240		97.52 /LF	40,178	59,520
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>20,158.00 SF</b>	<b>1,126.8</b>	<b>48,320</b>	<b>53,835</b>		<b>614</b>		<b>5.10 /SF</b>	<b>102,770</b>	<b>151,956</b>
				32.0 Exterior Improvements	1.00 LS	1,126.8	48,320	53,835		614		102,769.70 /LS	102,770	151,956
				030 Paths/Trails	2,832.00 LF	1,126.8	48,320	53,835		614		36.29 /LF	102,770	151,956
		<b>040</b>		Roads										
			<b>32-0</b>	Exterior Improvements										
			<b>32-12</b>	Flexible Paving										
				New 6" Thick, 16' Wide Asphalt Maintenance Road										
				Fine grading, grade subgrade for base course, roadways	1,379.66 sy	6.3	278	-	-	222	-	0.36 /sy	501	721
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,379.66 sy	7.4	345	5,877	-	400	-	4.80 /sy	6,622	10,171
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	1,379.66 sy	29.3	1,226	20,419	-	699	-	16.20 /sy	22,344	34,349



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				<b>New 6" Thick, 16' Wide Asphalt Maintenance Road</b>										
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,379.66 sy	20.9	886	11,451	-	495	-	9.30 /sy	12,832	19,695
				<b>New 6" Thick, 16' Wide Asphalt Maintenance Road</b>	<b>1,379.66 SY</b>	<b>63.9</b>	<b>2,735</b>	<b>37,748</b>		<b>1,816</b>		<b>30.66 /SY</b>	<b>42,299</b>	<b>64,937</b>
				<b>New 6" Thick, Asphalt Entry Road</b>										
				Fine grading, grade subgrade for base course, roadways	2,524.00 sy	11.5	509	-	-	407	-	0.36 /sy	916	1,319
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	2,524.00 sy	13.5	631	10,752	-	731	-	4.80 /sy	12,115	18,608
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	2,524.00 sy	53.7	2,242	37,355	-	1,279	-	16.20 /sy	40,876	62,840
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	2,524.00 sy	38.2	1,621	20,949	-	905	-	9.30 /sy	23,476	36,031
				<b>New 6" Thick, Asphalt Entry Road</b>	<b>2,524.00 SY</b>	<b>116.8</b>	<b>5,004</b>	<b>69,057</b>		<b>3,323</b>		<b>30.66 /SY</b>	<b>77,383</b>	<b>118,797</b>
				<b>32-12 Flexible Paving</b>	<b>35,133.00 SF</b>	<b>180.7</b>	<b>7,739</b>	<b>106,804</b>		<b>5,139</b>		<b>3.41 /SF</b>	<b>119,681</b>	<b>183,734</b>
				<b>Rigid Paving</b>										
				<b>New 6" Thick, Concrete Drive</b>										
				Fine grading, grade subgrade for base course, roadways	87.77 sy	0.4	18	-	-	14	-	0.36 /sy	32	46
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	790.00 sf	37.2	1,632	1,801	-	-	-	4.35 /sf	3,433	5,075
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	87.77 sy	0.5	22	374	-	25	-	4.80 /sy	421	647
				<b>New 6" Thick, Concrete Drive</b>	<b>87.77 SY</b>	<b>38.0</b>	<b>1,672</b>	<b>2,175</b>		<b>40</b>		<b>44.28 /SY</b>	<b>3,886</b>	<b>5,768</b>
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	580.00 lf	70.8	3,253	13,050	-	41	-	28.18 /lf	16,343	24,812
				Fine grading, grade subgrade for base course, roadways	726.44 sy	3.3	146	-	-	117	-	0.36 /sy	264	380
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	6,538.00 sf	307.7	13,506	14,907	-	-	-	4.35 /sf	28,413	42,001
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	726.44 sy	3.9	182	3,095	-	211	-	4.80 /sy	3,487	5,356
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>	<b>726.44 SY</b>	<b>385.6</b>	<b>17,087</b>	<b>31,051</b>		<b>368</b>		<b>66.77 /SY</b>	<b>48,507</b>	<b>72,547</b>
				<b>32-13 Rigid Paving</b>	<b>7,328.00 SF</b>	<b>423.7</b>	<b>18,759</b>	<b>33,226</b>		<b>408</b>		<b>7.15 /SF</b>	<b>52,393</b>	<b>78,315</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>604.4</b>	<b>26,498</b>	<b>140,031</b>		<b>5,547</b>		<b>172,074.64 /LS</b>	<b>172,075</b>	<b>262,049</b>
				<b>040 Roads</b>	<b>42,461.00 SF</b>	<b>604.4</b>	<b>26,498</b>	<b>140,031</b>		<b>5,547</b>		<b>4.05 /SF</b>	<b>172,075</b>	<b>262,049</b>
				<b>Parking Lots</b>										
				<b>Exterior Improvements</b>										
				<b>32-12 Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	4,777.11 sy	21.8	963	-	-	770	-	0.36 /sy	1,733	2,496
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,777.11 sy	25.5	1,195	20,350	-	1,384	-	4.80 /sy	22,930	35,219
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	4,777.11 sy	101.6	4,244	70,701	-	2,420	-	16.20 /sy	77,365	118,935
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	4,777.11 sy	72.3	3,068	39,650	-	1,714	-	9.30 /sy	44,432	68,195
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>4,777.11 SY</b>	<b>221.1</b>	<b>9,470</b>	<b>130,702</b>		<b>6,288</b>		<b>30.66 /SY</b>	<b>146,460</b>	<b>224,845</b>
				<b>32-12 Flexible Paving</b>	<b>42,994.00 SF</b>	<b>221.1</b>	<b>9,470</b>	<b>130,702</b>		<b>6,288</b>		<b>3.41 /SF</b>	<b>146,460</b>	<b>224,845</b>
				<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	512.66 sy	22.2	873	-	-	36	-	1.77 /sy	908	1,277
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,614.00 sf	44.3	1,743	2,353	-	72	-	0.90 /sf	4,168	6,192
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	2,307.00 lf	276.8	12,932	8,397	-	-	-	9.25 /lf	21,329	31,124
				<b>Parking Lot Curb and Gutter</b>	<b>2,307.00 LF</b>	<b>343.3</b>	<b>15,548</b>	<b>10,751</b>		<b>107</b>		<b>11.45 /LF</b>	<b>26,406</b>	<b>38,593</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>4,614.00 SF</b>	<b>343.3</b>	<b>15,548</b>	<b>10,751</b>		<b>107</b>		<b>5.72 /SF</b>	<b>26,406</b>	<b>38,593</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>564.4</b>	<b>25,018</b>	<b>141,452</b>		<b>6,396</b>		<b>172,866.06 /LS</b>	<b>172,866</b>	<b>263,437</b>
				<b>050 Parking Lots</b>	<b>47,608.00 SF</b>	<b>564.4</b>	<b>25,018</b>	<b>141,452</b>		<b>6,396</b>		<b>3.63 /SF</b>	<b>172,866</b>	<b>263,437</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>10x10 Steel Shelter w/ Stone Columns</b>										
				10x10 Steel Shelter w/ Stone Columns (Allowance)	9.00 EA				90,000	-	-	10,000.00 /EA	90,000	137,443
				<b>10x10 Steel Shelter w/ Stone Columns</b>	<b>9.00 EA</b>				<b>90,000</b>			<b>10,000.00 /EA</b>	<b>90,000</b>	<b>137,443</b>
				<b>20x30 Steel Shelter w/ Stone Columns</b>										
				20x30 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				83,000	-	-	83,000.00 /EA	83,000	126,753



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				20x30 Steel Shelter w/ Stone Columns	1.00 EA				83,000			83,000.00 /EA	83,000	126,753
				20x30 Restroom Structure										
				20x30 Restroom Structure (Allowance)	1.00 EA				235,000	-	-	235,000.00 /EA	235,000	358,878
				20x30 Restroom Structure	1.00 EA				235,000			235,000.00 /EA	235,000	358,878
				13-34 Fabricated Engineered Structures	11.00 EA				408,000			37,090.91 /EA	408,000	623,073
				13.0 Special Construction	1.00 LS				408,000			408,000.00 /LS	408,000	623,073
				060 Structures	13.00 EA				408,000			31,384.62 /EA	408,000	623,073
070				Special Features										
		32.0		Exterior Improvements										
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 06' Wide Concrete Sidewalk Colored										
				Fine grading, fine grade granular base for sidewalks and bikeways	60.44 sy	1.2	50	-	-		7	0.94 /sy	57	80
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	544.00 sf	21.8	955	1,006	-		-	3.61 /sf	1,962	2,896
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	544.00 sf	5.2	206	277	-		8	0.90 /sf	491	730
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	544.00 sf	26.1	1,146	-	-		-	2.11 /sf	1,146	1,607
				New 4" Thick, 06' Wide Concrete Sidewalk Colored	544.00 SF	54.3	2,357	1,284			15	6.72 /SF	3,656	5,314
				New 4" Thick, Concrete w/ Color Art. Turf										
				Turf, artificial, 1/2" pile and 5/8" cushion pad, standard	2,586.00 sf	72.4	3,492	35,558	-		-	15.10 /sf	39,050	59,909
				Fine grading, fine grade granular base for sidewalks and bikeways	289.33 sy	5.8	241	-	-		32	0.94 /sy	272	384
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	2,586.00 sf	103.4	4,541	4,784	-		-	3.61 /sf	9,325	13,769
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,586.00 sf	24.8	977	1,319	-		40	0.90 /sf	2,336	3,470
				New 4" Thick, Concrete w/ Color Art. Turf	2,586.00 SF	206.5	9,251	41,660			72	19.72 /SF	50,983	77,532
				New 4" Thick, Concrete Stamped & Colored										
				Fine grading, fine grade granular base for sidewalks and bikeways	954.55 sy	19.1	794	-	-		104	0.94 /sy	898	1,268
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	8,591.00 sf	343.6	15,085	15,893	-		-	3.61 /sf	30,978	45,741
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	8,591.00 sf	82.5	3,246	4,381	-		133	0.90 /sf	7,761	11,529
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	8,591.00 sf	412.4	18,102	-	-		-	2.11 /sf	18,102	25,382
				New 4" Thick, Concrete Stamped & Colored	8,591.00 SF	857.6	37,227	20,275			237	6.72 /SF	57,740	83,919
				New 4" Thick, Concrete w/ Safety Surface										
				Fine grading, fine grade granular base for sidewalks and bikeways	243.44 sy	4.9	203	-	-		27	0.94 /sy	229	323
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	2,191.00 sf	87.6	3,847	4,053	-		-	3.61 /sf	7,901	11,665
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,191.00 sf	21.0	828	1,117	-		34	0.90 /sf	1,979	2,940
				Playground protective surfacing, resilient rubber surface, colors, 2" thick, poured in place	2,191.00 sf	12.5	614	17,528	-		-	8.28 /sf	18,142	27,980
				New 4" Thick, Concrete w/ Safety Surface	2,191.00 SF	126.1	5,492	22,699			61	12.89 /SF	28,251	42,909
				32-16 Curbs, Gutters, Sidewalks, and Driveways	13,912.00 SF	1,244.4	54,328	85,918			384	10.11 /SF	140,630	209,674
			32-17	Paving Specialties										
				New 6" Thick, Colored Shotcrete Landing										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 2" thick	8,864.00 sf	472.7	19,765	13,562	-		3,431	4.15 /sf	36,758	53,798
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	8,864.00 sf	567.3	23,720	27,124	-		4,117	6.20 /sf	54,960	81,346
				Fine grading, fine grade granular base for sidewalks and bikeways	984.88 sy	19.7	819	-	-		107	0.94 /sy	927	1,308
				Sidewalks, driveways, and patios, sidewalk, concrete, excludes base, for 4" thick bank run gravel base, add	8,864.00 sf	85.1	3,349	4,521	-		138	0.90 /sf	8,008	11,895
				New 6" Thick, Colored Shotcrete Landing	8,864.00 SF	1,144.8	47,654	45,206			7,792	11.36 /SF	100,652	148,347
				New 8" Thick, Colored Shotcrete Recirculating Waterfall										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	1,194.00 sf	76.4	3,195	3,654	-		555	6.20 /sf	7,403	10,957
				Waterfall Feature (Allowance)	1.00 LS				150,000	-	-	150,000.00 /LS	150,000	229,071
				Fine grading, fine grade granular base for sidewalks and bikeways	66.33 sy	1.3	55	-	-		7	0.94 /sy	62	88
				Sidewalks, driveways, and patios, sidewalk, concrete, excludes base, for 4" thick bank run gravel base, add	597.00 sf	5.7	226	304	-		9	0.90 /sf	539	801
				New 8" Thick, Colored Shotcrete Recirculating Waterfall	597.00 SF	83.5	3,476	3,958	150,000		571	264.67 /SF	158,005	240,918
				32-17 Paving Specialties	9,461.00 SF	1,228.3	51,130	49,165	150,000		8,363	27.34 /SF	258,657	389,264
			32-33	Site Furnishings										
				Bench										



Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Bench</b>										
				Benches, park, precast conc., w/back, wood rails, 8' long	8.00 ea	32.0	1,181	7,440	-	-	-	1,077.67 /ea	8,621	13,167
				<b>Bench</b>	<b>8.00 EA</b>	<b>32.0</b>	<b>1,181</b>	<b>7,440</b>				<b>1,077.67 /EA</b>	<b>8,621</b>	<b>13,167</b>
				<b>Locking Double Pole Gate w/ Signage</b>										
				Locking Double Pole Gate w/ Signage	3.00 EA				7,500	-	-	2,500.00 /EA	7,500	11,454
				<b>Locking Double Pole Gate w/ Signage</b>	<b>3.00 EA</b>				<b>7,500</b>			<b>2,500.00 /EA</b>	<b>7,500</b>	<b>11,454</b>
				<b>Monument Sign - 4' high CIP Concrete</b>										
				Monument Sign - 4' high CIP Concrete	2.00 EA				20,000	-	-	10,000.00 /EA	20,000	30,543
				<b>Monument Sign - 4' high CIP Concrete</b>	<b>2.00 EA</b>				<b>20,000</b>			<b>10,000.00 /EA</b>	<b>20,000</b>	<b>30,543</b>
				<b>Overlook w/ Shade Structure</b>										
				Overlook w/ Shade Structure (Allowance)	6,595.00 SF				329,750	-	-	50.00 /SF	329,750	503,574
				<b>Overlook w/ Shade Structure</b>	<b>6,595.00 SF</b>				<b>329,750</b>			<b>50.00 /SF</b>	<b>329,750</b>	<b>503,574</b>
				<b>Sand Volleyball Court</b>										
				Sand Volleyball Court (Allowance)	1.00 LS				5,000	-	-	5,000.00 /LS	5,000	7,636
				<b>Sand Volleyball Court</b>	<b>1.00 EA</b>				<b>5,000</b>			<b>5,000.00 /EA</b>	<b>5,000</b>	<b>7,636</b>
				<b>Steel Powdercoated Arbor Structure</b>										
				Steel Powdercoated Arbor Structure (Allowance)	750.00 sf				46,500	-	-	62.00 /sf	46,500	71,012
				<b>Steel Powdercoated Arbor Structure</b>	<b>750.00 SF</b>				<b>46,500</b>			<b>62.00 /SF</b>	<b>46,500</b>	<b>71,012</b>
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>	<b>32.0</b>	<b>1,181</b>	<b>7,440</b>	<b>408,750</b>			<b>417,371.34 /LS</b>	<b>417,371</b>	<b>637,386</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>2,504.7</b>	<b>106,638</b>	<b>142,522</b>	<b>558,750</b>	<b>8,748</b>		<b>816,658.60 /LS</b>	<b>816,659</b>	<b>1,236,324</b>
				<b>070 Special Features</b>	<b>1.00 LS</b>	<b>2,504.7</b>	<b>106,638</b>	<b>142,522</b>	<b>558,750</b>	<b>8,748</b>		<b>816,658.60 /LS</b>	<b>816,659</b>	<b>1,236,324</b>
				<b>Retaining Walls</b>										
				<b>Exterior Improvements</b>										
				<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	1.00 HR	1.0	45	26	-	67	-	137.95 /HR	138	203
				Dust Control Operations	4.00 HR	6.0	280		-	327	-	151.83 /HR	607	879
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	1.00 HR	1.0	42	11	-	65	-	117.71 /HR	118	172
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	1,800.00 bcy	13.8	618	-	-	1,593	-	1.23 /bcy	2,211	3,236
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	1,800.00 lcy	19.8	751	-	-	5,415	-	3.43 /lcy	6,166	9,106
				<b>Mass Common Excavation</b>	<b>1,800.00 CY</b>	<b>41.6</b>	<b>1,736</b>	<b>37</b>		<b>7,466</b>		<b>5.13 /CY</b>	<b>9,240</b>	<b>13,597</b>
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>										
				Precast window sill, concrete, 12" wall, 3-1/2" tapers to 2-1/2", 13" wide	256.00 lf	81.9	3,541	3,968	-	-	-	29.33 /lf	7,509	11,105
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	512.00 sf	126.0	5,902	3,200	-	1,466	-	20.64 /sf	10,568	15,407
				Cast-in place retaining walls,concrete gravity wall with vertical face,level embankment,6'high,includes excavation&backfill,excludes reinforcing	256.00 lf	590.2	29,325	18,304	-	4,422	-	203.32 /lf	52,050	76,012
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>	<b>256.00 LF</b>	<b>798.2</b>	<b>38,768</b>	<b>25,472</b>		<b>5,888</b>		<b>273.94 /LF</b>	<b>70,128</b>	<b>102,524</b>
				<b>Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	337.00 sf	83.0	3,885	2,106	-	965	-	20.64 /sf	6,956	10,141
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	112.00 lf	22.4	1,341	6,048	-	75	-	66.64 /lf	7,464	11,349
				Cast-in place retaining walls,concrete gravity wall with vertical face,level embankment,6'high,includes excavation&backfill,excludes reinforcing	112.00 lf	258.2	12,830	8,008	-	1,935	-	203.32 /lf	22,772	33,255
				<b>Retaining Wall - 08" Concrete w/ Stone Railing (3' HT)</b>	<b>112.00 LF</b>	<b>363.6</b>	<b>18,056</b>	<b>16,162</b>		<b>2,974</b>		<b>332.07 /LF</b>	<b>37,192</b>	<b>54,745</b>
				<b>Retaining Wall - 12" Concrete (5' HT)</b>										
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	234.00 lf	669.7	33,275	17,784	-	5,018	-	239.64 /lf	56,076	81,632
				<b>Retaining Wall - 12" Concrete (5' HT)</b>	<b>234.00 LF</b>	<b>669.7</b>	<b>33,275</b>	<b>17,784</b>		<b>5,018</b>		<b>239.64 /LF</b>	<b>56,076</b>	<b>81,632</b>
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	1,412.00 sf	347.6	16,277	8,825	-	4,042	-	20.64 /sf	29,145	42,489
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	282.00 lf	56.4	3,377	15,228	-	188	-	66.64 /lf	18,793	28,574
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	282.00 lf	807.1	40,100	21,432	-	6,047	-	239.64 /lf	67,579	98,378
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>	<b>282.00 LF</b>	<b>1,211.1</b>	<b>59,755</b>	<b>45,485</b>		<b>10,277</b>		<b>409.63 /LF</b>	<b>115,517</b>	<b>169,441</b>
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (6' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	509.00 sf	125.3	5,868	3,181	-	1,457	-	20.64 /sf	10,506	15,316
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	85.00 lf	17.0	1,018	4,590	-	57	-	66.64 /lf	5,665	8,613
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	85.00 lf	243.3	12,087	6,460	-	1,823	-	239.64 /lf	20,370	29,653





Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (6' HT)</b>	<b>85.00 LF</b>	<b>385.6</b>	<b>18,973</b>	<b>14,231</b>		<b>3,336</b>		<b>429.89 /LF</b>	<b>36,540</b>	<b>53,582</b>
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>										
				Structural concrete, in place, stair landing (3500 psi), cast on ground, includes forms(4 uses), reinforcing steel, concrete, placing and finishing	560.00 sf	56.6	2,676	1,932	-	29	-	8.28 /sf	4,637	6,784
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	56.00 sf	13.8	646	350	-	160	-	20.64 /sf	1,156	1,685
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	56.00 lf	11.2	671	3,024	-	37	-	66.64 /lf	3,732	5,674
				Fine grading, fine grade granular base for sidewalks and bikeways	62.22 sy	1.2	52	-	-	7	-	0.94 /sy	59	83
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	560.00 sf	5.4	212	286	-	9	-	0.90 /sf	506	751
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>	<b>5.00 EA</b>	<b>88.2</b>	<b>4,255</b>	<b>5,592</b>		<b>242</b>		<b>2,017.85 /EA</b>	<b>10,089</b>	<b>14,978</b>
				<b>32-32 Retaining Walls</b>	<b>969.00 LF</b>	<b>3,557.9</b>	<b>174,818</b>	<b>124,763</b>		<b>35,201</b>		<b>345.49 /LF</b>	<b>334,783</b>	<b>490,498</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>3,557.9</b>	<b>174,818</b>	<b>124,763</b>		<b>35,201</b>		<b>334,782.55 /LS</b>	<b>334,783</b>	<b>490,498</b>
				<b>080 Retaining Walls</b>	<b>969.00 LF</b>	<b>3,557.9</b>	<b>174,818</b>	<b>124,763</b>		<b>35,201</b>		<b>345.49 /LF</b>	<b>334,783</b>	<b>490,498</b>
				<b>Landscaping</b>										
				<b>Exterior Improvements</b>										
				<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	265.00 EA				106,000	-	-	400.00 /EA	106,000	161,877
				<b>Large Shade Tree</b>	<b>265.00 EA</b>				<b>106,000</b>			<b>400.00 /EA</b>	<b>106,000</b>	<b>161,877</b>
				<b>Landscape - U3 Bermuda Sod</b>										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2' supply	32,213.00 sf	429.4	18,425	15,784	-	-	-	1.06 /sf	34,209	50,255
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	596.53 cy	53.0	2,205	14,615	-	289	-	28.68 /cy	17,109	26,133
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow	32.21 msf	1.0	46	-	-	26	-	2.23 /msf	72	103
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	32.21 msf	64.4	2,599	8,150	-	210	-	340.22 /msf	10,960	16,567
				<b>Landscape - U3 Bermuda Sod</b>	<b>32,213.00 SF</b>	<b>547.8</b>	<b>23,275</b>	<b>38,549</b>		<b>525</b>		<b>1.94 /SF</b>	<b>62,349</b>	<b>93,057</b>
				<b>Landscape - Extensive</b>										
				Landscape - Extensive	8,511.00 SF				25,533	-	-	3.00 /SF	25,533	38,992
				<b>Landscape - Extensive</b>	<b>8,511.00 SF</b>				<b>25,533</b>			<b>3.00 /SF</b>	<b>25,533</b>	<b>38,992</b>
				<b>Landscape - Light</b>										
				Landscape - Light	100,637.00 SF				100,637	-	-	1.00 /SF	100,637	153,687
				<b>Landscape - Light</b>	<b>100,637.00 SF</b>				<b>100,637</b>			<b>1.00 /SF</b>	<b>100,637</b>	<b>153,687</b>
				<b>32-92 Turf and Grasses</b>	<b>141,361.00 SF</b>	<b>547.8</b>	<b>23,275</b>	<b>38,549</b>	<b>232,170</b>	<b>525</b>		<b>2.08 /SF</b>	<b>294,519</b>	<b>447,613</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>547.8</b>	<b>23,275</b>	<b>38,549</b>	<b>232,170</b>	<b>525</b>		<b>294,519.41 /LS</b>	<b>294,519</b>	<b>447,613</b>
				<b>090 Landscaping</b>	<b>141,361.00 SF</b>	<b>547.8</b>	<b>23,275</b>	<b>38,549</b>	<b>232,170</b>	<b>525</b>		<b>2.08 /SF</b>	<b>294,519</b>	<b>447,613</b>
				<b>Bank Stabilization</b>										
				<b>Site/Civil</b>										
				<b>Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	3,565.70 lcy	731.7	32,671	83,647	-	26,309	-	40.00 /lcy	142,627	214,351
				<b>Bank Stabilization</b>	<b>3,565.70 CY</b>	<b>731.7</b>	<b>32,671</b>	<b>83,647</b>		<b>26,309</b>		<b>40.00 /CY</b>	<b>142,627</b>	<b>214,351</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>731.7</b>	<b>32,671</b>	<b>83,647</b>		<b>26,309</b>		<b>142,627.17 /LS</b>	<b>142,627</b>	<b>214,351</b>
				<b>31.0 Site/Civil</b>	<b>1.00 LS</b>	<b>731.7</b>	<b>32,671</b>	<b>83,647</b>		<b>26,309</b>		<b>142,627.17 /LS</b>	<b>142,627</b>	<b>214,351</b>
				<b>100 Bank Stabilization</b>	<b>900.00 LF</b>	<b>731.7</b>	<b>32,671</b>	<b>83,647</b>		<b>26,309</b>		<b>158.48 /LF</b>	<b>142,627</b>	<b>214,351</b>
				<b>Utilities</b>										
				<b>Electrical Work</b>										
				<b>Site Electrical</b>										
				<b>Electrical Service</b>										
				PSO Quote for Electrical to Site	1.00 LS				405,800	-	-	405,800.00 /LS	405,800	619,714
				<b>Electrical Service</b>	<b>1.00 LS</b>				<b>405,800</b>			<b>405,800.00 /LS</b>	<b>405,800</b>	<b>619,714</b>
				<b>Site Lighting</b>										
				Site Lighting - North Bank Public Access	1.00 ls				210,000	-	-	210,000.00 /ls	210,000	320,699
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>210,000</b>			<b>210,000.00 /LS</b>	<b>210,000</b>	<b>320,699</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>615,800</b>			<b>615,800.00 /LS</b>	<b>615,800</b>	<b>940,413</b>
				<b>26.0 Electrical Work</b>	<b>1.00 LS</b>				<b>615,800</b>			<b>615,800.00 /LS</b>	<b>615,800</b>	<b>940,413</b>
				<b>Buried Piping</b>										
				<b>Water Utility Distribuiton Piping</b>										
				<b>3" PVC Water</b>										
				Bedding Stone, Material Only	262.31 tn			3,672	-	-	-	14.00 /tn	3,672	5,682
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,600.00 LF	640.0	30,428	3,344	-	14,662	-	30.27 /LF	48,433	69,643
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, ELL, 45	1.00 ea			14	-	-	-	13.78 /ea	14	21



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>3" PVC Water</b>										
				3" PVC, Sch. 80, socket joint, coupling	80.00 ea		-	643	-	-	-	8.04 /ea	643	995
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,158
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	50.00 lf	2.7	115	4	-	151	-	5.39 /lf	270	392
				<b>3" PVC Water</b>	<b>1,600.00 LF</b>	<b>698.7</b>	<b>33,188</b>	<b>9,183</b>		<b>17,289</b>		<b>37.29 /LF</b>	<b>59,659</b>	<b>86,453</b>
				<b>33-11 Water Utility Distribution Piping</b>	<b>1,600.00 LF</b>	<b>698.7</b>	<b>33,188</b>	<b>9,183</b>		<b>17,289</b>		<b>37.29 /LF</b>	<b>59,659</b>	<b>86,453</b>
		33-31		<b>Sanitary Utility Sewerage Piping</b>										
				<b>2" PVC Sewer</b>										
				Bedding Stone, Material Only	198.55 tn		-	2,780	-	-	-	14.00 /tn	2,780	4,301
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,200.00 LF	480.0	22,821	1,248	-	10,996	-	29.22 /LF	35,065	50,283
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea		-	4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	60.00 ea		-	170	-	-	-	2.84 /ea	170	264
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				Pump,sewage ejector,duplex system,coated steel tank,268 gpm,1 hp, 15'head,135 gallon,2"dschr,includes operating and level controls,tank,cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,777
				<b>2" PVC Sewer</b>	<b>1,200.00 LF</b>	<b>564.9</b>	<b>27,021</b>	<b>18,703</b>		<b>13,019</b>		<b>48.95 /LF</b>	<b>58,742</b>	<b>86,184</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>	<b>1,200.00 LF</b>	<b>564.9</b>	<b>27,021</b>	<b>18,703</b>		<b>13,019</b>		<b>48.95 /LF</b>	<b>58,742</b>	<b>86,184</b>
				<b>33.0 Buried Piping</b>	<b>2,800.00 LF</b>	<b>1,263.6</b>	<b>60,208</b>	<b>27,885</b>		<b>30,307</b>		<b>42.29 /LF</b>	<b>118,401</b>	<b>172,637</b>
				<b>110 Utilities</b>	<b>1.00 LS</b>	<b>1,263.6</b>	<b>60,208</b>	<b>27,885</b>	<b>615,800</b>	<b>30,307</b>		<b>734,200.81 /LS</b>	<b>734,201</b>	<b>1,113,050</b>
				<b>02 North Bank Public Access</b>	<b>320,179.00 SF</b>	<b>11,375.6</b>	<b>519,679</b>	<b>752,685</b>	<b>1,814,720</b>	<b>144,569</b>	<b>0</b>	<b>10.09 /SF</b>	<b>3,231,653</b>	<b>5,097,513</b>



Project: Bixby  
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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
03				<b>South Bank Public Access</b>										
		001		Land Acquisition										
		01.0		General Conditions										
			01-10	Land Acquisition										
				Land Acquisition - South Bank Public Access										
				Land Acquisition Costs	1.00 LS						0	0.01 /LS	0	4,000
				Land Acquisition - South Bank Public Access	1.00 LS						0	0.01 /LS	0	4,000
				01-10 Land Acquisition	1.00 LS						0	0.01 /LS	0	4,000
				01.0 General Conditions	1.00 LS						0	0.01 /LS	0	4,000
				001 Land Acquisition	1.00 LS						0	0.01 /LS	0	4,000
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	37,160.33 sy	495.5	23,223			32,299		1.49 /sy	55,522	80,599
				Mass Grading	37,160.33 SY	495.5	23,223			32,299		1.49 /SY	55,522	80,599
				31-00 Site/Civil	1.00 LS	495.5	23,223			32,299		55,522.32 /LS	55,522	80,599
				31.0 Site/Civil	1.00 LS	495.5	23,223			32,299		55,522.32 /LS	55,522	80,599
				005 Overall Site Grading	334,443.00 SF	495.5	23,223			32,299		0.17 /SF	55,522	80,599
		020		Pedestrian Bridges										
		32.0		Exterior Improvements										
			32-34	Fabricated Bridges										
				Pedestrian Bridge, 15' Wide w/ Overlook										
				Fabricated highway bridges, concrete in place, no reinforcing, abutment	60.00 cy	213.9	10,625	13,260		1,109		416.56 /cy	24,994	37,062
				Fabricated pedestrian bridges, wood, laminated type, complete in place, 130' span, includes erection, excludes foundations	2,110.00 sf	662.0	31,612	186,735		7,286		106.94 /sf	225,633	344,066
				Pedestrian Bridge, 15' Wide w/ Overlook	141.00 LF	875.9	42,237	199,995		8,395		1,777.50 /LF	250,627	381,128
				32-34 Fabricated Bridges	1.00 EA	875.9	42,237	199,995		8,395		250,626.85 /EA	250,627	381,128
				32.0 Exterior Improvements	1.00 LS	875.9	42,237	199,995		8,395		250,626.85 /LS	250,627	381,128
				020 Pedestrian Bridges	1.00 EA	875.9	42,237	199,995		8,395		250,626.85 /EA	250,627	381,128
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				New 3" Thick, 20' Wide Asphalt Upper Trail										
				Fine grading, grade subgrade for base course, roadways	1,963.33 sy	9.0	396			317		0.36 /sy	712	1,026
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,963.33 sy	10.5	491	8,364		569		4.80 /sy	9,424	14,475
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 3" thick, no hauling included	1,963.33 sy	35.2	1,472	21,793		839		12.28 /sy	24,103	37,028
				New 3" Thick, 20' Wide Asphalt Upper Trail	884.00 LF	54.7	2,359	30,157		1,724		38.73 /LF	34,240	52,528
				32-12 Flexible Paving	17,670.00 SF	54.7	2,359	30,157		1,724		1.94 /SF	34,240	52,528
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 06' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	486.00 sy	9.7	404			53		0.94 /sy	457	646
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	4,374.00 sf	175.0	7,680	8,092				3.61 /sf	15,772	23,288
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,374.00 sf	42.0	1,653	2,231		68		0.90 /sf	3,951	5,870
				New 4" Thick, 06' Wide Concrete Sidewalk	729.00 LF	226.7	9,737	10,323		121		27.68 /LF	20,181	29,804
				New 4" Thick, 08' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,231.11 sy	24.6	1,024			134		0.94 /sy	1,158	1,635
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	11,080.00 sf	443.2	19,456	20,498				3.61 /sf	39,954	58,993
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	11,080.00 sf	106.4	4,187	5,651		172		0.90 /sf	10,010	14,869
				New 4" Thick, 08' Wide Concrete Trail	1,385.00 LF	574.2	24,666	26,149		306		36.91 /LF	51,121	75,497
				New 4" Thick, 10' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,684.44 sy	33.7	1,401			183		0.94 /sy	1,585	2,237
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	15,160.00 sf	606.4	26,620	28,046				3.61 /sf	54,666	80,716
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	15,160.00 sf	145.5	5,728	7,732		235		0.90 /sf	13,695	20,344



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				<b>New 4" Thick, 10' Wide Concrete Trail</b>	1,516.00 LF	785.6	33,749	35,778		419		46.14 /LF	69,946	103,297
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	30,614.00 SF	1,586.5	68,153	72,249		846		4.61 /SF	141,248	208,597
				<b>32.0 Exterior Improvements</b>	1.00 LS	1,641.1	70,512	102,406		2,570		175,487.34 /LS	175,487	261,125
				<b>030 Paths/Trails</b>	4,514.00 LF	1,641.1	70,512	102,406		2,570		38.88 /LF	175,487	261,125
				<b>Roads</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>2" Thick Asphalt Overlay</b>										
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,310.88 sy	19.8	842	10,880	-	470	-	9.30 /sy	12,193	18,713
				<b>2" Thick Asphalt Overlay</b>	11,798.00 SF	19.8	842	10,880		470		1.03 /SF	12,193	18,713
				<b>32-12 Flexible Paving</b>	11,798.00 SF	19.8	842	10,880		470		1.03 /SF	12,193	18,713
				<b>Rigid Paving</b>										
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	1,139.00 lf	139.0	6,388	25,628	-	80	-	28.18 /lf	32,095	48,725
				Fine grading, grade subgrade for base course, roadways	1,145.88 sy	5.2	231	-	-	185	-	0.36 /sy	416	599
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	10,313.00 sf	485.3	21,305	23,514	-	-	-	4.35 /sf	44,819	66,252
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,145.88 sy	6.1	287	4,881	-	332	-	4.80 /sy	5,500	8,448
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>	1,145.88 SY	635.6	28,210	54,023		597		72.29 /SY	82,830	124,023
				<b>32-13 Rigid Paving</b>	10,313.00 SF	635.6	28,210	54,023		597		8.03 /SF	82,830	124,023
				<b>32.0 Exterior Improvements</b>	1.00 LS	655.5	29,052	64,903		1,067		95,022.17 /LS	95,022	142,736
				<b>040 Roads</b>	22,111.00 SF	655.5	29,052	64,903		1,067		4.30 /SF	95,022	142,736
				<b>Parking Lots</b>										
				<b>Exterior Improvements</b>										
				<b>Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	1,838.66 sy	8.4	371	-	-	297	-	0.36 /sy	667	961
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,838.66 sy	9.8	460	7,833	-	533	-	4.80 /sy	8,825	13,555
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	1,838.66 sy	39.1	1,634	27,212	-	931	-	16.20 /sy	29,777	45,777
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	1,838.66 sy	27.8	1,181	15,261	-	660	-	9.30 /sy	17,101	26,248
				<b>New 6" Thick, Asphalt Parking Lot</b>	1,838.66 SY	85.1	3,645	50,306		2,420		30.66 /SY	56,371	86,540
				<b>32-12 Flexible Paving</b>	16,548.00 SF	85.1	3,645	50,306		2,420		3.41 /SF	56,371	86,540
				<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	207.33 sy	9.0	353	-	-	14	-	1.77 /sy	367	516
				Sidewalks, driveways, and patios, sidewalk, concrete, excludes base, for 4" thick bank run gravel base, add	1,866.66 sf	17.9	705	952	-	29	-	0.90 /sf	1,686	2,504
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	933.00 lf	112.0	5,230	3,396	-	-	-	9.25 /lf	8,626	12,587
				<b>Parking Lot Curb and Gutter</b>	933.00 LF	138.8	6,288	4,348		43		11.45 /LF	10,679	15,608
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	1,866.00 SF	138.8	6,288	4,348		43		5.72 /SF	10,679	15,608
				<b>32.0 Exterior Improvements</b>	1.00 LS	224.0	9,933	54,654		2,464		67,050.12 /LS	67,050	102,148
				<b>050 Parking Lots</b>	18,414.00 SF	224.0	9,933	54,654		2,464		3.64 /SF	67,050	102,148
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>Fabricated Engineered Structures</b>										
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	328,335
				<b>20x30 Restroom Structure</b>	1.00 EA				215,000			215,000.00 /EA	215,000	328,335
				<b>13-34 Fabricated Engineered Structures</b>	1.00 EA				215,000			215,000.00 /EA	215,000	328,335
				<b>13.0 Special Construction</b>	1.00 LS				215,000			215,000.00 /LS	215,000	328,335
				<b>060 Structures</b>	1.00 EA				215,000			215,000.00 /EA	215,000	328,335
				<b>Special Features</b>										
				<b>Exterior Improvements</b>										
				<b>Rigid Paving</b>										
				<b>New 6" Thick, 08' Wide Concrete ADA Ramp</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	978.00 sf	240.7	11,274	6,113	-	2,800	-	20.64 /sf	20,187	29,429
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	163.00 lf	32.6	1,952	8,802	-	108	-	66.64 /lf	10,863	16,516
				Fine grading, grade subgrade for base course, roadways	145.00 sy	0.7	29	-	-	23	-	0.36 /sy	53	76



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				<b>New 6" Thick, 08' Wide Concrete ADA Ramp</b>										
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	1,305.00 sf	61.4	2,696	2,975	-	-	-	4.35 /sf	5,671	8,383
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	145.00 sy	0.8	36	618	-	42	-	4.80 /sy	696	1,069
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	163.00 lf	466.5	23,178	12,388	-	3,495	-	239.64 /lf	39,062	56,864
				<b>New 6" Thick, 08' Wide Concrete ADA Ramp</b>	<b>1,305.00 SF</b>	<b>802.7</b>	<b>39,166</b>	<b>30,896</b>		<b>6,469</b>		<b>58.64 /SF</b>	<b>76,531</b>	<b>112,337</b>
				<b>32-13 Rigid Paving</b>	<b>1,305.00 SF</b>	<b>802.7</b>	<b>39,166</b>	<b>30,896</b>		<b>6,469</b>		<b>58.64 /SF</b>	<b>76,531</b>	<b>112,337</b>
		32-16		<b>Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>										
				Fine grading, fine grade granular base for sidewalks and bikeways	450.88 sy	9.0	375	-	-	49	-	0.94 /sy	424	599
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	4,058.00 sf	162.3	7,126	7,507	-	-	-	3.61 /sf	14,633	21,606
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,058.00 sf	39.0	1,533	2,070	-	63	-	0.90 /sf	3,666	5,446
				Sidewalks, driveways, and patios, sidewalks, concrete, for patterned surface, excludes base, add to above, maximum	4,058.00 sf	194.8	8,551	-	-	-	-	2.11 /sf	8,551	11,989
				<b>New 4" Thick, Concrete Stamped &amp; Colored</b>	<b>4,058.00 SF</b>	<b>405.1</b>	<b>17,585</b>	<b>9,577</b>		<b>112</b>		<b>6.72 /SF</b>	<b>27,274</b>	<b>39,640</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>4,058.00 SF</b>	<b>405.1</b>	<b>17,585</b>	<b>9,577</b>		<b>112</b>		<b>6.72 /SF</b>	<b>27,274</b>	<b>39,640</b>
		32-33		<b>Site Furnishings</b>										
				<b>Interactive Recirculating Fountain</b>										
				Fountain Feature (Allowance)	1.00 LS				180,000	-	-	180,000.00 /LS	180,000	274,885
				<b>Interactive Recirculating Fountain</b>	<b>1.00 EA</b>				<b>180,000</b>			<b>180,000.00 /EA</b>	<b>180,000</b>	<b>274,885</b>
				<b>Historical Signage</b>										
				Historical Signage (Allowance)	1.00 LS			10,000	-	-	-	10,000.00 /LS	10,000	15,271
				<b>Historical Signage</b>	<b>1.00 LS</b>			<b>10,000</b>				<b>10,000.00 /LS</b>	<b>10,000</b>	<b>15,271</b>
				<b>32-33 Site Furnishings</b>	<b>1.00 LS</b>			<b>190,000</b>				<b>190,000.00 /LS</b>	<b>190,000</b>	<b>290,157</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>1,207.8</b>	<b>56,751</b>	<b>40,472</b>	<b>190,000</b>	<b>6,581</b>		<b>293,804.43 /LS</b>	<b>293,804</b>	<b>442,134</b>
				<b>070 Special Features</b>	<b>1.00 LS</b>	<b>1,207.8</b>	<b>56,751</b>	<b>40,472</b>	<b>190,000</b>	<b>6,581</b>		<b>293,804.43 /LS</b>	<b>293,804</b>	<b>442,134</b>
	080			<b>Retaining Walls</b>										
		32.0		<b>Exterior Improvements</b>										
			32-32	<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	1.00 HR	1.0	45	26	-	67	-	137.95 /HR	138	203
				Dust Control Operations	4.00 HR	6.0	280		-	327	-	151.83 /HR	607	879
				Service Truck for Equipment: Lube, Oil, Service w/Teamster	1.00 HR	1.0	42	11	-	65	-	117.71 /HR	118	172
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	2,500.00 bcy	19.2	859	-	-	2,212	-	1.23 /bcy	3,071	4,494
				Hauling,excavated borrow material,loose cubic yards,1 mile round trip,2.6 loads/hr,base wd rate,16.5 cy dump trailer,off-highway,excludes loading	2,500.00 lcy	27.5	1,043	-	-	7,521	-	3.43 /lcy	8,564	12,648
				<b>Mass Common Excavation</b>	<b>2,500.00 CY</b>	<b>54.7</b>	<b>2,269</b>	<b>37</b>		<b>10,191</b>		<b>5.00 /CY</b>	<b>12,498</b>	<b>18,396</b>
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>										
				Precast window sill, concrete, 12" wall, 3-1/2" tapers to 2-1/2", 13" wide	695.00 lf	222.4	9,615	10,773	-	-	-	29.33 /lf	20,387	30,148
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	1,389.00 sf	341.9	16,012	8,681	-	3,976	-	20.64 /sf	28,670	41,797
				Cast-in place retaining walls,concrete gravity wall with vertical face,level embankment,6'high,includes excavation&backfill,excludes reinforcing	695.00 lf	1,602.4	79,612	49,693	-	12,004	-	203.32 /lf	141,309	206,362
				<b>Retaining Wall - 08" Concrete w/ Seating (2' HT)</b>	<b>695.00 LF</b>	<b>2,166.7</b>	<b>105,239</b>	<b>69,146</b>		<b>15,981</b>		<b>273.91 /LF</b>	<b>190,366</b>	<b>278,306</b>
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>										
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	3,226.00 sf	794.1	37,189	20,163	-	9,236	-	20.64 /sf	66,587	97,074
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	645.00 lf	129.0	7,725	34,830	-	429	-	66.64 /lf	42,984	65,356
				Cast-in place retaining walls, reinforced concrete cantilever, 33 degree slope embankment, 8' high, includes excavation, backfill & reinforcing	645.00 lf	1,846.0	91,718	49,020	-	13,831	-	239.64 /lf	154,569	225,013
				<b>Retaining Wall - 12" Concrete w/ Stone Railing (5' HT)</b>	<b>645.00 LF</b>	<b>2,769.1</b>	<b>136,632</b>	<b>104,013</b>		<b>23,496</b>		<b>409.52 /LF</b>	<b>264,140</b>	<b>387,443</b>
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>										
				Structural concrete, in place, stair landing (3500 psi), cast on ground, includes forms(4 uses), reinforcing steel, concrete, placing and finishing	225.00 sf	22.7	1,075	776	-	12	-	8.28 /sf	1,863	2,726
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	43.00 sf	10.6	496	269	-	123	-	20.64 /sf	888	1,294
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	43.00 lf	8.6	515	2,322	-	29	-	66.64 /lf	2,866	4,357
				Fine grading, fine grade granular base for sidewalks and bikeways	25.00 sy	0.5	21	-	-	3	-	0.94 /sy	24	33



Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>										
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	225.00 sf	2.2	85	115	-	3	-	0.90 /sf	203	302
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>	<b>2.00 EA</b>	<b>44.6</b>	<b>2,192</b>	<b>3,482</b>		<b>170</b>		<b>2,921.51 /EA</b>	<b>5,843</b>	<b>8,712</b>
				<b>32-32 Retaining Walls</b>	<b>1,340.00 LF</b>	<b>5,035.1</b>	<b>246,331</b>	<b>176,678</b>		<b>49,838</b>		<b>352.87 /LF</b>	<b>472,847</b>	<b>692,857</b>
				32.0 Exterior Improvements	1.00 LS	5,035.1	246,331	176,678		49,838		472,846.91 /LS	472,847	692,857
				<b>080 Retaining Walls</b>	<b>1,340.00 LF</b>	<b>5,035.1</b>	<b>246,331</b>	<b>176,678</b>		<b>49,838</b>		<b>352.87 /LF</b>	<b>472,847</b>	<b>692,857</b>
				<b>Landscaping</b>										
				Exterior Improvements										
				<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	76.00 EA				30,400	-	-	400.00 /EA	30,400	46,425
				<b>Large Shade Tree</b>	<b>76.00 EA</b>				<b>30,400</b>			<b>400.00 /EA</b>	<b>30,400</b>	<b>46,425</b>
				<b>Landscape - U3 Bermuda Sod</b>										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	122,162.00 sf	1,628.4	69,872	59,859	-	-	-	1.06 /sf	129,732	190,581
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	2,262.25 cy	201.1	8,364	55,425	-	1,095	-	28.68 /cy	64,883	99,105
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow\	122.16 msf	3.6	173	-	-	99	-	2.23 /msf	272	390
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	122.16 msf	244.3	9,857	30,907	-	798	-	340.22 /msf	41,562	62,825
				<b>Landscape - U3 Bermuda Sod</b>	<b>122,162.00 SF</b>	<b>2,077.5</b>	<b>88,266</b>	<b>146,192</b>		<b>1,992</b>		<b>1.94 /SF</b>	<b>236,449</b>	<b>352,902</b>
				<b>Landscape - Extensive</b>										
				Landscape - Extensive	2,467.00 SF				7,401	-	-	3.00 /SF	7,401	11,302
				<b>Landscape - Extensive</b>	<b>2,467.00 SF</b>				<b>7,401</b>			<b>3.00 /SF</b>	<b>7,401</b>	<b>11,302</b>
				<b>Landscape - Light</b>										
				Landscape - Light	71,135.00 SF				88,919	-	-	1.25 /SF	88,919	135,791
				<b>Landscape - Light</b>	<b>71,135.00 SF</b>				<b>88,919</b>			<b>1.25 /SF</b>	<b>88,919</b>	<b>135,791</b>
				<b>32-92 Turf and Grasses</b>	<b>195,764.00 SF</b>	<b>2,077.5</b>	<b>88,266</b>	<b>146,192</b>	<b>126,720</b>	<b>1,992</b>		<b>1.86 /SF</b>	<b>363,169</b>	<b>546,421</b>
				32.0 Exterior Improvements	1.00 LS	2,077.5	88,266	146,192	126,720	1,992		363,169.10 /LS	363,169	546,421
				<b>090 Landscaping</b>	<b>195,764.00 SF</b>	<b>2,077.5</b>	<b>88,266</b>	<b>146,192</b>	<b>126,720</b>	<b>1,992</b>		<b>1.86 /SF</b>	<b>363,169</b>	<b>546,421</b>
				<b>Bank Stabilization</b>										
				Site/Civil										
				<b>Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	3,169.50 lcy	650.4	29,041	74,353	-	23,386	-	40.00 /lcy	126,779	190,534
				<b>Bank Stabilization</b>	<b>3,169.50 CY</b>	<b>650.4</b>	<b>29,041</b>	<b>74,353</b>		<b>23,386</b>		<b>40.00 /CY</b>	<b>126,779</b>	<b>190,534</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>650.4</b>	<b>29,041</b>	<b>74,353</b>		<b>23,386</b>		<b>126,779.24 /LS</b>	<b>126,779</b>	<b>190,534</b>
				31.0 Site/Civil	1.00 LS	650.4	29,041	74,353		23,386		126,779.24 /LS	126,779	190,534
				<b>100 Bank Stabilization</b>	<b>800.00 LF</b>	<b>650.4</b>	<b>29,041</b>	<b>74,353</b>		<b>23,386</b>		<b>158.47 /LF</b>	<b>126,779</b>	<b>190,534</b>
				<b>Utilities</b>										
				<b>Electrical Work</b>										
				<b>Site Electrical</b>										
				<b>Electrical Service</b>										
				Electrical Service Allowance	1.00 LS				50,000	-	-	50,000.00 /LS	50,000	76,357
				<b>Electrical Service</b>	<b>1.00 LS</b>				<b>50,000</b>			<b>50,000.00 /LS</b>	<b>50,000</b>	<b>76,357</b>
				<b>Site Lighting</b>										
				Site Lighting - South Bank Public Access	1.00 ls				160,000	-	-	160,000.00 /ls	160,000	244,342
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>160,000</b>			<b>160,000.00 /LS</b>	<b>160,000</b>	<b>244,342</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>210,000</b>			<b>210,000.00 /LS</b>	<b>210,000</b>	<b>320,699</b>
				26.0 Electrical Work	1.00 LS				210,000			210,000.00 /LS	210,000	320,699
				<b>Buried Piping</b>										
				<b>Water Utility Distribution Piping</b>										
				<b>3" PVC Water</b>										
				Bedding Stone, Material Only	40.99 tn			574	-	-	-	14.00 /tn	574	888
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	250.00 LF	100.0	4,754	523	-	2,291	-	30.27 /LF	7,568	10,882
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, coupling	13.00 ea			105	-	-	-	8.04 /ea	105	162
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				<b>3" PVC Water</b>	<b>250.00 LF</b>	<b>148.0</b>	<b>7,054</b>	<b>2,707</b>		<b>4,313</b>		<b>56.30 /LF</b>	<b>14,074</b>	<b>20,493</b>
				<b>33-11 Water Utility Distribution Piping</b>	<b>250.00 LF</b>	<b>148.0</b>	<b>7,054</b>	<b>2,707</b>		<b>4,313</b>		<b>56.30 /LF</b>	<b>14,074</b>	<b>20,493</b>
				<b>Sanitary Utility Sewerage Piping</b>										
				<b>2" PVC Sewer</b>										
				Bedding Stone, Material Only	279.95 tn			3,919	-	-	-	14.00 /tn	3,919	6,064
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	1,700.00 LF	680.0	32,330	1,768	-	15,578	-	29.22 /LF	49,675	71,234



Project: **Bixby**  
 Project No.: **386594**  
 Design Stage: **Schematic Design**

Estimator: **Jones T**  
 Rev No. / Date: **02 - 04/24/2014**  
 Estimate Class: **Class 3**

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>2" PVC Sewer</b>										
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea		-	4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	85.00 ea		-	241	-	-	-	2.84 /ea	241	373
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				Pump, sewage ejector, duplex system, coated steel tank, 268 gpm, 1 hp, 15' head, 135 gallon, 2" dschr, includes operating and level controls, tank, cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,777
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,158
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	50.00 lf	2.7	115	4	-	151	-	5.39 /lf	270	392
				<b>2" PVC Sewer</b>	<b>1,700.00 LF</b>	<b>775.6</b>	<b>36,989</b>	<b>20,437</b>		<b>18,205</b>		<b>44.49 /LF</b>	<b>75,631</b>	<b>110,558</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>	<b>1,700.00 LF</b>	<b>775.6</b>	<b>36,989</b>	<b>20,437</b>		<b>18,205</b>		<b>44.49 /LF</b>	<b>75,631</b>	<b>110,558</b>
				33.0 Buried Piping	250.00 LF	923.6	44,043	23,143		22,518		358.82 /LF	89,705	131,051
				<b>110 Utilities</b>	<b>1.00 LS</b>	<b>923.6</b>	<b>44,043</b>	<b>23,143</b>	<b>210,000</b>	<b>22,518</b>		<b>299,705.27 /LS</b>	<b>299,705</b>	<b>451,751</b>
				<b>03 South Bank Public Access</b>	<b>334,443.00 LS</b>	<b>13,786.2</b>	<b>639,390</b>	<b>882,795</b>	<b>741,720</b>	<b>151,109</b>	<b>0</b>	<b>7.22 /LS</b>	<b>2,415,014</b>	<b>3,623,768</b>



Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>04</b>				<b>Memorial Public Access</b>										
		001		Land Acquisition										
		01.0		General Conditions										
			01-10	Land Acquisition										
				Land Acquisition - Memorial Public Access										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	40,000
				Land Acquisition - Memorial Public Access	1.00 LS						0	0.01 /LS	0	40,000
				01-10 Land Acquisition	1.00 LS						0	0.01 /LS	0	40,000
				01.0 General Conditions	1.00 LS						0	0.01 /LS	0	40,000
				001 Land Acquisition	1.00 LS						0	0.01 /LS	0	40,000
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	32,261.56 sy	430.2	20,161	-	-	28,041	-	1.49 /sy	48,203	69,974
				Mass Grading	162,815.22 SY	430.2	20,161			28,041		0.30 /SY	48,203	69,974
				31-00 Site/Civil	1.00 LS	430.2	20,161			28,041		48,202.93 /LS	48,203	69,974
				31.0 Site/Civil	1.00 LS	430.2	20,161			28,041		48,202.93 /LS	48,203	69,974
				005 Overall Site Grading	290,354.00 SF	430.2	20,161			28,041		0.17 /SF	48,203	69,974
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				New 3" Thick, 20' Wide Asphalt Upper Trail										
				Fine grading, grade subgrade for base course, roadways	1,200.00 sy	5.5	242	-	-	194	-	0.36 /sy	435	627
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,200.00 sy	6.4	300	5,112	-	348	-	4.80 /sy	5,760	8,847
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 3" thick, no hauling included	1,200.00 sy	21.5	900	13,320	-	513	-	12.28 /sy	14,732	22,632
				New 3" Thick, 20' Wide Asphalt Upper Trail	540.00 LF	33.4	1,442	18,432		1,054		38.75 /LF	20,927	32,105
				32-12 Flexible Paving	10,800.00 SF	33.4	1,442	18,432		1,054		1.94 /SF	20,927	32,105
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 06' Wide Concrete Sidewalk										
				Fine grading, fine grade granular base for sidewalks and bikeways	483.33 sy	9.7	402	-	-	53	-	0.94 /sy	455	642
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	4,350.00 sf	174.0	7,638	8,048	-	-	-	3.61 /sf	15,686	23,161
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	4,350.00 sf	41.8	1,644	2,219	-	68	-	0.90 /sf	3,930	5,837
				New 4" Thick, 06' Wide Concrete Sidewalk	725.00 LF	225.4	9,684	10,266		120		27.68 /LF	20,070	29,640
				New 4" Thick, 08' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	786.66 sy	15.7	654	-	-	86	-	0.94 /sy	740	1,045
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	7,080.00 sf	283.2	12,432	13,098	-	-	-	3.61 /sf	25,530	37,696
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	7,080.00 sf	68.0	2,675	3,611	-	110	-	0.90 /sf	6,396	9,501
				New 4" Thick, 08' Wide Concrete Trail	885.00 LF	366.9	15,762	16,709		196		36.91 /LF	32,666	48,242
				New 4" Thick, 20' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,624.44 sy	32.5	1,351	-	-	177	-	0.94 /sy	1,528	2,158
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	14,620.00 sf	584.8	25,672	27,047	-	-	-	3.61 /sf	52,719	77,841
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	14,620.00 sf	140.4	5,524	7,456	-	227	-	0.90 /sf	13,208	19,619
				New 4" Thick, 20' Wide Concrete Trail	731.00 LF	757.6	32,547	34,503		404		92.28 /LF	67,454	99,618
				32-16 Curbs, Gutters, Sidewalks, and Driveways	26,050.00 SF	1,350.0	57,993	61,478		720		4.61 /SF	120,190	177,499
				32.0 Exterior Improvements	1.00 LS	1,383.4	59,434	79,910		1,773		141,117.71 /LS	141,118	209,605
				030 Paths/Trails	2,881.00 LF	1,383.4	59,434	79,910		1,773		48.98 /LF	141,118	209,605
		040		Roads										
		32.0		Exterior Improvements										
			32-13	Rigid Paving										
				New 6" Thick, Concrete Emergency Boat Ramp										
				Thickened slab edge, 3500 psi, 20" deep x 20" wide bottom, reinforced	1,049.00 lf	128.0	5,883	23,603	-	73	-	28.18 /lf	29,559	44,875
				Fine grading, grade subgrade for base course, roadways	1,247.33 sy	5.7	251	-	-	201	-	0.36 /sy	453	652
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base	11,226.00 sf	528.3	23,191	25,595	-	-	-	4.35 /sf	48,786	72,117





Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>										
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	1,247.33 sy	6.6	312	5,314	-	361	-	4.80 /sy	5,987	9,196
				<b>New 6" Thick, Concrete Emergency Boat Ramp</b>	<b>1,247.33 SY</b>	<b>668.6</b>	<b>29,638</b>	<b>54,511</b>		<b>636</b>		<b>67.97 /SY</b>	<b>84,785</b>	<b>126,839</b>
				<b>32-13 Rigid Paving</b>	<b>11,226.00 SF</b>	<b>668.6</b>	<b>29,638</b>	<b>54,511</b>		<b>636</b>		<b>7.55 /SF</b>	<b>84,785</b>	<b>126,839</b>
				32.0 Exterior Improvements	1.00 LS	668.6	29,638	54,511		636		84,785.11 /LS	84,785	126,839
				<b>040 Roads</b>	<b>11,226.00 SF</b>	<b>668.6</b>	<b>29,638</b>	<b>54,511</b>		<b>636</b>		<b>7.55 /SF</b>	<b>84,785</b>	<b>126,839</b>
				<b>Parking Lots</b>										
				Exterior Improvements										
				<b>32-12 Flexible Paving</b>										
				<b>New 6" Thick, Asphalt Parking Lot</b>										
				Fine grading, grade subgrade for base course, roadways	2,821.77 sy	12.9	569	-	-	455	-	0.36 /sy	1,024	1,474
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	2,821.77 sy	15.0	706	12,021	-	818	-	4.80 /sy	13,544	20,803
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	2,821.77 sy	60.0	2,507	41,762	-	1,429	-	16.20 /sy	45,699	70,253
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	2,821.77 sy	42.7	1,812	23,421	-	1,012	-	9.30 /sy	26,245	40,282
				<b>New 6" Thick, Asphalt Parking Lot</b>	<b>2,821.77 SY</b>	<b>130.6</b>	<b>5,594</b>	<b>77,204</b>		<b>3,714</b>		<b>30.66 /SY</b>	<b>86,512</b>	<b>132,813</b>
				<b>32-12 Flexible Paving</b>	<b>25,396.00 SF</b>	<b>130.6</b>	<b>5,594</b>	<b>77,204</b>		<b>3,714</b>		<b>3.41 /SF</b>	<b>86,512</b>	<b>132,813</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>										
				<b>Parking Lot Curb and Gutter</b>										
				Fine grading, select gravel, 4" deep, hand grading, including compaction	283.77 sy	12.3	483	-	-	20	-	1.77 /sy	503	707
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	2,554.00 sf	24.5	965	1,303	-	40	-	0.90 /sf	2,307	3,427
				Cast-in place concrete curbs & gutters, concrete, steel forms, radius, 6" x 18", includes concrete	1,277.00 lf	153.2	7,158	4,648	-	-	-	9.25 /lf	11,806	17,228
				<b>Parking Lot Curb and Gutter</b>	<b>1,277.00 LF</b>	<b>190.0</b>	<b>8,606</b>	<b>5,951</b>		<b>59</b>		<b>11.45 /LF</b>	<b>14,616</b>	<b>21,362</b>
				<b>32-16 Curbs, Gutters, Sidewalks, and Driveways</b>	<b>2,554.00 SF</b>	<b>190.0</b>	<b>8,606</b>	<b>5,951</b>		<b>59</b>		<b>5.72 /SF</b>	<b>14,616</b>	<b>21,362</b>
				32.0 Exterior Improvements	1.00 LS	320.6	14,200	83,154		3,774		101,128.44 /LS	101,128	154,175
				<b>050 Parking Lots</b>	<b>27,950.00 SF</b>	<b>320.6</b>	<b>14,200</b>	<b>83,154</b>		<b>3,774</b>		<b>3.62 /SF</b>	<b>101,128</b>	<b>154,175</b>
				<b>Structures</b>										
				<b>Special Construction</b>										
				<b>13-34 Fabricated Engineered Structures</b>										
				<b>10x20 Steel Shelter w/ Stone Columns</b>										
				10x20 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				12,000	-	-	12,000.00 /EA	12,000	18,326
				<b>10x20 Steel Shelter w/ Stone Columns</b>	<b>1.00 EA</b>				<b>12,000</b>			<b>12,000.00 /EA</b>	<b>12,000</b>	<b>18,326</b>
				<b>20x20 Steel Shelter w/ Stone Columns</b>										
				20x20 Steel Shelter w/ Stone Columns (Allowance)	1.00 EA				24,000	-	-	24,000.00 /EA	24,000	36,651
				<b>20x20 Steel Shelter w/ Stone Columns</b>	<b>1.00 EA</b>				<b>24,000</b>			<b>24,000.00 /EA</b>	<b>24,000</b>	<b>36,651</b>
				<b>20x30 Restroom Structure</b>										
				20x30 Restroom Structure (Allowance)	1.00 EA				215,000	-	-	215,000.00 /EA	215,000	328,335
				<b>20x30 Restroom Structure</b>	<b>1.00 EA</b>				<b>215,000</b>			<b>215,000.00 /EA</b>	<b>215,000</b>	<b>328,335</b>
				<b>13-34 Fabricated Engineered Structures</b>	<b>3.00 EA</b>				<b>251,000</b>			<b>83,666.67 /EA</b>	<b>251,000</b>	<b>383,312</b>
				<b>13.0 Special Construction</b>	<b>1.00 LS</b>				<b>251,000</b>			<b>251,000.00 /LS</b>	<b>251,000</b>	<b>383,312</b>
				<b>060 Structures</b>	<b>3.00 EA</b>				<b>251,000</b>			<b>83,666.67 /EA</b>	<b>251,000</b>	<b>383,312</b>
				<b>Special Features</b>										
				Exterior Improvements										
				<b>32-17 Paving Specialties</b>										
				<b>New 8" Thick, Colored Shotcrete Landing</b>										
				Shotcrete, wet mix, fiber reinforced, 3000 psi, 4" thick	11,956.00 sf	765.2	31,994	36,585	-	5,553	-	6.20 /sf	74,132	109,721
				Fine grading, fine grade granular base for sidewalks and bikeways	664.22 sy	13.3	553	-	-	72	-	0.94 /sy	625	882
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	5,978.00 sf	57.4	2,259	3,049	-	93	-	0.90 /sf	5,400	8,022
				<b>New 8" Thick, Colored Shotcrete Landing</b>	<b>5,978.00 SF</b>	<b>835.9</b>	<b>34,805</b>	<b>39,634</b>		<b>5,718</b>		<b>13.41 /SF</b>	<b>80,157</b>	<b>118,625</b>
				<b>32-17 Paving Specialties</b>	<b>5,978.00 SF</b>	<b>835.9</b>	<b>34,805</b>	<b>39,634</b>		<b>5,718</b>		<b>13.41 /SF</b>	<b>80,157</b>	<b>118,625</b>
				<b>32-92 Turf and Grasses</b>										
				<b>Dog Park - Large</b>										
				Fence, chain link, resdntl, galv steel, 11ga wire, 1-5/8" post, 10'oc, 1-3/8" top rail, 2" corner post, 4' high, schedule 20, includes excavation, excludes concrete	258.00 lf	15.5	605	1,819	-	146	-	9.96 /lf	2,569	3,879
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	3,921.00 sf	52.3	2,243	1,921	-	-	-	1.06 /sf	4,164	6,117
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	72.61 cy	6.5	268	1,779	-	35	-	28.68 /cy	2,083	3,181
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow\	3.92 msf	0.1	6	-	-	3	-	2.23 /msf	9	13



Project:  
Project No.:  
Design Stage:

**Bixby**  
386594  
Schematic Design

Estimator:  
Rev No. / Date:  
Estimate Class:

Jones T  
02 - 04/24/2014  
Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Dog Park - Large</b>										
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	3.92 msf	7.8	316	992	-	26	-	340.22 /msf	1,334	2,016
				<b>Dog Park - Large</b>	<b>1.00 EA</b>	<b>82.2</b>	<b>3,438</b>	<b>6,511</b>		<b>210</b>		<b>10,158.11 /EA</b>	<b>10,158</b>	<b>15,205</b>
				<b>Dog Park - Small</b>										
				Fence,chain link, resdntl, galv steel, 11ga wire, 1-5/8"post, 10'oc, 1-3/8"top rail, 2" corner post, 4 high, schedule 20, includes excavation, excludes concrete	181.00 lf	10.9	424	1,276	-	102	-	9.96 /lf	1,802	2,721
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	2,068.00 sf	27.6	1,183	1,013	-	-	-	1.06 /sf	2,196	3,226
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	38.29 cy	3.4	142	938	-	19	-	28.68 /cy	1,098	1,677
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow\	2.07 msf	0.1	3	-	-	2	-	2.23 /msf	5	7
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	2.07 msf	4.1	167	524	-	14	-	340.22 /msf	704	1,065
				<b>Dog Park - Small</b>	<b>1.00 EA</b>	<b>46.0</b>	<b>1,919</b>	<b>3,751</b>		<b>136</b>		<b>5,805.65 /EA</b>	<b>5,806</b>	<b>8,696</b>
				<b>32-92 Turf and Grasses</b>	<b>5,989.00 SF</b>	<b>128.2</b>	<b>5,356</b>	<b>10,262</b>		<b>346</b>		<b>2.67 /SF</b>	<b>15,964</b>	<b>23,901</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>964.0</b>	<b>40,161</b>	<b>49,896</b>		<b>6,064</b>		<b>96,121.15 /LS</b>	<b>96,121</b>	<b>142,526</b>
				<b>070 Special Features</b>	<b>1.00 LS</b>	<b>964.0</b>	<b>40,161</b>	<b>49,896</b>		<b>6,064</b>		<b>96,121.15 /LS</b>	<b>96,121</b>	<b>142,526</b>
				<b>Retaining Walls</b>										
				<b>Exterior Improvements</b>										
				<b>Retaining Walls</b>										
				<b>Mass Common Excavation</b>										
				Maintain Haul Roads w/Grader & Operator	1.00 HR	1.0	45	26	-	67	-	137.95 /HR	138	203
				Dust Control Operations	1.00 HR	1.5	70	-	-	82	-	151.83 /HR	152	220
				Service Truck for Equipment; Lube, Oil, Service w/Teamster	1.00 HR	1.0	42	11	-	65	-	117.71 /HR	118	172
				Excavating, bulk bank measure, 3 C.Y. capacity = 260 C.Y./hour, backhoe, hydraulic, crawler mounted, excluding truck loading	100.00 bcy	0.8	34	-	-	88	-	1.23 /bcy	123	180
				Hauling, excavated borrow material, loose cubic yards, 1 mile round trip, 2.6 loads/hr, base wd rate, 16.5 cy dump trailer, off-highway, excludes loading	100.00 lcy	1.1	42	-	-	301	-	3.43 /lcy	343	506
				<b>Mass Common Excavation</b>	<b>100.00 CY</b>	<b>5.4</b>	<b>233</b>	<b>37</b>		<b>603</b>		<b>8.73 /CY</b>	<b>873</b>	<b>1,281</b>
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>										
				Structural concrete, in place, stair landing (3500 psi), cast on ground, includes forms(4 uses), reinforcing steel, concrete, placing and finishing	571.00 sf	57.7	2,728	1,970	-	30	-	8.28 /sf	4,728	6,918
				Lightweight lava type natural stone, veneer, rubble face, sawed back, irregular shapes	60.00 sf	14.8	692	375	-	172	-	20.64 /sf	1,238	1,805
				Railing, pipe, steel, primed, 3'-6" high, posts @ 5' O.C., 1-1/2" dia, shop fabricated	60.00 lf	12.0	719	3,240	-	40	-	66.64 /lf	3,999	6,080
				Fine grading, fine grade granular base for sidewalks and bikeways	63.44 sy	1.3	53	-	-	7	-	0.94 /sy	60	84
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	571.00 sf	5.5	216	291	-	9	-	0.90 /sf	516	766
				<b>New 8" Thick, Concrete Steps w/ Handrail &amp; Stone Veneer</b>	<b>1.00 EA</b>	<b>91.2</b>	<b>4,407</b>	<b>5,876</b>		<b>257</b>		<b>10,540.56 /EA</b>	<b>10,541</b>	<b>15,653</b>
				<b>32-32 Retaining Walls</b>	<b>60.00 LF</b>	<b>96.6</b>	<b>4,640</b>	<b>5,914</b>		<b>860</b>		<b>190.22 /LF</b>	<b>11,413</b>	<b>16,934</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>96.6</b>	<b>4,640</b>	<b>5,914</b>		<b>860</b>		<b>11,413.44 /LS</b>	<b>11,413</b>	<b>16,934</b>
				<b>080 Retaining Walls</b>	<b>60.00 LF</b>	<b>96.6</b>	<b>4,640</b>	<b>5,914</b>		<b>860</b>		<b>190.22 /LF</b>	<b>11,413</b>	<b>16,934</b>
				<b>Landscaping</b>										
				<b>Exterior Improvements</b>										
				<b>Turf and Grasses</b>										
				<b>Large Shade Tree</b>										
				Large Shade Tree	82.00 EA				32,800	-	-	400.00 /EA	32,800	50,090
				<b>Large Shade Tree</b>	<b>82.00 EA</b>				<b>32,800</b>			<b>400.00 /EA</b>	<b>32,800</b>	<b>50,090</b>
				<b>Landscape - U3 Bermuda Sod</b>										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	28,398.00 sf	378.5	16,243	13,915	-	-	-	1.06 /sf	30,158	44,303
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	525.88 cy	46.7	1,944	12,884	-	254	-	28.68 /cy	15,083	23,038
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow\	28.40 msf	0.8	40	-	-	23	-	2.23 /msf	63	91
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	28.40 msf	56.8	2,292	7,185	-	186	-	340.22 /msf	9,662	14,606
				<b>Landscape - U3 Bermuda Sod</b>	<b>28,398.00 SF</b>	<b>482.9</b>	<b>20,519</b>	<b>33,984</b>		<b>463</b>		<b>1.94 /SF</b>	<b>54,966</b>	<b>82,037</b>
				<b>Landscape - Light</b>										
				Landscape - Light	138,456.00 SF				173,070	-	-	1.25 /SF	173,070	264,302
				<b>Landscape - Light</b>	<b>138,456.00 SF</b>				<b>173,070</b>			<b>1.25 /SF</b>	<b>173,070</b>	<b>264,302</b>
				<b>32-92 Turf and Grasses</b>	<b>166,854.00 SF</b>	<b>482.9</b>	<b>20,519</b>	<b>33,984</b>	<b>205,870</b>	<b>463</b>		<b>1.56 /SF</b>	<b>260,836</b>	<b>396,429</b>
				<b>32.0 Exterior Improvements</b>	<b>1.00 LS</b>	<b>482.9</b>	<b>20,519</b>	<b>33,984</b>	<b>205,870</b>	<b>463</b>		<b>260,835.93 /LS</b>	<b>260,836</b>	<b>396,429</b>
				<b>090 Landscaping</b>	<b>166,854.00 SF</b>	<b>482.9</b>	<b>20,519</b>	<b>33,984</b>	<b>205,870</b>	<b>463</b>		<b>1.56 /SF</b>	<b>260,836</b>	<b>396,429</b>
				<b>Bank Stabilization</b>										
				<b>Site/Civil</b>										



Project: Bixby  
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Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
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Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
			31-30	<b>Site Specialties</b>										
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	1,902.40 lcy	390.4	17,431	44,628	-	14,037	-	40.00 /lcy	76,096	114,362
				<b>Bank Stabilization</b>	<b>1,902.40 CY</b>	<b>390.4</b>	<b>17,431</b>	<b>44,628</b>		<b>14,037</b>		<b>40.00 /CY</b>	<b>76,096</b>	<b>114,362</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>390.4</b>	<b>17,431</b>	<b>44,628</b>		<b>14,037</b>		<b>76,095.55 /LS</b>	<b>76,096</b>	<b>114,362</b>
				<b>31.0 Site/Civil</b>	<b>1.00 LS</b>	<b>390.4</b>	<b>17,431</b>	<b>44,628</b>		<b>14,037</b>		<b>76,095.55 /LS</b>	<b>76,096</b>	<b>114,362</b>
				<b>100 Bank Stabilization</b>	<b>500.00 LF</b>	<b>390.4</b>	<b>17,431</b>	<b>44,628</b>		<b>14,037</b>		<b>152.19 /LF</b>	<b>76,096</b>	<b>114,362</b>
				<b>Utilities</b>										
110				<b>Electrical Work</b>										
		26.0		<b>Site Electrical</b>										
			26-10	<b>Electrical Service</b>										
				Electrical Service Allowance	1.00 LS				50,000	-	-	50,000.00 /LS	50,000	76,357
				<b>Electrical Service</b>	<b>1.00 LS</b>				<b>50,000</b>			<b>50,000.00 /LS</b>	<b>50,000</b>	<b>76,357</b>
				<b>Site Lighting</b>										
				Site Lighting - Memorial Public Access	1.00 ls				80,000	-	-	80,000.00 /ls	80,000	122,171
				<b>Site Lighting</b>	<b>1.00 LS</b>				<b>80,000</b>			<b>80,000.00 /LS</b>	<b>80,000</b>	<b>122,171</b>
				<b>26-10 Site Electrical</b>	<b>1.00 LS</b>				<b>130,000</b>			<b>130,000.00 /LS</b>	<b>130,000</b>	<b>198,528</b>
				26.0 Electrical Work	1.00 LS				130,000			130,000.00 /LS	130,000	198,528
		33.0		<b>Buried Piping</b>										
			33-11	<b>Water Utility Distribuion Piping</b>										
				<b>3" PVC Water</b>										
				Bedding Stone, Material Only	24.59 tn			344	-	-	-	14.00 /tn	344	533
				3" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	150.00 LF	60.0	2,853	314	-	1,375	-	30.27 /LF	4,541	6,529
				3" PVC, Sch. 80, socket joint, ELL, 90	1.00 ea			6	-	-	-	5.89 /ea	6	9
				3" PVC, Sch. 80, socket joint, coupling	8.00 ea			64	-	-	-	8.04 /ea	64	100
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				<b>3" PVC Water</b>	<b>150.00 LF</b>	<b>108.0</b>	<b>5,152</b>	<b>2,228</b>		<b>3,397</b>		<b>71.85 /LF</b>	<b>10,777</b>	<b>15,723</b>
				<b>33-11 Water Utility Distribuion Piping</b>	<b>150.00 LF</b>	<b>108.0</b>	<b>5,152</b>	<b>2,228</b>		<b>3,397</b>		<b>71.85 /LF</b>	<b>10,777</b>	<b>15,723</b>
			33-31	<b>Sanitary Utility Sewerage Piping</b>										
				<b>2" PVC Sewer</b>										
				Bedding Stone, Material Only	26.34 tn			369	-	-	-	14.00 /tn	369	571
				2" PVC, Sch. 80, socket joint, pipe, excav/bkfill included	160.00 LF	64.0	3,043	166	-	1,466	-	29.22 /LF	4,675	6,704
				2" PVC, Sch. 80, socket joint, ELL, 90	2.00 ea			4	-	-	-	2.24 /ea	4	7
				2" PVC, Sch. 80, socket joint, coupling	8.00 ea			23	-	-	-	2.84 /ea	23	35
				Add for tie-in to existing (Adjust productivity)	2.00 ea	48.0	2,300	1,500	-	2,022	-	2,911.07 /ea	5,822	8,553
				Pump,sewage ejector,duplex system,coated steel tank,268 gpm,1 hp, 15'head,135 gallon,2"dschr,includes operating and level controls,tank,cover and pumps	2.00 ea	36.9	1,900	13,000	-	-	-	7,450.01 /ea	14,900	22,777
				Directional drilling, small equipment to 300', not to exceed 12" dia, small unit mobilization to site, excluding cost of conduit	1.00 ea	8.0	345	-	-	453	-	798.68 /ea	799	1,158
				Directional drilling, small equipment to 300', per linear feet, gravel, sand & silt, up to 12" dia, 100' minimum, excluding cost of conduit	50.00 lf	2.7	115	4	-	151	-	5.39 /lf	270	392
				<b>2" PVC Sewer</b>	<b>160.00 LF</b>	<b>159.6</b>	<b>7,703</b>	<b>15,066</b>		<b>4,093</b>		<b>167.89 /LF</b>	<b>26,862</b>	<b>40,197</b>
				<b>33-31 Sanitary Utility Sewerage Piping</b>	<b>160.00 LF</b>	<b>159.6</b>	<b>7,703</b>	<b>15,066</b>		<b>4,093</b>		<b>167.89 /LF</b>	<b>26,862</b>	<b>40,197</b>
				33.0 Buried Piping	310.00 LF	267.6	12,855	17,294		7,490		121.42 /LF	37,639	55,920
				110 Utilities	1.00 LS	267.6	12,855	17,294	130,000	7,490		167,639.08 /LS	167,639	254,449
				<b>04 Memorial Public Access</b>	<b>290,354.00 SF</b>	<b>5,004.3</b>	<b>219,040</b>	<b>369,292</b>	<b>586,870</b>	<b>63,138</b>	<b>0</b>	<b>4.27 /SF</b>	<b>1,238,339</b>	<b>1,908,605</b>



Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
05				<b>Memorial to Dam Trail</b>										
		001		Land Acquisition										
		01.0		General Conditions										
			01-10	Land Acquisition										
				Land Acquisition - Memorial to Dam Trail										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	256,000
				Land Acquisition - Memorial to Dam Trail	1.00 LS				0	0	0	0.01 /LS	0	256,000
				01-10 Land Acquisition	1.00 LS				0	0	0	0.01 /LS	0	256,000
				01.0 General Conditions	1.00 LS				0	0	0	0.01 /LS	0	256,000
				001 Land Acquisition	1.00 LS				0	0	0	0.01 /LS	0	256,000
		005		Overall Site Grading										
		31.0		Site/Civil										
			31-00	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	37,309.22 sy	497.5	23,316	-	-	32,429	-	1.49 /sy	55,745	80,922
				Mass Grading	162,815.22 SY	497.5	23,316			32,429		0.34 /SY	55,745	80,922
				31-00 Site/Civil	1.00 LS	497.5	23,316			32,429		55,744.78 /LS	55,745	80,922
				31.0 Site/Civil	1.00 LS	497.5	23,316			32,429		55,744.78 /LS	55,745	80,922
				005 Overall Site Grading	335,783.00 SF	497.5	23,316			32,429		0.17 /SF	55,745	80,922
		030		Paths/Trails										
		32.0		Exterior Improvements										
			32-12	Flexible Paving										
				New 3" Thick, 20' Wide Asphalt Upper Trail										
				Fine grading, grade subgrade for base course, roadways	4,660.00 sy	21.3	939	-	-	751	-	0.36 /sy	1,691	2,435
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	4,660.00 sy	24.8	1,165	19,852	-	1,350	-	4.80 /sy	22,367	34,356
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 3" thick, no hauling included	4,660.00 sy	83.6	3,494	51,726	-	1,990	-	12.28 /sy	57,210	87,886
				New 3" Thick, 20' Wide Asphalt Upper Trail	2,097.00 LF	129.7	5,598	71,578		4,092		38.75 /LF	81,268	124,676
				32-12 Flexible Paving	41,933.00 SF	129.7	5,598	71,578		4,092		1.94 /SF	81,268	124,676
			32-16	Curbs, Gutters, Sidewalks, and Driveways										
				New 4" Thick, 08' Wide Concrete Trail										
				Fine grading, fine grade granular base for sidewalks and bikeways	1,894.22 sy	37.9	1,576	-	-	206	-	0.94 /sy	1,782	2,516
				Sidewalks, driveways, and patios, sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 4" thick, excludes base	17,048.00 sf	681.9	29,935	31,539	-	-	-	3.61 /sf	61,474	90,768
				Sidewalks, driveways, and patios, sidewalks, concrete, excludes base, for 4" thick bank run gravel base, add	17,048.00 sf	163.7	6,442	8,694	-	265	-	0.90 /sf	15,401	22,877
				New 4" Thick, 08' Wide Concrete Trail	2,131.00 LF	883.5	37,952	40,233		471		36.91 /LF	78,657	116,161
				32-16 Curbs, Gutters, Sidewalks, and Driveways	17,048.00 SF	883.5	37,952	40,233		471		4.61 /SF	78,657	116,161
				32.0 Exterior Improvements	1.00 LS	1,013.2	43,551	111,811		4,563		159,924.69 /LS	159,925	240,838
				030 Paths/Trails	4,228.00 LF	1,013.2	43,551	111,811		4,563		37.83 /LF	159,925	240,838
		090		Landscaping										
		32.0		Exterior Improvements										
			32-92	Turf and Grasses										
				Large Shade Tree										
				Large Shade Tree	82.00 EA				32,800	-	-	400.00 /EA	32,800	50,090
				Large Shade Tree	82.00 EA				32,800			400.00 /EA	32,800	50,090
				Landscape - U3 Bermuda Sod										
				Underground sprinklers irrigation system, for lawns, residential system, custom, 1-1/2" supply	84,420.00 sf	1,125.3	48,285	41,366	-	-	-	1.06 /sf	89,651	131,701
				Soil preparation, structural soil mixing, spread topsoil, skid steer loader and hand dress	1,563.33 cy	139.0	5,780	38,302	-	756	-	28.68 /cy	44,838	68,487
				Soil preparation, structural soil mixing, tilling topsoil, 6" deep, 20 HP tractor, disk harrow	84.42 msf	2.5	120	-	-	68	-	2.23 /msf	188	270
				Sodding, bent grass sod, on level ground, over 6 M.S.F.	84.42 msf	168.8	6,812	21,358	-	551	-	340.22 /msf	28,722	43,416
				Landscape - U3 Bermuda Sod	84,420.00 SF	1,435.6	60,996	101,026		1,376		1.94 /SF	163,398	243,873
				Landscape - Light										
				Landscape - Light	170,000.00 SF				212,500	-	-	1.25 /SF	212,500	324,517
				Landscape - Light	170,000.00 SF				212,500			1.25 /SF	212,500	324,517
				32-92 Turf and Grasses	254,420.00 SF	1,435.6	60,996	101,026	245,300	1,376		1.61 /SF	408,698	618,481
				32.0 Exterior Improvements	1.00 LS	1,435.6	60,996	101,026	245,300	1,376		408,698.32 /LS	408,698	618,481
				090 Landscaping	254,420.00 SF	1,435.6	60,996	101,026	245,300	1,376		1.61 /SF	408,698	618,481
		100		Bank Stabilization										
		31.0		Site/Civil										
			31-30	Site Specialties										



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator: Jones T  
 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
				<b>Bank Stabilization</b>										
				Rip-rap and rock lining, random, broken stone, machine placed for slope protection	9,131.00 lcy	1,873.8	83,664	214,202	-	67,371	-	40.00 /lcy	365,238	548,907
				<b>Bank Stabilization</b>	<b>9,131.00 CY</b>	<b>1,873.8</b>	<b>83,664</b>	<b>214,202</b>		<b>67,371</b>		<b>40.00 /CY</b>	<b>365,238</b>	<b>548,907</b>
				<b>31-30 Site Specialties</b>	<b>1.00 LS</b>	<b>1,873.8</b>	<b>83,664</b>	<b>214,202</b>		<b>67,371</b>		<b>365,237.85 /LS</b>	<b>365,238</b>	<b>548,907</b>
				<b>31.0 Site/Civil</b>	<b>1.00 LS</b>	<b>1,873.8</b>	<b>83,664</b>	<b>214,202</b>		<b>67,371</b>		<b>365,237.85 /LS</b>	<b>365,238</b>	<b>548,907</b>
				<b>100 Bank Stabilization</b>	<b>3,000.00 LF</b>	<b>1,873.8</b>	<b>83,664</b>	<b>214,202</b>		<b>67,371</b>		<b>121.75 /LF</b>	<b>365,238</b>	<b>548,907</b>
				<b>05 Memorial to Dam Trail</b>	<b>335,783.00 SF</b>	<b>4,820.1</b>	<b>211,527</b>	<b>427,039</b>	<b>245,300</b>	<b>105,740</b>	<b>0</b>	<b>2.95 /SF</b>	<b>989,606</b>	<b>1,745,147</b>



Project: Bixby  
 Project No.: 386594  
 Design Stage: Schematic Design

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 Rev No. / Date: 02 - 04/24/2014  
 Estimate Class: Class 3

Bid Item	Area	Work Pkg	Trade Pkg	Description	Takeoff Quantity	Labor Man Hrs	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount	Grand Total
<b>06</b>				<b>Irving North Park Access</b>										
		<b>001</b>		Land Acquisition										
			<b>01.0</b>	General Conditions										
			<b>01-10</b>	Land Acquisition										
				Land Acquisition - Irving North Park Access										
				Land Acquisition Costs	1.00 LS				-	-	0	0.01 /LS	0	237,000
				Land Acquisition - Irving North Park Access	1.00 LS		0.01				0	0.01 /LS	0	237,000
				<b>01-10 Land Acquisition</b>	<b>1.00 LS</b>		<b>0</b>				<b>0</b>	<b>0.01 /LS</b>	<b>0</b>	<b>237,000</b>
				01.0 General Conditions	1.00 LS		0				0	0.01 /LS	0	237,000
				001 Land Acquisition	1.00 LS		0				0	0.01 /LS	0	237,000
		<b>005</b>		Overall Site Grading										
			<b>31.0</b>	Site/Civil										
			<b>31-00</b>	Site/Civil										
				Mass Grading										
				Rough Site Grading, Small Crew	30,391.78 sy	405.2	18,993	-	-	26,416	-	1.49 /sy	45,409	65,918
				Mass Grading	37,309.22 SY	405.2	18,993			26,416		1.22 /SY	45,409	65,918
				<b>31-00 Site/Civil</b>	<b>1.00 LS</b>	<b>405.2</b>	<b>18,993</b>			<b>26,416</b>		<b>45,409.24 /LS</b>	<b>45,409</b>	<b>65,918</b>
				31.0 Site/Civil	1.00 LS	405.2	18,993			26,416		45,409.24 /LS	45,409	65,918
				<b>005 Overall Site Grading</b>	<b>273,526.00 SF</b>	<b>405.2</b>	<b>18,993</b>			<b>26,416</b>		<b>0.17 /SF</b>	<b>45,409</b>	<b>65,918</b>
		<b>040</b>		Roads										
			<b>32.0</b>	Exterior Improvements										
			<b>32-12</b>	Flexible Paving										
				New 6" Thick, Asphalt Entry Road										
				Fine grading, grade subgrade for base course, roadways	12,773.33 sy	58.4	2,575	-	-	2,060	-	0.36 /sy	4,635	6,674
				Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 6" deep	12,773.33 sy	68.1	3,195	54,414	-	3,701	-	4.80 /sy	61,310	94,171
				Plant-mix asphalt paving, for highways and large paved areas, binder course, 4" thick, no hauling included	12,773.33 sy	271.6	11,348	189,045	-	6,471	-	16.20 /sy	206,864	318,015
				Plant-mix asphalt paving, for highways and large paved areas, wearing course, 2" thick, no hauling included	12,773.33 sy	193.3	8,204	106,019	-	4,582	-	9.30 /sy	118,805	182,344
				<b>New 6" Thick, Asphalt Entry Road</b>	<b>12,773.33 SY</b>	<b>591.3</b>	<b>25,322</b>	<b>349,478</b>		<b>16,814</b>		<b>30.66 /SY</b>	<b>391,614</b>	<b>601,204</b>
				<b>32-12 Flexible Paving</b>	<b>114,960.00 SF</b>	<b>591.3</b>	<b>25,322</b>	<b>349,478</b>		<b>16,814</b>		<b>3.41 /SF</b>	<b>391,614</b>	<b>601,204</b>
				32.0 Exterior Improvements	1.00 LS	591.3	25,322	349,478		16,814		391,614.41 /LS	391,614	601,204
				<b>040 Roads</b>	<b>114,960.00 SF</b>	<b>591.3</b>	<b>25,322</b>	<b>349,478</b>		<b>16,814</b>		<b>3.41 /SF</b>	<b>391,614</b>	<b>601,204</b>
		<b>050</b>		Parking Lots										
			<b>32.0</b>	Exterior Improvements										
			<b>32-12</b>	Flexible Paving										
				Fog Seal and Restripe Existing Pavement										
				Pavement Marking, 4" Pavement striping	3,000.00 lf	6.0		-	4,500	-	-	1.50 /lf	4,500	6,872
				Fog seal, sealcoating, non-skid pavement renewal, 1000 to 10,000 S.Y.	4,230.44 sy	22.5	1,025	5,753	-	1,065	-	1.85 /sy	7,843	11,921
				<b>Fog Seal and Restripe Existing Pavement</b>	<b>38,074.00 SF</b>	<b>28.5</b>	<b>1,025</b>	<b>5,753</b>	<b>4,500</b>	<b>1,065</b>		<b>0.32 /SF</b>	<b>12,343</b>	<b>18,793</b>
				<b>32-12 Flexible Paving</b>	<b>38,074.00 SF</b>	<b>28.5</b>	<b>1,025</b>	<b>5,753</b>	<b>4,500</b>	<b>1,065</b>		<b>0.32 /SF</b>	<b>12,343</b>	<b>18,793</b>
				32.0 Exterior Improvements	1.00 LS	28.5	1,025	5,753	4,500	1,065		12,342.63 /LS	12,343	18,793
				<b>050 Parking Lots</b>	<b>38,074.00 SF</b>	<b>28.5</b>	<b>1,025</b>	<b>5,753</b>	<b>4,500</b>	<b>1,065</b>		<b>0.32 /SF</b>	<b>12,343</b>	<b>18,793</b>
				<b>06 Irving North Park Access</b>	<b>273,526.00 SF</b>	<b>1,025.0</b>	<b>45,339</b>	<b>355,232</b>	<b>4,500</b>	<b>44,295</b>	<b>0</b>	<b>1.64 /SF</b>	<b>449,366</b>	<b>922,915</b>



Project: **Bixby**  
 Project No.: 386594  
 Design Stage: Schematic Design

Estimator:  
 Rev No. / Date:  
 Estimate Class:

Jones T  
 02 - 04/24/2014  
 Class 3

**Estimate Totals**

<b>Construction Costs</b>	<b>Amount</b>	<b>Totals</b>	<b>Rate</b>
Labor	7,791,014		
Material	14,628,310		
Subcontract	6,175,288		
Equipment	2,217,019		
Other			
<b>Total Before Markups</b>	<b>30,811,631</b>	<b>30,811,631</b>	
Estimate Contingency Dam	3,373,148		15.000 %
Estimate Contingency Parks	1,664,796		20.000 %
	<b>5,037,944</b>	<b>35,849,575</b>	
Tulsa Location Fac. Site	(1,251,004)		(12.500) %
<b>Adjusted Raw Total</b>	<b>(1,251,004)</b>	<b>34,598,571</b>	
General Conditions	1,729,929		5.000 %
<b>Total General Conditions</b>	<b>1,729,929</b>	<b>36,328,500</b>	
Material Sales & Use Tax - %	292,566		2.000 %
Construction Equip Tax - %	188,668		8.510 %
<b>Total Taxes</b>	<b>481,234</b>	<b>36,809,734</b>	
Project Staff & Home Office OH	3,680,973		10.000 %
Profit on Previous Subtotal	1,840,487		5.000 %
Mobilization/Demobilization	1,377,436		3.000 %
Blder's Risk & Gen Liab Ins -%	459,145		1.000 %
Flood Insurance	459,145		1.000 %
Payment & Performance Bonds	532,609		1.160 %
<b>Total Bonds and Insurances</b>	<b>8,349,795</b>	<b>45,159,529</b>	
<b>Construction Total</b>		<b>45,159,529</b>	
Land Acquisition - North Bank	218,000		
Land Acquisition - South Bank	4,000		
Land Acquisition - Memorial	40,000		
Land Acquisition - Memorial Tr	256,000		
Land Acquisition - Irving	237,000		
<b>Construction Total w/ Land</b>	<b>755,000</b>	<b>45,914,529</b>	

**Appendix B:  
AAEAI Classification**

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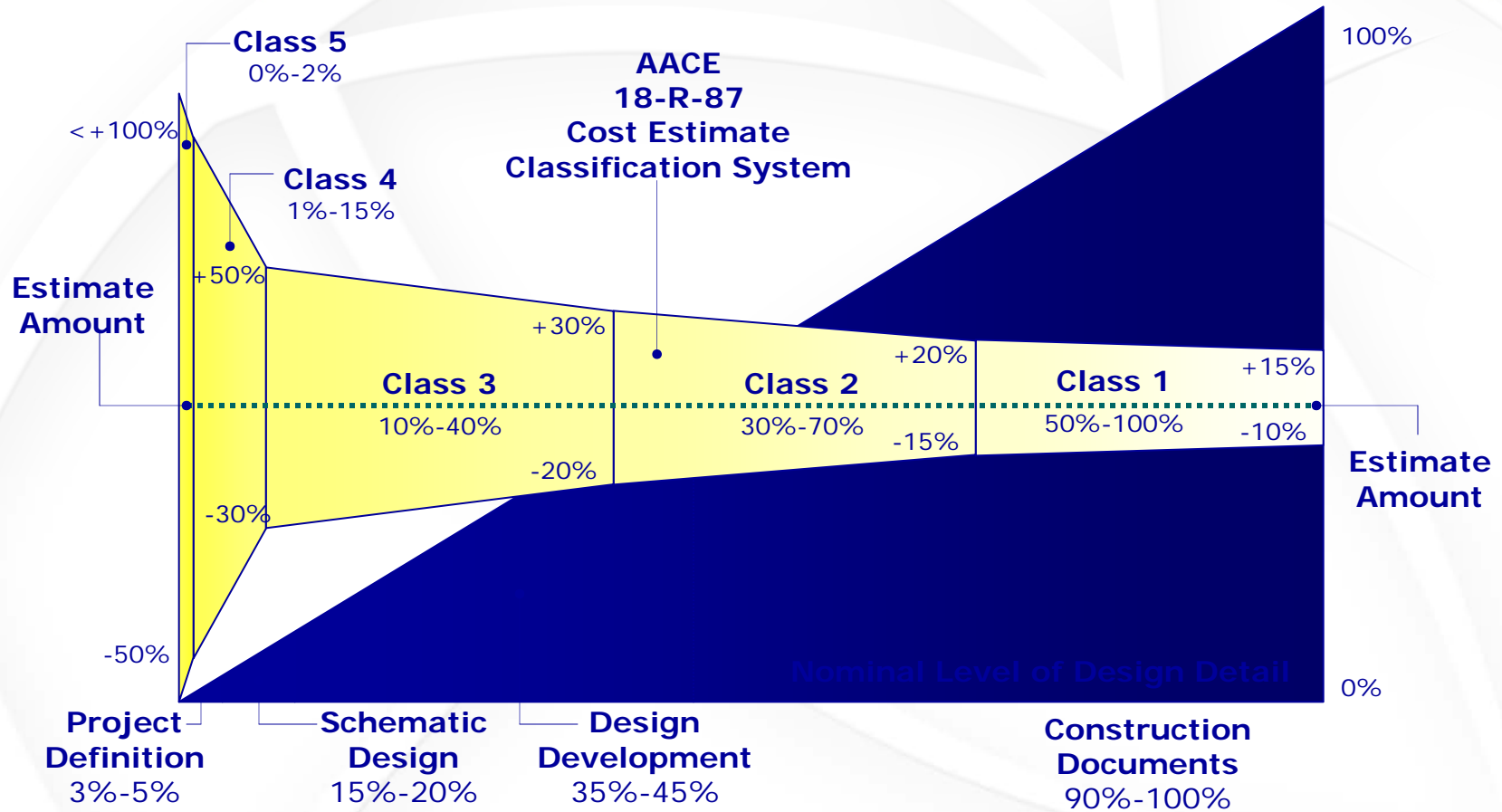




Estimate Class	Class 5	Class 4	Class 3	Class 2	Class 1
<b>LEVEL OF PROJECT DEFINITION</b> Expressed as a % of complete definition	0% to 2%	1% to 15%	10% to 40%	30% to 70%	50% to 100%
<b>END USAGE</b> Typical Purpose of Estimate	Concept Screening	Study or Feasibility	Budget Authorization, or Control	Control or Bid / Tender	Check Estimate or Bid / Tender
<b>METHODOLOGY</b> Typical estimating method	Capacity Factored, Parametric Models, Judgment, or Analogy	Equipment Factored or Parametric Models	Semi-Detailed Unit Costs with Assembly Level Line Items	Detailed Unit Cost with Forced Detailed Take-Off	Detailed Unit Cost with Detailed Take-Off
<b>EXPECTED ACCURACY RANGE</b> Typical variation in low and high ranges [a]	L: -20% to -50% H: +30% to +100%	L: -15% to -30% H: +20% to +50%	L: -10% to -20% H: +10% to +30%	L: -5% to -15% H: +5% to +20%	L: -3% to -10% H: +3% to +15%
<b>PREPARATION EFFORT</b> Typical degree of effort relative to least cost index of 1 [b]	1	2 to 4	3 to 10	4 to 20	5 to 100
<b>REFINED CLASS DEFINITION</b>	Class 5 estimates are generally prepared based on very limited information, and subsequently have very wide accuracy ranges. As such, some companies and organizations have elected to determine that due to the inherent inaccuracies, such estimates cannot be classified in a conventional and systematic manner. Class 5 estimates, due to the requirements of end use, may be prepared within a very limited amount of time and with very little effort expended - sometimes requiring less than 1 hour to prepare. Often, little more than proposed plant type, location, and capacity are known at the time of estimate preparation.	Class 4 estimates are generally prepared based on very limited information, and subsequently have very wide accuracy ranges. They are typically used for project screening, determination of feasibility, concept evaluation, and preliminary budget approval. Typically, engineering is from 1% to 5% complete, and would comprise at a minimum the following: plant capacity, block schematics, indicated layout, process flow diagrams (PFDs) for main process systems and preliminary engineered process and utility equipment lists. Level of Project Definition Required: 1% to 15% of full project definition.	Class 3 estimates are generally prepared to form the basis for budget authorization, appropriation, and/or funding. As such, they typically form the initial control estimate against which all actual costs and resources will be monitored. Typically, engineering is from 10% to 40% complete, and would comprise at a minimum the following: process flow diagrams, utility flow diagrams, preliminary piping and instrument diagrams, utility flow diagrams, preliminary piping and instrument diagrams, plot plan, developed layout drawings, and essentially complete engineering process and utility equipment lists. Level Of Project Definition Required: 10% to 40% of full project definition.	Class 2 estimates are generally prepared to form a detailed control baseline against which all project work is monitored in terms of cost and progress control. For contractors, this class of estimate is often used as the "bid" estimate to establish contract value. Typically, engineering is from 30% to 70% complete, and would comprise at a minimum the following: Process flow diagrams, utility flow diagrams, piping and instrument flow diagrams, heat and material balances, final plot plan, final layout drawings, complete engineered process and utility equipment lists, single line diagrams for electrical, electrical equipment and motor schedules, vendor quotations, detailed project execution plans, resourcing and work force plans, etc.	Class 1 estimates are generally prepared for discrete parts or sections of the total project rather than generating this level of detail for the entire project. The parts of the project estimated at this level of detail will typically be used by subcontractors for bids, or by owners for check estimates. The updated estimate is often referred to as the current control estimate and becomes the new baseline for cost/schedule control of the project. Class 1 estimates may be prepared for parts of the project to comprise a fair price estimate or bid check estimate to compare against a contractor's bid estimate, or to evaluate/dispute claims. Typically, engineering is from 50% to 100% complete, and would comprise virtually all engineering and design documentation of the project, and complete project execution and commissioning plans. Level for Project Definition Required: 50% to 100% of full project definition.
<b>END USAGE DEFINED</b>	Class 5 estimates are prepared for any number of strategic business planning purposes, such as but not limited to market studies, assessment of initial viability, evaluation of alternate schemes, project screening, project location studies, evaluation of resource needs and budgeting, long-range capital planning, etc.	Class 4 estimates are prepared for a number of purposes, such as but not limited to, detailed strategic planning, business development, project screening at more developed stages, alternative scheme analysis, confirmation of economic and/or technical feasibility, and preliminary budget approval or approval to proceed to next stage.	Class 3 estimates are typically prepared to support full project funding requests, and become the first of the project phase "control estimate" against which all actual costs and resources will be monitored for variations to the budget. They are used as the project budget until replaced by more detailed estimates. In many owner organizations, a Class 3 estimate may be the last estimate required and could well form the only basis for cost/schedule control.	Class 2 estimates are typically prepared as the detailed control baseline against which all actual costs and resources will now be monitored for variation to the budget, and form a part of the change/variation control program.	Class 1 estimates are typically prepared to form a current control estimate to be used as the final control baseline against which all actual costs and resources will now be monitored for variations to the budget, and form a part of the change/variation control program. They may be used to evaluate bid checking, to support vendor/contractor negotiations, or for claim evaluations and dispute resolution.
<b>ESTIMATING METHODS USED</b>	Class 5 estimates virtually always use stochastic estimating methods such as cost/capacity curves and factors, scale of operations factors, Lang factors, Hand factors, Chilton factors, Peters-Timmerhaus factors, Guthrie factors, and other parametric and modeling techniques.	Class 4 estimates virtually always use stochastic estimating methods such as cost/capacity curves and factors, scale of operations factors, Lang factors, Hand factors, Chilton factors, Peters-Timmerhaus factors, Guthrie factors, the Miller method, gross unit costs/ratios, and other parametric and modeling techniques.	Class 3 estimates usually involve more deterministic estimating methods that stochastic methods. They usually involve a high degree of unit cost line items, although these may be at an assembly level of detail rather than individual components. Factoring and other stochastic methods may be used to estimate less-significant areas of the project.	Class 2 estimates always involve a high degree of deterministic estimating methods. Class 2 estimates are prepared in great detail, and often involve tens of thousands of unit cost line items. For those areas of the project still undefined, an assumed level of detailed takeoff (forced detail) may be developed to use as line items in the estimate instead of relying on factoring methods.	Class 1 estimates involve the highest degree of deterministic estimating methods, and require a great amount of effort. Class 1 estimates are prepared in great detail, and thus are usually performed on only the most important or critical areas of the project. All items in the estimate are usually unit cost line items based on actual design quantities.
<b>EXPECTED ACCURACY RANGE</b>	Typical accuracy ranges for Class 5 estimates are -20% to -50% on the low side, and +30% to +100% on the high side, depending on the technological complexity of the project, appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.	Typical accuracy ranges for Class 4 estimates are -15% to -30% on the low side, and +20% to +50% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.	Typical accuracy ranges for Class 3 estimates are -10% to -20% on the low side, and +10% to +30% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.	Typical accuracy ranges for Class 2 estimates are -5% to -15% on the low side, and +5% to +20% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.	Typical accuracy ranges for Class 1 estimates are -3% to -10% on the low side, and +3% to +15% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.
<b>EFFORT TO PREPARE (for US\$20MM project):</b>	As little as 1 hour or less to prepare to perhaps more than 200 hours, depending on the project and the estimating methodology used.	Typically, as little as 20 hours or less to perhaps more than 300 hours, depending on the project and the estimating methodology used.	Typically, as little as 150 hours or less to perhaps more than 1500 hours, depending on the project and the estimating methodology used.	Typically, as little as 300 hours or less to perhaps more than 3000 hours, depending on the project and the estimating methodology used. Bid Estimates typically require more effort than estimates used for funding or control purposes	Class 1 estimates require the most effort to create, and as such are generally developed for only selected areas of the project, or for bidding purposes. A complete Class 1 estimate may involve as little as 600 hours or less, to perhaps more than 6,000 hours, depending on the project and the estimating methodology used. Bid estimate typically require more effort than estimates used for funding or control purposes.
<b>ANSI Standard Reference Z94.2-1989 name; Alternate Estimate Names, Terms, Expressions, Synonyms:</b>	Order of Magnitude Estimate; Ratio, ballpark, blue sky, seat-of-pants, ROM, idea study, prospect estimate, concession license estimate, guesstimate, rule-of thumb.	Budget Estimate; Screening, top-down, feasibility, authorization, factored, pre-design, pre-study.	Budget Estimate; Budget, scope, sanction, semi-detailed, authorization, preliminary control, concept study, development, basic engineering phase estimate, target estimate.	Definitive Estimate; Detailed Control, forced detail, execution phase, master control, engineering, bid, tender, change order estimate.	Definitive Estimate; Full detail, release, fall-out, tender, firm price, bottoms-up, final, detailed control, forced detail, execution phase, master control, fair price, definitive, change order estimate.

Estimate Class	Class 5	Class 4	Class 3	Class 2	Class 1
	Class 5	Class 4	Class 3	Class 2	Class 1
<b>GENERAL PROJECT DATA</b>					
Project Scope Description	General	Preliminary	Defined	Defined	Defined
Plant Production / Facility Capacity	Assumed	Preliminary	Defined	Defined	Defined
Plant Location	General	Approximate	Specific	Specific	Specific
Soils & Hydrology	None	Preliminary	Defined	Defined	Defined
Integrated Project Plan	None	Preliminary	Defined	Defined	Defined
Project Master Schedule	None	Preliminary	Defined	Defined	Defined
Escalation Strategy	None	Preliminary	Defined	Defined	Defined
Work Breakdown Structure	None	Preliminary	Defined	Defined	Defined
Project Code of Accounts	None	Preliminary	Defined	Defined	Defined
Contracting Strategy	Assumed	Assumed	Preliminary	Defined	Defined
<b>ENGINEERING DELIVERABLES:</b>	<b>Class 5</b>	<b>Class 4</b>	<b>Class 3</b>	<b>Class 2</b>	<b>Class 1</b>
Block Flow Diagrams	Started / Preliminary	Preliminary / Complete	Complete	Complete	Complete
Plot Plans		Started	Preliminary / Complete	Complete	Complete
Process Flow Diagrams (PFDs)		Started / Preliminary	Preliminary / Complete	Complete	Complete
Utility Flow Diagrams (UFDs)		Started / Preliminary	Preliminary / Complete	Complete	Complete
Piping & Instrument Diagrams (P&IDS)		Started	Preliminary / Complete	Complete	Complete
Heat and Material Balances		Started	Preliminary / Complete	Complete	Complete
Process Equipment List		Started / Preliminary	Preliminary / Complete	Complete	Complete
Utility Equipment List		Started / Preliminary	Preliminary / Complete	Complete	Complete
Electrical One Line Drawings		Started / Preliminary	Preliminary / Complete	Complete	Complete
Specifications and Datasheets		Started	Preliminary / Complete	Complete	Complete
General Equipment Arrangement Drawings		Started	Preliminary / Complete	Complete	Complete
Spare Parts Lists			Started / Preliminary	Preliminary	Complete
Architectural Details / Schedules		Started	Preliminary / Complete	Complete	Complete
Structural Details		Started	Preliminary / Complete	Complete	Complete
Mechanical Discipline Drawings			Started	Preliminary	Preliminary / Complete
Electrical Discipline Drawings			Started	Preliminary	Preliminary / Complete
System Discipline Drawings			Started	Preliminary	Preliminary / Complete
Civil/Site Discipline Drawings			Started	Preliminary	Preliminary / Complete
Demolition Details		Started	Preliminary / Complete	Complete	Complete

# AACE – Classification System



## Construction Cost Estimate Accuracy Ranges