

*U.S. Army Corps of Engineers - Buffalo District  
Project : Blanchard River Flood Control Project Cost  
Estimate*

*Estimated by AECOM*

*Designed by AECOM*

*Prepared by AECOM*

*Preparation Date 12/29/15*

*Effective Date of Pricing 10/1/2015*

*Estimated Construction Time Days*

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**Date Author Note**

8/19/2015  
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PM

***Project Description:***

***Cost Basis:***

*The cost basis for the detailed cost estimate is a combination of MII's 2012 English Cost Book, estimator created site specific cost items, local subcontractor quotations, and local material supplier quotations. For purposes of updating the Cost Book to present day pricing, a current, area specific labor library was used to reflect market labor conditions. Major material costs were verified. For cost book material items that did not reflect current commodities pricing, vendor quotes were obtained and estimator judgment applied when warranted.*

***Quantity Development:***

► *All quantities were provided by AECOM Clifton, NJ, except where noted below or in the estimate. Quantity calculations are included in the backup materials for this submittal.*

**Material Balance:**

***Excavation of Diversion Channel:***

*Quantity of Soil to be Excavated from Diversion Channel = X*

*Quantity for Excavating, bulk bank measure... = X \* 10% (10% of the excavation will be performed with an excavator)*

*Scraping = X \* 90% (90% of the excavation will be performed with a scraper)*

*A portion of the excavated soil will be used to construct the channel embankment, C.*

*The material excavated using the excavator will be hauled to the stockpile areas in each Contract Reach*

*Diversion Channel Material Hauling = (C + (X\*10%))\*1.30 (Expansion Factor)*

*In Contract Reaches 2A and 3A, rock will be excavated. A portion of the rock will be blasted (A) and a portion will be ripped (B). This material will also be hauled to the stockpile areas in each Contract Reach*

*Diversion Channel Material Hauling (Rock Hauling) = (A + B)\*1.50 (Expansion Factor)*

**General Work Flow Description**

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*The operation of the construction of the diversion channel is as follows in each contract reach is as follows:*

*An equipment operator manning a 200 HP dozer will strip and stockpile topsoil at rate of 143.75 CY/hr. A laborer will assist the operation on a half-time basis. Silt fencing will be placed around the topsoil stockpiles. This crew from the unit price book is applicable to the site operation.*

*Approximately 90% of the diversion channel will be excavated by a crew consisting of an two equipment operators, each manning a 44 CY scraper on a full-time basis and two additional operators, each manning a 440 HP dozer on a quarter-time basis. Two laborers will assist the operation on a half-time basis. This crew can excavate soils at a rate of 330 CY/hr. The productivity for this item was reduced 20% to 264 CY/hr.*

*Approximately 10% of the diversion channel will be excavated by a crew consisting of an operator manning a 3 CY excavator on a full-time basis. A laborer will assist the operation on a full time basis. This crew can excavate soils at a rate of 300 CY/hour. This crew from the unit price book is applicable to the site operation.*

*The excavated material will be placed in stockpiles, one mile apart, on purchased property along the Diversion Channel. The maximum haul to a stockpile is 0.5 miles. The average haul to a stockpile is 0.25 miles.*

*A portion of the soils excavated from the Diversion Channel will be used for the levee embankment*

*In Contract Reaches 2A and 3A, rock will be excavated. A portion of the rock will be excavated via blasting and a portion of the rock will be excavated via ripping. The rock will be ripped by a crew consisting of a full-time operator manning a 400 HP dozer with shank rippers. A laborer will assist this operation half-time. This crew can rip rock at a rate of 518.25 CY/hr. This crew from the unit price book is applicable to the site operation.*

*The remaining rock will be excavated via blasting. The rock will be blasted by a crew consisting of an operator manning an air track crawler drill on a full-time basis with an 600 cfm air compressor. Two laborers will assist the operation on a full-time basis. This crew can blast rock at a rate of 37.5 CY/hr. This crew from the unit price book is applicable to the site operation.*

*The 10% of soil excavated using the hydraulic excavator (and rock in Contract Reaches 2A and 3A) will be hauled by two heavy truck drivers, each manning a 42 CY off highway dump truck to the stockpiles within each Contract Reach. The productivity of this operation in the unit price book is 110.25 CY/hr with a single truck and driver. A custom crew was created based off of the UPB crew with two drivers and two trucks. This productivity in the custom crew item is 220.50 CY/hr.*

*The off-highway dump trucks will be loaded by a custom crew consisting of an equipment operator manning a 5.5 CY wheel loader. A laborer will assist this operation on a full-time basis. The production rate of this crew was set to match the productivity of the off highway dump trucks at*

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220.50 CY/hr. The production rate of a comparable crew in the unit price book was 325 CY/hr.

The soil (and rock in Contract Reaches 2A and 3A) stockpiles will be rough graded on the purchased parcels of property by a crew consisting of two equipment operators manning a 400 HP dozer each. A laborer will assist the operation full time. This crew was created by the estimator for this operation.

The topsoil will be loaded by a custom crew consisting of a full-time equipment operator manning a 5.5 CY front-end loader and a full-time laborer. The productivity of this crew is 125 CY/hr.

The topsoil will be hauled by a custom crew consisting of four truck drivers, each manning a 12CY dump truck. The productivity of this crew is 125 CY/hr. The UPB crew that this custom crew was based on had a single driver and truck. The productivity of that crew was 32 CY/hr. The crew size was increased to four drivers and trucks to match the productivity of the loading operation.

The topsoil will be placed by a custom crew consisting of a full-time equipment operator manning a 5.5 CY front-end loader and a full-time laborer. The productivity of this crew is 125 CY/hr.

**Bridge Costs:**

The bridge costs were developed by DGL Consulting Engineers, LLC. Backup for the bridge costs was included in the ATR backup.

Labor Wage Rates: Davis Bacon - Hancock County, OH, General Decision Number: OH150002 10/2015 OH2

**Equipment Rates - 2014 EP Region 2 Equipment Library**

▶ Fuel rates: gas = \$1.99/gal, Diesel (On-Road) = \$2.37/gal, Diesel (Off-Road) = \$1.91 (Assumed to be \$0.46 less than Diesel (On-Road))  
www.ohiogasprices.com

**Material/Subcontractor Quotes Obtained - Appendix C**

- ▶ Sluice Gates Rodney Hunt-Fontaine, Cincinnati, OH (513-414-7400), Dan Caskey
- ▶ Sluice Gate Installation Kokosing Construction, Columbus, OH (614-212-5636), Mark Littleton

**Project Mark-ups:**

- ▶ Overtime: based on standard 5 day work week and 9 hours per day
- ▶ Sales Tax = 6.75%
- ▶ Escalation: The 2012 Cost Book used for the estimate has not been escalated. Current labor rates were utilized to update the 2012 Cost

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Book.

*Prime Contractor Mark-ups:*

- ▶ JOOH = 10%
- ▶ Home Office Overhead, (HOOH) = 8%
- ▶ Small Tools = 2%
- ▶ Profit (using profit-weighted guidelines) = 6.3%
- ▶ Bond = 1.5%

*Subcontractor Mark-ups:*

- ▶ JOOH = 5%
- ▶ Hauling Subcontractor JOOH = 1%
- ▶ Home Office Overhead, (HOOH) = 8%
- ▶ Profit = 6.3%
- ▶ Bond = 1.5%

| Description  | Quantity   | UOM       | ContractCost         |
|--|------------|-----------|----------------------|
| <b>Project Cost</b>  |            |           | <b>54,916,858.56</b> |
| <b>1 1.0 - CONTRACT 1A - Diversion Channel Reach 1 0+00 to 120+00</b>  | <b>1.0</b> | <b>EA</b> | <b>13,128,534.00</b> |
|  |            |           | 13,128,534.00        |
| <b>1.1 01 Lands and Damages</b>  | <b>1.0</b> | <b>EA</b> | <b>5,510,973.00</b>  |
| 1.1.1 USR Lands and Damages  | 1.0        | LS        | 5,510,973.00         |
|  |            |           | 5,510,973.00         |
| <b>1.2 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>421,633.59</b>    |
|  |            |           | 421,633.59           |
| <b>1.2.1 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>328,324.18</b>    |
|  |            |           | 328,324.18           |
| <b>1.2.1.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>320,324.18</b>    |
| (Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)   |            |           | 320,324.18           |
| (Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)   |            |           | 320,324.18           |
| (Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)   |            |           | 320,324.18           |
| 1.2.1.1.4.2.1 USR Overhead Electric Line Removal<br>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. Two 250 LF overhead electric lines will be demolished. 500 total LF.)  | 500.0      | LF        | 4,430.44             |
|  |            |           | 8.86                 |
| 1.2.1.1.4.2.2 RSM 337139130180 Overhead line conductors & devices, conductors, primary circuits, per wire, over 1600 kcmil<br>(Note: Two 250 LF overhead electric lines will be installed. 500 total LF.)                | 500.0      | LF        | 7,518.25             |
|  |            |           | 15.04                |
| 1.2.1.1.4.2.3 RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors   | 0.0        | MI        | 30.28                |
|  |            |           | 639.47               |
| <b>1.2.1.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>8,000.00</b>      |
| (Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$8,000.) |            |           | 8,000.00             |
| 1.2.1.2.1 USR Mobilization   | 1.0        | LS        | 8,000.00             |
|  |            |           | 93,309.40            |
| <b>1.2.2 Roadways</b>  | <b>1.0</b> | <b>EA</b> | <b>93,309.40</b>     |
|  |            |           | 93,309.40            |
| <b>1.2.2.1 TR-89 Cul-De-Sac</b>  | <b>1.0</b> | <b>EA</b> | <b>93,309.40</b>     |
|  |            |           | 93,309.40            |
| 1.2.2.1.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick                           | 471.0      | TON       | 41,074.94            |
|  |            |           | 87.21                |
| 1.2.2.1.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included                                  | 314.0      | TON       | 28,810.12            |
|  |            |           | 91.75                |
| 1.2.2.1.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included                                     | 157.0      | TON       | 16,011.50            |
|  |            |           | 101.98               |

| Description  | Quantity   | UOM       | ContractCost                                |
|--|------------|-----------|---|
| 1.2.2.1.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.<br>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)  | 1,367.0    | SY        | 701.43 <sup>0.51</sup>                      |
| 1.2.2.1.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)                | 228.0      | CY        | 5,503.74 <sup>24.14</sup>                   |
| 1.2.2.1.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)   | 692.0      | ECY       | 470.26 <sup>0.68</sup>                      |
| 1.2.2.1.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer   | 1,367.0    | SY        | 737.41 <sup>0.54</sup>                      |
| <b>1.3 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>7,042,927.41</b> <sup>7,042,927.41</sup> |
| <b>1.3.1 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>6,682,927.41</b> <sup>6,682,927.41</sup> |
| <b>1.3.1.1 Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | <b>263,980.05</b> <sup>263,980.05</sup>     |
| 1.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 73,884.0   | BCY       | 70,182.15 <sup>0.95</sup>                   |
| 1.3.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.) | 25,627.0   | LCY       | 57,050.50 <sup>2.23</sup>                   |
| 1.3.1.1.3 USR Fine Grading   | 15.9       | ACR       | 66,026.84 <sup>4,157.86</sup>               |
| 1.3.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 15.9       | ACR       | 13,670.06 <sup>860.84</sup>                 |
| 1.3.1.1.5 USR Topsoil Loading  | 25,627.0   | LCY       | 57,050.50 <sup>2.23</sup>                   |
| <b>1.3.1.2 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>282,002.21</b> <sup>282,002.21</sup>     |
| 1.3.1.2.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 10,000.00 <sup>10,000.00</sup>              |
| 1.3.1.2.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)   | 4,160.0    | HR        | 272,002.21 <sup>65.39</sup>                 |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| <b>1.3.1.3 Construct Diversion Channel Tie-in to Blanchard River</b>   | <b>1.0</b> | <b>EA</b> | <b>582,361.34</b>   |
| 1.3.1.3.1.1 USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 5,334 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 5,334 SY x 0.5 Yard = 2,667 CY x 1.35 tons/CY = 3,600.45 tons)   | 3,600.5    | TON       | 582,361.34          |
| <b>1.3.1.4 Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | <b>154,257.04</b>   |
| 1.3.1.4.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | 93,888.9   | CY        | 150,227.73          |
| 1.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 4,029.32            |
| <b>1.3.1.5 Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | <b>84,622.58</b>    |
| 1.3.1.5.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,223 CY x 1.40 = 3,112.2 CY)   | 3,112.2    | LCY       | 17,224.29           |
| 1.3.1.5.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | 2,223.0    | ECY       | 67,398.28           |
| <b>1.3.1.6 Excavation of Diversion Channel</b>   | <b>1.0</b> | <b>EA</b> | <b>1,684,266.83</b> |
| 1.3.1.6.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 314,187 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 314,187 CY = 31,419 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.) | 31,419.0   | BCY       | 52,906.68           |
| 1.3.1.6.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 4,029.32            |
| 1.3.1.6.3 USR Scraping<br>(Note: 90% of the 314,187 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 314,187 CY = 282,768 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)   | 282,768.0  | BCY       | 786,499.52          |
| 1.3.1.6.1.1 USR Rough Grading<br>(Note: Manage piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (314,187 CY - 65,057 CY)*1.30 = 323,869 CY (Assume an expansion factor of 1.30).)   | 323,869.0  | BCY       | 342,241.41          |

2.46



| Description   | Quantity   | UOM       | ContractCost      |
|---|------------|-----------|-------------------|
| 1.3.1.6.1.2 USR Diversion Channel Material Hauling<br>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (31,419 CY + 65,057) x 1.30 = 125,419 CY (Assume an expansion factor of 1.30.) | 125,419.0  | LCY       | 309,049.82        |
| 1.3.1.6.1.3 USR Diversion Channel Excavation Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. Quantity equal to hauling quantity.)   | 125,419.0  | LCY       | 189,540.08        |
| <b>1.3.1.7 Grade Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>89,371.71</b>  |
| 1.3.1.7.1 USR Rough Grading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)   | 84,574.0   | BCY       | 89,371.71         |
| <b>1.3.1.8 Construct Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>438,776.06</b> |
| 1.3.1.8.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)  | 84,574.0   | LCY       | 300,842.71        |
| 1.3.1.8.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 84,574.0   | ECY       | 31,200.04         |
| 1.3.1.8.3 USR Diversion Channel Excavation Loading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)  | 84,574.0   | LCY       | 106,733.31        |
| <b>1.3.1.9 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>1.0</b> | <b>EA</b> | <b>620,962.58</b> |
| 1.3.1.9.1 USR Topsoil Placement<br>(Note: Topsoil placement for the berm and the channel. 32,463 CY * 1.30 = 42,202 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | 42,202.0   | LCY       | 93,949.55         |
| 1.3.1.9.2 USR Fine Grading<br>(Note: Assume 6" Placement. 32,463 CY * 6 = 194,778 SY = 40.24 acres)   | 40.2       | ACR       | 167,312.35        |
| 1.3.1.9.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40 for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 40.2       | ACR       | 112,029.28        |
| 1.3.1.9.4 USR Topsoil Loading   | 42,202.0   | LCY       | 93,949.55         |
| 1.3.1.9.5 USR Topsoil Hauling<br>(Note: 32,463 CY * 1.30 = 42,202 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)   | 42,202.0   | LCY       | 153,721.85        |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| <b>1.3.1.10 Drainage Outlets</b>   | <b>1.0</b> | <b>EA</b> | <b>2,471,114.39</b> |
| 1.3.1.10.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover   | 16.0       | EA        | 48,883.35           |
| 1.3.1.10.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 16 manholes x 4 additional feet per manhole = 64 feet)   | 64.0       | VLF       | 23,726.53           |
| 1.3.1.10.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.   | 16.0       | EA        | 14,564.22           |
| 1.3.1.10.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 16 manholes x 17 CY of backfill material per manhole = 272 CY. 272 CY of material will be used as backfill around the manholes.) | 272.0      | LCY       | 1,000.64            |
| 1.3.1.10.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 16 manholes x 16 CY per manhole = 256 CY)   | 256.0      | BCY       | 5,397.39            |
| <b>1.3.1.11 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>11,212.63</b>    |
| 1.3.1.11.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 136 mats x 156.1 SF/mat = 21,229.6 SF)  | 21,229.6   | SF        | 11,212.63           |
| <b>1.3.2 090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of item 09 - Channals and Canals and Contract 1B is \$9,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$360,000.)  | <b>1.0</b> | <b>EA</b> | <b>360,000.00</b>   |
| 1.3.2.1 USR Mobilization   | 1.0        | LS        | 360,000.00          |
| <b>1.4 18 Cultural Resources Preservation</b><br>(Note: The approximate value of Contracts 1A and 1B is \$15,300,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$153,000.)   | <b>1.0</b> | <b>EA</b> | <b>153,000.00</b>   |
| 1.4.1 USR Cultural Resources Preservation  | 1.0        | LS        | 153,000.00          |
| <b>2 1.0 - CONTRACT 1B - Bridges Reach 1 0+00 to 120+00</b>  | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> |
| <b>2.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> |
| <b>2.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> |
| 2.1.1.1 USR Bridge TR 130  | 1.0        | EA        | 965,000.00          |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| 2.1.1.2 USR Bridge CR 86   | 1.0        | EA        | 578,000.00          |
| 2.1.1.3 USR Bridge SR 12   | 1.0        | EA        | 809,000.00          |
| <b>3 2.0 - CONTRACT 2A - Diversion Channel Reach 2 120+00 to 235+00</b>  | <b>1.0</b> | <b>EA</b> | <b>9,015,341.67</b> |
| <b>3.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>777,455.95</b>   |
| <b>3.1.1 Dry Road Crossing 215+73</b>  | <b>1.0</b> | <b>EA</b> | <b>585,284.07</b>   |
| 3.1.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Excavated material to be hauled and disposed of offsite.)   | 2,054.0    | LCY       | 11,367.75           |
| 3.1.1.2 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Concrete Roadway Materials)   | 556.0      | LCY       | 3,077.15            |
| 3.1.1.3 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)               | 556.0      | CY        | 13,421.41           |
| 3.1.1.4 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 2,054.0    | BCY       | 3,465.35            |
| 3.1.1.5 RSM 033053402500 Structural concrete, in place, elevated slab (4000 psi), one way joists, 125 psf superimposed load, 30" pans, 15' span, includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | 556.0      | CY        | 553,952.41          |
| <b>3.1.2 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>192,171.89</b>   |
| <b>3.1.2.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>184,171.89</b>   |
| 3.1.2.1.3.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | 250.0      | LF        | 33.38               |
| 3.1.2.1.3.2.2 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Three 250 LF copper cables will be installed. Each cable will be installed in a separate conduit. 750 total LF of conduit will be installed. Labor cost has been removed from this item.)   | 750.0      | LF        | 16,231.87           |
| 3.1.2.1.3.2.3 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading   | 350.0      | LCY       | 2,370.03            |

| Description   | Quantity   | UOM       | ContractCost          |
|---|------------|-----------|-----------------------|
| <i>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)</i>   |            |           |                       |
| 3.1.2.1.3.2.4 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br><i>(Note: Material price received from Hancock County Material Bid Sheet.)</i>   | 14.0       | LCY       | 49.22<br>689.13       |
| 3.1.2.1.3.2.5 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br><i>(Note: 250 CY)</i>  | 250.0      | ECY       | 7.04<br>1,759.27      |
| 3.1.2.1.3.2.6 RSM 260526803900 Insulated ground wire, copper, stranded, 1000 kcmil<br><i>(Note: Three 250 LF Copper Cables will be installed. 750 total LF.)</i>  | 750.0      | LF        | 53.91<br>40,429.86    |
| 3.1.2.1.3.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 250.0      | BCY       | 2.06<br>516.06        |
| 3.1.2.1.3.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br><i>(Note: Material cost removed. Excavation material re-used as backfill.)</i>   | 19.0       | BCY       | 2.65<br>50.27         |
| 3.1.2.1.3.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted   | 19.0       | BCY       | 35.54<br>675.21       |
| <b>3.1.2.2 090101 Mob, Demob &amp; Preparatory Work</b><br><i>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$8,000.)</i>  | <b>1.0</b> | <b>EA</b> | <b>8,000.00</b>       |
| 3.1.2.2.1 USR Mobilization  | 1.0        | LS        | 8,000.00              |
| <b>3.2 08 Roads, Railroads, and Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>2,084,000.00</b>   |
| 3.2.1 USR Railroad Bridge   | 1.0        | EA        | 2,084,000.00          |
| <b>3.3 09 Channels and Canals</b>   | <b>1.0</b> | <b>EA</b> | <b>5,579,024.56</b>   |
| <b>3.3.1 0901 Channels</b>  | <b>1.0</b> | <b>EA</b> | <b>5,323,024.56</b>   |
| <b>3.3.1.1 Drainage Ditch</b>   | <b>1.0</b> | <b>EA</b> | <b>62,467.34</b>      |
| 3.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 17,478.0   | BCY       | 0.95<br>16,602.29     |
| 3.3.1.1.2 USR Topsoil Placement<br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | 6,063.0    | LCY       | 2.23<br>13,497.37     |
| 3.3.1.1.3 USR Fine Grading  | 3.8        | ACR       | 4,157.86<br>15,633.56 |

| Description   | Quantity   | UOM       | ContractCost                        |
|---|------------|-----------|-------------------------------------|
| 3.3.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 3.8        | ACR       | 860.84<br>3,236.74                  |
| 3.3.1.1.5 USR Topsoil Loading   | 6,063.0    | LCY       | 2.23<br>13,497.37                   |
| <b>3.3.1.2 Strip and Stockpile Topsoil</b>  | <b>1.0</b> | <b>EA</b> | 158,849.82<br><b>158,849.82</b>     |
| 3.3.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer   | 96,759.3   | CY        | 1.60<br>154,820.50                  |
| 3.3.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 4.03<br>4,029.32                    |
| <b>3.3.1.3 Install Access Road</b>  | <b>1.0</b> | <b>EA</b> | 81,082.36<br><b>81,082.36</b>       |
| 3.3.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)  | 2,982.0    | LCY       | 5.53<br>16,503.71                   |
| 3.3.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)   | 2,130.0    | ECY       | 30.32<br>64,578.65                  |
| <b>3.3.1.4 Excavation of Diversion Channel</b>  | <b>1.0</b> | <b>EA</b> | 3,307,537.68<br><b>3,307,537.68</b> |
| 3.3.1.4.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 694,114 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 694,114 CY = 69,411 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)  | 69,411.0   | BCY       | 1.68<br>116,881.67                  |
| 3.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 4.03<br>4,029.32                    |
| 3.3.1.4.3 HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.) | 1,063.5    | BCY       | 3.35<br>3,561.87                    |
| 3.3.1.4.4 RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock in these sections will be excavated via blasting. The remaining 6,737 CY of rock between Stations 120+00 and 235+00 will excavated via blasting. A total of 7,800.50 CY of rock between Stations 120+00 and 235+00 will excavated via blasting.)   | 7,800.5    | BCY       | 12.10<br>94,406.89                  |
| 3.3.1.4.5 USR Scraping  | 624,703.0  | BCY       | 2.78<br>1,737,567.93                |

| Description   | Quantity   | UOM       | ContractCost                           |
|---|------------|-----------|--|
| <i>(Note: 90% of the 694,114 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 694,114 CY = 624,703 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)</i>   |            |           |  |
| 3.3.1.4.1.1 USR Rough Grading<br><i>(Note: Manage piles on purchased property. Sum of the soil and rock hauling quantities: (885,665 CY + 13,296 CY) = 898,961 CY)</i>  | 898,961.0  | BCY       | 949,957.18 <sup>1.06</sup>             |
| 3.3.1.4.1.2 USR Diversion Channel Material Hauling<br><i>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (69,411 CY + 12,833 CY) x 1.30 = 106,917 CY (Assume an expansion factor of 1.30.)</i> | 106,917.0  | LCY       | 221,835.63 <sup>2.07</sup>             |
| 3.3.1.4.1.3 USR Diversion Channel Material Hauling<br><i>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and blasted x 1.50 = 8,864 CY x 1.50 = 13,296 CY (Assume an expansion factor of 1.30.)</i>  | 13,296.0   | LCY       | 27,587.07 <sup>2.07</sup>              |
| 3.3.1.4.1.4 USR Diversion Channel Excavation Loading<br><i>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (106,917 CY + 13,296 CY) = 120,213 CY)</i>   | 120,213.0  | LCY       | 151,710.11 <sup>1.26</sup>             |
| <b>3.3.1.5 Grade Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>17,629.39<sup>17,629.39</sup></b>   |
| 3.3.1.5.1 USR Rough Grading<br><i>(Note: 12,833 CY * 1.30 = 16,683 CY)</i>  | 16,683.0   | BCY       | 17,629.39 <sup>1.06</sup>              |
| <b>3.3.1.6 Construct Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>86,552.62<sup>86,552.62</sup></b>   |
| 3.3.1.6.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 12,833 CY * 1.30 = 16,683 CY)</i>   | 16,683.0   | LCY       | 59,343.99 <sup>3.56</sup>              |
| 3.3.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 16,683.0   | ECY       | 6,154.49 <sup>0.37</sup>               |
| 3.3.1.6.3 USR Diversion Channel Excavation Loading<br><i>(Note: 12,833 CY * 1.30 = 16,683 CY)</i>   | 16,683.0   | LCY       | 21,054.13 <sup>1.26</sup>              |
| <b>3.3.1.7 Place Topsoil and Seed</b><br><i>(Note: Topsoil placement for the berm and the channel.)</i>   | <b>1.0</b> | <b>EA</b> | <b>781,843.74<sup>781,843.74</sup></b> |
| 3.3.1.7.1 USR Topsoil Placement<br><i>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i>   | 53,132.0   | LCY       | 118,281.78 <sup>2.23</sup>             |

| Description  | Quantity   | UOM       | ContractCost      |
|--|------------|-----------|-------------------|
| 3.3.1.7.2 USR Fine Grading<br>(Note: Assume 6" Placement. 40,871 CY * 6 = 245,226 SY = 50.67 Acres)  | 50.7       | ACR       | 210,678.84        |
| 3.3.1.7.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 50.7       | ACR       | 141,066.69        |
| 3.3.1.7.4 USR Topsoil Loading  | 53,132.0   | LCY       | 118,281.78        |
| 3.3.1.7.5 USR Topsoil Hauling<br>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)  | 53,132.0   | LCY       | 193,534.66        |
| <b>3.3.1.8 Drainage Outlets</b>  | <b>1.0</b> | <b>EA</b> | <b>503,821.80</b> |
| 3.3.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover  | 6.0        | EA        | 18,331.25         |
| 3.3.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 6 manholes x 4 additional feet per manhole = 24 feet)   | 24.0       | VLF       | 8,897.45          |
| 3.3.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | 6.0        | EA        | 5,461.58          |
| 3.3.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 6 manholes x 17 CY of backfill material per manhole = 102 CY. 102 CY of material will be used as backfill around the manholes.) | 102.0      | LCY       | 375.24            |
| 3.3.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay, till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 6 manholes x 16 CY per manhole = 96 CY)   | 96.0       | BCY       | 2,024.02          |
| <b>3.3.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>284,820.08</b> |
| 3.3.1.9.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 12,817.87         |
| 3.3.1.9.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)   | 4,160.0    | HR        | 272,002.21        |
| <b>3.3.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>38,419.74</b>  |

| Description  | Quantity   | UOM       | ContractCost            |
|--|------------|-----------|-------------------------|
| 3.3.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 466 mats x 156.1 SF/mat = 72,742.60 SF)   | 72,742.6   | SF        | 0.53<br>38,419.74       |
| <b>3.3.2 090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of item 09 - Channels and Canals and Contract 2B is \$6,400,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$256,000.) | <b>1.0</b> | <b>EA</b> | <b>256,000.00</b>       |
| 3.3.2.1 USR Mobilization   | 1.0        | LS        | 256,000.00              |
| <b>3.4 15 Floodway Control-Diversion Struc</b>   | <b>1.0</b> | <b>EA</b> | <b>474,861.16</b>       |
| <b>3.4.1 1500 Floodway Control-Diversion Struc</b>   | <b>1.0</b> | <b>EA</b> | <b>474,861.16</b>       |
| <b>3.4.1.1 150005 Bridges, Foundations</b>   | <b>1.0</b> | <b>EA</b> | <b>122,345.08</b>       |
| 3.4.1.1.1.1.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)           | 127.0      | CY        | 963.35<br>122,345.08    |
| <b>3.4.1.2 150006 Bridges, Abutments and Piers</b>   | <b>1.0</b> | <b>EA</b> | <b>168,264.37</b>       |
| 3.4.1.2.1.1.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)         | 40.0       | CY        | 963.35<br>38,533.88     |
| <b>3.4.1.3 150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>1.0</b> | <b>EA</b> | <b>184,251.71</b>       |
| 3.4.1.3.1.1.1.1 USR Furnish 3' x 10' Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$63,300 plus 6.75% sales tax = \$67,573)   | 2.0        | EA        | 86,614.17<br>173,228.34 |
| 3.4.1.3.1.1.1.2 USR Install 3' x 10' Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | 2.0        | EA        | 5,511.68<br>11,023.37   |
| <b>3.5 18 Cultural Resources Preservation</b><br>(Note: The approximate value of Contracts 2A and 2B is \$10,000,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$100,000.)   | <b>1.0</b> | <b>EA</b> | <b>100,000.00</b>       |
| 3.5.1 USR Cultural Resources Preservation  | 1.0        | LS        | 100,000.00              |
| <b>4 2.0 - CONTRACT 2B - Bridges Reach 2 120+00 to 235+00</b>  | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b>     |
| <b>4.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b>     |
| <b>4.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b>     |



| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| 4.1.1.1 USR Bridge CR 84   | 1.0        | EA        | 1,082,000.00        |
| <b>5 3.0 - CONTRACT 3A - Diversion Channel Reach 3 235+00 to 350+00</b>  | <b>1.0</b> | <b>EA</b> | <b>7,342,683.31</b> |
| <b>5.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>72,890.46</b>    |
| <b>5.1.1 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>72,890.46</b>    |
| <b>5.1.1.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>68,890.46</b>    |
| 5.1.1.1.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | 250.0      | LF        | 33.38               |
| 5.1.1.1.2.2 RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: Two 250 LF Fiber Optic Cables will be installed. 500 total LF.)   | 500.0      | LF        | 1,654.01            |
| 5.1.1.1.2.3 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Two 250 LF Fiber Optic Cables will be installed. Each cable will be installed in a separate condui. 500 total LF of conduit will be installed. Labor cost has been removed from this item.) | 500.0      | LF        | 10,821.24           |
| 5.1.1.1.2.4 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)                                   | 325.0      | LCY       | 2,200.74            |
| 5.1.1.1.2.5 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction  | 14.0       | LCY       | 908.69              |
| 5.1.1.1.2.6 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | 250.0      | ECY       | 1,759.27            |
| 5.1.1.1.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 250.0      | BCY       | 516.06              |
| 5.1.1.1.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | 19.0       | BCY       | 50.27               |
| 5.1.1.1.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | 19.0       | BCY       | 675.21              |
| <b>5.1.1.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>4,000.00</b>     |
| (Note: The approximate value of the Utilities Relocation is \$100,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$4,000.)  |            |           |                     |
| 5.1.1.2.1 USR Mobilization   | 1.0        | LS        | 4,000.00            |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| <b>5.3 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>6,345,865.24</b> |
|  |            |           | 6,345,865.24        |
| <b>5.3.1 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>5,815,367.59</b> |
|  |            |           | 5,815,367.59        |
| <b>5.3.1.1 Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | <b>119,211.03</b>   |
|  |            |           | 119,211.03          |
| 5.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 33,367.0   | BCY       | 31,695.19           |
|  |            |           | 0.95                |
| 5.3.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.) | 11,574.0   | LCY       | 25,765.89           |
|  |            |           | 2.23                |
| 5.3.1.1.3 USR Fine Grading   | 7.2        | ACR       | 29,811.87           |
|  |            |           | 4,157.86            |
| 5.3.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 7.2        | ACR       | 6,172.19            |
|  |            |           | 860.84              |
| 5.3.1.1.5 USR Topsoil Loading  | 11,574.0   | LCY       | 25,765.89           |
|  |            |           | 2.23                |
| <b>5.3.1.2 Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | <b>165,220.42</b>   |
|  |            |           | 165,220.42          |
| 5.3.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | 100,740.7  | CY        | 161,191.10          |
|  |            |           | 1.60                |
| 5.3.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 4,029.32            |
|  |            |           | 4.03                |
| <b>5.3.1.3 Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | <b>81,082.36</b>    |
|  |            |           | 81,082.36           |
| 5.3.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)   | 2,982.0    | LCY       | 16,503.71           |
|  |            |           | 5.53                |
| 5.3.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | 2,130.0    | ECY       | 64,578.65           |
|  |            |           | 30.32               |
| <b>5.3.1.4 Excavation of Diversion Channel</b>   | <b>1.0</b> | <b>EA</b> | <b>3,736,084.68</b> |
|  |            |           | 3,736,084.68        |
| 5.3.1.4.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 57,271.0   | BCY       | 96,439.04           |
|  |            |           | 1.68                |

| Description  | Quantity   | UOM       | ContractCost      |
|--|------------|-----------|-------------------|
| <i>(Note: 10% of the 572,714 CY of soil excavated in this reach will be excavated by hydraulic excavator. 0.10 x 572,714 CY = 57,271 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)</i>  |            |           |                   |
| 5.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 4,029.32          |
|  |            |           | 4.03              |
| 5.3.1.4.3 HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.  | 25,770.5   | BCY       | 86,310.49         |
|  |            |           | 3.35              |
| <i>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.50 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.)</i> |            |           |                   |
| 5.3.1.4.4 RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.   | 46,822.5   | BCY       | 566,677.33        |
|  |            |           | 12.10             |
| <i>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.5 CY of the rock in these sections will be excavated via blasting. The remaining 21,052 CY of rock between Stations 235+00 and 350+00 will excavated via blasting. A total of 46,822.5 CY of rock between Stations 120+00 and 235+00 will excavated via blasting.)</i>  |            |           |                   |
| 5.3.1.4.5 USR Scraping   | 515,443.0  | BCY       | 1,433,668.84      |
|  |            |           | 2.78              |
| <i>(Note: 90% of the 572,714 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 572,714 CY = 515,443 CY Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)</i>   |            |           |                   |
| 5.3.1.4.1.1 USR Rough Grading  | 837,917.0  | BCY       | 885,450.28        |
|  |            |           | 1.06              |
| <i>(Note: Manage the piles on purchased property. Sum of the soil and rock hauling quantities: (729,027 CY + 108,890 CY) = 837,917 CY)</i>   |            |           |                   |
| 5.3.1.4.1.2 USR Diversion Channel Material Hauling   | 89,953.0   | LCY       | 186,638.05        |
|  |            |           | 2.07              |
| <i>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (57,271 CY + 11,924) x 1.30 = 89,953 CY (Assume an expansion factor of 1.30.)</i>                    |            |           |                   |
| 5.3.1.4.1.3 USR Diversion Channel Material Hauling   | 108,890.0  | LCY       | 225,929.29        |
|  |            |           | 2.07              |
| <i>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and blasted x 1.50 = 72,593 CY x 1.50 = 108,890 CY (Assume an expansion factor of 1.30.)</i>   |            |           |                   |
| 5.3.1.4.1.4 USR Diversion Channel Excavation Loading   | 198,843.0  | LCY       | 250,942.03        |
|  |            |           | 1.26              |
| <i>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (89,953 CY + 108,890 CY) = 198,843 CY)</i>  |            |           |                   |
| <b>5.3.1.5 Grade Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>16,380.34</b>  |
|  |            |           | 16,380.34         |
| 5.3.1.5.1 USR Rough Grading  | 15,501.0   | BCY       | 16,380.34         |
|  |            |           | 1.06              |
| <b>5.3.1.6 Construct Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>111,070.28</b> |
|  |            |           | 111,070.28        |
| 5.3.1.6.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers,  | 15,501.0   | LCY       | 85,789.40         |
|  |            |           | 5.53              |

| Description   | Quantity   | UOM       | ContractCost      |
|---|------------|-----------|-------------------|
| excludes loading<br>(Note: 11,924 CY * 1.30 = 15,501 CY)  |            |           |                   |
| 5.3.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 15,501.0   | ECY       | 5,718.45          |
| 5.3.1.6.3 USR Diversion Channel Excavation Loading<br>(Note: 11,924 CY * 1.30 = 15,501 CY)  | 15,501.0   | LCY       | 19,562.43         |
| <b>5.3.1.7 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>1.0</b> | <b>EA</b> | <b>679,124.55</b> |
| 5.3.1.7.1 USR Topsoil Placement<br>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | 46,154.0   | LCY       | 102,747.44        |
| 5.3.1.7.2 USR Fine Grading<br>(Note: Assume 6" Placement. 35,503 CY * 6 = 213,018 SY = 44.01 Acres)   | 44.0       | ACR       | 182,987.49        |
| 5.3.1.7.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 44.0       | ACR       | 122,525.06        |
| 5.3.1.7.4 USR Topsoil Loading   | 46,154.0   | LCY       | 102,747.44        |
| 5.3.1.7.5 USR Topsoil Hauling<br>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)   | 46,154.0   | LCY       | 168,117.11        |
| <b>5.3.1.8 Drainage Outlets</b>   | <b>1.0</b> | <b>EA</b> | <b>516,605.01</b> |
| 5.3.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover   | 12.0       | EA        | 36,662.51         |
| 5.3.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 12 manholes x 4 additional feet per manhole = 48 feet)   | 48.0       | VLF       | 17,794.90         |
| 5.3.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.   | 12.0       | EA        | 10,923.17         |
| 5.3.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 12 manholes x 17 CY of backfill material per manhole = 204 CY. 204 CY of material will be used as backfill around the manholes.) | 204.0      | LCY       | 750.48            |

| Description  | Quantity   | UOM       | ContractCost           |
|--|------------|-----------|------------------------|
| 5.3.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay, till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 12 manholes x 16 CY per manhole = 192 CY) | 192.0      | BCY       | 21.08<br>4,048.04      |
| <b>5.3.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>284,820.08</b>      |
| 5.3.1.9.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 12,817.87<br>12,817.87 |
| 5.3.1.9.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)   | 4,160.0    | HR        | 65.39<br>272,002.21    |
| <b>5.3.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>30,175.16</b>       |
| 5.3.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 366 mats x 156.1 SF/mat = SF)   | 57,132.6   | SF        | 0.53<br>30,175.16      |
| <b>5.3.1.11 Drainage Ditch Diversion to Aurund Run</b>   | <b>1.0</b> | <b>EA</b> | <b>75,593.69</b>       |
| 5.3.1.11.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 4,267.0    | BCY       | 0.95<br>4,053.21       |
| 5.3.1.11.2 RSM 334113600200 Public Storm Utility Drainage Piping, concrete, box culvert, precast, base price, 8' long, 8' x 3', excludes excavation or backfill  | 80.0       | LF        | 719.14<br>57,531.53    |
| 5.3.1.11.3 USR Rip-Rap Placement<br>(Note: 500 SF x 18 in. = 500 SF x 1.5 FT = 750 CF. 750 CF/27 = 28 CY. 28 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 37.8 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)  | 37.8       | TON       | 66.77<br>2,523.77      |
| 5.3.1.11.4 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | 1,520.0    | LCY       | 2.23<br>3,383.80       |
| 5.3.1.11.5 USR Fine Grading  | 0.9        | ACR       | 4,157.86<br>3,908.39   |
| 5.3.1.11.6 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 0.9        | ACR       | 860.84<br>809.18       |
| 5.3.1.11.7 USR Topsoil Loading   | 1,520.0    | LCY       | 2.23<br>3,383.80       |
| <b>5.3.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>492,000.00</b>      |

| Description   | Quantity   | UOM       | ContractCost      |
|---|------------|-----------|-------------------|
| <i>(Note: The approximate value of item 09 - Channals and Canals and Contract 3B is \$12,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$492,000.)</i>   |            |           |                   |
| 5.3.2.1 USR Mobilization  | 1.0        | LS        | 492,000.00        |
| <b>5.3.3 Reroute Tributary Before Stream Crossing</b>   | <b>1.0</b> | <b>EA</b> | <b>38,497.65</b>  |
| 5.3.3.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 2,215.0    | BCY       | 2,104.02          |
| 5.3.3.2 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading  | 4,207.0    | LCY       | 23,283.40         |
| 5.3.3.3 USR Rip-Rap Placement<br><i>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 84 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 84 SY x 0.5 Yard = 42 CY x 1.35 tons/CY = 56.7 tons.)</i> | 56.7       | TON       | 9,171.04          |
| 5.3.3.4 USR Topsoil Placement   | 790.0      | LCY       | 1,758.69          |
| 5.3.3.5 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | 0.5        | ACR       | 421.81            |
| 5.3.3.6 USR Topsoil Loading   | 790.0      | LCY       | 1,758.69          |
| <b>5.4 15 Floodway Control-Diversion Struc</b>  | <b>1.0</b> | <b>EA</b> | <b>786,927.61</b> |
| <b>5.4.1 1500 Floodway Control-Diversion Struc</b>  | <b>1.0</b> | <b>EA</b> | <b>786,927.61</b> |
| <b>5.4.1.1 150010 Earthwork for Structures</b>  | <b>1.0</b> | <b>EA</b> | <b>256,434.23</b> |
| 5.4.1.1.3.1 USR Braced Excavation Temporary Retaining Structure<br><i>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)</i>  | 1.0        | LS        | 12,817.87         |
| <b>5.4.1.2 150099 Associated General Items</b>  | <b>1.0</b> | <b>EA</b> | <b>33,006.01</b>  |
| 5.4.1.2.1.1 RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments   | 250.0      | CY        | 33,006.01         |
| <b>5.4.1.3 150005 Bridges, Foundations</b>  | <b>1.0</b> | <b>EA</b> | <b>130,051.86</b> |
| 5.4.1.3.1.1.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br><i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   | 135.0      | CY        | 130,051.86        |

169,227.72

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| <b>5.4.1.4 150006 Bridges, Abutments and Piers</b>   | <b>1.0</b> | <b>EA</b> | <b>169,227.72</b>   |
| 5.4.1.4.2.1.1.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | 40.0       | CY        | 38,533.88           |
|  |            |           | 963.35              |
| <b>5.4.1.5 150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>1.0</b> | <b>EA</b> | <b>198,207.80</b>   |
| 5.4.1.5.1.1.1.1 USR Furnish 4' x 10' Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$68,400 plus 6.75% sales tax = \$73,017)   | 2.0        | EA        | 187,184.43          |
|  |            |           | 93,592.22           |
| 5.4.1.5.1.1.1.2 USR Install 4' x 10' Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | 2.0        | EA        | 11,023.37           |
|  |            |           | 5,511.68            |
| <b>5.5 18 Cultural Resource Preservation</b>   | <b>1.0</b> | <b>EA</b> | <b>137,000.00</b>   |
| (Note: The approximate value of Contracts 3A and 3B is \$13,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$137,000.)  |            |           | 137,000.00          |
| 5.5.1 USR Cultural Resources Preservation  | 1.0        | LS        | 137,000.00          |
| <b>6 3.0 - CONTRACT 3B - Bridges Reach 3 235+00 to 350+00</b>  | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> |
|  |            |           | 6,491,000.00        |
| <b>6.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> |
|  |            |           | 6,491,000.00        |
| <b>6.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> |
|  |            |           | 6,491,000.00        |
| 6.1.1.1 USR Bridge CR 313  | 1.0        | EA        | 799,000.00          |
|  |            |           | 799,000.00          |
| 6.1.1.2 USR Bridge CR 9  | 1.0        | EA        | 920,000.00          |
|  |            |           | 920,000.00          |
| 6.1.1.3 USR Bridge I-75 WB and EB  | 1.0        | EA        | 3,910,000.00        |
|  |            |           | 3,910,000.00        |
| 6.1.1.4 USR Bridge TR 67   | 1.0        | EA        | 862,000.00          |
|  |            |           | 862,000.00          |
| <b>7 4.0 - CONTRACT 4A - Diversion Channel Reach 4 350+00 to 490+00</b>  | <b>1.0</b> | <b>EA</b> | <b>7,688,060.55</b> |
|  |            |           | 7,688,060.55        |
| <b>7.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>245,713.54</b>   |
|  |            |           | 245,713.54          |
| <b>7.1.1 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>58,954.12</b>    |
|  |            |           | 58,954.12           |
| <b>7.1.1.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>56,954.12</b>    |
|  |            |           | 56,954.12           |
| 7.1.1.1.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation   | 250.0      | LF        | 33.38               |
|  |            |           | 0.13                |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| and backfill   |            |           |                     |
| 7.1.1.1.2.2 RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: One 250 LF Fiber Optic Cable will be installed. 250 total LF.)  | 250.0      | LF        | 3.31<br>827.01      |
| 7.1.1.1.2.3 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: One 250 LF Fiber Optic Cable will be installed. Each cable will be installed in a separate conduit. 250 total LF of conduit will be installed. Labor cost has been removed from this item.)   | 250.0      | LF        | 21.64<br>5,410.62   |
| 7.1.1.1.2.4 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)                                     | 325.0      | LCY       | 6.77<br>2,200.74    |
| 7.1.1.1.2.5 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | 14.0       | LCY       | 49.22<br>689.13     |
| 7.1.1.1.2.6 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | 250.0      | ECY       | 7.04<br>1,759.27    |
| 7.1.1.1.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 250.0      | BCY       | 2.06<br>516.06      |
| 7.1.1.1.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | 19.0       | BCY       | 2.65<br>50.27       |
| 7.1.1.1.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | 19.0       | BCY       | 35.54<br>675.21     |
| <b>7.1.1.2 090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of the Utilities Relocation is \$50,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$2,000.) | <b>1.0</b> | <b>EA</b> | <b>2,000.00</b>     |
| 7.1.1.2.1 USR Mobilization   | 1.0        | LS        | 2,000.00            |
| <b>7.1.2 Roadways</b>  | <b>1.0</b> | <b>EA</b> | <b>186,759.42</b>   |
| <b>7.1.2.1 TR-76 Cul-De-Sac</b>  | <b>1.0</b> | <b>EA</b> | <b>93,379.71</b>    |
| 7.1.2.1.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick   | 471.0      | TON       | 87.21<br>41,074.94  |
| 7.1.2.1.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included  | 314.0      | TON       | 91.75<br>28,810.12  |
| 7.1.2.1.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1"  | 157.0      | TON       | 101.98<br>16,011.50 |



| Description   | Quantity   | UOM       | ContractCost        |
|---|------------|-----------|---------------------|
| <i>thick, no hauling included</i>   |            |           |                     |
| 7.1.2.1.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.   | 1,367.0    | SY        | 771.73              |
| 7.1.2.1.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.) | 228.0      | CY        | 5,503.74            |
| 7.1.2.1.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)  | 692.0      | ECY       | 470.26              |
| 7.1.2.1.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer  | 1,367.0    | SY        | 737.41              |
| <b>7.1.2.2 TR-49 Cul-De-Sac</b>   | <b>1.0</b> | <b>EA</b> | <b>93,379.71</b>    |
| 7.1.2.2.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick  | 471.0      | TON       | 41,074.94           |
| 7.1.2.2.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | 314.0      | TON       | 28,810.12           |
| 7.1.2.2.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included  | 157.0      | TON       | 16,011.50           |
| 7.1.2.2.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.   | 1,367.0    | SY        | 771.73              |
| 7.1.2.2.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.) | 228.0      | CY        | 5,503.74            |
| 7.1.2.2.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)  | 692.0      | ECY       | 470.26              |
| 7.1.2.2.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer  | 1,367.0    | SY        | 737.41              |
| <b>7.2 09 Channels and Canals</b>   | <b>1.0</b> | <b>EA</b> | <b>7,366,347.01</b> |
| <b>7.2.1 0901 Channels</b>  | <b>1.0</b> | <b>EA</b> | <b>7,086,347.01</b> |
| <b>7.2.1.1 Drainage Ditch</b>   | <b>1.0</b> | <b>EA</b> | <b>239,710.27</b>   |

0.95

| Description   | Quantity   | UOM       | ContractCost        |
|---|------------|-----------|---------------------|
| 7.2.1.1.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 67,131.0   | BCY       | 63,767.50           |
| 7.2.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | 23,285.0   | LCY       | 51,836.77           |
| 7.2.1.1.3 USR Fine Grading  | 14.4       | ACR       | 59,873.21           |
| 7.2.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 14.4       | ACR       | 12,396.02           |
| 7.2.1.1.5 USR Topsoil Loading   | 23,285.0   | LCY       | 51,836.77           |
| <b>7.2.1.2 Strip and Stockpile Topsoil</b>  | <b>1.0</b> | <b>EA</b> | <b>220,126.08</b>   |
| 7.2.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer   | 135,055.5  | CY        | 216,096.77          |
| 7.2.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 4,029.32            |
| <b>7.2.1.3 Install Access Road</b>  | <b>1.0</b> | <b>EA</b> | <b>98,707.31</b>    |
| 7.2.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,593 CY x 1.40 = 3,630.20 CY)   | 3,630.2    | LCY       | 20,091.13           |
| 7.2.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)   | 2,593.0    | ECY       | 78,616.17           |
| <b>7.2.1.4 Excavation of Diversion Channel</b>  | <b>1.0</b> | <b>EA</b> | <b>2,801,027.45</b> |
| 7.2.1.4.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 528,324 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 528,324 CY = 52,832 CY. Productivity decreased from 300 CY/hr to 150 CY/hr. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.) | 52,832.0   | BCY       | 88,964.18           |
| 7.2.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 4,029.32            |
| 7.2.1.4.3 USR Scraping<br>(Note: 90% of the 528,324 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 528,324 CY = 475,491 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account  | 475,491.0  | BCY       | 1,322,545.14        |

| Description   | Quantity   | UOM       | ContractCost      |
|---|------------|-----------|-------------------|
| for excavating in the channel.)   |            |           |                   |
| 7.2.1.4.1.1 USR Rough Grading<br>(Note: Managing piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (528,324 CY - 70,256 CY)*1.30 = 595,488 CY (Assume an expansion factor of 1.30).)  | 595,488.0  | BCY       | 749,370.17        |
| 7.2.1.4.1.2 USR Diversion Channel Material Hauling<br>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (52,832 CY + 70,256 CY) x 1.30 = 160,014 CY (Assume an expansion factor of 1.30).) | 160,014.0  | LCY       | 394,296.70        |
| 7.2.1.4.1.3 USR Diversion Channel Excavation Loading<br>(Note: Note: Material unit cost has been removed. Existing site material will be loaded out. Quantity equal to hauling quantity.)   | 160,014.0  | LCY       | 241,821.95        |
| <b>7.2.1.5 Grade Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>96,514.13</b>  |
| 7.2.1.5.1 USR Rough Grading<br>(Note: 70,256 CY * 1.30 = 91,333 CY)   | 91,333.0   | BCY       | 96,514.13         |
| <b>7.2.1.6 Construct Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>502,658.05</b> |
| 7.2.1.6.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 70,256 CY * 1.30 = 91,333 CY)  | 91,333.0   | LCY       | 324,885.51        |
| 7.2.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 91,333.0   | ECY       | 33,693.49         |
| 7.2.1.6.3 USR Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. 70,256 CY * 1.30 = 91,333 CY)   | 91,333.0   | BCY       | 144,079.05        |
| <b>7.2.1.7 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>1.0</b> | <b>EA</b> | <b>664,592.09</b> |
| 7.2.1.7.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Productivity increased from 32 CY/hr. to 50 CY/hr.)  | 39,113.0   | LCY       | 89,043.81         |
| 7.2.1.7.2 USR Topsoil Placement<br>(Note: 30,087 CY * 1.30 = 39,113 CY)   | 39,113.0   | LCY       | 87,072.86         |
| 7.2.1.7.3 USR Fine Grading<br>(Note: Assume 6" Placement. 30,087 CY * 6 = 180,522 SY = 37.30 Acres)   | 37.3       | ACR       | 155,088.24        |

| Description  | Quantity   | UOM       | ContractCost           |
|--|------------|-----------|------------------------|
| 7.2.1.7.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 37.3       | ACR       | 2,784.03<br>103,844.23 |
| 7.2.1.7.5 USR Topsoil Loading  | 39,113.0   | LCY       | 2.23<br>87,072.86      |
| 7.2.1.7.6 USR Topsoil Hauling<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)  | 39,113.0   | LCY       | 3.64<br>142,470.09     |
| <b>7.2.1.8 Drainage Outlets</b>  | <b>1.0</b> | <b>EA</b> | <b>2,155,271.62</b>    |
| 7.2.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover  | 11.0       | EA        | 3,055.21<br>33,607.30  |
| 7.2.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 11 manholes x 4 additional feet per manhole = 44 feet)  | 44.0       | VLF       | 370.73<br>16,311.99    |
| 7.2.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | 11.0       | EA        | 910.26<br>10,012.90    |
| 7.2.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy $3.14159 \times (1.5 \text{ ft.}^2) \times 12 \text{ ft.} = 84.823 \text{ cf} = 3 \text{ CY}$ . The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. $13 \text{ CY} \times 1.30 = 17 \text{ CY}$ . 11 manholes x 17 CY of backfill material per manhole = 187 CY. 187 CY of material will be used as backfill around the manholes.) | 187.0      | LCY       | 3.68<br>687.94         |
| 7.2.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay, till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 11 manholes x 16 CY per manhole = 176 CY)   | 176.0      | BCY       | 21.08<br>3,710.70      |
| <b>7.2.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>284,820.08</b>      |
| 7.2.1.9.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 12,817.87<br>12,817.87 |
| 7.2.1.9.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)   | 4,160.0    | HR        | 65.39<br>272,002.21    |
| <b>7.2.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>22,919.93</b>       |
| 7.2.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick   | 43,395.8   | SF        | 0.53<br>22,919.93      |

| Description  | Quantity   | UOM       | ContractCost        |
|--|------------|-----------|---------------------|
| (Note: 278 mats x 156.1 SF/mat = 43,395.80 SF)   |            |           |                     |
| <b>7.2.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>280,000.00</b>   |
| (Note: The approximate value of item 09 - Channals and Canals is \$7,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$.)  |            |           | 280,000.00          |
| 7.2.2.1 USR Mobilization   | 1.0        | LS        | 280,000.00          |
| <b>7.3 18 Cultural Resources Preservation</b>  | <b>1.0</b> | <b>EA</b> | <b>76,000.00</b>    |
| (Note: The approximate value of Contract 4A is \$7,600,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$76,000.)  |            |           | 76,000.00           |
| 7.3.1 USR Cultural Resources Preservation  | 1.0        | LS        | 76,000.00           |
| <b>8 5.0 - CONTRACT 4B - Diversion Channel Reach 5 490+00 to 495+43 &amp; Gate Structure at Eagle Creek</b>  | <b>1.0</b> | <b>EA</b> | <b>7,817,239.04</b> |
|  |            |           | 7,817,239.04        |
| <b>8.1 06 Fish and Wildlife Facilities</b>   | <b>1.0</b> | <b>EA</b> | <b>1,379,000.00</b> |
| (Note: The stream quantities for mitigation include 9,094 LF at \$100/LF or \$909,400. The wetland mitigation cost reflects improvements to an entire 19.14 acre site. The wetland mitigation cost is 25,000 per acre for 8.6 acres or approximately \$215,000. The remaining 10.5 acres on the mitigation area will be planted as forested upland buffer to help increase the functions and values of our mitigation and further offset the 3.8 acres of forested habitat impacts currently proposed. The 10.5 acres upland buffer would cost approximately \$10,000 per acre or a total of \$105,000. Thus the wetland and forested mitigation would cost a total of \$320,000.) |            |           | 1,379,000.00        |
| <b>8.1.1 Stream Mitigation</b>   | <b>1.0</b> | <b>EA</b> | <b>1,379,000.00</b> |
| 8.1.1.1 USR Stream Mitigation  | 1.0        | LS        | 1,379,000.00        |
| <b>8.2 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>792,711.71</b>   |
|  |            |           | 792,711.71          |
| <b>8.2.1 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>30,400.00</b>    |
| (Note: The approximate value of item 09 - Channals and Canals is \$760,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$30,400.)  |            |           | 30,400.00           |
| 8.2.1.1 USR Mobilization   | 1.0        | LS        | 30,400.00           |
| <b>8.2.2 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>301,364.08</b>   |
|  |            |           | 301,364.08          |
| <b>8.2.2.1 Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | <b>3,844.75</b>     |
|  |            |           | 3,844.75            |
| 8.2.2.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 101 CY x 1.40 = 141.40 CY)  | 141.4      | LCY       | 782.57              |
|  |            |           | 5.53                |
| 8.2.2.1.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | 101.0      | ECY       | 3,062.18            |
|  |            |           | 30.32               |
| <b>8.2.2.2 Dewatering</b>  | <b>1.0</b> | <b>EA</b> | <b>12,699.26</b>    |
| 8.2.2.2.1 USR Laborers for Dewatering at Eagle Creek   | 1.0        | LS        | 9,023.78            |
|  |            |           | 12,699.26           |

| Description   | Quantity   | UOM       | ContractCost                    |
|---|------------|-----------|---------------------------------|
| <i>(Note: Bare cost for 2 laborers x 2 hours per day x 22 work days per month x 2 months = 176 hours x \$40/hr. = \$7,040)</i>  |            |           |                                 |
| 8.2.2.2.2 HTW 026510107173 Petroleum contaminated soil, excavate and stockpile, sandbags for stockpile, excludes transportation and disposal fees   | 100.0      | EA        | 5.12<br>511.85                  |
| 8.2.2.2.3 RSM 225119500900 Swimming pool equipment, filter system, sand or diatomite type, 6,000 gal/hour, incl. pump   | 1.0        | LS        | 3,163.63                        |
| <b>8.2.2.3 090113 Traffic Control</b>   | <b>1.0</b> | <b>EA</b> | 284,820.08<br><b>284,820.08</b> |
| 8.2.2.3.1 USR Signage and Traffic Cone Allowance<br><i>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>  | 1.0        | EA        | 12,817.87<br>12,817.87          |
| 8.2.2.3.2 MIL B-LABORER Laborers, General (Lowest paid)<br><i>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)</i> | 4,160.0    | HR        | 65.39<br>272,002.21             |
| <b>8.2.3 090101 Earthen Dam</b>   | <b>1.0</b> | <b>EA</b> | 460,947.63<br><b>460,947.63</b> |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i>                        |            |           |                                 |
| <b>8.2.3.1 090101 Embankment</b>  | <b>1.0</b> | <b>EA</b> | 270,107.95<br><b>270,107.95</b> |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i>                        |            |           |                                 |
| 8.2.3.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: Common Fill Hauling. 6,404 CY x 1.30 = 8,325 CY)</i>                | 8,325.0    | LCY       | 5.53<br>46,074.24               |
| 8.2.3.1.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br><i>(Note: Impervious Fill Compaction)</i>   | 3,495.0    | ECY       | 0.37<br>1,289.33                |
| 8.2.3.1.3 USR Common Fill Placement   | 8,325.0    | LCY       | 2.23<br>18,533.01               |
| 8.2.3.1.4 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br><i>(Note: Common Fill Compaction)</i>   | 6,404.0    | ECY       | 0.37<br>2,362.49                |
| 8.2.3.1.5 RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br><i>(Note: Impervious Fill. 3,495 CY x 1.30 (Expansion Factor) = 4,544 CY)</i>    | 4,544.0    | LCY       | 35.89<br>163,084.28             |
| 8.2.3.1.6 USR Impervious Fill Placement   | 4,544.0    | LCY       | 2.23<br>10,115.79               |
| 8.2.3.1.7 USR Common Fill Loading   | 8,325.0    | LCY       | 2.23<br>18,533.01               |
|   |            |           | 2.23                            |

| Description   | Quantity   | UOM       | ContractCost     |
|---|------------|-----------|------------------|
| 8.2.3.1.8 USR Impervious Fill Loading   | 4,544.0    | LCY       | 10,115.79        |
| <b>8.2.3.2 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>1.0</b> | <b>EA</b> | <b>1,526.34</b>  |
| 8.2.3.2.1 USR Topsoil Placement<br>(Note: 477 SY (Assume placed 6 in. or 0,167 yd. thick). 477 SY x 0.167 yd. = 80 CY. 80 CY x 1.30 (Expansion Factor) = 104 CY)  | 104.0      | LCY       | 231.52           |
| 8.2.3.2.2 USR Fine Grading<br>(Note: 477 SY = 0.0986 acres)   | 0.1        | ACR       | 409.97           |
| 8.2.3.2.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 0.1        | ACR       | 274.51           |
| 8.2.3.2.4 USR Topsoil Hauling<br>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | 104.0      | LCY       | 378.82           |
| 8.2.3.2.5 USR Topsoil Loading   | 104.0      | LCY       | 231.52           |
| <b>8.2.3.3 Inspection Trench</b>  | <b>1.0</b> | <b>EA</b> | <b>95,576.12</b> |
| 8.2.3.3.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 1,778.0    | BCY       | 1,688.92         |
| 8.2.3.3.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br>(Note: Impervious Fill Compaction)  | 1,778.0    | ECY       | 655.92           |
| 8.2.3.3.3 USR Impervious Fill Placement<br>(Note: Impervious Fill. 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)   | 2,311.0    | LCY       | 5,144.72         |
| 8.2.3.3.4 RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br>(Note: Impervious Fill 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)  | 2,311.0    | LCY       | 82,941.85        |
| 8.2.3.3.5 USR Impervious Fill Loading   | 2,311.0    | LCY       | 5,144.72         |
| <b>8.2.3.4 Roadway</b>  | <b>1.0</b> | <b>EA</b> | <b>40,524.37</b> |
| 8.2.3.4.1 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.<br>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)   | 1,067.0    | SY        | 547.49           |

| Description   | Quantity | UOM | ContractCost |
|---|----------|-----|--------------|
| 8.2.3.4.2 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)                           | 178.0    | CY  | 4,296.78     |
| 8.2.3.4.3 RSM 321126130500 Asphalt Paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 4" thick   | 1,067.0  | SY  | 20,895.35    |
| 8.2.3.4.4 RSM 321216130080 Plant-mix asphalt paving, for highways and large paved areas, binder course, 1-1/2" thick, no hauling included   | 1,067.0  | SY  | 7,975.40     |
| 8.2.3.4.5 RSM 321216130300 Plant-mix asphalt paving, for highways and large paved areas, wearing course, 1" thick, no hauling included  | 1,067.0  | SY  | 5,427.96     |
| 8.2.3.4.6 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Base course aggregate hauling.)  | 178.0    | LCY | 985.13       |
| 8.2.3.4.7 USR Base Course Aggregate Loading   | 178.0    | LCY | 396.26       |
| <b>8.2.3.5 Place Rip-Rap</b><br>(Note: Topsoil placement for the berm and the channel.)   | 1.0      | EA  | 53,212.84    |
| 8.2.3.5.1 USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assumed density of rip rap is 1.35 tons/CY 1,180 SY of riprap placed, Assume placement 18" (0.5 yards) thick. 1,180 SY x 0.5 Yard = 590 CY x 1.35 tons/CY = 797 tons) | 797.0    | TON | 53,212.84    |
| <b>8.3 15 Floodway Control-Diversion Struc</b>  | 1.0      | EA  | 5,568,527.33 |
| <b>8.3.1 1500 Floodway Control-Diversion Struc</b>  | 1.0      | EA  | 5,436,527.33 |
| <b>8.3.1.1 150010 Earthwork for Structures</b>  | 1.0      | EA  | 315,426.74   |
| 8.3.1.1.3.1 USR Braced Excavation Temporary Retaining Structure<br>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)   | 1.0      | LS  | 15,682.96    |
| <b>8.3.1.2 150011 Foundation Work</b>   | 1.0      | EA  | 2,954.03     |
| 8.3.1.2.1.1.1 RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales  | 100.0    | SF  | 2,954.03     |
| <b>8.3.1.3 150099 Associated General Items</b>  | 1.0      | EA  | 107,049.33   |
| 8.3.1.3.2.2.1 RSM 263213132110 Generator set, diesel, 3 phase 4 wire, 277/480 V, 60 kW, incl battery, charger, muffler, automatic transfer switch & day tank, excl conduit, wiring, & concrete  | 1.0      | EA  | 52,283.24    |
| <b>8.3.1.4 150005 Bridges, Foundations</b>  | 1.0      | EA  | 1,918,462.71 |



| Description  | Quantity   | UOM       | ContractCost                 |
|--|------------|-----------|------------------------------|
| 8.3.1.4.1.2.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)   | 451.0      | CY        | 1,187.90<br>535,744.08       |
| <b>8.3.1.5 150006 Bridges, Abutments and Piers</b>   | <b>1.0</b> | <b>EA</b> | <b>1,150,431.95</b>          |
| 8.3.1.5.2.1.2.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | 488.0      | CY        | 1,187.90<br>579,696.47       |
| <b>8.3.1.6 150007 Bridges, Superstructure and Deck</b>   | <b>1.0</b> | <b>EA</b> | <b>27,131.53</b>             |
| 8.3.1.6.1.1.1.1 RSM 323410101610 Fabricated highway bridges, precast, prestressed concrete, I beams, 80' to 100' span  | 1.0        | EA        | 27,131.53<br>27,131.53       |
| <b>8.3.1.7 150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>1.0</b> | <b>EA</b> | <b>1,915,071.04</b>          |
| 8.3.1.7.1.1.1.1 USR Obermeyer Gate and Appurtenances<br>(Note: Quotation from Rob Eckman, Obermayer Hyrdro, Inc., September 1, 2015 for two, 17 ft. x 28 ft. Obermeyer Gates (including freight).)   | 1.0        | EA        | 1,867,448.78<br>1,867,448.78 |
| 8.3.1.7.1.1.2 RSM 015419500200 Crane crew, daily use for small jobs, 25-ton truck-mounted hydraulic crane, portal to portal  | 6.0        | DAY       | 1,417.75<br>8,506.48         |
| 8.3.1.7.1.1.3 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Four laborers required at 48 hours each to install the gates)  | 192.0      | HR        | 81.20<br>15,591.33           |
| 8.3.1.7.1.1.4 USR Testing<br>(Note: Per September 1, 2015 Obermeyer Hydro Quotation the cost of having an Obermeyer Hydro Representative onsite for testing is \$1,500/day. An estimate 10 days of testing are required for the gates.)  | 10.0       | EA        | 2,352.44<br>23,524.44        |
| <b>8.3.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>132,000.00</b>            |
| (Note: The approximate value of Floodway Control-Diversion Struc is \$3,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$132,000.)  |            |           |                              |
| 8.3.2.1 USR Mobilization   | 1.0        | LS        | 132,000.00                   |
| <b>8.4 18 Cultural Resources Preservation</b>  | <b>1.0</b> | <b>EA</b> | <b>77,000.00</b>             |
| (Note: The approximate value of Contract 4B is \$7,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$77,000.)  |            |           |                              |
| 8.4.1 USR Cultural Resources Preservation  | 1.0        | LS        | 77,000.00                    |

| Description   | Quantity   | UOM       | DirectCost           | SubCMU              | PrimeCMU            | ContractCost         |
|---|------------|-----------|----------------------|---------------------|---------------------|----------------------|
| <b>Project Indirect Summary</b>   |            |           | <b>45,903,367.04</b> | <b>1,562,602.38</b> | <b>7,450,889.14</b> | <b>54,916,858.56</b> |
| <b>1 1.0 - CONTRACT 1A - Diversion Channel Reach 1 0+00 to 120+00</b>   | <b>1.0</b> | <b>EA</b> | <b>11,114,306.61</b> | <b>456,325.11</b>   | <b>1,557,902.28</b> | <b>13,128,534.00</b> |
| <b>1.1 01 Lands and Damages</b>   | <b>1.0</b> | <b>EA</b> | <b>5,510,973.00</b>  | <b>0.00</b>         | <b>0.00</b>         | <b>5,510,973.00</b>  |
| 1.1.1 USR Lands and Damages   | 1.0        | LS        | 5,510,973.00         | 0.00                | 0.00                | 5,510,973.00         |
| <b>1.2 02 Relocations</b>   | <b>1.0</b> | <b>EA</b> | <b>285,046.15</b>    | <b>45,654.65</b>    | <b>90,932.78</b>    | <b>421,633.59</b>    |
| <b>1.2.1 0203 Cemetery, Utilities, &amp; Structure</b>  | <b>1.0</b> | <b>EA</b> | <b>212,249.79</b>    | <b>45,654.65</b>    | <b>70,419.74</b>    | <b>328,324.18</b>    |
| <b>1.2.1.1 020318 Utilities</b>   | <b>1.0</b> | <b>EA</b> | <b>204,249.79</b>    | <b>45,654.65</b>    | <b>70,419.74</b>    | <b>320,324.18</b>    |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>   |            |           |                      |                     |                     |                      |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>   |            |           |                      |                     |                     |                      |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>   |            |           |                      |                     |                     |                      |
| 1.2.1.1.4.2.1 USR Overhead Electric Line Removal  | 500.0      | LF        | 2,825.00             | 631.45              | 973.98              | 4,430.44             |
| <i>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. Two 250 LF overhead electric lines will be demolished. 500 total LF.)</i>  |            |           |                      |                     |                     |                      |
| 1.2.1.1.4.2.2 RSM 337139130180 Overhead line conductors & devices, conductors, primary circuits, per wire, over 1600 kcmil  | 500.0      | LF        | 4,793.90             | 1,071.55            | 1,652.80            | 7,518.25             |
| <i>(Note: Two 250 LF overhead electric lines will be installed. 500 total LF.)</i>  |            |           |                      |                     |                     |                      |
| 1.2.1.1.4.2.3 RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors  | 0.0        | MI        | 19.31                | 4.32                | 6.66                | 30.28                |
| <b>1.2.1.2 090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>8,000.00</b>      | <b>0.00</b>         | <b>0.00</b>         | <b>8,000.00</b>      |
| <i>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$8,000.)</i> |            |           |                      |                     |                     |                      |
| 1.2.1.2.1 USR Mobilization  | 1.0        | LS        | 8,000.00             | 0.00                | 0.00                | 8,000.00             |
| <b>1.2.2 Roadways</b>   | <b>1.0</b> | <b>EA</b> | <b>72,796.36</b>     | <b>0.00</b>         | <b>20,513.04</b>    | <b>93,309.40</b>     |
| <b>1.2.2.1 TR-89 Cul-De-Sac</b>   | <b>1.0</b> | <b>EA</b> | <b>72,796.36</b>     | <b>0.00</b>         | <b>20,513.04</b>    | <b>93,309.40</b>     |
| 1.2.2.1.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick                                  | 471.0      | TON       | 32,045.07            | 0.00                | 9,029.87            | 41,074.94            |
| 1.2.2.1.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | 314.0      | TON       | 22,476.54            | 0.00                | 6,333.59            | 28,810.12            |
| 1.2.2.1.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing  | 157.0      | TON       | 12,491.55            | 0.00                | 3,519.95            | 16,011.50            |

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| Description   | Quantity   | UOM       | DirectCost                            | SubCMU            | PrimeCMU            | ContractCost                          |
|---|------------|-----------|---------------------------------------|-------------------|---------------------|---------------------------------------|
| <i>course, alternate method for developing paving costs, 1" thick, no hauling included</i>  |            |           |                                       |                   |                     |                                       |
| 1.2.2.1.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.<br><i>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)</i>  | 1,367.0    | SY        | 0.4003<br>547.23                      | 0.00              | 154.20              | 0.5131<br>701.43                      |
| 1.2.2.1.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br><i>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)</i>                | 228.0      | CY        | 18.8325<br>4,293.81                   | 0.00              | 1,209.94            | 24.1392<br>5,503.74                   |
| 1.2.2.1.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br><i>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)</i>   | 692.0      | ECY       | 0.5302<br>366.88                      | 0.00              | 103.38              | 0.6796<br>470.26                      |
| 1.2.2.1.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer  | 1,367.0    | SY        | 0.4208<br>575.30                      | 0.00              | 162.11              | 0.5394<br>737.41                      |
| <b>1.3 09 Channels and Canals</b>   | <b>1.0</b> | <b>EA</b> | 5,165,287.4609<br><b>5,165,287.46</b> | <b>410,670.46</b> | <b>1,466,969.49</b> | 7,042,927.4139<br><b>7,042,927.41</b> |
| <b>1.3.1 0901 Channels</b>  | <b>1.0</b> | <b>EA</b> | 4,805,287.4609<br><b>4,805,287.46</b> | <b>410,670.46</b> | <b>1,466,969.49</b> | 6,682,927.4139<br><b>6,682,927.41</b> |
| <b>1.3.1.1 Drainage Ditch</b>   | <b>1.0</b> | <b>EA</b> | 205,946.9468<br><b>205,946.95</b>     | <b>0.00</b>       | <b>58,033.10</b>    | 263,980.0491<br><b>263,980.05</b>     |
| 1.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 73,884.0   | BCY       | 0.7411<br>54,753.38                   | 0.00              | 15,428.77           | 0.9499<br>70,182.15                   |
| 1.3.1.1.2 USR Topsoil Placement<br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | 25,627.0   | LCY       | 1.7368<br>44,508.58                   | 0.00              | 12,541.92           | 2.2262<br>57,050.50                   |
| 1.3.1.1.3 USR Fine Grading  | 15.9       | ACR       | 3,243.8015<br>51,511.57               | 0.00              | 14,515.27           | 4,157.8616<br>66,026.84               |
| 1.3.1.1.4 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | 15.9       | ACR       | 671.5899<br>10,664.85                 | 0.00              | 3,005.21            | 860.8350<br>13,670.06                 |
| 1.3.1.1.5 USR Topsoil Loading   | 25,627.0   | LCY       | 1.7368<br>44,508.58                   | 0.00              | 12,541.92           | 2.2262<br>57,050.50                   |
| <b>1.3.1.2 090113 Traffic Control</b>   | <b>1.0</b> | <b>EA</b> | 222,205.5231<br><b>222,205.52</b>     | <b>0.00</b>       | <b>59,796.69</b>    | 282,002.2088<br><b>282,002.21</b>     |
| 1.3.1.2.1 USR Signage and Traffic Cone Allowance<br><i>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>  | 1.0        | EA        | 10,000.0000<br>10,000.00              | 0.00              | 0.00                | 10,000.0000<br>10,000.00              |
| 1.3.1.2.2 MIL B-LABORER Laborers, General (Lowest paid)   | 4,160.0    | HR        | 51.0109<br>212,205.52                 | 0.00              | 59,796.69           | 65.3851<br>272,002.21                 |

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| Description   | Quantity   | UOM       | DirectCost                            | SubCMU           | PrimeCMU          | ContractCost                          |
|---|------------|-----------|---------------------------------------|------------------|-------------------|---------------------------------------|
| <i>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 hours)</i>   |            |           |                                       |                  |                   |                                       |
| <i>Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours</i>   |            |           |                                       |                  |                   |                                       |
| <b>1.3.1.3 Construct Diversion Channel Tie-in to Blanchard River</b>  | <b>1.0</b> | <b>EA</b> | 454,335.6225<br><b>454,335.62</b>     | <b>0.00</b>      | <b>128,025.72</b> | 582,361.3401<br><b>582,361.34</b>     |
| 1.3.1.3.1.1 USR Rip-Rap Placement   | 3,600.5    | TON       | 126.1886<br>454,335.62                | 0.00             | 128,025.72        | 161.7468<br>582,361.34                |
| <i>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 5,334 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 5,334 SY x 0.5 Yard = 2,667 CY x 1.35 tons/CY = 3,600.45 tons)</i>              |            |           |                                       |                  |                   |                                       |
| <b>1.3.1.4 Strip and Stockpile Topsoil</b>  | <b>1.0</b> | <b>EA</b> | 120,345.3325<br><b>120,345.33</b>     | <b>0.00</b>      | <b>33,911.71</b>  | 154,257.0418<br><b>154,257.04</b>     |
| 1.3.1.4.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer   | 93,888.9   | CY        | 1.2483<br>117,201.82                  | 0.00             | 33,025.91         | 1.6001<br>150,227.73                  |
| 1.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 3.1435<br>3,143.52                    | 0.00             | 885.80            | 4.0293<br>4,029.32                    |
| <b>1.3.1.5 Install Access Road</b>  | <b>1.0</b> | <b>EA</b> | 66,019.2368<br><b>66,019.24</b>       | <b>0.00</b>      | <b>18,603.34</b>  | 84,622.5771<br><b>84,622.58</b>       |
| 1.3.1.5.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading  | 3,112.2    | LCY       | 4.3178<br>13,437.72                   | 0.00             | 3,786.57          | 5.5344<br>17,224.29                   |
| <i>(Note: 1.40 compaction factor assumed. 2,223 CY x 1.40 = 3,112.2 CY)</i>   |            |           |                                       |                  |                   |                                       |
| 1.3.1.5.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep   | 2,223.0    | ECY       | 23.6534<br>52,581.51                  | 0.00             | 14,816.77         | 30.3186<br>67,398.28                  |
| <i>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)</i>   |            |           |                                       |                  |                   |                                       |
| <b>1.3.1.6 Excavation of Diversion Channel</b>  | <b>1.0</b> | <b>EA</b> | 1,255,527.9400<br><b>1,255,527.94</b> | <b>58,471.41</b> | <b>370,267.49</b> | 1,684,266.8347<br><b>1,684,266.83</b> |
| 1.3.1.6.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 31,419.0   | BCY       | 1.3137<br>41,275.73                   | 0.00             | 11,630.95         | 1.6839<br>52,906.68                   |
| <i>(Note: 10% of the 314,187 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 314,187 CY = 31,419 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)</i>  |            |           |                                       |                  |                   |                                       |
| 1.3.1.6.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 3.1435<br>3,143.52                    | 0.00             | 885.80            | 4.0293<br>4,029.32                    |
| 1.3.1.6.3 USR Scraping  | 282,768.0  | BCY       | 2.1700<br>613,596.27                  | 0.00             | 172,903.24        | 2.7814<br>786,499.52                  |
| <i>(Note: 90% of the 314,187 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 314,187 CY = 282,768 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)</i> |            |           |                                       |                  |                   |                                       |
| 1.3.1.6.1.1 USR Rough Grading   | 323,869.0  | BCY       | 0.8244<br>267,003.41                  | 0.00             | 75,238.00         | 1.0567<br>342,241.41                  |
| <i>(Note: Manage piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (314,187 CY - 65,057 CY)*1.30 = 323,869 CY (Assume an expansion factor</i>   |            |           |                                       |                  |                   |                                       |

| Description  | Quantity   | UOM       | DirectCost        | SubCMU      | PrimeCMU          | ContractCost      |
|--|------------|-----------|-------------------|-------------|-------------------|-------------------|
| of 1.30.)  |            |           |                   |             |                   |                   |
| 1.3.1.6.1.2 USR Diversion Channel Material Hauling<br>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (31,419 CY + 65,057) x 1.30 = 125,419 CY (Assume an expansion factor of 1.30).) | 125,419.0  | LCY       | 204,865.26        | 36,243.37   | 67,941.19         | 309,049.82        |
| 1.3.1.6.1.3 USR Diversion Channel Excavation Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. Quantity equal to hauling quantity.)  | 125,419.0  | LCY       | 125,643.75        | 22,228.04   | 41,668.30         | 189,540.08        |
| <b>1.3.1.7 Grade Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>69,724.32</b>  | <b>0.00</b> | <b>19,647.38</b>  | <b>89,371.71</b>  |
| 1.3.1.7.1 USR Rough Grading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)  | 84,574.0   | BCY       | 69,724.32         | 0.00        | 19,647.38         | 89,371.71         |
| <b>1.3.1.8 Construct Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>342,315.98</b> | <b>0.00</b> | <b>96,460.08</b>  | <b>438,776.06</b> |
| 1.3.1.8.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)   | 84,574.0   | LCY       | 234,705.76        | 0.00        | 66,136.95         | 300,842.71        |
| 1.3.1.8.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | 84,574.0   | ECY       | 24,341.05         | 0.00        | 6,858.98          | 31,200.04         |
| 1.3.1.8.3 USR Diversion Channel Excavation Loading<br>(Note: 65,057 CY * 1.30 = 84,574 CY)   | 84,574.0   | LCY       | 83,269.17         | 0.00        | 23,464.14         | 106,733.31        |
| <b>1.3.1.9 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)   | <b>1.0</b> | <b>EA</b> | <b>484,450.81</b> | <b>0.00</b> | <b>136,511.77</b> | <b>620,962.58</b> |
| 1.3.1.9.1 USR Topsoil Placement<br>(Note: Topsoil placement for the berm and the channel. 32,463 CY * 1.30 = 42,202 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)   | 42,202.0   | LCY       | 73,295.78         | 0.00        | 20,653.77         | 93,949.55         |
| 1.3.1.9.2 USR Fine Grading<br>(Note: Assume 6" Placement. 32,463 CY * 6 = 194,778 SY = 40.24 acres)  | 40.2       | ACR       | 130,530.57        | 0.00        | 36,781.77         | 167,312.35        |
| 1.3.1.9.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40 for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 40.2       | ACR       | 87,400.88         | 0.00        | 24,628.40         | 112,029.28        |
| 1.3.1.9.4 USR Topsoil Loading  | 42,202.0   | LCY       | 73,295.78         | 0.00        | 20,653.77         | 93,949.55         |
| 1.3.1.9.5 USR Topsoil Hauling  | 42,202.0   | LCY       | 119,927.80        | 0.00        | 33,794.05         | 153,721.85        |

| Description   | Quantity   | UOM       | DirectCost          | SubCMU            | PrimeCMU          | ContractCost        |
|---|------------|-----------|---------------------|-------------------|-------------------|---------------------|
| <i>(Note: 32,463 CY * 1.30 = 42,202 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)</i>   |            |           |                     |                   |                   |                     |
| <b>1.3.1.10 Drainage Outlets</b>  | <b>1.0</b> | <b>EA</b> | <b>1,575,668.09</b> | <b>352,199.05</b> | <b>543,247.24</b> | <b>2,471,114.39</b> |
|   |            |           | 1,575,668.0913      |                   |                   | 2,471,114.3858      |
| 1.3.1.10.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover  | 16.0       | EA        | 31,169.71           | 6,967.17          | 10,746.46         | 48,883.35           |
|   |            |           | 1,948.1071          |                   |                   | 3,055.2091          |
| 1.3.1.10.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8' (Note: 16 manholes x 4 additional feet per manhole = 64 feet)   | 64.0       | VLF       | 15,128.86           | 3,381.66          | 5,216.02          | 23,726.53           |
|   |            |           | 236.3884            |                   |                   | 370.7270            |
| 1.3.1.10.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | 16.0       | EA        | 9,286.65            | 2,075.79          | 3,201.78          | 14,564.22           |
|   |            |           | 580.4159            |                   |                   | 910.2640            |
| 1.3.1.10.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering (Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 16 manholes x 17 CY of backfill material per manhole = 272 CY. 272 CY of material will be used as backfill around the manholes.) | 272.0      | LCY       | 638.04              | 142.62            | 219.98            | 1,000.64            |
|   |            |           | 2,3457              |                   |                   | 3,6788              |
| 1.3.1.10.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe (Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 16 manholes x 16 CY per manhole = 256 CY)   | 256.0      | BCY       | 3,441.56            | 769.27            | 1,186.56          | 5,397.39            |
|   |            |           | 13.4436             |                   |                   | 21.0835             |
| <b>1.3.1.11 Erosion Mats</b>  | <b>1.0</b> | <b>EA</b> | <b>8,747.66</b>     | <b>0.00</b>       | <b>2,464.97</b>   | <b>11,212.63</b>    |
|   |            |           | 8,747.6559          |                   |                   | 11,212.6286         |
| 1.3.1.11.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick (Note: 136 mats x 156.1 SF/mat = 21,229.6 SF)  | 21,229.6   | SF        | 8,747.66            | 0.00              | 2,464.97          | 11,212.63           |
|   |            |           | 0.4120              |                   |                   | 0.5282              |
| <b>1.3.2 090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>360,000.00</b>   | <b>0.00</b>       | <b>0.00</b>       | <b>360,000.00</b>   |
|   |            |           | 360,000.0000        |                   |                   | 360,000.0000        |
| <i>(Note: The approximate value of item 09 - Channals and Canals and Contract 1B is \$9,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$360,000.)</i>   |            |           |                     |                   |                   |                     |
| 1.3.2.1 USR Mobilization  | 1.0        | LS        | 360,000.00          | 0.00              | 0.00              | 360,000.00          |
| <b>1.4 18 Cultural Resources Preservation</b>   | <b>1.0</b> | <b>EA</b> | <b>153,000.00</b>   | <b>0.00</b>       | <b>0.00</b>       | <b>153,000.00</b>   |
|   |            |           | 153,000.0000        |                   |                   | 153,000.0000        |
| <i>(Note: The approximate value of Contracts 1A and 1B is \$15,300,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$153,000.)</i>  |            |           |                     |                   |                   |                     |
| 1.4.1 USR Cultural Resources Preservation   | 1.0        | LS        | 153,000.00          | 0.00              | 0.00              | 153,000.00          |
| <b>2 1.0 - CONTRACT 1B - Bridges Reach 1 0+00 to 120+00</b>   | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> | <b>0.00</b>       | <b>0.00</b>       | <b>2,352,000.00</b> |
|   |            |           | 2,352,000.0000      |                   |                   | 2,352,000.0000      |
| <b>2.1 02 Relocations</b>   | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> | <b>0.00</b>       | <b>0.00</b>       | <b>2,352,000.00</b> |
|   |            |           | 2,352,000.0000      |                   |                   | 2,352,000.0000      |
|   |            |           | 2,352,000.0000      |                   |                   | 2,352,000.0000      |

| Description  | Quantity   | UOM       | DirectCost          | SubCMU           | PrimeCMU            | ContractCost        |
|--|------------|-----------|---------------------|------------------|---------------------|---------------------|
| <b>2.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>2,352,000.00</b> | <b>0.00</b>      | <b>0.00</b>         | <b>2,352,000.00</b> |
| 2.1.1.1 USR Bridge TR 130  | 1.0        | EA        | 965,000.00          | 0.00             | 0.00                | 965,000.00          |
| 2.1.1.2 USR Bridge CR 86   | 1.0        | EA        | 578,000.00          | 0.00             | 0.00                | 578,000.00          |
| 2.1.1.3 USR Bridge SR 12   | 1.0        | EA        | 809,000.00          | 0.00             | 0.00                | 809,000.00          |
| <b>3 2.0 - CONTRACT 2A - Diversion Channel Reach 2 120+00 to 235+00</b>  | <b>1.0</b> | <b>EA</b> | <b>7,473,526.77</b> | <b>98,057.27</b> | <b>1,443,757.63</b> | <b>9,015,341.67</b> |
| <b>3.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>582,050.19</b>   | <b>26,249.36</b> | <b>169,156.40</b>   | <b>777,455.95</b>   |
| <b>3.1.1 Dry Road Crossing 215+73</b>  | <b>1.0</b> | <b>EA</b> | <b>456,615.82</b>   | <b>0.00</b>      | <b>128,668.25</b>   | <b>585,284.07</b>   |
| 3.1.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Excavated material to to hauled and disposed of offsite.)   | 2,054.0    | LCY       | 8,868.67            | 0.00             | 2,499.07            | 11,367.75           |
| 3.1.1.2 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Concrete Roadway Materials)   | 556.0      | LCY       | 2,400.67            | 0.00             | 676.48              | 3,077.15            |
| 3.1.1.3 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)                | 556.0      | CY        | 10,470.86           | 0.00             | 2,950.55            | 13,421.41           |
| 3.1.1.4 RSM 312316425100 Excavating, bulk bank measure,sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 2,054.0    | BCY       | 2,703.53            | 0.00             | 761.82              | 3,465.35            |
| 3.1.1.5 RSM 033053402500 Structural concrete, in place, elevated slab (4000 psi), one way joists, 125 psf superimposed load, 30" pans, 15' span, includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | 556.0      | CY        | 432,172.09          | 0.00             | 121,780.33          | 553,952.41          |
| <b>3.1.2 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>125,434.37</b>   | <b>26,249.36</b> | <b>40,488.16</b>    | <b>192,171.89</b>   |
| <b>3.1.2.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>117,434.37</b>   | <b>26,249.36</b> | <b>40,488.16</b>    | <b>184,171.89</b>   |
| 3.1.2.1.3.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | 250.0      | LF        | 21.29               | 4.76             | 7.34                | 33.38               |
| 3.1.2.1.3.2.2 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter   | 750.0      | LF        | 10,350.00           | 2,313.47         | 3,568.40            | 16,231.87           |

| Description  | Quantity   | UOM       | DirectCost                            | SubCMU           | PrimeCMU            | ContractCost                          |
|--|------------|-----------|---------------------------------------|------------------|---------------------|---------------------------------------|
| <i>(Note: Three 250 LF copper cables will be installed. Each cable will be installed in a separate conduit. 750 total LF of conduit will be installed. Labor cost has been removed from this item.)</i>  |            |           |                                       |                  |                     |                                       |
| 3.1.2.1.3.2.3 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)</i>                                    | 350.0      | LCY       | 4.3178<br>1,511.21                    | 337.79           | 521.03              | 6.7715<br>2,370.03                    |
| 3.1.2.1.3.2.4 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br><i>(Note: Material price received from Hancock County Material Bid Sheet.)</i>  | 14.0       | LCY       | 31.3865<br>439.41                     | 98.22            | 151.50              | 49.2233<br>689.13                     |
| 3.1.2.1.3.2.5 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br><i>(Note: 250 CY)</i>   | 250.0      | ECY       | 4.4871<br>1,121.77                    | 250.74           | 386.76              | 7.0371<br>1,759.27                    |
| 3.1.2.1.3.2.6 RSM 260526803900 Insulated ground wire, copper, stranded, 1000 kcmil<br><i>(Note: Three 250 LF Copper Cables will be installed. 750 total LF.)</i>   | 750.0      | LF        | 34.3726<br>25,779.48                  | 5,762.32         | 8,888.06            | 53.9065<br>40,429.86                  |
| 3.1.2.1.3.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 250.0      | BCY       | 1.3162<br>329.06                      | 73.55            | 113.45              | 2.0642<br>516.06                      |
| 3.1.2.1.3.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br><i>(Note: Material cost removed. Excavation material re-used as backfill.)</i>  | 19.0       | BCY       | 1.6870<br>32.05                       | 7.16             | 11.05               | 2.6458<br>50.27                       |
| 3.1.2.1.3.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | 19.0       | BCY       | 22.6598<br>430.54                     | 96.24            | 148.44              | 35.5373<br>675.21                     |
| <b>3.1.2.2 090101 Mob, Demob &amp; Preparatory Work</b><br><i>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$8,000.)</i> | <b>1.0</b> | <b>EA</b> | 8,000.0000<br><b>8,000.00</b>         | <b>0.00</b>      | <b>0.00</b>         | 8,000.0000<br><b>8,000.00</b>         |
| 3.1.2.2.1 USR Mobilization   | 1.0        | LS        | 8,000.00                              | 0.00             | 0.00                | 8,000.00                              |
| <b>3.2 08 Roads, Railroads, and Bridges</b>  | <b>1.0</b> | <b>EA</b> | 2,084,000.0000<br><b>2,084,000.00</b> | <b>0.00</b>      | <b>0.00</b>         | 2,084,000.0000<br><b>2,084,000.00</b> |
| 3.2.1 USR Railroad Bridge  | 1.0        | EA        | 2,084,000.0000<br>2,084,000.00        | 0.00             | 0.00                | 2,084,000.0000<br>2,084,000.00        |
| <b>3.3 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | 4,337,008.4092<br><b>4,337,008.41</b> | <b>71,807.91</b> | <b>1,170,208.24</b> | 5,579,024.5602<br><b>5,579,024.56</b> |
| <b>3.3.1 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | 4,081,008.4092<br><b>4,081,008.41</b> | <b>71,807.91</b> | <b>1,170,208.24</b> | 5,323,024.5602<br><b>5,323,024.56</b> |
| <b>3.3.1.1 Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | 48,734.5805<br><b>48,734.58</b>       | <b>0.00</b>      | <b>13,732.75</b>    | 62,467.3351<br><b>62,467.34</b>       |
| 3.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity =  | 17,478.0   | BCY       | 0.7411<br>12,952.46                   | 0.00             | 3,649.83            | 0.9499<br>16,602.29                   |



| Description   | Quantity   | UOM       | DirectCost          | SubCMU      | PrimeCMU          | ContractCost        |
|---|------------|-----------|---------------------|-------------|-------------------|---------------------|
| 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   |            |           |                     |             |                   |                     |
| 3.3.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | 6,063.0    | LCY       | 10,530.12           | 0.00        | 2,967.25          | 13,497.37           |
| 3.3.1.1.3 USR Fine Grading  | 3.8        | ACR       | 12,196.69           | 0.00        | 3,436.87          | 15,633.56           |
| 3.3.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 3.8        | ACR       | 2,525.18            | 0.00        | 711.56            | 3,236.74            |
| 3.3.1.1.5 USR Topsoil Loading   | 6,063.0    | LCY       | 10,530.12           | 0.00        | 2,967.25          | 13,497.37           |
| <b>3.3.1.2 Strip and Stockpile Topsoil</b>  | <b>1.0</b> | <b>EA</b> | <b>123,928.44</b>   | <b>0.00</b> | <b>34,921.38</b>  | <b>158,849.82</b>   |
| 3.3.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer   | 96,759.3   | CY        | 120,784.92          | 0.00        | 34,035.58         | 154,820.50          |
| 3.3.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 3,143.52            | 0.00        | 885.80            | 4,029.32            |
| <b>3.3.1.3 Install Access Road</b>  | <b>1.0</b> | <b>EA</b> | <b>63,257.30</b>    | <b>0.00</b> | <b>17,825.06</b>  | <b>81,082.36</b>    |
| 3.3.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)  | 2,982.0    | LCY       | 12,875.55           | 0.00        | 3,628.16          | 16,503.71           |
| 3.3.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)   | 2,130.0    | ECY       | 50,381.75           | 0.00        | 14,196.90         | 64,578.65           |
| <b>3.3.1.4 Excavation of Diversion Channel</b>  | <b>1.0</b> | <b>EA</b> | <b>2,580,412.00</b> | <b>0.00</b> | <b>727,125.68</b> | <b>3,307,537.68</b> |
| 3.3.1.4.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 694,114 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 694,114 CY = 69,411 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)    | 69,411.0   | BCY       | 91,186.52           | 0.00        | 25,695.15         | 116,881.67          |
| 3.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0    | LF        | 3,143.52            | 0.00        | 885.80            | 4,029.32            |
| 3.3.1.4.3 HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been | 1,063.5    | BCY       | 2,778.83            | 0.00        | 783.04            | 3,561.87            |

| Description   | Quantity   | UOM       | DirectCost       | SubCMU      | PrimeCMU         | ContractCost     |
|---|------------|-----------|------------------|-------------|------------------|------------------|
| multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.)   |            |           |                  |             |                  |                  |
| 3.3.1.4.4 RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock in these sections will be excavated via blasting. The remaining 6,737 CY of rock between Stations 120+00 and 235+00 will excavated via blasting. A total of 7,800.50 CY of rock between Stations 120+00 and 235+00 will excavated via blasting.) | 7,800.5    | BCY       | 73,652.57        | 0.00        | 20,754.31        | 94,406.89        |
|   |            |           | 9.4420           |             |                  | 12.1027          |
| 3.3.1.4.5 USR Scraping<br>(Note: 90% of the 694,114 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 694,114 CY = 624,703 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)  | 624,703.0  | BCY       | 1,355,582.79     | 0.00        | 381,985.15       | 1,737,567.93     |
|   |            |           | 2.1700           |             |                  | 2.7814           |
| 3.3.1.4.1.1 USR Rough Grading<br>(Note: Manage piles on purchased property. Sum of the soil and rock hauling quantities: (885,665 CY + 13,296 CY) = 898,961 CY)   | 898,961.0  | BCY       | 741,119.57       | 0.00        | 208,837.61       | 949,957.18       |
|   |            |           | 0.8244           |             |                  | 1.0567           |
| 3.3.1.4.1.2 USR Diversion Channel Material Hauling<br>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (69,411 CY + 12,833 CY) x 1.30 = 106,917 CY (Assume an expansion factor of 1.30).)                     | 106,917.0  | LCY       | 173,067.51       | 0.00        | 48,768.12        | 221,835.63       |
|   |            |           | 1.6187           |             |                  | 2.0748           |
| 3.3.1.4.1.3 USR Diversion Channel Material Hauling<br>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and blasted x 1.50 = 8,864 CY x 1.50 = 13,296 CY (Assume an expansion factor of 1.30).)  | 13,296.0   | LCY       | 21,522.36        | 0.00        | 6,064.71         | 27,587.07        |
|   |            |           | 1.6187           |             |                  | 2.0748           |
| 3.3.1.4.1.4 USR Diversion Channel Excavation Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (106,917 CY + 13,296 CY) = 120,213 CY)  | 120,213.0  | LCY       | 118,358.32       | 0.00        | 33,351.80        | 151,710.11       |
|   |            |           | 0.9846           |             |                  | 1.2620           |
| <b>3.3.1.5 Grade Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>13,753.76</b> | <b>0.00</b> | <b>3,875.63</b>  | <b>17,629.39</b> |
|   |            |           | 13,753.7644      |             |                  | 17,629.3918      |
| 3.3.1.5.1 USR Rough Grading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)   | 16,683.0   | BCY       | 13,753.76        | 0.00        | 3,875.63         | 17,629.39        |
|   |            |           | 0.8244           |             |                  | 1.0567           |
| <b>3.3.1.6 Construct Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>67,524.98</b> | <b>0.00</b> | <b>19,027.64</b> | <b>86,552.62</b> |
|   |            |           | 67,524.9785      |             |                  | 86,552.6166      |
| 3.3.1.6.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)  | 16,683.0   | LCY       | 46,297.87        | 0.00        | 13,046.12        | 59,343.99        |
|   |            |           | 2.7752           |             |                  | 3.5572           |
| 3.3.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 16,683.0   | ECY       | 4,801.50         | 0.00        | 1,353.00         | 6,154.49         |
|   |            |           | 0.2878           |             |                  | 0.3689           |
| 3.3.1.6.3 USR Diversion Channel Excavation Loading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)  | 16,683.0   | LCY       | 16,425.61        | 0.00        | 4,628.52         | 21,054.13        |
|   |            |           | 0.9846           |             |                  | 1.2620           |

| Description  | Quantity   | UOM       | DirectCost                        | SubCMU           | PrimeCMU          | ContractCost                      |
|--|------------|-----------|-----------------------------------|------------------|-------------------|-----------------------------------|
| <b>3.3.1.7 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)   | <b>1.0</b> | <b>EA</b> | 609,964.0180<br><b>609,964.02</b> | <b>0.00</b>      | <b>171,879.72</b> | 781,843.7413<br><b>781,843.74</b> |
| 3.3.1.7.1 USR Topsoil Placement<br>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)   | 53,132.0   | LCY       | 1.7368<br>92,278.83               | 0.00             | 26,002.94         | 2.2262<br>118,281.78              |
| 3.3.1.7.2 USR Fine Grading<br>(Note: Assume 6" Placement. 40,871 CY * 6 = 245,226 SY = 50.67 Acres)  | 50.7       | ACR       | 3,243.8015<br>164,363.42          | 0.00             | 46,315.42         | 4,157.8616<br>210,678.84          |
| 3.3.1.7.3 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 50.7       | ACR       | 2,171.9899<br>110,054.73          | 0.00             | 31,011.95         | 2,784.0277<br>141,066.69          |
| 3.3.1.7.4 USR Topsoil Loading  | 53,132.0   | LCY       | 1.7368<br>92,278.83               | 0.00             | 26,002.94         | 2.2262<br>118,281.78              |
| 3.3.1.7.5 USR Topsoil Hauling<br>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)  | 53,132.0   | LCY       | 2.8418<br>150,988.20              | 0.00             | 42,546.46         | 3.6425<br>193,534.66              |
| <b>3.3.1.8 Drainage Outlets</b>  | <b>1.0</b> | <b>EA</b> | 321,254.2257<br><b>321,254.23</b> | <b>71,807.91</b> | <b>110,759.67</b> | 503,821.8030<br><b>503,821.80</b> |
| 3.3.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover  | 6.0        | EA        | 1,948.1071<br>11,688.64           | 2,612.69         | 4,029.92          | 3,055.2091<br>18,331.25           |
| 3.3.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8' (Note: 6 manholes x 4 additional feet per manhole = 24 feet)  | 24.0       | VLF       | 236.3884<br>5,673.32              | 1,268.12         | 1,956.01          | 370.7270<br>8,897.45              |
| 3.3.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | 6.0        | EA        | 580.4159<br>3,482.50              | 778.42           | 1,200.67          | 910.2640<br>5,461.58              |
| 3.3.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 6 manholes x 17 CY of backfill material per manhole = 102 CY. 102 CY of material will be used as backfill around the manholes.) | 102.0      | LCY       | 2.3457<br>239.27                  | 53.48            | 82.49             | 3.6788<br>375.24                  |
| 3.3.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay, till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 6 manholes x 16 CY per manhole = 96 CY)   | 96.0       | BCY       | 13.4436<br>1,290.59               | 288.48           | 444.96            | 21.0835<br>2,024.02               |
| <b>3.3.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | 222,205.5231<br><b>222,205.52</b> | <b>0.00</b>      | <b>62,614.55</b>  | 284,820.0754<br><b>284,820.08</b> |

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| Description  | Quantity   | UOM       | DirectCost                               | SubCMU      | PrimeCMU          | ContractCost                             |
|--|------------|-----------|--|-------------|-------------------|--|
| 3.3.1.9.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 10,000.0000<br>10,000.00                 | 0.00        | 2,817.87          | 12,817.8666<br>12,817.87                 |
| 3.3.1.9.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 hours)  | 4,160.0    | HR        | 51.0109<br>212,205.52                    | 0.00        | 59,796.69         | 65.3851<br>272,002.21                    |
| Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160   |            |           |  |             |                   |  |
| <b>3.3.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>29,973.5855</b><br><b>29,973.59</b>   | <b>0.00</b> | <b>8,446.16</b>   | <b>38,419.7420</b><br><b>38,419.74</b>   |
| 3.3.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 466 mats x 156.1 SF/mat = 72,742.60 SF)   | 72,742.6   | SF        | 0.4120<br>29,973.59                      | 0.00        | 8,446.16          | 0.5282<br>38,419.74                      |
| <b>3.3.2 090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of item 09 - Channals and Canals and Contract 2B is \$6,400,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$256,000.) | <b>1.0</b> | <b>EA</b> | <b>256,000.0000</b><br><b>256,000.00</b> | <b>0.00</b> | <b>0.00</b>       | <b>256,000.0000</b><br><b>256,000.00</b> |
| 3.3.2.1 USR Mobilization   | 1.0        | LS        | 256,000.00                               | 0.00        | 0.00              | 256,000.00                               |
| <b>3.4 15 Floodway Control-Diversion Struc</b>   | <b>1.0</b> | <b>EA</b> | <b>370,468.1688</b><br><b>370,468.17</b> | <b>0.00</b> | <b>104,392.99</b> | <b>474,861.1567</b><br><b>474,861.16</b> |
| <b>3.4.1 1500 Floodway Control-Diversion Struc</b>   | <b>1.0</b> | <b>EA</b> | <b>370,468.1688</b><br><b>370,468.17</b> | <b>0.00</b> | <b>104,392.99</b> | <b>474,861.1567</b><br><b>474,861.16</b> |
| <b>3.4.1.1 150005 Bridges, Foundations</b>   | <b>1.0</b> | <b>EA</b> | <b>95,448.8651</b><br><b>95,448.87</b>   | <b>0.00</b> | <b>26,896.22</b>  | <b>122,345.0821</b><br><b>122,345.08</b> |
| 3.4.1.1.1.1.1.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)         | 127.0      | CY        | 751.5659<br>95,448.87                    | 0.00        | 26,896.22         | 963.3471<br>122,345.08                   |
| <b>3.4.1.2 150006 Bridges, Abutments and Piers</b>   | <b>1.0</b> | <b>EA</b> | <b>131,273.3036</b><br><b>131,273.30</b> | <b>0.00</b> | <b>36,991.07</b>  | <b>168,264.3694</b><br><b>168,264.37</b> |
| 3.4.1.2.2.1.1.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)       | 40.0       | CY        | 751.5659<br>30,062.63                    | 0.00        | 8,471.25          | 963.3471<br>38,533.88                    |
| <b>3.4.1.3 150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>1.0</b> | <b>EA</b> | <b>143,746.0000</b><br><b>143,746.00</b> | <b>0.00</b> | <b>40,505.71</b>  | <b>184,251.7052</b><br><b>184,251.71</b> |
| 3.4.1.3.1.1.1.1 USR Furnish 3' x 10' Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$63,300 plus 6.75% sales tax = \$67,573)   | 2.0        | EA        | 67,573.0000<br>135,146.00                | 0.00        | 38,082.34         | 86,614.1700<br>173,228.34                |
| 3.4.1.3.1.1.1.2 USR Install 3' x 10' Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | 2.0        | EA        | 4,300.0000<br>8,600.00                   | 0.00        | 2,423.37          | 5,511.6826<br>11,023.37                  |
|  |            |           | 100,000.0000                             |             |                   | 100,000.0000                             |

| Description  | Quantity   | UOM       | DirectCost          | SubCMU           | PrimeCMU            | ContractCost        |
|--|------------|-----------|---------------------|------------------|---------------------|---------------------|
| <b>3.5 18 Cultural Resources Preservation</b>  | <b>1.0</b> | <b>EA</b> | <b>100,000.00</b>   | <b>0.00</b>      | <b>0.00</b>         | <b>100,000.00</b>   |
| <i>(Note: The approximate value of Contracts 2A and 2B is \$10,000,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$100,000.)</i>   |            |           |                     |                  |                     |                     |
| 3.5.1 USR Cultural Resources Preservation  | 1.0        | LS        | 100,000.00          | 0.00             | 0.00                | 100,000.00          |
|  |            |           | 1,082,000.0000      |                  |                     | 1,082,000.0000      |
| <b>4 2.0 - CONTRACT 2B - Bridges Reach 2 120+00 to 235+00</b>  | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b> | <b>0.00</b>      | <b>0.00</b>         | <b>1,082,000.00</b> |
|  |            |           | 1,082,000.0000      |                  |                     | 1,082,000.0000      |
| <b>4.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b> | <b>0.00</b>      | <b>0.00</b>         | <b>1,082,000.00</b> |
|  |            |           | 1,082,000.0000      |                  |                     | 1,082,000.0000      |
| <b>4.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>1,082,000.00</b> | <b>0.00</b>      | <b>0.00</b>         | <b>1,082,000.00</b> |
|  |            |           | 1,082,000.0000      |                  |                     | 1,082,000.0000      |
| 4.1.1.1 USR Bridge CR 84   | 1.0        | EA        | 1,082,000.00        | 0.00             | 0.00                | 1,082,000.00        |
|  |            |           | 5,842,986.2504      |                  |                     | 7,342,683.3075      |
| <b>5 3.0 - CONTRACT 3A - Diversion Channel Reach 3 235+00 to 350+00</b>  | <b>1.0</b> | <b>EA</b> | <b>5,842,986.25</b> | <b>24,647.19</b> | <b>1,475,049.87</b> | <b>7,342,683.31</b> |
|  |            |           | 47,926.9418         |                  |                     | 72,890.4589         |
| <b>5.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>47,926.94</b>    | <b>9,818.71</b>  | <b>15,144.81</b>    | <b>72,890.46</b>    |
|  |            |           | 47,926.9418         |                  |                     | 72,890.4589         |
| <b>5.1.1 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>47,926.94</b>    | <b>9,818.71</b>  | <b>15,144.81</b>    | <b>72,890.46</b>    |
|  |            |           | 43,926.9418         |                  |                     | 68,890.4589         |
| <b>5.1.1.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>43,926.94</b>    | <b>9,818.71</b>  | <b>15,144.81</b>    | <b>68,890.46</b>    |
|  |            |           | 0.0851              |                  |                     | 0.1335              |
| 5.1.1.1.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | 250.0      | LF        | 21.29               | 4.76             | 7.34                | 33.38               |
|  |            |           | 2.1093              |                  |                     | 3.3080              |
| 5.1.1.1.2.2 RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: Two 250 LF Fiber Optic Cables will be installed. 500 total LF.)   | 500.0      | LF        | 1,054.65            | 235.74           | 363.62              | 1,654.01            |
|  |            |           | 13.8000             |                  |                     | 21.6425             |
| 5.1.1.1.2.3 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Two 250 LF Fiber Optic Cables will be installed. Each cable will be installed in a separate condui. 500 total LF of conduit will be installed. Labor cost has been removed from this item.) | 500.0      | LF        | 6,900.00            | 1,542.31         | 2,378.93            | 10,821.24           |
|  |            |           | 4.3178              |                  |                     | 6.7715              |
| 5.1.1.1.2.4 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)                                   | 325.0      | LCY       | 1,403.27            | 313.66           | 483.81              | 2,200.74            |
|  |            |           | 41.3865             |                  |                     | 64.9062             |
| 5.1.1.1.2.5 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction  | 14.0       | LCY       | 579.41              | 129.51           | 199.76              | 908.69              |
|  |            |           | 4.4871              |                  |                     | 7.0371              |
| 5.1.1.1.2.6 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | 250.0      | ECY       | 1,121.77            | 250.74           | 386.76              | 1,759.27            |
|  |            |           | 1.3162              |                  |                     | 2.0642              |
| 5.1.1.1.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 250.0      | BCY       | 329.06              | 73.55            | 113.45              | 516.06              |

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| Description  | Quantity   | UOM       | DirectCost            | SubCMU           | PrimeCMU            | ContractCost         |
|--|------------|-----------|-----------------------|------------------|---------------------|----------------------|
| 5.1.1.1.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | 19.0       | BCY       | 32.05                 | 7.16             | 11.05               | 50.27                |
| 5.1.1.1.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | 19.0       | BCY       | 430.54                | 96.24            | 148.44              | 675.21               |
| <b>5.1.1.2 090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of the Utilities Relocation is \$100,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$4,000.)  | <b>1.0</b> | <b>EA</b> | <b>4,000.00</b>       | <b>0.00</b>      | <b>0.00</b>         | <b>4,000.000</b>     |
| 5.1.1.2.1 USR Mobilization   | 1.0        | LS        | 4,000.00              | 0.00             | 0.00                | 4,000.00             |
| <b>5.3 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>5,044,129.06</b>   | <b>14,828.48</b> | <b>1,286,907.71</b> | <b>6,345,865.24</b>  |
| <b>5.3.1 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>4,522,094.6893</b> | <b>14,828.48</b> | <b>1,278,444.43</b> | <b>5,815,367.591</b> |
| <b>5.3.1.1 Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | <b>93,003.80</b>      | <b>0.00</b>      | <b>26,207.23</b>    | <b>119,211.03</b>    |
| 5.3.1.1.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 33,367.0   | BCY       | 24,727.36             | 0.00             | 6,967.84            | 31,695.19            |
| 5.3.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.) | 11,574.0   | LCY       | 20,101.54             | 0.00             | 5,664.35            | 25,765.89            |
| 5.3.1.1.3 USR Fine Grading   | 7.2        | ACR       | 23,258.06             | 0.00             | 6,553.81            | 29,811.87            |
| 5.3.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 7.2        | ACR       | 4,815.30              | 0.00             | 1,356.89            | 6,172.19             |
| 5.3.1.1.5 USR Topsoil Loading  | 11,574.0   | LCY       | 20,101.54             | 0.00             | 5,664.35            | 25,765.89            |
| <b>5.3.1.2 Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | <b>128,898.53</b>     | <b>0.00</b>      | <b>36,321.89</b>    | <b>165,220.42</b>    |
| 5.3.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | 100,740.7  | CY        | 125,755.02            | 0.00             | 35,436.09           | 161,191.10           |
| 5.3.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 3,143.52              | 0.00             | 885.80              | 4,029.32             |
| <b>5.3.1.3 Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | <b>63,257.30</b>      | <b>0.00</b>      | <b>17,825.06</b>    | <b>81,082.36</b>     |

| Description  | Quantity   | UOM       | DirectCost          | SubCMU      | PrimeCMU          | ContractCost        |
|--|------------|-----------|---------------------|-------------|-------------------|---------------------|
| 5.3.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)   | 2,982.0    | LCY       | 12,875.55           | 0.00        | 3,628.16          | 16,503.71           |
| 5.3.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | 2,130.0    | ECY       | 50,381.75           | 0.00        | 14,196.90         | 64,578.65           |
| <b>5.3.1.4 Excavation of Diversion Channel</b>   | <b>1.0</b> | <b>EA</b> | <b>2,914,747.67</b> | <b>0.00</b> | <b>821,337.01</b> | <b>3,736,084.68</b> |
| 5.3.1.4.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 572,714 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 572,714 CY = 57,271 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)   | 57,271.0   | BCY       | 75,237.98           | 0.00        | 21,201.06         | 96,439.04           |
| 5.3.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 3,143.52            | 0.00        | 885.80            | 4,029.32            |
| 5.3.1.4.3 HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.<br>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.50 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.) | 25,770.5   | BCY       | 67,336.08           | 0.00        | 18,974.41         | 86,310.49           |
| 5.3.1.4.4 RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.<br>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.5 CY of the rock in these sections will be excavated via blasting. The remaining 21,052 CY of rock between Stations 235+00 and 350+00 will excavated via blasting. A total of 46,822.5 CY of rock between Stations 120+00 and 235+00 will excavated via blasting.)   | 46,822.5   | BCY       | 442,099.57          | 0.00        | 124,577.76        | 566,677.33          |
| 5.3.1.4.5 USR Scraping<br>(Note: 90% of the 572,714 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 572,714 CY = 515,443 CY Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)  | 515,443.0  | BCY       | 1,118,492.56        | 0.00        | 315,176.28        | 1,433,668.84        |
| 5.3.1.4.1.1 USR Rough Grading<br>(Note: Manage the piles on purchased property. Sum of the soil and rock hauling quantities: (729,027 CY + 108,890 CY) = 837,917 CY)   | 837,917.0  | BCY       | 690,793.80          | 0.00        | 194,656.48        | 885,450.28          |
| 5.3.1.4.1.2 USR Diversion Channel Material Hauling<br>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load, travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (57,271 CY + 11,924) x 1.30 = 89,953 CY (Assume an expansion factor of 1.30).)   | 89,953.0   | LCY       | 145,607.73          | 0.00        | 41,030.32         | 186,638.05          |
| 5.3.1.4.1.3 USR Diversion Channel Material Hauling<br>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load, travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and  | 108,890.0  | LCY       | 176,261.23          | 0.00        | 49,668.06         | 225,929.29          |

| Description  | Quantity   | UOM       | DirectCost        | SubCMU           | PrimeCMU          | ContractCost      |
|--|------------|-----------|-------------------|------------------|-------------------|-------------------|
| <i>blasted x 1.50 = 72,593 CY x 1.50 = 108,890 CY (Assume an expansion factor of 1.30.)</i>  |            |           |                   |                  |                   |                   |
| 5.3.1.4.1.4 USR Diversion Channel Excavation Loading<br><i>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (89,953 CY + 108,890 CY) = 198,843 CY)</i>  | 198,843.0  | LCY       | 195,775.19        | 0.00             | 55,166.84         | 250,942.03        |
|  |            |           | 0.9846            |                  |                   | 1.2620            |
| <b>5.3.1.5 Grade Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>12,779.30</b>  | <b>0.00</b>      | <b>3,601.04</b>   | <b>16,380.34</b>  |
| 5.3.1.5.1 USR Rough Grading  | 15,501.0   | BCY       | 12,779.30         | 0.00             | 3,601.04          | 16,380.34         |
|  |            |           | 0.8244            |                  |                   | 1.0567            |
| <b>5.3.1.6 Construct Channel Embankment</b>  | <b>1.0</b> | <b>EA</b> | <b>86,652.70</b>  | <b>0.00</b>      | <b>24,417.58</b>  | <b>111,070.28</b> |
| 5.3.1.6.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 11,924 CY * 1.30 = 15,501 CY)</i>  | 15,501.0   | LCY       | 66,929.55         | 0.00             | 18,859.85         | 85,789.40         |
|  |            |           | 4.3178            |                  |                   | 5.5344            |
| 5.3.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | 15,501.0   | ECY       | 4,461.31          | 0.00             | 1,257.14          | 5,718.45          |
|  |            |           | 0.2878            |                  |                   | 0.3689            |
| 5.3.1.6.3 USR Diversion Channel Excavation Loading<br><i>(Note: 11,924 CY * 1.30 = 15,501 CY)</i>  | 15,501.0   | LCY       | 15,261.85         | 0.00             | 4,300.58          | 19,562.43         |
|  |            |           | 0.9846            |                  |                   | 1.2620            |
| <b>5.3.1.7 Place Topsoil and Seed</b><br><i>(Note: Topsoil placement for the berm and the channel.)</i>  | <b>1.0</b> | <b>EA</b> | <b>529,826.51</b> | <b>0.00</b>      | <b>149,298.04</b> | <b>679,124.55</b> |
|  |            |           | 529,826.5068      |                  |                   | 679,124.5485      |
| 5.3.1.7.1 USR Topsoil Placement<br><i>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i>  | 46,154.0   | LCY       | 80,159.55         | 0.00             | 22,587.89         | 102,747.44        |
|  |            |           | 1.7368            |                  |                   | 2.2262            |
| 5.3.1.7.2 USR Fine Grading<br><i>(Note: Assume 6" Placement. 35,503 CY * 6 = 213,018 SY = 44.01 Acres)</i>   | 44.0       | ACR       | 142,759.71        | 0.00             | 40,227.78         | 182,987.49        |
|  |            |           | 3,243.8015        |                  |                   | 4,157.8616        |
| 5.3.1.7.3 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>  | 44.0       | ACR       | 95,589.28         | 0.00             | 26,935.78         | 122,525.06        |
|  |            |           | 2,171.9899        |                  |                   | 2,784.0277        |
| 5.3.1.7.4 USR Topsoil Loading  | 46,154.0   | LCY       | 80,159.55         | 0.00             | 22,587.89         | 102,747.44        |
|  |            |           | 1.7368            |                  |                   | 2.2262            |
| 5.3.1.7.5 USR Topsoil Hauling<br><i>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)</i> | 46,154.0   | LCY       | 131,158.42        | 0.00             | 36,958.69         | 168,117.11        |
|  |            |           | 2.8418            |                  |                   | 3.6425            |
| <b>5.3.1.8 Drainage Outlets</b>  | <b>1.0</b> | <b>EA</b> | <b>388,206.62</b> | <b>14,828.48</b> | <b>113,569.91</b> | <b>516,605.01</b> |
|  |            |           | 388,206.6205      |                  |                   | 516,605.0096      |
| 5.3.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D.,   | 12.0       | EA        | 23,377.29         | 5,225.38         | 8,059.85          | 36,662.51         |
|  |            |           | 1,948.1071        |                  |                   | 3,055.2091        |



| Description  | Quantity   | UOM       | DirectCost        | SubCMU      | PrimeCMU         | ContractCost      |
|--|------------|-----------|-------------------|-------------|------------------|-------------------|
| 8' deep, excludes footing, excavation, backfill, frame and cover   |            |           |                   |             |                  |                   |
| 5.3.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8' (Note: 12 manholes x 4 additional feet per manhole = 48 feet)   | 48.0       | VLF       | 11,346.64         | 2,536.24    | 3,912.01         | 17,794.90         |
| 5.3.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | 12.0       | EA        | 6,964.99          | 1,556.84    | 2,401.34         | 10,923.17         |
| 5.3.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering (Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 12 manholes x 17 CY of backfill material per manhole = 204 CY. 204 CY of material will be used as backfill around the manholes.) | 204.0      | LCY       | 478.53            | 106.96      | 164.98           | 750.48            |
| 5.3.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe (Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 12 manholes x 16 CY per manhole = 192 CY)   | 192.0      | BCY       | 2,581.17          | 576.95      | 889.92           | 4,048.04          |
| <b>5.3.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>222,205.52</b> | <b>0.00</b> | <b>62,614.55</b> | <b>284,820.08</b> |
| 5.3.1.9.1 USR Signage and Traffic Cone Allowance (Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)   | 1.0        | EA        | 10,000.00         | 0.00        | 2,817.87         | 12,817.87         |
| 5.3.1.9.2 MIL B-LABORER Laborers, General (Lowest paid) (Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 hours)   | 4,160.0    | HR        | 212,205.52        | 0.00        | 59,796.69        | 272,002.21        |
| <b>5.3.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>23,541.49</b>  | <b>0.00</b> | <b>6,633.68</b>  | <b>30,175.16</b>  |
| 5.3.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick (Note: 366 mats x 156.1 SF/mat = SF)  | 57,132.6   | SF        | 23,541.49         | 0.00        | 6,633.68         | 30,175.16         |
| <b>5.3.1.11 Drainage Ditch Diversion to Aurund Run</b>   | <b>1.0</b> | <b>EA</b> | <b>58,975.25</b>  | <b>0.00</b> | <b>16,618.44</b> | <b>75,593.69</b>  |
| 5.3.1.11.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 4,267.0    | BCY       | 3,162.16          | 0.00        | 891.05           | 4,053.21          |
| 5.3.1.11.2 RSM 334113600200 Public Storm Utility Drainage Piping, concrete, box culvert, precast, base price, 8' long, 8' x 3', excludes excavation or backfill  | 80.0       | LF        | 44,883.86         | 0.00        | 12,647.67        | 57,531.53         |
| 5.3.1.11.3 USR Rip-Rap Placement (Note: 500 SF x 18 in. = 500 SF x 1.5 FT = 750 CF. 750 CF/27 = 28 CY. 28 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 37.8 tons. Material cost of \$37.05/ton for ungrouted riprap  | 37.8       | TON       | 1,968.95          | 0.00        | 554.82           | 2,523.77          |

| Description   | Quantity   | UOM       | DirectCost        | SubCMU      | PrimeCMU          | ContractCost      |
|---|------------|-----------|-------------------|-------------|-------------------|-------------------|
| <i>obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)</i>   |            |           |                   |             |                   |                   |
| 5.3.1.11.4 USR Topsoil Placement<br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i>  | 1,520.0    | LCY       | 2,639.91          | 0.00        | 743.89            | 3,383.80          |
| 5.3.1.11.5 USR Fine Grading   | 0.9        | ACR       | 3,049.17          | 0.00        | 859.22            | 3,908.39          |
| 5.3.1.11.6 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>  | 0.9        | ACR       | 631.29            | 0.00        | 177.89            | 809.18            |
| 5.3.1.11.7 USR Topsoil Loading  | 1,520.0    | LCY       | 2,639.91          | 0.00        | 743.89            | 3,383.80          |
| <b>5.3.2 090101 Mob, Demob &amp; Preparatory Work</b><br><i>(Note: The approximate value of item 09 - Channals and Canals and Contract 3B is \$12,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$492,000.)</i>   | <b>1.0</b> | <b>EA</b> | <b>492,000.00</b> | <b>0.00</b> | <b>0.00</b>       | <b>492,000.00</b> |
| 5.3.2.1 USR Mobilization  | 1.0        | LS        | 492,000.00        | 0.00        | 0.00              | 492,000.00        |
| <b>5.3.3 Reroute Tributary Before Stream Crossing</b>   | <b>1.0</b> | <b>EA</b> | <b>30,034.37</b>  | <b>0.00</b> | <b>8,463.28</b>   | <b>38,497.65</b>  |
| 5.3.3.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 2,215.0    | BCY       | 1,641.47          | 0.00        | 462.55            | 2,104.02          |
| 5.3.3.2 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading  | 4,207.0    | LCY       | 18,164.80         | 0.00        | 5,118.60          | 23,283.40         |
| 5.3.3.3 USR Rip-Rap Placement<br><i>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 84 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 84 SY x 0.5 Yard = 42 CY x 1.35 tons/CY = 56.7 tons.)</i> | 56.7       | TON       | 7,154.89          | 0.00        | 2,016.15          | 9,171.04          |
| 5.3.3.4 USR Topsoil Placement   | 790.0      | LCY       | 1,372.06          | 0.00        | 386.63            | 1,758.69          |
| 5.3.3.5 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | 0.5        | ACR       | 329.08            | 0.00        | 92.73             | 421.81            |
| 5.3.3.6 USR Topsoil Loading   | 790.0      | LCY       | 1,372.06          | 0.00        | 386.63            | 1,758.69          |
| <b>5.4 15 Floodway Control-Diversion Struc</b>  | <b>1.0</b> | <b>EA</b> | <b>613,930.25</b> | <b>0.00</b> | <b>172,997.36</b> | <b>786,927.61</b> |
| <b>5.4.1 1500 Floodway Control-Diversion Struc</b>  | <b>1.0</b> | <b>EA</b> | <b>613,930.25</b> | <b>0.00</b> | <b>172,997.36</b> | <b>786,927.61</b> |
| <b>5.4.1.1 150010 Earthwork for Structures</b>  | <b>1.0</b> | <b>EA</b> | <b>200,059.99</b> | <b>0.00</b> | <b>56,374.24</b>  | <b>256,434.23</b> |

| Description  | Quantity   | UOM       | DirectCost          | SubCMU      | PrimeCMU         | ContractCost        |
|--|------------|-----------|---------------------|-------------|------------------|---------------------|
| 5.4.1.1.3.1 USR Braced Excavation Temporary Retaining Structure<br>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)  | 1.0        | LS        | 10,000.00           | 0.00        | 2,817.87         | 12,817.87           |
| <b>5.4.1.2 150099 Associated General Items</b>   | <b>1.0</b> | <b>EA</b> | <b>25,750.00</b>    | <b>0.00</b> | <b>7,256.01</b>  | <b>33,006.01</b>    |
| 5.4.1.2.1.1.1 RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments  | 250.0      | CY        | 25,750.00           | 0.00        | 7,256.01         | 33,006.01           |
| <b>5.4.1.3 150005 Bridges, Foundations</b>   | <b>1.0</b> | <b>EA</b> | <b>101,461.39</b>   | <b>0.00</b> | <b>28,590.47</b> | <b>130,051.86</b>   |
| 5.4.1.3.1.1.1.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)   | 135.0      | CY        | 101,461.39          | 0.00        | 28,590.47        | 130,051.86          |
| <b>5.4.1.4 150006 Bridges, Abutments and Piers</b>   | <b>1.0</b> | <b>EA</b> | <b>132,024.87</b>   | <b>0.00</b> | <b>37,202.85</b> | <b>169,227.72</b>   |
| 5.4.1.4.2.1.1.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | 40.0       | CY        | 30,062.63           | 0.00        | 8,471.25         | 38,533.88           |
| <b>5.4.1.5 150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>1.0</b> | <b>EA</b> | <b>154,634.00</b>   | <b>0.00</b> | <b>43,573.80</b> | <b>198,207.80</b>   |
| 5.4.1.5.1.1.1.1 USR Furnish 4' x 10' Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$68,400 plus 6.75% sales tax = \$73,017)   | 2.0        | EA        | 146,034.00          | 0.00        | 41,150.43        | 187,184.43          |
| 5.4.1.5.1.1.1.2 USR Install 4' x 10' Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | 2.0        | EA        | 8,600.00            | 0.00        | 2,423.37         | 11,023.37           |
| <b>5.5 18 Cultural Resource Preservation</b>   | <b>1.0</b> | <b>EA</b> | <b>137,000.00</b>   | <b>0.00</b> | <b>0.00</b>      | <b>137,000.00</b>   |
| (Note: The approximate value of Contracts 3A and 3B is \$13,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$137,000.)  |            |           |                     |             |                  |                     |
| 5.5.1 USR Cultural Resources Preservation  | 1.0        | LS        | 137,000.00          | 0.00        | 0.00             | 137,000.00          |
| <b>6 3.0 - CONTRACT 3B - Bridges Reach 3 235+00 to 350+00</b>  | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> | <b>0.00</b> | <b>0.00</b>      | <b>6,491,000.00</b> |
| <b>6.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> | <b>0.00</b> | <b>0.00</b>      | <b>6,491,000.00</b> |
| <b>6.1.1 Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>6,491,000.00</b> | <b>0.00</b> | <b>0.00</b>      | <b>6,491,000.00</b> |
| 6.1.1.1 USR Bridge CR 313  | 1.0        | EA        | 799,000.00          | 0.00        | 0.00             | 799,000.00          |
| 6.1.1.2 USR Bridge CR 9  | 1.0        | EA        | 920,000.00          | 0.00        | 0.00             | 920,000.00          |

| Description  | Quantity   | UOM       | DirectCost                                   | SubCMU            | PrimeCMU            | ContractCost                                 |
|--|------------|-----------|--|-------------------|---------------------|--|
| 6.1.1.3 USR Bridge I-75 WB and EB  | 1.0        | EA        | 3,910,000.0000<br>3,910,000.00               | 0.00              | 0.00                | 3,910,000.0000<br>3,910,000.00               |
| 6.1.1.4 USR Bridge TR 67   | 1.0        | EA        | 862,000.0000<br>862,000.00                   | 0.00              | 0.00                | 862,000.0000<br>862,000.00                   |
| <b>7 4.0 - CONTRACT 4A - Diversion Channel Reach 4 350+00 to 490+00</b>  | <b>1.0</b> | <b>EA</b> | <b>5,867,903.4699</b><br><b>5,867,903.47</b> | <b>208,724.11</b> | <b>1,611,432.97</b> | <b>7,688,060.5450</b><br><b>7,688,060.55</b> |
| <b>7.1 02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>184,018.3383</b><br><b>184,018.34</b>     | <b>8,117.47</b>   | <b>53,577.73</b>    | <b>245,713.5379</b><br><b>245,713.54</b>     |
| <b>7.1.1 0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>38,315.9202</b><br><b>38,315.92</b>       | <b>8,117.47</b>   | <b>12,520.74</b>    | <b>58,954.1222</b><br><b>58,954.12</b>       |
| <b>7.1.1.1 020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>36,315.9202</b><br><b>36,315.92</b>       | <b>8,117.47</b>   | <b>12,520.74</b>    | <b>56,954.1222</b><br><b>56,954.12</b>       |
| 7.1.1.1.2.1 RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | 250.0      | LF        | 0.0851<br>21.29                              | 4.76              | 7.34                | 0.1335<br>33.38                              |
| 7.1.1.1.2.2 RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: One 250 LF Fiber Optic Cable will be installed. 250 total LF.)  | 250.0      | LF        | 2.1093<br>527.33                             | 117.87            | 181.81              | 3.3080<br>827.01                             |
| 7.1.1.1.2.3 RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: One 250 LF Fiber Optic Cable will be installed. Each cable will be installed in a separate conduit. 250 total LF of conduit will be installed. Labor cost has been removed from this item.) | 250.0      | LF        | 13.8000<br>3,450.00                          | 771.16            | 1,189.47            | 21.6425<br>5,410.62                          |
| 7.1.1.1.2.4 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)                                   | 325.0      | LCY       | 4.3178<br>1,403.27                           | 313.66            | 483.81              | 6.7715<br>2,200.74                           |
| 7.1.1.1.2.5 RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | 14.0       | LCY       | 31.3865<br>439.41                            | 98.22             | 151.50              | 49.2233<br>689.13                            |
| 7.1.1.1.2.6 RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | 250.0      | ECY       | 4.4871<br>1,121.77                           | 250.74            | 386.76              | 7.0371<br>1,759.27                           |
| 7.1.1.1.2.7 RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 250.0      | BCY       | 1.3162<br>329.06                             | 73.55             | 113.45              | 2.0642<br>516.06                             |
| 7.1.1.1.2.8 RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | 19.0       | BCY       | 1.6870<br>32.05                              | 7.16              | 11.05               | 2.6458<br>50.27                              |
| 7.1.1.1.2.9 RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | 19.0       | BCY       | 22.6598<br>430.54                            | 96.24             | 148.44              | 35.5373<br>675.21                            |

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| Description   | Quantity   | UOM       | DirectCost        | SubCMU      | PrimeCMU         | ContractCost      |
|---|------------|-----------|-------------------|-------------|------------------|-------------------|
| <b>7.1.1.2 090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>2,000.00</b>   | <b>0.00</b> | <b>0.00</b>      | <b>2,000.00</b>   |
| <i>(Note: The approximate value of the Utilities Relocation is \$50,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$2,000.)</i>  |            |           |                   |             |                  |                   |
| 7.1.1.2.1 USR Mobilization  | 1.0        | LS        | 2,000.00          | 0.00        | 0.00             | 2,000.00          |
| <b>7.1.2 Roadways</b>   | <b>1.0</b> | <b>EA</b> | <b>145,702.42</b> | <b>0.00</b> | <b>41,057.00</b> | <b>186,759.42</b> |
| <b>7.1.2.1 TR-76 Cul-De-Sac</b>   | <b>1.0</b> | <b>EA</b> | <b>72,851.21</b>  | <b>0.00</b> | <b>20,528.50</b> | <b>93,379.71</b>  |
| 7.1.2.1.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick  | 471.0      | TON       | 32,045.07         | 0.00        | 9,029.87         | 41,074.94         |
| 7.1.2.1.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | 314.0      | TON       | 22,476.54         | 0.00        | 6,333.59         | 28,810.12         |
| 7.1.2.1.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included  | 157.0      | TON       | 12,491.55         | 0.00        | 3,519.95         | 16,011.50         |
| 7.1.2.1.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.   | 1,367.0    | SY        | 602.08            | 0.00        | 169.66           | 771.73            |
| 7.1.2.1.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br><i>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)</i> | 228.0      | CY        | 4,293.81          | 0.00        | 1,209.94         | 5,503.74          |
| 7.1.2.1.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br><i>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)</i>   | 692.0      | ECY       | 366.88            | 0.00        | 103.38           | 470.26            |
| 7.1.2.1.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer  | 1,367.0    | SY        | 575.30            | 0.00        | 162.11           | 737.41            |
| <b>7.1.2.2 TR-49 Cul-De-Sac</b>   | <b>1.0</b> | <b>EA</b> | <b>72,851.21</b>  | <b>0.00</b> | <b>20,528.50</b> | <b>93,379.71</b>  |
| 7.1.2.2.1 RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick  | 471.0      | TON       | 32,045.07         | 0.00        | 9,029.87         | 41,074.94         |
| 7.1.2.2.2 RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | 314.0      | TON       | 22,476.54         | 0.00        | 6,333.59         | 28,810.12         |
| 7.1.2.2.3 RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included  | 157.0      | TON       | 12,491.55         | 0.00        | 3,519.95         | 16,011.50         |

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| Description  | Quantity   | UOM       | DirectCost                            | SubCMU            | PrimeCMU            | ContractCost                          |
|--|------------|-----------|---------------------------------------|-------------------|---------------------|---------------------------------------|
| 7.1.2.2.4 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.  | 1,367.0    | SY        | 0.4404<br>602.08                      | 0.00              | 169.66              | 0.5645<br>771.73                      |
| 7.1.2.2.5 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)                | 228.0      | CY        | 18.8325<br>4,293.81                   | 0.00              | 1,209.94            | 24.1392<br>5,503.74                   |
| 7.1.2.2.6 RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)   | 692.0      | ECY       | 0.5302<br>366.88                      | 0.00              | 103.38              | 0.6796<br>470.26                      |
| 7.1.2.2.7 RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer   | 1,367.0    | SY        | 0.4208<br>575.30                      | 0.00              | 162.11              | 0.5394<br>737.41                      |
| <b>7.2 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | 5,607,885.1316<br><b>5,607,885.13</b> | <b>200,606.64</b> | <b>1,557,855.23</b> | 7,366,347.0071<br><b>7,366,347.01</b> |
| <b>7.2.1 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | 5,327,885.1316<br><b>5,327,885.13</b> | <b>200,606.64</b> | <b>1,557,855.23</b> | 7,086,347.0071<br><b>7,086,347.01</b> |
| <b>7.2.1.1 Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | 187,012.6084<br><b>187,012.61</b>     | <b>0.00</b>       | <b>52,697.66</b>    | 239,710.2667<br><b>239,710.27</b>     |
| 7.2.1.1.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | 67,131.0   | BCY       | 0.7411<br>49,748.92                   | 0.00              | 14,018.58           | 0.9499<br>63,767.50                   |
| 7.2.1.1.2 USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.) | 23,285.0   | LCY       | 1.7368<br>40,441.03                   | 0.00              | 11,395.74           | 2.2262<br>51,836.77                   |
| 7.2.1.1.3 USR Fine Grading   | 14.4       | ACR       | 3,243.8015<br>46,710.74               | 0.00              | 13,162.46           | 4,157.8616<br>59,873.21               |
| 7.2.1.1.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | 14.4       | ACR       | 671.5899<br>9,670.90                  | 0.00              | 2,725.13            | 860.8350<br>12,396.02                 |
| 7.2.1.1.5 USR Topsoil Loading  | 23,285.0   | LCY       | 1.7368<br>40,441.03                   | 0.00              | 11,395.74           | 2.2262<br>51,836.77                   |
| <b>7.2.1.2 Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | 171,733.7929<br><b>171,733.79</b>     | <b>0.00</b>       | <b>48,392.29</b>    | 220,126.0848<br><b>220,126.08</b>     |
| 7.2.1.2.1 RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | 135,055.5  | CY        | 1.2483<br>168,590.28                  | 0.00              | 47,506.49           | 1.6001<br>216,096.77                  |
| 7.2.1.2.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | 1,000.0    | LF        | 3.1435<br>3,143.52                    | 0.00              | 885.80              | 4.0293<br>4,029.32                    |
|  |            |           | 77,007.5938                           |                   |                     | 98,707.3065                           |

| Description   | Quantity  | UOM           | DirectCost          | SubCMU            | PrimeCMU          | ContractCost        |
|---|-----------|---------------|---------------------|-------------------|-------------------|---------------------|
| <b>7.2.1.3 Install Access Road</b>  |           | <b>1.0 EA</b> | <b>77,007.59</b>    | <b>0.00</b>       | <b>21,699.71</b>  | <b>98,707.31</b>    |
| 7.2.1.3.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,593 CY x 1.40 = 3,630.20 CY)   | 3,630.2   | LCY           | 15,674.32           | 0.00              | 4,416.81          | 20,091.13           |
| 7.2.1.3.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)   | 2,593.0   | ECY           | 61,333.27           | 0.00              | 17,282.90         | 78,616.17           |
| <b>7.2.1.4 Excavation of Diversion Channel</b>  |           | <b>1.0 EA</b> | <b>2,022,771.27</b> | <b>162,481.19</b> | <b>615,774.99</b> | <b>2,801,027.45</b> |
| 7.2.1.4.1 RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 528,324 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 528,324 CY = 52,832 CY. Productivity decreased from 300 CY/hr to 150 CY/hr. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)                                      | 52,832.0  | BCY           | 69,406.38           | 0.00              | 19,557.79         | 88,964.18           |
| 7.2.1.4.2 RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts   | 1,000.0   | LF            | 3,143.52            | 0.00              | 885.80            | 4,029.32            |
| 7.2.1.4.3 USR Scraping<br>(Note: 90% of the 528,324 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 528,324 CY = 475,491 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)  | 475,491.0 | BCY           | 1,031,798.17        | 0.00              | 290,746.96        | 1,322,545.14        |
| 7.2.1.4.1.1 USR Rough Grading<br>(Note: Managing piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (528,324 CY - 70,256 CY)*1.30 = 595,488 CY (Assume an expansion factor of 1.30).)  | 595,488.0 | BCY           | 496,748.11          | 87,881.30         | 164,740.77        | 749,370.17          |
| 7.2.1.4.1.2 USR Diversion Channel Material Hauling<br>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (52,832 CY + 70,256 CY) x 1.30 = 160,014 CY (Assume an expansion factor of 1.30).) | 160,014.0 | LCY           | 261,374.35          | 46,240.57         | 86,681.78         | 394,296.70          |
| 7.2.1.4.1.3 USR Diversion Channel Excavation Loading<br>(Note: Note: Material unit cost has been removed. Existing site material will be loaded out. Quantity equal to hauling quantity.)   | 160,014.0 | LCY           | 160,300.74          | 28,359.32         | 53,161.89         | 241,821.95          |
| <b>7.2.1.5 Grade Channel Embankment</b>   |           | <b>1.0 EA</b> | <b>75,296.56</b>    | <b>0.00</b>       | <b>21,217.57</b>  | <b>96,514.13</b>    |
| 7.2.1.5.1 USR Rough Grading<br>(Note: 70,256 CY * 1.30 = 91,333 CY)   | 91,333.0  | BCY           | 75,296.56           | 0.00              | 21,217.57         | 96,514.13           |
| <b>7.2.1.6 Construct Channel Embankment</b>   |           | <b>1.0 EA</b> | <b>392,154.22</b>   | <b>0.00</b>       | <b>110,503.83</b> | <b>502,658.05</b>   |

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| Description   | Quantity   | UOM       | DirectCost          | SubCMU           | PrimeCMU          | ContractCost        |
|---|------------|-----------|---------------------|------------------|-------------------|---------------------|
| 7.2.1.6.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 70,256 CY * 1.30 = 91,333 CY)  | 91,333.0   | LCY       | 253,463.02          | 0.00             | 71,422.50         | 324,885.51          |
| 7.2.1.6.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | 91,333.0   | ECY       | 26,286.35           | 0.00             | 7,407.14          | 33,693.49           |
| 7.2.1.6.3 USR Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. 70,256 CY * 1.30 = 91,333 CY)   | 91,333.0   | BCY       | 112,404.86          | 0.00             | 31,674.19         | 144,079.05          |
| <b>7.2.1.7 Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>1.0</b> | <b>EA</b> | <b>518,488.85</b>   | <b>0.00</b>      | <b>146,103.24</b> | <b>664,592.09</b>   |
| 7.2.1.7.1 HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Productivity increased from 32 CY/hr. to 50 CY/hr.)  | 39,113.0   | LCY       | 69,468.51           | 0.00             | 19,575.30         | 89,043.81           |
| 7.2.1.7.2 USR Topsoil Placement<br>(Note: 30,087 CY * 1.30 = 39,113 CY)   | 39,113.0   | LCY       | 67,930.85           | 0.00             | 19,142.01         | 87,072.86           |
| 7.2.1.7.3 USR Fine Grading<br>(Note: Assume 6" Placement. 30,087 CY * 6 = 180,522 SY = 37.30 Acres)   | 37.3       | ACR       | 120,993.80          | 0.00             | 34,094.44         | 155,088.24          |
| 7.2.1.7.4 USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | 37.3       | ACR       | 81,015.22           | 0.00             | 22,829.01         | 103,844.23          |
| 7.2.1.7.5 USR Topsoil Loading   | 39,113.0   | LCY       | 67,930.85           | 0.00             | 19,142.01         | 87,072.86           |
| 7.2.1.7.6 USR Topsoil Hauling<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | 39,113.0   | LCY       | 111,149.61          | 0.00             | 31,320.48         | 142,470.09          |
| <b>7.2.1.8 Drainage Outlets</b>   | <b>1.0</b> | <b>EA</b> | <b>1,643,333.47</b> | <b>38,125.45</b> | <b>473,812.69</b> | <b>2,155,271.62</b> |
| 7.2.1.8.15.1 RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover   | 11.0       | EA        | 21,429.18           | 4,789.93         | 7,388.19          | 33,607.30           |
| 7.2.1.8.15.2 RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 11 manholes x 4 additional feet per manhole = 44 feet)   | 44.0       | VLF       | 10,401.09           | 2,324.89         | 3,586.01          | 16,311.99           |
| 7.2.1.8.15.3 HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.   | 11.0       | EA        | 6,384.57            | 1,427.10         | 2,201.23          | 10,012.90           |



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| Description  | Quantity   | UOM       | DirectCost          | SubCMU            | PrimeCMU            | ContractCost        |
|--|------------|-----------|---------------------|-------------------|---------------------|---------------------|
| 7.2.1.8.15.4 RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 11 manholes x 17 CY of backfill material per manhole = 187 CY. 187 CY of material will be used as backfill around the manholes.)  | 187.0      | LCY       | 438.65              | 98.05             | 151.24              | 687.94              |
| 7.2.1.8.15.5 RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 11 manholes x 16 CY per manhole = 176 CY)  | 176.0      | BCY       | 2,366.07            | 528.87            | 815.76              | 3,710.70            |
| <b>7.2.1.9 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>222,205.52</b>   | <b>0.00</b>       | <b>62,614.55</b>    | <b>284,820.08</b>   |
| 7.2.1.9.1 USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | 1.0        | EA        | 10,000.00           | 0.00              | 2,817.87            | 12,817.87           |
| 7.2.1.9.2 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 hours)  | 4,160.0    | HR        | 212,205.52          | 0.00              | 59,796.69           | 272,002.21          |
| <b>7.2.1.10 Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>17,881.24</b>    | <b>0.00</b>       | <b>5,038.69</b>     | <b>22,919.93</b>    |
| 7.2.1.10.1 RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 278 mats x 156.1 SF/mat = 43,395.80 SF)   | 43,395.8   | SF        | 17,881.24           | 0.00              | 5,038.69            | 22,919.93           |
| <b>7.2.2 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>280,000.00</b>   | <b>0.00</b>       | <b>0.00</b>         | <b>280,000.00</b>   |
| (Note: The approximate value of item 09 - Channals and Canals is \$7,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$.)  |            |           |                     |                   |                     |                     |
| 7.2.2.1 USR Mobilization   | 1.0        | LS        | 280,000.00          | 0.00              | 0.00                | 280,000.00          |
| <b>7.3 18 Cultural Resources Preservation</b>  | <b>1.0</b> | <b>EA</b> | <b>76,000.00</b>    | <b>0.00</b>       | <b>0.00</b>         | <b>76,000.00</b>    |
| (Note: The approximate value of Contract 4A is \$7,600,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$76,000.)  |            |           |                     |                   |                     |                     |
| 7.3.1 USR Cultural Resources Preservation  | 1.0        | LS        | 76,000.00           | 0.00              | 0.00                | 76,000.00           |
| <b>8 5.0 - CONTRACT 4B - Diversion Channel Reach 5 490+00 to 495+43 &amp; Gate Structure at Eagle Creek</b>  | <b>1.0</b> | <b>EA</b> | <b>5,679,643.94</b> | <b>774,848.70</b> | <b>1,362,746.39</b> | <b>7,817,239.04</b> |
| <b>8.1 06 Fish and Wildlife Facilities</b>   | <b>1.0</b> | <b>EA</b> | <b>1,379,000.00</b> | <b>0.00</b>       | <b>0.00</b>         | <b>1,379,000.00</b> |
| (Note: The stream quantities for mitigation include 9,094 LF at \$100/LF or \$909,400. The wetland mitigation cost reflects improvements to an entire 19.14 acre site. The wetland mitigation cost is 25,000 per acre for 8.6 acres or approximately \$215,000. The remaining 10.5 acres on the mitigation area will be planted as forested upland buffer to help increase the functions and values of our mitigation and further offset the 3.8 acres of forested habitat impacts currently proposed. The 10.5 acres upland buffer would cost approximately \$10,000 per acre or a total of \$105,000. Thus the wetland and forested mitigation would cost a total of \$320,000.) |            |           |                     |                   |                     |                     |
| <b>8.1.1 Stream Mitigation</b>   | <b>1.0</b> | <b>EA</b> | <b>1,379,000.00</b> | <b>0.00</b>       | <b>0.00</b>         | <b>1,379,000.00</b> |
| 8.1.1.1 USR Stream Mitigation  | 1.0        | LS        | 1,379,000.00        | 0.00              | 0.00                | 1,379,000.00        |

| Description  | Quantity   | UOM       | DirectCost                        | SubCMU      | PrimeCMU          | ContractCost                      |
|--|------------|-----------|-----------------------------------|-------------|-------------------|-----------------------------------|
| <b>8.2 09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | 625,125.8856<br><b>625,125.89</b> | <b>0.00</b> | <b>167,585.82</b> | 792,711.7066<br><b>792,711.71</b> |
| <b>8.2.1 090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | 30,400.0000<br><b>30,400.00</b>   | <b>0.00</b> | <b>0.00</b>       | 30,400.0000<br><b>30,400.00</b>   |
| <i>(Note: The approximate value of item 09 - Channels and Canals is \$760,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$30,400.)</i>   |            |           |                                   |             |                   |                                   |
| 8.2.1.1 USR Mobilization   | 1.0        | LS        | 30,400.00                         | 0.00        | 0.00              | 30,400.00                         |
| <b>8.2.2 0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | 235,112.5119<br><b>235,112.51</b> | <b>0.00</b> | <b>66,251.57</b>  | 301,364.0813<br><b>301,364.08</b> |
| <b>8.2.2.1 Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | 2,999.5245<br><b>2,999.52</b>     | <b>0.00</b> | <b>845.23</b>     | 3,844.7505<br><b>3,844.75</b>     |
| 8.2.2.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 1.40 compaction factor assumed. 101 CY x 1.40 = 141.40 CY)</i>                             | 141.4      | LCY       | 4.3178<br>610.53                  | 0.00        | 172.04            | 5.5344<br>782.57                  |
| 8.2.2.1.2 RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br><i>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)</i> | 101.0      | ECY       | 23.6534<br>2,388.99               | 0.00        | 673.19            | 30.3186<br>3,062.18               |
| <b>8.2.2.2 Dewatering</b>  | <b>1.0</b> | <b>EA</b> | 9,907.4643<br><b>9,907.46</b>     | <b>0.00</b> | <b>2,791.79</b>   | 12,699.2555<br><b>12,699.26</b>   |
| 8.2.2.2.1 USR Laborers for Dewatering at Eagle Creek<br><i>(Note: Bare cost for 2 laborers x 2 hours per day x 22 work days per month x 2 months = 176 hours x \$40/hr. = \$7,040)</i>   | 1.0        | LS        | 7,040.00                          | 0.00        | 1,983.78          | 9,023.78                          |
| 8.2.2.2.2 HTW 026510107173 Petroleum contaminated soil, excavate and stockpile, sandbags for stockpile, excludes transportation and disposal fees  | 100.0      | EA        | 3.9932<br>399.32                  | 0.00        | 112.52            | 5.1185<br>511.85                  |
| 8.2.2.2.3 RSM 225119500900 Swimming pool equipment, filter system, sand or diatomite type, 6,000 gal/hour, incl. pump  | 1.0        | LS        | 2,468.14                          | 0.00        | 695.49            | 3,163.63                          |
| <b>8.2.2.3 090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | 222,205.5231<br><b>222,205.52</b> | <b>0.00</b> | <b>62,614.55</b>  | 284,820.0754<br><b>284,820.08</b> |
| 8.2.2.3.1 USR Signage and Traffic Cone Allowance<br><i>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>   | 1.0        | EA        | 10,000.0000<br>10,000.00          | 0.00        | 2,817.87          | 12,817.8666<br>12,817.87          |
| 8.2.2.3.2 MIL B-LABORER Laborers, General (Lowest paid)<br><i>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 hours)</i>   | 4,160.0    | HR        | 51.0109<br>212,205.52             | 0.00        | 59,796.69         | 65.3851<br>272,002.21             |
| <i>Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours</i>  |            |           |                                   |             |                   |                                   |
| <b>8.2.3 090101 Earthen Dam</b>  | <b>1.0</b> | <b>EA</b> | 359,613.3737<br><b>359,613.37</b> | <b>0.00</b> | <b>101,334.25</b> | 460,947.6252<br><b>460,947.63</b> |
| <i>(Note: The approximate value of item 09 - Channels and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i>   |            |           |                                   |             |                   |                                   |
| <b>8.2.3.1 090101 Embankment</b>   | <b>1.0</b> | <b>EA</b> | 210,727.6925<br><b>210,727.69</b> | <b>0.00</b> | <b>59,380.25</b>  | 270,107.9452<br><b>270,107.95</b> |

| Description  | Quantity   | UOM       | DirectCost      | SubCMU      | PrimeCMU      | ContractCost    |
|--|------------|-----------|-----------------|-------------|---------------|-----------------|
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i>   |            |           |                 |             |               |                 |
| 8.2.3.1.1 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: Common Fill Hauling. 6,404 CY x 1.30 = 8,325 CY)</i>   | 8,325.0    | LCY       | 35,945.32       | 0.00        | 10,128.91     | 46,074.24       |
| 8.2.3.1.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br><i>(Note: Impervious Fill Compaction)</i>  | 3,495.0    | ECY       | 1,005.89        | 0.00        | 283.45        | 1,289.33        |
| 8.2.3.1.3 USR Common Fill Placement  | 8,325.0    | LCY       | 14,458.73       | 0.00        | 4,074.28      | 18,533.01       |
| 8.2.3.1.4 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br><i>(Note: Common Fill Compaction)</i>  | 6,404.0    | ECY       | 1,843.12        | 0.00        | 519.37        | 2,362.49        |
| 8.2.3.1.5 RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br><i>(Note: Impervious Fill. 3,495 CY x 1.30 (Expansion Factor) = 4,544 CY)</i>   | 4,544.0    | LCY       | 127,232.00      | 0.00        | 35,852.28     | 163,084.28      |
| 8.2.3.1.6 USR Impervious Fill Placement  | 4,544.0    | LCY       | 7,891.95        | 0.00        | 2,223.85      | 10,115.79       |
| 8.2.3.1.7 USR Common Fill Loading  | 8,325.0    | LCY       | 14,458.73       | 0.00        | 4,074.28      | 18,533.01       |
| 8.2.3.1.8 USR Impervious Fill Loading  | 4,544.0    | LCY       | 7,891.95        | 0.00        | 2,223.85      | 10,115.79       |
| <b>8.2.3.2 Place Topsoil and Seed</b><br><i>(Note: Topsoil placement for the berm and the channel.)</i>  | <b>1.0</b> | <b>EA</b> | <b>1,190.79</b> | <b>0.00</b> | <b>335.55</b> | <b>1,526.34</b> |
| 8.2.3.2.1 USR Topsoil Placement<br><i>(Note: 477 SY (Assume placed 6 in. or 0,167 yd. thick). 477 SY x 0.167 yd. = 80 CY. 80 CY x 1.30 (Expansion Factor) = 104 CY)</i>  | 104.0      | LCY       | 180.63          | 0.00        | 50.90         | 231.52          |
| 8.2.3.2.2 USR Fine Grading<br><i>(Note: 477 SY = 0.0986 acres)</i>   | 0.1        | ACR       | 319.84          | 0.00        | 90.13         | 409.97          |
| 8.2.3.2.3 USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>  | 0.1        | ACR       | 214.16          | 0.00        | 60.35         | 274.51          |
| 8.2.3.2.4 USR Topsoil Hauling<br><i>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)</i> | 104.0      | LCY       | 295.54          | 0.00        | 83.28         | 378.82          |
| 8.2.3.2.5 USR Topsoil Loading  | 104.0      | LCY       | 180.63          | 0.00        | 50.90         | 231.52          |

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| Description   | Quantity   | UOM       | DirectCost                      | SubCMU      | PrimeCMU         | ContractCost                    |
|---|------------|-----------|---------------------------------|-------------|------------------|---------------------------------|
| <b>8.2.3.3 Inspection Trench</b>  | <b>1.0</b> | <b>EA</b> | 74,564.7665<br><b>74,564.77</b> | <b>0.00</b> | <b>21,011.36</b> | 95,576.1230<br><b>95,576.12</b> |
| 8.2.3.3.1 RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | 1,778.0    | BCY       | 0.7411<br>1,317.63              | 0.00        | 371.29           | 0.9499<br>1,688.92              |
| 8.2.3.3.2 RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br>(Note: Impervious Fill Compaction)  | 1,778.0    | ECY       | 0.2878<br>511.72                | 0.00        | 144.20           | 0.3689<br>655.92                |
| 8.2.3.3.3 USR Impervious Fill Placement<br>(Note: Impervious Fill. 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)   | 2,311.0    | LCY       | 1.7368<br>4,013.71              | 0.00        | 1,131.01         | 2.2262<br>5,144.72              |
| 8.2.3.3.4 RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br>(Note: Impervious Fill 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)  | 2,311.0    | LCY       | 28.0000<br>64,708.00            | 0.00        | 18,233.85        | 35.8900<br>82,941.85            |
| 8.2.3.3.5 USR Impervious Fill Loading   | 2,311.0    | LCY       | 1.7368<br>4,013.71              | 0.00        | 1,131.01         | 2.2262<br>5,144.72              |
| <b>8.2.3.4 Roadway</b>  | <b>1.0</b> | <b>EA</b> | 31,615.5367<br><b>31,615.54</b> | <b>0.00</b> | <b>8,908.84</b>  | 40,524.3732<br><b>40,524.37</b> |
| 8.2.3.4.1 RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.<br>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)   | 1,067.0    | SY        | 0.4003<br>427.13                | 0.00        | 120.36           | 0.5131<br>547.49                |
| 8.2.3.4.2 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4"maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.) | 178.0      | CY        | 18.8325<br>3,352.18             | 0.00        | 944.60           | 24.1392<br>4,296.78             |
| 8.2.3.4.3 RSM 321126130500 Asphalt Paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 4" thick   | 1,067.0    | SY        | 15.2781<br>16,301.74            | 0.00        | 4,593.61         | 19.5833<br>20,895.35            |
| 8.2.3.4.4 RSM 321216130080 Plant-mix asphalt paving, for highways and large paved areas, binder course, 1-1/2" thick, no hauling included   | 1,067.0    | SY        | 5.8314<br>6,222.09              | 0.00        | 1,753.30         | 7.4746<br>7,975.40              |
| 8.2.3.4.5 RSM 321216130300 Plant-mix asphalt paving, for highways and large paved areas, wearing course, 1" thick, no hauling included  | 1,067.0    | SY        | 3.9688<br>4,234.68              | 0.00        | 1,193.28         | 5.0871<br>5,427.96              |
| 8.2.3.4.6 HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Base course aggregate hauling.)  | 178.0      | LCY       | 4.3178<br>768.56                | 0.00        | 216.57           | 5.5344<br>985.13                |
| 8.2.3.4.7 USR Base Course Aggregate Loading   | 178.0      | LCY       | 1.7368<br>309.15                | 0.00        | 87.11            | 2.2262<br>396.26                |

| Description   | Quantity | UOM | DirectCost                     | SubCMU     | PrimeCMU     | ContractCost                   |
|---|----------|-----|--------------------------------|------------|--------------|--------------------------------|
| <b>8.2.3.5 Place Rip-Rap</b><br>(Note: Topsoil placement for the berm and the channel.)   | 1.0      | EA  | 41,514.59<br>41,514.59         | 0.00       | 11,698.26    | 53,212.84<br>53,212.84         |
| 8.2.3.5.1 USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assumed density of rip rap is 1.35 tons/CY 1,180 SY of riprap placed, Assume placement 18" (0.5 yards) thick. 1,180 SY x 0.5 Yard = 590 CY x 1.35 tons/CY = 797 tons) | 797.0    | TON | 52.0886<br>41,514.59           | 0.00       | 11,698.26    | 66.7664<br>53,212.84           |
| <b>8.3 15 Floodway Control-Diversion Struc</b>  | 1.0      | EA  | 3,598,518.0580<br>3,598,518.06 | 774,848.70 | 1,195,160.57 | 5,568,527.3302<br>5,568,527.33 |
| <b>8.3.1 1500 Floodway Control-Diversion Struc</b>  | 1.0      | EA  | 3,466,518.0580<br>3,466,518.06 | 774,848.70 | 1,195,160.57 | 5,436,527.3302<br>5,436,527.33 |
| <b>8.3.1.1 150010 Earthwork for Structures</b>  | 1.0      | EA  | 201,127.0076<br>201,127.01     | 44,956.64  | 69,343.09    | 315,426.7353<br>315,426.74     |
| 8.3.1.1.3.1 USR Braced Excavation Temporary Retaining Structure<br>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)   | 1.0      | LS  | 10,000.00                      | 2,235.24   | 3,447.73     | 15,682.96                      |
| <b>8.3.1.2 150011 Foundation Work</b>   | 1.0      | EA  | 1,883.5931<br>1,883.59         | 421.03     | 649.41       | 2,954.0321<br>2,954.03         |
| 8.3.1.2.1.1.1 RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales  | 100.0    | SF  | 18.8359<br>1,883.59            | 421.03     | 649.41       | 29.5403<br>2,954.03            |
| <b>8.3.1.3 150099 Associated General Items</b>  | 1.0      | EA  | 68,258.3608<br>68,258.36       | 15,257.36  | 23,533.62    | 107,049.3325<br>107,049.33     |
| 8.3.1.3.2.2.1 RSM 263213132110 Generator set, diesel, 3 phase 4 wire, 277/480 V, 60 kW, incl battery, charger, muffler, automatic transfer switch & day tank, excl conduit, wiring, & concrete  | 1.0      | EA  | 33,337.6012<br>33,337.60       | 7,451.74   | 11,493.89    | 52,283.2355<br>52,283.24       |
| <b>8.3.1.4 150005 Bridges, Foundations</b>  | 1.0      | EA  | 1,223,278.2511<br>1,223,278.25 | 273,431.60 | 421,752.87   | 1,918,462.7149<br>1,918,462.71 |
| 8.3.1.4.1.2.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)  | 451.0    | CY  | 757.4478<br>341,608.97         | 76,357.68  | 117,777.43   | 1,187.9026<br>535,744.08       |
| <b>8.3.1.5 150006 Bridges, Abutments and Piers</b>  | 1.0      | EA  | 733,555.2427<br>733,555.24     | 163,966.93 | 252,909.78   | 1,150,431.9488<br>1,150,431.95 |
| 8.3.1.5.2.1.2.2.1 RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)                                      | 488.0    | CY  | 757.4478<br>369,634.54         | 82,622.05  | 127,439.88   | 1,187.9026<br>579,696.47       |
| <b>8.3.1.6 150007 Bridges, Superstructure and Deck</b>  | 1.0      | EA  | 17,300.0000<br>17,300.00       | 3,866.96   | 5,964.57     | 27,131.5254<br>27,131.53       |
| 8.3.1.6.1.1.1 RSM 323410101610 Fabricated highway bridges, precast, prestressed concrete, I beams, 80' to 100' span   | 1.0      | EA  | 17,300.0000<br>17,300.00       | 3,866.96   | 5,964.57     | 27,131.5254<br>27,131.53       |

| Description   | Quantity   | UOM       | DirectCost          | SubCMU            | PrimeCMU          | ContractCost        |
|---|------------|-----------|---------------------|-------------------|-------------------|---------------------|
| <b>8.3.1.7 150041 Gates, Stop Logs-Associated Eqpt</b>  | <b>1.0</b> | <b>EA</b> | <b>1,221,115.60</b> | <b>272,948.19</b> | <b>421,007.25</b> | <b>1,915,071.04</b> |
|   |            |           | 1,221,115.6026      |                   |                   | 1,915,071.0413      |
| 8.3.1.7.1.1.1 USR Obermeyer Gate and Appurtenances<br>(Note: Quotation from Rob Eckman, Obermeyer Hydro, Inc., September 1, 2015 for two, 17 ft. x 28 ft. Obermeyer Gates (including freight).)   | 1.0        | EA        | 1,190,750.00        | 266,160.76        | 410,538.02        | 1,867,448.78        |
|   |            |           | 1,190,750.0000      |                   |                   | 1,867,448.7801      |
| 8.3.1.7.1.1.2 RSM 015419500200 Crane crew, daily use for small jobs, 25-ton truck-mounted hydraulic crane, portal to portal   | 6.0        | DAY       | 5,424.03            | 1,212.40          | 1,870.06          | 8,506.48            |
|   |            |           | 904.0047            |                   |                   | 1,417.7472          |
| 8.3.1.7.1.1.3 MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Four laborers required at 48 hours each to install the gates)   | 192.0      | HR        | 9,941.57            | 2,222.18          | 3,427.58          | 15,591.33           |
|   |            |           | 51.7790             |                   |                   | 81.2049             |
| 8.3.1.7.1.1.4 USR Testing<br>(Note: Per September 1, 2015 Obermeyer Hydro Quotation the cost of having an Obermeyer Hydro Representative onsite for testing is \$1,500/day. An estimate 10 days of testing are required for the gates.) | 10.0       | EA        | 15,000.00           | 3,352.85          | 5,171.59          | 23,524.44           |
|   |            |           | 1,500.0000          |                   |                   | 2,352.4444          |
| <b>8.3.2 090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>132,000.00</b>   | <b>0.00</b>       | <b>0.00</b>       | <b>132,000.00</b>   |
|   |            |           | 132,000.0000        |                   |                   | 132,000.0000        |
| (Note: The approximate value of Floodway Control-Diversion Struc is \$3,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$132,000.)    |            |           |                     |                   |                   |                     |
| 8.3.2.1 USR Mobilization  | 1.0        | LS        | 132,000.00          | 0.00              | 0.00              | 132,000.00          |
| <b>8.4 18 Cultural Resources Preservation</b>   | <b>1.0</b> | <b>EA</b> | <b>77,000.00</b>    | <b>0.00</b>       | <b>0.00</b>       | <b>77,000.00</b>    |
|   |            |           | 77,000.0000         |                   |                   | 77,000.0000         |
| (Note: The approximate value of Contract 4B is \$7,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$77,000.)   |            |           |                     |                   |                   |                     |
| 8.4.1 USR Cultural Resources Preservation   | 1.0        | LS        | 77,000.00           | 0.00              | 0.00              | 77,000.00           |

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| Description  | Quantity   | UOM       | Contractor                        | DirectLabor         | DirectEQ            | DirectMatl          | DirectSubBid     | DirectUserCost       | DirectCost           |
|--|------------|-----------|-----------------------------------|---------------------|---------------------|---------------------|------------------|----------------------|----------------------|
| <b>Project Direct Summary</b>  |            |           |                                   | <b>9,525,407.69</b> | <b>7,474,312.10</b> | <b>3,542,258.19</b> | <b>17,300.00</b> | <b>25,344,089.06</b> | <b>45,903,367.04</b> |
|  |            |           |                                   | 1,776,751.4598      | 1,368,665.7541      | 941,476.2759        | 0.0000           |                      | 11,114,306.6098      |
| <b>1.0 - CONTRACT 1A - Diversion Channel Reach 1 0+00 to 120+00</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>1,776,751.46</b> | <b>1,368,665.75</b> | <b>941,476.28</b>   | <b>0.00</b>      | <b>7,027,413.12</b>  | <b>11,114,306.61</b> |
|  |            |           |                                   | 0.0000              | 0.0000              | 0.0000              | 0.0000           |                      | 5,510,973.0000       |
| <b>01 Lands and Damages</b>  | <b>1.0</b> | <b>EA</b> |                                   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>      | <b>5,510,973.00</b>  | <b>5,510,973.00</b>  |
| <b>02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>81,007.97</b>    | <b>24,892.27</b>    | <b>149,571.79</b>   | <b>0.00</b>      | <b>29,574.12</b>     | <b>285,046.15</b>    |
|  |            |           |                                   | 81,007.9651         | 24,892.2718         | 149,571.7921        | 0.0000           |                      | 285,046.1490         |
|  |            |           |                                   | 73,904.7463         | 22,810.7120         | 85,960.2121         | 0.0000           |                      | 212,249.7904         |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>Utility Subcontractor</b>      | <b>73,904.75</b>    | <b>22,810.71</b>    | <b>85,960.21</b>    | <b>0.00</b>      | <b>29,574.12</b>     | <b>212,249.79</b>    |
|  |            |           |                                   | 73,904.7463         | 22,810.7120         | 85,960.2121         | 0.0000           |                      | 204,249.7904         |
| <b>020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>Utility Subcontractor</b>      | <b>73,904.75</b>    | <b>22,810.71</b>    | <b>85,960.21</b>    | <b>0.00</b>      | <b>21,574.12</b>     | <b>204,249.79</b>    |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>  |            |           |                                   |                     |                     |                     |                  |                      |                      |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>  |            |           |                                   |                     |                     |                     |                  |                      |                      |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>  |            |           |                                   |                     |                     |                     |                  |                      |                      |
|  |            |           |                                   | 0.0000              | 0.0000              | 0.0000              | 0.0000           |                      | 8,000.0000           |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> | <b>Utility Subcontractor</b>      | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>      | <b>8,000.00</b>      | <b>8,000.00</b>      |
| <i>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$8,000.)</i> |            |           |                                   |                     |                     |                     |                  |                      |                      |
| <b>Roadways</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>7,103.22</b>     | <b>2,081.56</b>     | <b>63,611.58</b>    | <b>0.00</b>      | <b>0.00</b>          | <b>72,796.36</b>     |
|  |            |           |                                   | 7,103.2188          | 2,081.5598          | 63,611.5800         | 0.0000           |                      | 72,796.3586          |
| <b>TR-89 Cul-De-Sac</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>7,103.22</b>     | <b>2,081.56</b>     | <b>63,611.58</b>    | <b>0.00</b>      | <b>0.00</b>          | <b>72,796.36</b>     |
|  |            |           |                                   | 7,103.2188          | 2,081.5598          | 63,611.5800         | 0.0000           |                      | 72,796.3586          |
| <b>09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>1,695,743.49</b> | <b>1,343,773.48</b> | <b>791,904.48</b>   | <b>0.00</b>      | <b>1,333,866.00</b>  | <b>5,165,287.46</b>  |
|  |            |           |                                   | 1,695,743.4947      | 1,343,773.4824      | 791,904.4838        | 0.0000           |                      | 5,165,287.4609       |
| <b>0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>1,695,743.49</b> | <b>1,343,773.48</b> | <b>791,904.48</b>   | <b>0.00</b>      | <b>973,866.00</b>    | <b>4,805,287.46</b>  |
|  |            |           |                                   | 1,695,743.4947      | 1,343,773.4824      | 791,904.4838        | 0.0000           |                      | 4,805,287.4609       |
| <b>Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>117,090.02</b>   | <b>88,856.92</b>    | <b>0.00</b>         | <b>0.00</b>      | <b>0.00</b>          | <b>205,946.95</b>    |
|  |            |           |                                   | 117,090.0245        | 88,856.9224         | 0.0000              | 0.0000           |                      | 205,946.9468         |
| <b>090113 Traffic Control</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>212,205.52</b>   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>      | <b>10,000.00</b>     | <b>222,205.52</b>    |
|  |            |           |                                   | 212,205.5231        | 0.0000              | 0.0000              | 0.0000           |                      | 222,205.5231         |
| <b>Construct Diversion Channel Tie-in to Blanchard River</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>           | <b>39,477.56</b>    | <b>14,668.04</b>    | <b>400,190.02</b>   | <b>0.00</b>      | <b>0.00</b>          | <b>454,335.62</b>    |
|  |            |           |                                   | 39,477.5643         | 14,668.0407         | 400,190.0175        | 0.0000           |                      | 454,335.6225         |
| <b>Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | <b>Pile Driving Subcontractor</b> | <b>60,757.66</b>    | <b>58,797.67</b>    | <b>790.00</b>       | <b>0.00</b>      | <b>0.00</b>          | <b>120,345.33</b>    |
|  |            |           |                                   | 60,757.6607         | 58,797.6717         | 790.0000            | 0.0000           |                      | 120,345.3325         |
|  |            |           |                                   | 14,791.5426         | 10,880.2442         | 40,347.4500         | 0.0000           |                      | 66,019.2368          |

| Description  | Quantity | UOM | Contractor                          | DirectLabor  | DirectEQ     | DirectMatl | DirectSubBid | DirectUserCost | DirectCost   |
|--|----------|-----|-------------------------------------|--------------|--------------|------------|--------------|----------------|--------------|
| Install Access Road  | 1.0      | EA  | Prime Contractor                    | 14,791.54    | 10,880.24    | 40,347.45  | 0.00         | 0.00           | 66,019.24    |
| Excavation of Diversion Channel  | 1.0      | EA  | Prime Contractor                    | 476,912.87   | 777,825.07   | 790.00     | 0.0000       | 0.00           | 1,255,527.94 |
| Grade Channel Embankment   | 1.0      | EA  | Prime Contractor                    | 25,142.29    | 44,582.04    | 0.00       | 0.0000       | 0.00           | 69,724.32    |
| Construct Channel Embankment   | 1.0      | EA  | Prime Contractor                    | 204,633.77   | 137,682.21   | 0.00       | 0.0000       | 0.00           | 342,315.98   |
| Place Topsoil and Seed<br>(Note: Topsoil placement for the berm and the channel.)  | 1.0      | EA  | Prime Contractor                    | 256,258.22   | 167,816.49   | 60,376.10  | 0.0000       | 0.00           | 484,450.81   |
| Drainage Outlets   | 1.0      | EA  | Drainage Structure<br>Subcontractor | 284,310.35   | 42,043.68    | 285,448.06 | 0.00         | 963,866.00     | 1,575,668.09 |
| Erosion Mats   | 1.0      | EA  | Prime Contractor                    | 4,163.68     | 621.11       | 3,962.86   | 0.00         | 0.00           | 8,747.66     |
| 090101 Mob, Demob & Preparatory Work<br>(Note: The approximate value of item 09 - Channals and Canals and Contract 1B is \$9,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$360,000.) | 1.0      | EA  |                                     | 0.00         | 0.00         | 0.00       | 0.00         | 360,000.00     | 360,000.00   |
| 18 Cultural Resources Preservation<br>(Note: The approximate value of Contracts 1A and1B is \$15,300,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$153,000.)   | 1.0      | EA  |                                     | 0.00         | 0.00         | 0.00       | 0.00         | 153,000.00     | 153,000.00   |
| 1.0 - CONTRACT 1B - Bridges Reach 1 0+00 to 120+00   | 1.0      | EA  | Prime Contractor                    | 0.00         | 0.00         | 0.00       | 0.00         | 2,352,000.00   | 2,352,000.00 |
| 02 Relocations   | 1.0      | EA  | Prime Contractor                    | 0.00         | 0.00         | 0.00       | 0.00         | 2,352,000.00   | 2,352,000.00 |
| Bridges  | 1.0      | EA  |                                     | 0.00         | 0.00         | 0.00       | 0.00         | 2,352,000.00   | 2,352,000.00 |
| 2.0 - CONTRACT 2A - Diversion Channel Reach 2 120+00 to 235+00   | 1.0      | EA  | Prime Contractor                    | 2,079,586.45 | 1,980,078.98 | 521,812.85 | 0.00         | 2,892,048.50   | 7,473,526.77 |
| 02 Relocations   | 1.0      | EA  | Prime Contractor                    | 262,570.76   | 35,810.92    | 255,506.90 | 0.00         | 28,161.62      | 582,050.19   |
| Dry Road Crossing 215+73   | 1.0      | EA  | Prime Contractor                    | 229,442.97   | 27,657.81    | 199,515.04 | 0.00         | 0.00           | 456,615.82   |
| 0203 Cemetery, Utilities, & Structure  | 1.0      | EA  | Prime Contractor                    | 33,127.78    | 8,153.11     | 55,991.86  | 0.00         | 28,161.62      | 125,434.37   |
| 020318 Utilities   | 1.0      | EA  | Utility                             | 33,127.78    | 8,153.11     | 55,991.86  | 0.00         | 20,161.62      | 117,434.37   |



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| Description   | Quantity   | UOM       | Contractor Subcontractor                | DirectLabor         | DirectEQ            | DirectMatl        | DirectSubBid | DirectUserCost      | DirectCost          |
|---|------------|-----------|---|---------------------|---------------------|-------------------|--------------|---------------------|---------------------|
|   |            |           |   | 0.0000              | 0.0000              | 0.0000            | 0.0000       |                     | 8,000.0000          |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>Utility Subcontractor</b>            | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>8,000.00</b>     | <b>8,000.00</b>     |
| <i>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$8,000.)</i>                          |            |           |   |                     |                     |                   |              |                     |                     |
| <b>08 Roads, Railroads, and Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>2,084,000.00</b> | <b>2,084,000.00</b> |
| <b>09 Channels and Canals</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>1,731,165.77</b> | <b>1,932,974.83</b> | <b>219,255.81</b> | <b>0.00</b>  | <b>453,612.00</b>   | <b>4,337,008.41</b> |
| <b>0901 Channels</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>1,731,165.77</b> | <b>1,932,974.83</b> | <b>219,255.81</b> | <b>0.00</b>  | <b>197,612.00</b>   | <b>4,081,008.41</b> |
| <b>Drainage Ditch</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>27,709.05</b>    | <b>21,025.53</b>    | <b>0.00</b>       | <b>0.00</b>  | <b>0.00</b>         | <b>48,734.58</b>    |
| <b>Strip and Stockpile Topsoil</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>62,543.20</b>    | <b>60,595.24</b>    | <b>790.00</b>     | <b>0.00</b>  | <b>0.00</b>         | <b>123,928.44</b>   |
| <b>Install Access Road</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>14,172.73</b>    | <b>10,425.07</b>    | <b>38,659.50</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>63,257.30</b>    |
| <b>Excavation of Diversion Channel</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>973,039.94</b>   | <b>1,582,790.53</b> | <b>24,581.53</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>2,580,411.97</b> |
| <b>Grade Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>4,959.55</b>     | <b>8,794.22</b>     | <b>0.00</b>       | <b>0.00</b>  | <b>0.00</b>         | <b>13,753.76</b>    |
| <b>Construct Channel Embankment</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>40,365.90</b>    | <b>27,159.08</b>    | <b>0.00</b>       | <b>0.00</b>  | <b>0.00</b>         | <b>67,524.98</b>    |
| <b>Place Topsoil and Seed</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>322,648.53</b>   | <b>211,290.22</b>   | <b>76,025.27</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>609,964.02</b>   |
| <i>(Note: Topsoil placement for the berm and the channel.)</i>  |            |           |   |                     |                     |                   |              |                     |                     |
| <b>Drainage Outlets</b>   | <b>1.0</b> | <b>EA</b> | <b>Drainage Structure Subcontractor</b> | <b>59,254.61</b>    | <b>8,766.71</b>     | <b>65,620.90</b>  | <b>0.00</b>  | <b>187,612.00</b>   | <b>321,254.23</b>   |
| <b>090113 Traffic Control</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>212,205.52</b>   | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>10,000.00</b>    | <b>222,205.52</b>   |
| <b>Erosion Mats</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>14,266.74</b>    | <b>2,128.23</b>     | <b>13,578.62</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>29,973.59</b>    |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> |   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>256,000.00</b>   | <b>256,000.00</b>   |
| <i>(Note: The approximate value of item 09 - Channels and Canals and Contract 2B is \$6,400,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$256,000.)</i> |            |           |   |                     |                     |                   |              |                     |                     |
| <b>15 Floodway Control-Diversion Struc</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>                 | <b>85,849.92</b>    | <b>11,293.23</b>    | <b>47,050.14</b>  | <b>0.00</b>  | <b>226,274.88</b>   | <b>370,468.17</b>   |

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| Description   | Quantity | UOM | Contractor               | DirectLabor                           | DirectEQ                              | DirectMatl                        | DirectSubBid          | DirectUserCost | DirectCost                            |
|---|----------|-----|--------------------------|---------------------------------------|---------------------------------------|-----------------------------------|-----------------------|----------------|---------------------------------------|
| 1500 Floodway Control-Diversion Struc   | 1.0      | EA  | Prime Contractor         | 85,849.9221<br><b>85,849.92</b>       | 11,293.2317<br><b>11,293.23</b>       | 47,050.1400<br><b>47,050.14</b>   | 0.0000<br><b>0.00</b> | 226,274.88     | 370,468.1688<br><b>370,468.17</b>     |
| 150005 Bridges, Foundations   | 1.0      | EA  | Prime Contractor         | 55,757.0842<br><b>55,757.08</b>       | 5,932.6410<br><b>5,932.64</b>         | 33,759.1400<br><b>33,759.14</b>   | 0.0000<br><b>0.00</b> | 0.00           | 95,448.8651<br><b>95,448.87</b>       |
| 150006 Bridges, Abutments and Piers   | 1.0      | EA  | Prime Contractor         | 30,092.8379<br><b>30,092.84</b>       | 5,360.5907<br><b>5,360.59</b>         | 13,291.0000<br><b>13,291.00</b>   | 0.0000<br><b>0.00</b> | 82,528.88      | 131,273.3036<br><b>131,273.30</b>     |
| 150041 Gates, Stop Logs-Associated Eqpt   | 1.0      | EA  | Prime Contractor         | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 143,746.00     | 143,746.0000<br><b>143,746.00</b>     |
| 18 Cultural Resources Preservation  | 1.0      | EA  | Prime Contractor         | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 100,000.00     | 100,000.0000<br><b>100,000.00</b>     |
| <i>(Note: The approximate value of Contracts 2A and 2B is \$10,000,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$100,000.)</i>  |          |     |                          |                                       |                                       |                                   |                       |                |                                       |
| 2.0 - CONTRACT 2B - Bridges Reach 2<br>120+00 to 235+00   | 1.0      | EA  | Prime Contractor         | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 1,082,000.00   | 1,082,000.0000<br><b>1,082,000.00</b> |
| 02 Relocations  | 1.0      | EA  | Prime Contractor         | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 1,082,000.00   | 1,082,000.0000<br><b>1,082,000.00</b> |
| Bridges   | 1.0      | EA  | Prime Contractor         | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 1,082,000.00   | 1,082,000.0000<br><b>1,082,000.00</b> |
| 3.0 - CONTRACT 3A - Diversion Channel<br>Reach 3 235+00 to 350+00   | 1.0      | EA  | Prime Contractor         | 2,091,372.5325<br><b>2,091,372.53</b> | 2,052,879.3471<br><b>2,052,879.35</b> | 509,352.7718<br><b>509,352.77</b> | 0.0000<br><b>0.00</b> | 1,189,381.60   | 5,842,986.2504<br><b>5,842,986.25</b> |
| 02 Relocations  | 1.0      | EA  | Prime Contractor         | 6,313.1749<br><b>6,313.17</b>         | 1,177.4348<br><b>1,177.43</b>         | 14,862.2121<br><b>14,862.21</b>   | 0.0000<br><b>0.00</b> | 25,574.12      | 47,926.9418<br><b>47,926.94</b>       |
| 0203 Cemetery, Utilities, & Structure   | 1.0      | EA  | Prime Contractor         | 6,313.1749<br><b>6,313.17</b>         | 1,177.4348<br><b>1,177.43</b>         | 14,862.2121<br><b>14,862.21</b>   | 0.0000<br><b>0.00</b> | 25,574.12      | 47,926.9418<br><b>47,926.94</b>       |
| 020318 Utilities  | 1.0      | EA  | Utility<br>Subcontractor | 6,313.1749<br><b>6,313.17</b>         | 1,177.4348<br><b>1,177.43</b>         | 14,862.2121<br><b>14,862.21</b>   | 0.0000<br><b>0.00</b> | 21,574.12      | 43,926.9418<br><b>43,926.94</b>       |
| 090101 Mob, Demob & Preparatory Work  | 1.0      | EA  |                          | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 4,000.00       | 4,000.0000<br><b>4,000.00</b>         |
| <i>(Note: The approximate value of the Utilities Relocation is \$100,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$4,000.)</i> |          |     |                          |                                       |                                       |                                   |                       |                |                                       |
| 09 Channels and Canals  | 1.0      | EA  | Prime Contractor         | 1,919,311.7906<br><b>1,919,311.79</b> | 2,009,079.6224<br><b>2,009,079.62</b> | 336,093.0397<br><b>336,093.04</b> | 0.0000<br><b>0.00</b> | 779,644.60     | 5,044,129.0567<br><b>5,044,129.06</b> |
| 0901 Channels   | 1.0      | EA  | Prime Contractor         | 1,904,758.7006<br><b>1,904,758.70</b> | 1,999,900.5500<br><b>1,999,900.55</b> | 329,790.8347<br><b>329,790.83</b> | 0.0000<br><b>0.00</b> | 287,644.60     | 4,522,094.6893<br><b>4,522,094.69</b> |
| Drainage Ditch  | 1.0      | EA  | Prime Contractor         | 52,876.0942<br><b>52,876.09</b>       | 40,127.7060<br><b>40,127.71</b>       | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.00           | 93,003.8001<br><b>93,003.80</b>       |
| Strip and Stockpile Topsoil   | 1.0      | EA  | Prime Contractor         | 65,019.9016<br><b>65,019.90</b>       | 63,088.6316<br><b>63,088.63</b>       | 790.0000<br><b>790.00</b>         | 0.0000<br><b>0.00</b> | 0.00           | 128,898.5332<br><b>128,898.53</b>     |

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| Description  | Quantity | UOM | Contractor       | DirectLabor                           | DirectEQ                              | DirectMatl                        | DirectSubBid          | DirectUserCost | DirectCost                            |
|--|----------|-----|------------------|---------------------------------------|---------------------------------------|-----------------------------------|-----------------------|----------------|---------------------------------------|
| Install Access Road  | 1.0      | EA  | Prime Contractor | 14,172.7332<br><b>14,172.73</b>       | 10,425.0653<br><b>10,425.07</b>       | 38,659.5000<br><b>38,659.50</b>   | 0.0000<br><b>0.00</b> | 0.00           | 63,257.2984<br><b>63,257.30</b>       |
| Excavation of Diversion Channel  | 1.0      | EA  | Prime Contractor | 1,128,636.6430<br><b>1,128,636.64</b> | 1,642,512.3995<br><b>1,642,512.40</b> | 143,598.6250<br><b>143,598.63</b> | 0.0000<br><b>0.00</b> | 0.00           | 2,914,747.6675<br><b>2,914,747.67</b> |
| Grade Channel Embankment   | 1.0      | EA  | Prime Contractor | 4,608.1604<br><b>4,608.16</b>         | 8,171.1420<br><b>8,171.14</b>         | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.00           | 12,779.3024<br><b>12,779.30</b>       |
| Construct Channel Embankment   | 1.0      | EA  | Prime Contractor | 53,270.9961<br><b>53,271.00</b>       | 33,381.7043<br><b>33,381.70</b>       | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.00           | 86,652.7003<br><b>86,652.70</b>       |
| Place Topsoil and Seed<br>(Note: Topsoil placement for the berm and the channel.)  | 1.0      | EA  | Prime Contractor | 280,260.0239<br><b>280,260.02</b>     | 183,533.8789<br><b>183,533.88</b>     | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 66,032.60      | 529,826.5068<br><b>529,826.51</b>     |
| Drainage Outlets   | 1.0      | EA  | Prime Contractor | 73,358.8027<br><b>73,358.80</b>       | 10,958.3500<br><b>10,958.35</b>       | 92,277.4677<br><b>92,277.47</b>   | 0.0000<br><b>0.00</b> | 211,612.00     | 388,206.6205<br><b>388,206.62</b>     |
| 090113 Traffic Control   | 1.0      | EA  | Prime Contractor | 212,205.5231<br><b>212,205.52</b>     | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 10,000.00      | 222,205.5231<br><b>222,205.52</b>     |
| Erosion Mats   | 1.0      | EA  | Prime Contractor | 11,205.2063<br><b>11,205.21</b>       | 1,671.5273<br><b>1,671.53</b>         | 10,664.7520<br><b>10,664.75</b>   | 0.0000<br><b>0.00</b> | 0.00           | 23,541.4856<br><b>23,541.49</b>       |
| Drainage Ditch Diversion to Aurund Run   | 1.0      | EA  | Prime Contractor | 9,144.6160<br><b>9,144.62</b>         | 6,030.1452<br><b>6,030.15</b>         | 43,800.4900<br><b>43,800.49</b>   | 0.0000<br><b>0.00</b> | 0.00           | 58,975.2512<br><b>58,975.25</b>       |
| 090101 Mob, Demob & Preparatory Work<br>(Note: The approximate value of item 09 - Channals and Canals and Contract 3B is \$12,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$492,000.) | 1.0      | EA  | Prime Contractor | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 492,000.00     | 492,000.0000<br><b>492,000.00</b>     |
| Reroute Tributary Before Stream Crossing   | 1.0      | EA  | Prime Contractor | 14,553.0900<br><b>14,553.09</b>       | 9,179.0724<br><b>9,179.07</b>         | 6,302.2050<br><b>6,302.21</b>     | 0.0000<br><b>0.00</b> | 0.00           | 30,034.3674<br><b>30,034.37</b>       |
| 15 Floodway Control-Diversion Struc  | 1.0      | EA  | Prime Contractor | 165,747.5669<br><b>165,747.57</b>     | 42,622.2899<br><b>42,622.29</b>       | 158,397.5200<br><b>158,397.52</b> | 0.0000<br><b>0.00</b> | 247,162.88     | 613,930.2518<br><b>613,930.25</b>     |
| 1500 Floodway Control-Diversion Struc  | 1.0      | EA  | Prime Contractor | 165,747.5669<br><b>165,747.57</b>     | 42,622.2899<br><b>42,622.29</b>       | 158,397.5200<br><b>158,397.52</b> | 0.0000<br><b>0.00</b> | 247,162.88     | 613,930.2518<br><b>613,930.25</b>     |
| 150010 Earthwork for Structures  | 1.0      | EA  | Prime Contractor | 75,946.3554<br><b>75,946.36</b>       | 30,908.6349<br><b>30,908.63</b>       | 83,205.0000<br><b>83,205.00</b>   | 0.0000<br><b>0.00</b> | 10,000.00      | 200,059.9903<br><b>200,059.99</b>     |
| 150099 Associated General Items  | 1.0      | EA  | Prime Contractor | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 25,750.0000<br><b>25,750.00</b>   | 0.0000<br><b>0.00</b> | 0.00           | 25,750.0000<br><b>25,750.00</b>       |
| 150005 Bridges, Foundations  | 1.0      | EA  | Prime Contractor | 59,269.3414<br><b>59,269.34</b>       | 6,306.3506<br><b>6,306.35</b>         | 35,885.7000<br><b>35,885.70</b>   | 0.0000<br><b>0.00</b> | 0.00           | 101,461.3921<br><b>101,461.39</b>     |
| 150006 Bridges, Abutments and Piers  | 1.0      | EA  | Prime Contractor | 30,531.8701<br><b>30,531.87</b>       | 5,407.3044<br><b>5,407.30</b>         | 13,556.8200<br><b>13,556.82</b>   | 0.0000<br><b>0.00</b> | 82,528.88      | 132,024.8695<br><b>132,024.87</b>     |
| 150041 Gates, Stop Logs-Associated Eqpt  | 1.0      | EA  | Prime Contractor | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>                 | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 154,634.00     | 154,634.0000<br><b>154,634.00</b>     |
|  |          |     |                  | 0.0000                                | 0.0000                                | 0.0000                            | 0.0000                |                | 137,000.0000                          |

| Description  | Quantity   | UOM       | Contractor                       | DirectLabor         | DirectEQ            | DirectMatl        | DirectSubBid | DirectUserCost      | DirectCost          |
|--|------------|-----------|----------------------------------|---------------------|---------------------|-------------------|--------------|---------------------|---------------------|
| <b>18 Cultural Resource Preservation</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>137,000.00</b>   | <b>137,000.00</b>   |
| <i>(Note: The approximate value of Contracts 3A and 3B is \$13,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$137,000.)</i>   |            |           |                                  |                     |                     |                   |              |                     |                     |
|  |            |           |                                  | 0.0000              | 0.0000              | 0.0000            | 0.0000       |                     | 6,491,000.0000      |
| <b>3.0 - CONTRACT 3B - Bridges Reach 3<br/>235+00 to 350+00</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
|  |            |           |                                  | 0.0000              | 0.0000              | 0.0000            | 0.0000       |                     | 6,491,000.0000      |
| <b>02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
|  |            |           |                                  | 0.0000              | 0.0000              | 0.0000            | 0.0000       |                     | 6,491,000.0000      |
| <b>Bridges</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
|  |            |           |                                  | 2,050,673.8934      | 1,871,926.3773      | 515,924.1402      | 0.0000       |                     | 5,867,903.4699      |
| <b>4.0 - CONTRACT 4A - Diversion Channel<br/>Reach 4 350+00 to 490+00</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>2,050,673.89</b> | <b>1,871,926.38</b> | <b>515,924.14</b> | <b>0.00</b>  | <b>1,429,379.06</b> | <b>5,867,903.47</b> |
|  |            |           |                                  | 20,505.6262         | 5,349.5760          | 136,001.5161      | 0.0000       |                     | 184,018.3383        |
| <b>02 Relocations</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>20,505.63</b>    | <b>5,349.58</b>     | <b>136,001.52</b> | <b>0.00</b>  | <b>22,161.62</b>    | <b>184,018.34</b>   |
|  |            |           |                                  | 6,225.4982          | 1,150.4460          | 8,778.3561        | 0.0000       |                     | 38,315.9202         |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>6,225.50</b>     | <b>1,150.45</b>     | <b>8,778.36</b>   | <b>0.00</b>  | <b>22,161.62</b>    | <b>38,315.92</b>    |
|  |            |           |                                  | 6,225.4982          | 1,150.4460          | 8,778.3561        | 0.0000       |                     | 36,315.9202         |
| <b>020318 Utilities</b>  | <b>1.0</b> | <b>EA</b> | <b>Utility<br/>Subcontractor</b> | <b>6,225.50</b>     | <b>1,150.45</b>     | <b>8,778.36</b>   | <b>0.00</b>  | <b>20,161.62</b>    | <b>36,315.92</b>    |
|  |            |           |                                  | 0.0000              | 0.0000              | 0.0000            | 0.0000       |                     | 2,000.0000          |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>  | <b>1.0</b> | <b>EA</b> |                                  | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>  | <b>2,000.00</b>     | <b>2,000.00</b>     |
| <i>(Note: The approximate value of the Utilities Relocation is \$50,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$2,000.)</i> |            |           |                                  |                     |                     |                   |              |                     |                     |
| <b>Roadways</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>14,280.13</b>    | <b>4,199.13</b>     | <b>127,223.16</b> | <b>0.00</b>  | <b>0.00</b>         | <b>145,702.42</b>   |
|  |            |           |                                  | 14,280.1280         | 4,199.1300          | 127,223.1600      | 0.0000       |                     | 145,702.4180        |
| <b>TR-76 Cul-De-Sac</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>7,140.06</b>     | <b>2,099.57</b>     | <b>63,611.58</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>72,851.21</b>    |
|  |            |           |                                  | 7,140.0640          | 2,099.5650          | 63,611.5800       | 0.0000       |                     | 72,851.2090         |
| <b>TR-49 Cul-De-Sac</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>7,140.06</b>     | <b>2,099.57</b>     | <b>63,611.58</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>72,851.21</b>    |
|  |            |           |                                  | 7,140.0640          | 2,099.5650          | 63,611.5800       | 0.0000       |                     | 72,851.2090         |
| <b>09 Channels and Canals</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>2,030,168.27</b> | <b>1,866,576.80</b> | <b>379,922.62</b> | <b>0.00</b>  | <b>1,331,217.44</b> | <b>5,607,885.13</b> |
|  |            |           |                                  | 2,030,168.2671      | 1,866,576.8013      | 379,922.6241      | 0.0000       |                     | 5,607,885.1316      |
| <b>0901 Channels</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>2,030,168.27</b> | <b>1,866,576.80</b> | <b>379,922.62</b> | <b>0.00</b>  | <b>1,051,217.44</b> | <b>5,327,885.13</b> |
|  |            |           |                                  | 2,030,168.2671      | 1,866,576.8013      | 379,922.6241      | 0.0000       |                     | 5,327,885.1316      |
| <b>Drainage Ditch</b>  | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>106,313.62</b>   | <b>80,698.99</b>    | <b>0.00</b>       | <b>0.00</b>  | <b>0.00</b>         | <b>187,012.61</b>   |
|  |            |           |                                  | 106,313.6158        | 80,698.9926         | 0.0000            | 0.0000       |                     | 187,012.6084        |
| <b>Strip and Stockpile Topsoil</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>86,365.62</b>    | <b>84,578.18</b>    | <b>790.00</b>     | <b>0.00</b>  | <b>0.00</b>         | <b>171,733.79</b>   |
|  |            |           |                                  | 86,365.6178         | 84,578.1751         | 790.0000          | 0.0000       |                     | 171,733.7929        |
| <b>Install Access Road</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b>          | <b>17,253.47</b>    | <b>12,691.17</b>    | <b>47,062.95</b>  | <b>0.00</b>  | <b>0.00</b>         | <b>77,007.59</b>    |
|  |            |           |                                  | 17,253.4728         | 12,691.1710         | 47,062.9500       | 0.0000       |                     | 77,007.5938         |
|  |            |           |                                  | 768,167.5011        | 1,253,813.7650      | 790.0000          | 0.0000       |                     | 2,022,771.2662      |

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| Description   | Quantity | UOM | Contractor       | DirectLabor  | DirectEQ     | DirectMatl   | DirectSubBid | DirectUserCost | DirectCost   |
|---|----------|-----|------------------|--------------|--------------|--------------|--------------|----------------|--------------|
| Excavation of Diversion Channel   | 1.0      | EA  | Prime Contractor | 768,167.50   | 1,253,813.77 | 790.00       | 0.00         | 0.00           | 2,022,771.27 |
| Grade Channel Embankment  | 1.0      | EA  | Prime Contractor | 27,151.61    | 48,144.95    | 0.00         | 0.00         | 0.00           | 75,296.56    |
| Construct Channel Embankment  | 1.0      | EA  | Prime Contractor | 232,864.12   | 159,290.10   | 0.00         | 0.00         | 0.00           | 392,154.22   |
| Place Topsoil and Seed<br>(Note: Topsoil placement for the berm and the channel.)   | 1.0      | EA  | Prime Contractor | 279,946.60   | 182,577.33   | 55,964.92    | 0.00         | 0.00           | 518,488.85   |
| Drainage Outlets  | 1.0      | EA  | Prime Contractor | 291,389.15   | 43,512.68    | 267,214.20   | 0.00         | 1,041,217.44   | 1,643,333.47 |
| 090113 Traffic Control  | 1.0      | EA  | Prime Contractor | 212,205.52   | 0.00         | 0.00         | 0.00         | 10,000.00      | 222,205.52   |
| Erosion Mats  | 1.0      | EA  | Prime Contractor | 8,511.06     | 1,269.63     | 8,100.55     | 0.00         | 0.00           | 17,881.24    |
| 090101 Mob, Demob & Preparatory Work<br>(Note: The approximate value of item 09 - Channals and Canals is \$7,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$.)   | 1.0      | EA  | Prime Contractor | 0.00         | 0.00         | 0.00         | 0.00         | 280,000.00     | 280,000.00   |
| 18 Cultural Resources Preservation<br>(Note: The approximate value of Contract 4A is \$7,600,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$76,000.)   | 1.0      | EA  | Prime Contractor | 0.00         | 0.00         | 0.00         | 0.00         | 76,000.00      | 76,000.00    |
| 5.0 - CONTRACT 4B - Diversion Channel<br>Reach 5 490+00 to 495+43 & Gate Structure<br>at Eagle Creek  | 1.0      | EA  | Prime Contractor | 1,527,023.36 | 200,761.65   | 1,053,692.15 | 17,300.00    | 2,880,866.79   | 5,679,643.94 |
| 06 Fish and Wildlife Facilities<br>(Note: The stream quantities for mitigation include 9,094 LF at \$100/LF or \$909,400. The wetland mitigation cost reflects improvements to an entire 19.14 acre site. The wetland mitigation cost is 25,000 per acre for 8.6 acres or approximately \$215,000. The remaining 10.5 acres on the mitigation area will be planted as forested upland buffer to help increase the functions and values of our mitigation and further offset the 3.8 acres of forested habitat impacts currently proposed. The 10.5 acres upland buffer would cost approximately \$10,000 per acre or a total of \$105,000. Thus the wetland and forested mitigation would cost a total of \$320,000.) | 1.0      | EA  | Prime Contractor | 0.00         | 0.00         | 0.00         | 0.00         | 1,379,000.00   | 1,379,000.00 |
| Stream Mitigation   | 1.0      | EA  | Prime Contractor | 0.00         | 0.00         | 0.00         | 0.00         | 1,379,000.00   | 1,379,000.00 |
| 09 Channels and Canals  | 1.0      | EA  | Prime Contractor | 280,007.59   | 45,157.50    | 222,844.01   | 0.00         | 77,116.79      | 625,125.89   |
| 090101 Mob, Demob & Preparatory Work<br>(Note: The approximate value of item 09 - Channals and Canals is \$760,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$30,400.)   | 1.0      | EA  | Prime Contractor | 0.00         | 0.00         | 0.00         | 0.00         | 30,400.00      | 30,400.00    |
| 0901 Channels   | 1.0      | EA  | Prime Contractor | 213,826.34   | 509.02       | 3,737.15     | 0.00         | 17,040.00      | 235,112.51   |

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| Description  | Quantity | UOM | Contractor        | DirectLabor  | DirectEQ   | DirectMatl | DirectSubBid | DirectUserCost | DirectCost   |
|--|----------|-----|-------------------|--------------|------------|------------|--------------|----------------|--------------|
| Install Access Road  | 1.0      | EA  | Prime Contractor  | 672.04       | 494.33     | 1,833.15   | 0.00         | 0.00           | 2,999.52     |
| Dewatering   | 1.0      | EA  | Prime Contractor  | 948.78       | 14.68      | 1,904.00   | 0.00         | 7,040.00       | 9,907.46     |
| 090113 Traffic Control   | 1.0      | EA  | Prime Contractor  | 212,205.52   | 0.00       | 0.00       | 0.00         | 10,000.00      | 222,205.52   |
| 090101 Earthen Dam   | 1.0      | EA  | Prime Contractor  | 66,181.24    | 44,648.48  | 219,106.86 | 0.00         | 29,676.79      | 359,613.37   |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i> |          |     |                   |              |            |            |              |                |              |
| 090101 Embankment  | 1.0      | EA  | Prime Contractor  | 48,216.53    | 35,279.16  | 127,232.00 | 0.00         | 0.00           | 210,727.69   |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i> |          |     |                   |              |            |            |              |                |              |
| Place Topsoil and Seed   | 1.0      | EA  | Prime Contractor  | 630.02       | 412.83     | 0.00       | 0.00         | 147.94         | 1,190.79     |
| <i>(Note: Topsoil placement for the berm and the channel.)</i>   |          |     |                   |              |            |            |              |                |              |
| Inspection Trench  | 1.0      | EA  | Prime Contractor  | 5,287.72     | 4,569.04   | 64,708.00  | 0.00         | 0.00           | 74,564.77    |
| Roadway  | 1.0      | EA  | Prime Contractor  | 3,308.16     | 1,140.51   | 27,166.86  | 0.00         | 0.00           | 31,615.54    |
| Place Rip-Rap  | 1.0      | EA  | Prime Contractor  | 8,738.80     | 3,246.94   | 0.00       | 0.00         | 29,528.85      | 41,514.59    |
| <i>(Note: Topsoil placement for the berm and the channel.)</i>   |          |     |                   |              |            |            |              |                |              |
| 15 Floodway Control-Diversion Struc  | 1.0      | EA  | Dam Subcontractor | 1,247,015.77 | 155,604.15 | 830,848.14 | 17,300.00    | 1,347,750.00   | 3,598,518.06 |
| 1500 Floodway Control-Diversion Struc  | 1.0      | EA  | Dam Subcontractor | 1,247,015.77 | 155,604.15 | 830,848.14 | 17,300.00    | 1,215,750.00   | 3,466,518.06 |
| 150010 Earthwork for Structures  | 1.0      | EA  | Dam Subcontractor | 77,013.37    | 30,908.63  | 83,205.00  | 0.00         | 10,000.00      | 201,127.01   |
| 150011 Foundation Work   | 1.0      | EA  | Dam Subcontractor | 783.93       | 324.66     | 775.00     | 0.00         | 0.00           | 1,883.59     |
| 150099 Associated General Items  | 1.0      | EA  | Dam Subcontractor | 6,044.65     | 363.71     | 61,850.00  | 0.00         | 0.00           | 68,258.36    |
| 150005 Bridges, Foundations  | 1.0      | EA  | Dam Subcontractor | 718,536.31   | 75,442.64  | 429,299.30 | 0.00         | 0.00           | 1,223,278.25 |
| 150006 Bridges, Abutments and Piers  | 1.0      | EA  | Dam Subcontractor | 431,587.02   | 46,249.38  | 255,718.84 | 0.00         | 0.00           | 733,555.24   |
| 150007 Bridges, Superstructure and Deck  | 1.0      | EA  | Dam Subcontractor | 0.00         | 0.00       | 0.00       | 17,300.00    | 0.00           | 17,300.00    |
| 150041 Gates, Stop Logs-Associated Eqpt  | 1.0      | EA  | Dam Subcontractor | 13,050.48    | 2,315.12   | 0.00       | 0.00         | 1,205,750.00   | 1,221,115.60 |

| Description   | Quantity   | UOM       | Contractor              | DirectLabor | DirectEQ    | DirectMatl  | DirectSubBid | DirectUserCost    | DirectCost        |
|---|------------|-----------|-------------------------|-------------|-------------|-------------|--------------|-------------------|-------------------|
|   |            |           |                         | 0.0000      | 0.0000      | 0.0000      | 0.0000       |                   | 132,000.0000      |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>   | <b>1.0</b> | <b>EA</b> | <b>Prime Contractor</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>  | <b>132,000.00</b> | <b>132,000.00</b> |
| <i>(Note: The approximate value of Floodway Control-Diversion Struc is \$3,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$132,000.)</i> |            |           |                         |             |             |             |              |                   |                   |
|   |            |           |                         | 0.0000      | 0.0000      | 0.0000      | 0.0000       |                   | 77,000.0000       |
| <b>18 Cultural Resources Preservation</b>   | <b>1.0</b> | <b>EA</b> |                         | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>  | <b>77,000.00</b>  | <b>77,000.00</b>  |
| <i>(Note: The approximate value of Contract 4B is \$7,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$77,000.)</i>  |            |           |                         |             |             |             |              |                   |                   |

| Description  | UOM        | Quantity     | DirectLabor         | EQCost              | MatlCost            | SubBidCost       | UserCost1            | DirectCost           |
|--|------------|--------------|---------------------|---------------------|---------------------|------------------|----------------------|----------------------|
| <b>Detailed Estimate</b>   |            |              | <b>9,525,407.69</b> | <b>7,474,312.10</b> | <b>3,542,258.19</b> | <b>17,300.00</b> | <b>25,344,089.06</b> | <b>45,903,367.04</b> |
|  |            |              | 1,776,751.4598      | 1,368,665.7541      | 941,476.2759        | 0.0000           |                      | 11,114,306.6098      |
| <b>1.0 - CONTRACT 1A - Diversion Channel Reach 1 0+00 to 120+00</b>  | <b>EA</b>  | <b>1.0</b>   | <b>1,776,751.46</b> | <b>1,368,665.75</b> | <b>941,476.28</b>   | <b>0.00</b>      | <b>7,027,413.12</b>  | <b>11,114,306.61</b> |
|  |            |              | 0.0000              | 0.0000              | 0.0000              | 0.0000           |                      | 5,510,973.0000       |
| <b>01 Lands and Damages</b>  | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>      | <b>5,510,973.00</b>  | <b>5,510,973.00</b>  |
| <i>USR Lands and Damages</i>   | <i>LS</i>  | <i>1.0</i>   | <i>0.00</i>         | <i>0.00</i>         | <i>0.00</i>         | <i>0.00</i>      | <i>5,510,973.00</i>  | <i>5,510,973.00</i>  |
|  |            |              | 81,007.9651         | 24,892.2718         | 149,571.7921        | 0.0000           |                      | 285,046.1490         |
| <b>02 Relocations</b>  | <b>EA</b>  | <b>1.0</b>   | <b>81,007.97</b>    | <b>24,892.27</b>    | <b>149,571.79</b>   | <b>0.00</b>      | <b>29,574.12</b>     | <b>285,046.15</b>    |
|  |            |              | 73,904.7463         | 22,810.7120         | 85,960.2121         | 0.0000           |                      | 212,249.7904         |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>EA</b>  | <b>1.0</b>   | <b>73,904.75</b>    | <b>22,810.71</b>    | <b>85,960.21</b>    | <b>0.00</b>      | <b>29,574.12</b>     | <b>212,249.79</b>    |
|  |            |              | 73,904.7463         | 22,810.7120         | 85,960.2121         | 0.0000           |                      | 204,249.7904         |
| <b>020318 Utilities</b>  | <b>EA</b>  | <b>1.0</b>   | <b>73,904.75</b>    | <b>22,810.71</b>    | <b>85,960.21</b>    | <b>0.00</b>      | <b>21,574.12</b>     | <b>204,249.79</b>    |
|  |            |              | 19,376.0788         | 6,464.7681          | 15,181.5000         | 0.0000           |                      | 41,022.3469          |
| <b>Pipeline at 22+50</b>   | <b>EA</b>  | <b>1.0</b>   | <b>19,376.08</b>    | <b>6,464.77</b>     | <b>15,181.50</b>    | <b>0.00</b>      | <b>0.00</b>          | <b>41,022.35</b>     |
| <i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>  |            |              |                     |                     |                     |                  |                      |                      |
|  |            |              | 8.8084              | 1.0781              | 21.5000             | 0.0000           | 0.0000               | 31.3865              |
| <i>RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction</i>   | <i>LCY</i> | <i>34.0</i>  | <i>299.48</i>       | <i>36.66</i>        | <i>731.00</i>       | <i>0.00</i>      | <i>0.00</i>          | <i>1,067.14</i>      |
| <i>(Note: Material price received from Hancock County Material Bid Sheet.)</i>   |            |              |                     |                     |                     |                  |                      |                      |
|  |            |              | 2.7121              | 1.6057              | 0.0000              | 0.0000           | 0.0000               | 4.3178               |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading</i>                      | <i>LCY</i> | <i>649.0</i> | <i>1,760.15</i>     | <i>1,042.08</i>     | <i>0.00</i>         | <i>0.00</i>      | <i>0.00</i>          | <i>2,802.22</i>      |
| <i>(Note: Hauling for disposal. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY.)</i>   |            |              |                     |                     |                     |                  |                      |                      |
|  |            |              | 13.3649             | 2.2069              | 31.5000             | 0.0000           | 0.0000               | 47.0718              |
| <i>RSM 331113153060 Water supply distribution piping, ductile iron, cement lined, tyton push-on joint, no fittings, 18' lengths, 10" diameter, class 50, excludes excavation or backfill</i> | <i>LF</i>  | <i>300.0</i> | <i>4,009.47</i>     | <i>662.07</i>       | <i>9,450.00</i>     | <i>0.00</i>      | <i>0.00</i>          | <i>14,121.55</i>     |
|  |            |              | 212.5992            | 35.1059             | 890.0000            | 0.0000           | 0.0000               | 1,137.7051           |
| <i>RSM 331113158060 Water supply distribution piping, fitting, 90 degree bend or elbow, mechanical joint, ductile iron, cement lined, 10" diameter, class 50 water piping</i>                | <i>EA</i>  | <i>4.0</i>   | <i>850.40</i>       | <i>140.42</i>       | <i>3,560.00</i>     | <i>0.00</i>      | <i>0.00</i>          | <i>4,550.82</i>      |
|  |            |              | 4.2460              | 0.2410              | 0.0000              | 0.0000           | 0.0000               | 4.4871               |
| <i>RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper</i>   | <i>ECY</i> | <i>600.0</i> | <i>2,547.62</i>     | <i>144.62</i>       | <i>0.00</i>         | <i>0.00</i>      | <i>0.00</i>          | <i>2,692.24</i>      |
| <i>(Note: 600 CY)</i>  |            |              |                     |                     |                     |                  |                      |                      |
|  |            |              | 0.9611              | 0.3551              | 0.0000              | 0.0000           | 0.0000               | 1.3162               |
| <i>RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading</i>           | <i>BCY</i> | <i>600.0</i> | <i>576.67</i>       | <i>213.07</i>       | <i>0.00</i>         | <i>0.00</i>      | <i>0.00</i>          | <i>789.74</i>        |
|  |            |              | 1.3007              | 0.3864              | 0.0000              | 0.0000           | 0.0000               | 1.6870               |
| <i>RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading</i>   | <i>BCY</i> | <i>67.0</i>  | <i>87.14</i>        | <i>25.89</i>        | <i>0.00</i>         | <i>0.00</i>      | <i>0.00</i>          | <i>113.03</i>        |



| Description   | UOM       | Quantity   | DirectLabor                     | EQCost                        | MatlCost                        | SubBidCost            | UserCost1             | DirectCost                      |
|---|-----------|------------|---------------------------------|-------------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|
| <i>and/or spreading, front end loader, wheel-mounted</i>  |           |            |                                 |                               |                                 |                       |                       |                                 |
| <i>(Note: Material cost removed. Excavation material re-used as backfill.)</i>  |           |            |                                 |                               |                                 |                       |                       |                                 |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted   | BCY       | 67.0       | 0.8942<br>59.91                 | 0.2656<br>17.80               | 21.5000<br>1,440.50             | 0.0000<br>0.00        | 0.0000<br>0.00        | 22.6598<br>1,518.21             |
| RSM 024113381100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation  | LF        | 300.0      | 12.3984<br>3,719.51             | 1.6161<br>484.82              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 14.0144<br>4,204.33             |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: Hauling for disposal. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY.)</i>              | LCY       | 649.0      | 2.7121<br>1,760.15              | 1.6057<br>1,042.08            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>2,802.22              |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add   | CY        | 649.0      | 5.7097<br>3,705.57              | 4.0913<br>2,655.27            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 9.8010<br>6,360.84              |
| <b>Pipeline at 29+50</b><br><i>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)</i>   | <b>EA</b> | <b>1.0</b> | 29,664.3671<br><b>29,664.37</b> | 9,298.8567<br><b>9,298.86</b> | 47,181.0000<br><b>47,181.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 86,144.2238<br><b>86,144.22</b> |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br><i>(Note: Material price received from Hancock County Material Bid Sheet.)</i>   | LCY       | 45.0       | 8.8084<br>396.38                | 1.0781<br>48.51               | 21.5000<br>967.50               | 0.0000<br>0.00        | 0.0000<br>0.00        | 31.3865<br>1,412.39             |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: Hauling for construction materials. 1.30 compaction factor assumed. (666 CY)*1.30 = 866 CY)</i> | LCY       | 866.0      | 2.7121<br>2,348.67              | 1.6057<br>1,390.51            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>3,739.18              |
| RSM 331113153180 Water supply distribution piping, ductile iron, cement lined, tyton push-on joint, no fittings, 18' lengths, 24" diameter, class 50, excludes excavation or backfill   | LF        | 300.0      | 31.5914<br>9,477.41             | 5.2166<br>1,564.98            | 72.0000<br>21,600.00            | 0.0000<br>0.00        | 0.0000<br>0.00        | 108.8080<br>32,642.39           |
| RSM 331113158180 Water supply distribution piping, fitting, 90 degree bend or elbow, mechanical joint, ductile iron, cement lined, 24" diameter, class 50 water piping  | EA        | 4.0        | 517.0231<br>2,068.09            | 85.3746<br>341.50             | 5,675.0000<br>22,700.00         | 0.0000<br>0.00        | 0.0000<br>0.00        | 6,277.3977<br>25,109.59         |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br><i>(Note: 800 CY)</i>  | ECY       | 800.0      | 4.2460<br>3,396.83              | 0.2410<br>192.83              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.4871<br>3,589.66              |
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 800.0      | 0.9611<br>768.89                | 0.3551<br>284.09              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.3162<br>1,052.98              |

| Description  | UOM       | Quantity   | DirectLabor                     | EQCost                        | MatlCost                        | SubBidCost            | UserCost1             | DirectCost                      |
|--|-----------|------------|---------------------------------|-------------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | BCY       | 89.0       | 1.3007<br>115.76                | 0.3864<br>34.39               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.6870<br>150.15                |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | BCY       | 89.0       | 0.8942<br>79.58                 | 0.2656<br>23.64               | 21.5000<br>1,913.50             | 0.0000<br>0.00        | 0.0000<br>0.00        | 22.6598<br>2,016.73             |
| RSM 024113381100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation   | LF        | 300.0      | 12.3984<br>3,719.51             | 1.6161<br>484.82              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 14.0144<br>4,204.33             |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Hauling for disposal. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY.)              | LCY       | 866.0      | 2.7121<br>2,348.67              | 1.6057<br>1,390.51            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>3,739.18              |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add  | CY        | 866.0      | 5.7097<br>4,944.57              | 4.0913<br>3,543.08            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 9.8010<br>8,487.65              |
| <b>Pipeline at 75+00</b><br>(Note: The excavation for the removal of the existing pipeline will be completed with the channel excavation.)   | <b>EA</b> | <b>1.0</b> | 19,995.5543<br><b>19,995.55</b> | 6,567.0603<br><b>6,567.06</b> | 17,071.5000<br><b>17,071.50</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 43,634.1146<br><b>43,634.11</b> |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | LCY       | 34.0       | 8.8084<br>299.48                | 1.0781<br>36.66               | 21.5000<br>731.00               | 0.0000<br>0.00        | 0.0000<br>0.00        | 31.3865<br>1,067.14             |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Hauling for construction materials. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY) | LCY       | 649.0      | 2.7121<br>1,760.15              | 1.6057<br>1,042.08            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>2,802.22              |
| RSM 331113158080 Water supply distribution piping, fitting, 90 degree bend or elbow, mechanical joint, ductile iron, cement lined, 12" diameter, class 50 water piping   | EA        | 4.0        | 230.7700<br>923.08              | 38.1064<br>152.43             | 1,250.0000<br>5,000.00          | 0.0000<br>0.00        | 0.0000<br>0.00        | 1,518.8765<br>6,075.51          |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 600 CY)  | ECY       | 600.0      | 4.2460<br>2,547.62              | 0.2410<br>144.62              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.4871<br>2,692.24              |
| RSM 331113153080 Water supply distribution piping, ductile iron, cement lined, tyton push-on joint, no fittings, 18' lengths, 12" diameter, class 50, excludes excavation or backfill  | LF        | 300.0      | 15.1876<br>4,556.27             | 2.5079<br>752.36              | 33.0000<br>9,900.00             | 0.0000<br>0.00        | 0.0000<br>0.00        | 50.6954<br>15,208.63            |
|  |           |            | 0.9611                          | 0.3551                        | 0.0000                          | 0.0000                | 0.0000                | 1.3162                          |

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| Description  | UOM       | Quantity   | DirectLabor     | EQCost        | MatlCost        | SubBidCost  | UserCost1        | DirectCost       |
|--|-----------|------------|-----------------|---------------|-----------------|-------------|------------------|------------------|
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | BCY       | 600.0      | 576.67          | 213.07        | 0.00            | 0.00        | 0.00             | 789.74           |
|  |           |            | 1.3007          | 0.3864        | 0.0000          | 0.0000      | 0.0000           | 1.6870           |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | BCY       | 67.0       | 87.14           | 25.89         | 0.00            | 0.00        | 0.00             | 113.03           |
|  |           |            | 0.8942          | 0.2656        | 21.5000         | 0.0000      | 0.0000           | 22.6598          |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | BCY       | 67.0       | 59.91           | 17.80         | 1,440.50        | 0.00        | 0.00             | 1,518.21         |
|  |           |            | 12.3984         | 1.6161        | 0.0000          | 0.0000      | 0.0000           | 14.0144          |
| RSM 024113381100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation   | LF        | 300.0      | 3,719.51        | 484.82        | 0.00            | 0.00        | 0.00             | 4,204.33         |
|  |           |            | 2.7121          | 1.6057        | 0.0000          | 0.0000      | 0.0000           | 4.3178           |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Hauling for disposal. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY.)        | LCY       | 649.0      | 1,760.15        | 1,042.08      | 0.00            | 0.00        | 0.00             | 2,802.22         |
|  |           |            | 5.7097          | 4.0913        | 0.0000          | 0.0000      | 0.0000           | 9.8010           |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add  | CY        | 649.0      | 3,705.57        | 2,655.27      | 0.00            | 0.00        | 0.00             | 6,360.84         |
| <b>Overhead Utilities</b>  | <b>EA</b> | <b>1.0</b> | <b>4,868.75</b> | <b>480.03</b> | <b>6,526.21</b> | <b>0.00</b> | <b>21,574.12</b> | <b>33,449.11</b> |
|  |           |            | 4,868.7461      | 480.0269      | 6,526.2121      | 0.0000      |                  | 33,449.1052      |
| HNC 337116335100 Wood pole, yellow pine, penta-treated, 50', class 3   | EA        | 4.0        | 3,001.77        | 293.72        | 2,040.00        | 0.00        | 0.00             | 5,335.50         |
|  |           |            | 750.4434        | 73.4311       | 510.0000        | 0.0000      | 0.0000           | 1,333.8745       |
| USR Pole Removal<br>(Note: Assumed to be 60% of the installation cost per pole. \$7,812.14*0.60 = \$4,687.28)  | EA        | 4.0        | 0.00            | 0.00          | 0.00            | 0.00        | 4,687.2800       | 4,687.2800       |
|  |           |            | 0.0000          | 0.0000        | 0.0000          | 0.0000      | 18,749.12        | 18,749.12        |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add<br>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)  | CY        | 22.0       | 125.61          | 90.01         | 0.00            | 0.00        | 0.00             | 215.62           |
|  |           |            | 5.7097          | 4.0913        | 0.0000          | 0.0000      | 0.0000           | 9.8010           |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.) | LCY       | 22.0       | 59.67           | 35.32         | 0.00            | 0.00        | 0.00             | 94.99            |
|  |           |            | 2.7121          | 1.6057        | 0.0000          | 0.0000      | 0.0000           | 4.3178           |
| <b>Overhead AT&amp;T Lines</b>   | <b>EA</b> | <b>1.0</b> | <b>1,236.16</b> | <b>2.01</b>   | <b>177.50</b>   | <b>0.00</b> | <b>0.00</b>      | <b>1,415.67</b>  |
|  |           |            | 1,236.1585      | 2.0127        | 177.5000        | 0.0000      |                  | 1,415.6713       |
| RSM 270505200240 Telephone cable, electrical demolition, remove<br>(Note: Five 250 LF AT&T Lines will be demolished. 1,250 total LF.)  | LF        | 1,250.0    | 266.09          | 0.00          | 0.00            | 0.00        | 0.00             | 266.09           |
|  |           |            | 0.2129          | 0.0000        | 0.0000          | 0.0000      | 0.0000           | 0.2129           |

| Description   | UOM       | Quantity   | DirectLabor                          | EQCost                               | MatlCost                               | SubBidCost                   | UserCost1          | DirectCost                             |
|---|-----------|------------|--------------------------------------|--------------------------------------|--|------------------------------|--------------------|--|
| RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors  | MI        | 0.1        | 387.6232<br>38.76                    | 20.1275<br>2.01                      | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00     | 407.7506<br>40.78                      |
| RSM 271513132300 Telephone cable, telephone twisted, PVC insulation, #22-4 conductor<br>(Note: Five 250 LF AT&T Lines will be installed. 1,250 total LF.)   | LF        | 1,250.0    | 0.7450<br>931.31                     | 0.0000<br>0.00                       | 0.1420<br>177.50                       | 0.0000<br>0.00               | 0.0000<br>0.00     | 0.8870<br>1,108.81                     |
| <b>Overhead Electric Lines</b>  | <b>EA</b> | <b>1.0</b> | <b>445.5355</b><br><b>445.54</b>     | <b>58.9561</b><br><b>58.96</b>       | <b>4,308.7121</b><br><b>4,308.71</b>   | <b>0.0000</b><br><b>0.00</b> | <b>2,825.00</b>    | <b>7,638.2037</b><br><b>7,638.20</b>   |
| USR Overhead Electric Line Removal<br>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. Two 250 LF overhead electric lines will be demolished. 500 total LF.)   | LF        | 500.0      | 0.0000<br>0.00                       | 0.0000<br>0.00                       | 0.0000<br>0.00                         | 0.0000<br>0.00               | 5.6500<br>2,825.00 | 5.6500<br>2,825.00                     |
| RSM 337139130180 Overhead line conductors & devices, conductors, primary circuits, per wire, over 1600 kcmil<br>(Note: Two 250 LF overhead electric lines will be installed. 500 total LF.)   | LF        | 500.0      | 0.8544<br>427.18                     | 0.1160<br>58.00                      | 8.6174<br>4,308.71                     | 0.0000<br>0.00               | 0.0000<br>0.00     | 9.5878<br>4,793.90                     |
| RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors  | MI        | 0.0        | 387.6232<br>18.35                    | 20.1275<br>0.95                      | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00     | 407.7506<br>19.31                      |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$8,000.) | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>         | <b>0.0000</b><br><b>0.00</b>         | <b>0.0000</b><br><b>0.00</b>           | <b>0.0000</b><br><b>0.00</b> | <b>8,000.00</b>    | <b>8,000.0000</b><br><b>8,000.00</b>   |
| USR Mobilization  | LS        | 1.0        | 0.00                                 | 0.00                                 | 0.00                                   | 0.00                         | 8,000.00           | 8,000.00                               |
| <b>Roadways</b>   | <b>EA</b> | <b>1.0</b> | <b>7,103.2188</b><br><b>7,103.22</b> | <b>2,081.5598</b><br><b>2,081.56</b> | <b>63,611.5800</b><br><b>63,611.58</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>        | <b>72,796.3586</b><br><b>72,796.36</b> |
| <b>TR-89 Cul-De-Sac</b>   | <b>EA</b> | <b>1.0</b> | <b>7,103.2188</b><br><b>7,103.22</b> | <b>2,081.5598</b><br><b>2,081.56</b> | <b>63,611.5800</b><br><b>63,611.58</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>        | <b>72,796.3586</b><br><b>72,796.36</b> |
| RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick  | TON       | 471.0      | 4.8347<br>2,277.13                   | 1.2016<br>565.94                     | 62.0000<br>29,202.00                   | 0.0000<br>0.00               | 0.0000<br>0.00     | 68.0362<br>32,045.07                   |
| RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | TON       | 314.0      | 7.6741<br>2,409.66                   | 1.9073<br>598.88                     | 62.0000<br>19,468.00                   | 0.0000<br>0.00               | 0.0000<br>0.00     | 71.5813<br>22,476.54                   |
| RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included  | TON       | 157.0      | 9.2941<br>1,459.17                   | 2.2699<br>356.38                     | 68.0000<br>10,676.00                   | 0.0000<br>0.00               | 0.0000<br>0.00     | 79.5640<br>12,491.55                   |
| RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.   | SY        | 1,367.0    | 0.0674<br>92.11                      | 0.0329<br>45.01                      | 0.3000<br>410.10                       | 0.0000<br>0.00               | 0.0000<br>0.00     | 0.4003<br>547.23                       |

| Description   | UOM       | Quantity   | DirectLabor         | EQCost              | MatlCost          | SubBidCost  | UserCost1           | DirectCost          |
|---|-----------|------------|---------------------|---------------------|-------------------|-------------|---------------------|---------------------|
| <i>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)</i>   |           |            |                     |                     |                   |             |                     |                     |
| 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br><i>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)</i>               | CY        | 228.0      | 317.92              | 120.40              | 3,855.48          | 0.00        | 0.00                | 4,293.81            |
| RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br><i>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)</i>   | ECY       | 692.0      | 260.54              | 106.34              | 0.00              | 0.00        | 0.00                | 366.88              |
| RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer  | SY        | 1,367.0    | 286.68              | 288.61              | 0.00              | 0.00        | 0.00                | 575.30              |
| <b>09 Channels and Canals</b>   | <b>EA</b> | <b>1.0</b> | <b>1,695,743.49</b> | <b>1,343,773.48</b> | <b>791,904.48</b> | <b>0.00</b> | <b>1,333,866.00</b> | <b>5,165,287.46</b> |
| <b>0901 Channels</b>  | <b>EA</b> | <b>1.0</b> | <b>1,695,743.49</b> | <b>1,343,773.48</b> | <b>791,904.48</b> | <b>0.00</b> | <b>973,866.00</b>   | <b>4,805,287.46</b> |
| <b>Drainage Ditch</b>   | <b>EA</b> | <b>1.0</b> | <b>117,090.02</b>   | <b>88,856.92</b>    | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b>         | <b>205,946.95</b>   |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 73,884.0   | 28,404.42           | 26,348.96           | 0.00              | 0.00        | 0.00                | 54,753.38           |
| USR Topsoil Placement<br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | LCY       | 25,627.0   | 23,513.27           | 20,995.31           | 0.00              | 0.00        | 0.00                | 44,508.58           |
| USR Fine Grading  | ACR       | 15.9       | 34,516.32           | 16,995.25           | 0.00              | 0.00        | 0.00                | 51,511.57           |
| USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | ACR       | 15.9       | 7,142.74            | 3,522.10            | 0.00              | 0.00        | 0.00                | 10,664.85           |
| USR Topsoil Loading   | LCY       | 25,627.0   | 23,513.27           | 20,995.31           | 0.00              | 0.00        | 0.00                | 44,508.58           |
| <b>090113 Traffic Control</b>   | <b>EA</b> | <b>1.0</b> | <b>212,205.52</b>   | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>10,000.00</b>    | <b>222,205.52</b>   |
| USR Signage and Traffic Cone Allowance<br><i>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>  | EA        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 10,000.00           | 10,000.00           |
| MIL B-LABORER Laborers, General (Lowest paid)<br><i>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160</i>  | HR        | 4,160.0    | 212,205.52          | 0.00                | 0.00              | 0.00        | 0.00                | 212,205.52          |

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| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                            | MatlCost                          | SubBidCost            | UserCost1      | DirectCost                            |
|--|-----------|------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------|---------------------------------------|
| hours)   |           |            |                                   |                                   |                                   |                       |                |                                       |
| <b>Construct Diversion Channel Tie-in to Blanchard River</b>   | <b>EA</b> | <b>1.0</b> | 39,477.5643<br><b>39,477.56</b>   | 14,668.0407<br><b>14,668.04</b>   | 400,190.0175<br><b>400,190.02</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>    | 454,335.6225<br><b>454,335.62</b>     |
| <b>Diversion Channel Outlet Protection</b>   | <b>EA</b> | <b>1.0</b> | 39,477.5643<br><b>39,477.56</b>   | 14,668.0407<br><b>14,668.04</b>   | 400,190.0175<br><b>400,190.02</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>    | 454,335.6225<br><b>454,335.62</b>     |
| USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 5,334 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 5,334 SY x 0.5 Yard = 2,667 CY x 1.35 tons/CY = 3,600.45 tons)   | TON       | 3,600.5    | 10.9646<br>39,477.56              | 4.0739<br>14,668.04               | 111.1500<br>400,190.02            | 0.0000<br>0.00        | 0.0000<br>0.00 | 126.1886<br>454,335.62                |
| <b>Strip and Stockpile Topsoil</b>   | <b>EA</b> | <b>1.0</b> | 60,757.6607<br><b>60,757.66</b>   | 58,797.6717<br><b>58,797.67</b>   | 790.0000<br><b>790.00</b>         | 0.0000<br><b>0.00</b> | <b>0.00</b>    | 120,345.3325<br><b>120,345.33</b>     |
| RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | CY        | 93,888.9   | 0.6221<br>58,404.14               | 0.6262<br>58,797.67               | 0.0000<br>0.00                    | 0.0000<br>0.00        | 0.0000<br>0.00 | 1.2483<br>117,201.82                  |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2.3535<br>2,353.52                | 0.0000<br>0.00                    | 0.7900<br>790.00                  | 0.0000<br>0.00        | 0.0000<br>0.00 | 3.1435<br>3,143.52                    |
| <b>Install Access Road</b>   | <b>EA</b> | <b>1.0</b> | 14,791.5426<br><b>14,791.54</b>   | 10,880.2442<br><b>10,880.24</b>   | 40,347.4500<br><b>40,347.45</b>   | 0.0000<br><b>0.00</b> | <b>0.00</b>    | 66,019.2368<br><b>66,019.24</b>       |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,223 CY x 1.40 = 3,112.2 CY)   | LCY       | 3,112.2    | 2.7121<br>8,440.57                | 1.6057<br>4,997.15                | 0.0000<br>0.00                    | 0.0000<br>0.00        | 0.0000<br>0.00 | 4.3178<br>13,437.72                   |
| RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | ECY       | 2,223.0    | 2.8569<br>6,350.97                | 2.6465<br>5,883.09                | 18.1500<br>40,347.45              | 0.0000<br>0.00        | 0.0000<br>0.00 | 23.6534<br>52,581.51                  |
| <b>Excavation of Diversion Channel</b>   | <b>EA</b> | <b>1.0</b> | 476,912.8713<br><b>476,912.87</b> | 777,825.0686<br><b>777,825.07</b> | 790.0000<br><b>790.00</b>         | 0.0000<br><b>0.00</b> | <b>0.00</b>    | 1,255,527.9400<br><b>1,255,527.94</b> |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 314,187 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 314,187 CY = 31,419 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.) | BCY       | 31,419.0   | 0.6815<br>21,412.62               | 0.6322<br>19,863.11               | 0.0000<br>0.00                    | 0.0000<br>0.00        | 0.0000<br>0.00 | 1.3137<br>41,275.73                   |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2.3535<br>2,353.52                | 0.0000<br>0.00                    | 0.7900<br>790.00                  | 0.0000<br>0.00        | 0.0000<br>0.00 | 3.1435<br>3,143.52                    |
| USR Scraping   | BCY       | 282,768.0  | 0.7990<br>225,918.63              | 1.3710<br>387,677.64              | 0.0000<br>0.00                    | 0.0000<br>0.00        | 0.0000<br>0.00 | 2.1700<br>613,596.27                  |

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| Description   | UOM       | Quantity   | DirectLabor                       | EQCost                            | MatlCost                        | SubBidCost            | UserCost1             | DirectCost                        |
|---|-----------|------------|-----------------------------------|-----------------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|
| <i>(Note: 90% of the 314,187 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 314,187 CY = 282,768 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)</i>   |           |            |                                   |                                   |                                 |                       |                       |                                   |
| <b>Hauling and Disposal</b>   | <b>EA</b> | <b>1.0</b> | 227,228.1042<br><b>227,228.10</b> | 370,284.3116<br><b>370,284.31</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 597,512.4158<br><b>597,512.42</b> |
| USR Rough Grading   | BCY       | 323,869.0  | 0.2973<br>96,280.26               | 0.5271<br>170,723.15              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.8244<br>267,003.41              |
| <i>(Note: Manage piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (314,187 CY - 65,057 CY)*1.30 = 323,869 CY (Assume an expansion factor of 1.30).)</i>  |           |            |                                   |                                   |                                 |                       |                       |                                   |
| USR Diversion Channel Material Hauling  | LCY       | 125,419.0  | 0.5067<br>63,553.20               | 1.1267<br>141,312.06              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.6334<br>204,865.26              |
| <i>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (31,419 CY + 65,057) x 1.30 = 125,419 CY (Assume an expansion factor of 1.30).)</i> |           |            |                                   |                                   |                                 |                       |                       |                                   |
| USR Diversion Channel Excavation Loading  | LCY       | 125,419.0  | 0.5374<br>67,394.65               | 0.4644<br>58,249.10               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.0018<br>125,643.75              |
| <i>(Note: Material unit cost has been removed. Existing site material will be loaded out. Quantity equal to hauling quantity.)</i>  |           |            |                                   |                                   |                                 |                       |                       |                                   |
| <b>Grade Channel Embankment</b>   | <b>EA</b> | <b>1.0</b> | 25,142.2851<br><b>25,142.29</b>   | 44,582.0374<br><b>44,582.04</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 69,724.3226<br><b>69,724.32</b>   |
| USR Rough Grading   | BCY       | 84,574.0   | 0.2973<br>25,142.29               | 0.5271<br>44,582.04               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.8244<br>69,724.32               |
| <i>(Note: 65,057 CY * 1.30 = 84,574 CY)</i>   |           |            |                                   |                                   |                                 |                       |                       |                                   |
| <b>Construct Channel Embankment</b>   | <b>EA</b> | <b>1.0</b> | 204,633.7734<br><b>204,633.77</b> | 137,682.2086<br><b>137,682.21</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 342,315.9821<br><b>342,315.98</b> |
| HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading  | LCY       | 84,574.0   | 1.6951<br>143,357.75              | 1.0801<br>91,348.01               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 2.7752<br>234,705.76              |
| <i>(Note: 65,057 CY * 1.30 = 84,574 CY)</i>   |           |            |                                   |                                   |                                 |                       |                       |                                   |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | ECY       | 84,574.0   | 0.2044<br>17,286.07               | 0.0834<br>7,054.99                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.2878<br>24,341.05               |
| USR Diversion Channel Excavation Loading  | LCY       | 84,574.0   | 0.5201<br>43,989.96               | 0.4644<br>39,279.21               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.9846<br>83,269.17               |
| <i>(Note: 65,057 CY * 1.30 = 84,574 CY)</i>   |           |            |                                   |                                   |                                 |                       |                       |                                   |
| <b>Place Topsoil and Seed</b>   | <b>EA</b> | <b>1.0</b> | 256,258.2196<br><b>256,258.22</b> | 167,816.4918<br><b>167,816.49</b> | 60,376.0960<br><b>60,376.10</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 484,450.8073<br><b>484,450.81</b> |
| <i>(Note: Topsoil placement for the berm and the channel.)</i>  |           |            |                                   |                                   |                                 |                       |                       |                                   |
| USR Topsoil Placement   | LCY       | 42,202.0   | 0.9175<br>38,721.15               | 0.8193<br>34,574.63               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.7368<br>73,295.78               |
| <i>(Note: Topsoil placement for the berm and the channel. 32,463 CY * 1.30 = 42,202 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i>  |           |            |                                   |                                   |                                 |                       |                       |                                   |
|   |           |            | 2,173.5720                        | 1,070.2296                        | 0.0000                          | 0.0000                | 0.0000                | 3,243.8015                        |

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| Description   | UOM       | Quantity    | DirectLabor         | EQCost             | MatlCost            | SubBidCost    | UserCost1         | DirectCost            |
|---|-----------|-------------|---------------------|--------------------|---------------------|---------------|-------------------|-----------------------|
| USR Fine Grading<br>(Note: Assume 6" Placement. 32,463 CY * 6 = 194,778 SY = 40.24 acres)   | ACR       | 40.2        | 87,464.54           | 43,066.04          | 0.00                | 0.00          | 0.00              | 130,530.57            |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40 for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | ACR       | 40.2        | 18,099.75           | 8,925.03           | 60,376.10           | 0.00          | 0.00              | 87,400.88             |
| USR Topsoil Loading   | LCY       | 42,202.0    | 38,721.15           | 34,574.63          | 0.00                | 0.00          | 0.00              | 73,295.78             |
| USR Topsoil Hauling<br>(Note: 32,463 CY * 1.30 = 42,202 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | LCY       | 42,202.0    | 73,251.63           | 46,676.17          | 0.00                | 0.00          | 0.00              | 119,927.80            |
| <b>Drainage Outlets</b>   | <b>EA</b> | <b>1.0</b>  | <b>284,310.3468</b> | <b>42,043.6829</b> | <b>285,448.0616</b> | <b>0.0000</b> | <b>963,866.00</b> | <b>1,575,668.0913</b> |
| <b>Riprap</b>   | <b>EA</b> | <b>1.0</b>  | <b>5,068.1172</b>   | <b>1,855.8456</b>  | <b>16,877.7570</b>  | <b>0.0000</b> | <b>0.00</b>       | <b>23,801.7198</b>    |
| USR Rip-Rap Placement<br>(Note: 337.44 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 455.54 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)   | TON       | 455.5       | 5,068.12            | 1,855.85           | 16,877.76           | 0.00          | 0.00              | 23,801.72             |
| <b>Geotextile Under Riprap</b>  | <b>EA</b> | <b>1.0</b>  | <b>288.1201</b>     | <b>0.0000</b>      | <b>982.4672</b>     | <b>0.0000</b> | <b>0.00</b>       | <b>1,270.5873</b>     |
| RSM 313219161550 Geosynthetic soil stabilization, geotextile fabric, non-woven, 120 lb. tensile strength, includes scarifying and compaction  | SY        | 869.4       | 288.12              | 0.00               | 982.47              | 0.00          | 0.00              | 1,270.59              |
| <b>Sluice Gate</b>  | <b>EA</b> | <b>1.0</b>  | <b>0.0000</b>       | <b>0.0000</b>      | <b>0.0000</b>       | <b>0.0000</b> | <b>811,866.00</b> | <b>811,866.0000</b>   |
| USR Furnish 24" Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$19,300 plus 6.75% sales tax = \$20,603)   | EA        | 22.0        | 0.00                | 0.00               | 0.00                | 0.00          | 453,266.00        | 453,266.00            |
| USR Install 24" Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | EA        | 22.0        | 0.00                | 0.00               | 0.00                | 0.00          | 94,600.00         | 94,600.00             |
| USR Backflow Preventer<br>(Note: \$12,000 allowance per 08/18/15 Conference Call with Clifton Office.)  | EA        | 22.0        | 0.00                | 0.00               | 0.00                | 0.00          | 264,000.00        | 264,000.00            |
| <b>24" Diameter Pipe Sleeve</b>   | <b>EA</b> | <b>48.0</b> | <b>340.05</b>       | <b>0.00</b>        | <b>2,662.00</b>     | <b>0.00</b>   | <b>0.00</b>       | <b>3,002.05</b>       |
| RSM 031505756200 Sleeves and chases, steel pipe, 12" long x 12" diameter, 1 use<br>(Note: Crew Output halved and labor and material prices doubled to account for 24" sleeve.)  | EA        | 22.0        | 340.05              | 0.00               | 2,662.00            | 0.00          | 0.00              | 3,002.05              |
|   |           |             | 2,436.8015          | 15.3174            | 12,405.3600         | 0.0000        |                   | 14,857.4789           |



| Description   | UOM        | Quantity       | DirectLabor      | EQCost           | MatlCost         | SubBidCost  | UserCost1   | DirectCost        |
|---|------------|----------------|------------------|------------------|------------------|-------------|-------------|-------------------|
| <b>2.5'x4' Aluminium Hatch</b>  | <b>EA</b>  | <b>1.0</b>     | <b>2,436.80</b>  | <b>15.32</b>     | <b>12,405.36</b> | <b>0.00</b> | <b>0.00</b> | <b>14,857.48</b>  |
| <i>RSM 055319300020 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated</i>   | <i>LF</i>  | <i>286.0</i>   | <i>1,950.75</i>  | <i>0.00</i>      | <i>960.96</i>    | <i>0.00</i> | <i>0.00</i> | <i>2,911.71</i>   |
| <i>(Note: Perimeter of Hatch = 13 ft.; 22 hatches x 13 ft. per hatch = 286 ft.)</i>   |            |                |                  |                  |                  |             |             |                   |
| <i>RSM 055319300100 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated, for each corner, add</i>   | <i>EA</i>  | <i>88.0</i>    | <i>0.00</i>      | <i>0.00</i>      | <i>444.40</i>    | <i>0.00</i> | <i>0.00</i> | <i>444.40</i>     |
| <i>(Note: 4 corners per hatch; 22 total hatches x 4 corners per hatch = 88 corners)</i>   |            |                |                  |                  |                  |             |             |                   |
| <i>RSM 055313101900 Floor grating, aluminum, heavy duty extruded plank, 5.0 lb per S.F., 2-1/4" D, field fabricated from panels</i>   | <i>SF</i>  | <i>220.0</i>   | <i>486.05</i>    | <i>15.32</i>     | <i>11,000.00</i> | <i>0.00</i> | <i>0.00</i> | <i>11,501.37</i>  |
| <i>(Note: 2.5 ft. x 4ft. = 10 SF per hatch; 22 hatches x 10 SF per hatch = 220 SF)</i>  |            |                |                  |                  |                  |             |             |                   |
| <b>Ladder</b>   | <b>EA</b>  | <b>1.0</b>     | <b>6,004.17</b>  | <b>189.22</b>    | <b>12,672.00</b> | <b>0.00</b> | <b>0.00</b> | <b>18,865.38</b>  |
| <i>RSM 055133130400 Ladder, shop fabricated, aluminum, 20" W, bolted to concrete, excl cage</i>   | <i>VLF</i> | <i>264.0</i>   | <i>6,004.17</i>  | <i>189.22</i>    | <i>12,672.00</i> | <i>0.00</i> | <i>0.00</i> | <i>18,865.38</i>  |
| <b>Crushed Stone Bedding</b>  | <b>EA</b>  | <b>1.0</b>     | <b>130.86</b>    | <b>80.73</b>     | <b>598.50</b>    | <b>0.00</b> | <b>0.00</b> | <b>810.09</b>     |
| <i>RSM 321123231523 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, compacted, 1-1/2", 12" deep</i>                   | <i>ECY</i> | <i>19.0</i>    | <i>56.66</i>     | <i>37.37</i>     | <i>598.50</i>    | <i>0.00</i> | <i>0.00</i> | <i>692.54</i>     |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading</i>   | <i>LCY</i> | <i>27.0</i>    | <i>74.20</i>     | <i>43.35</i>     | <i>0.00</i>      | <i>0.00</i> | <i>0.00</i> | <i>117.55</i>     |
| <i>(Note: 1.40 compaction factor assumed. (19 CY)*1.40 = 27 CY)</i>   |            |                |                  |                  |                  |             |             |                   |
| <b>Temporary Sheeting</b>   | <b>EA</b>  | <b>1.0</b>     | <b>51,011.28</b> | <b>19,999.29</b> | <b>47,740.00</b> | <b>0.00</b> | <b>0.00</b> | <b>118,750.57</b> |
| <i>RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales</i>   | <i>SF</i>  | <i>6,160.0</i> | <i>51,011.28</i> | <i>19,999.29</i> | <i>47,740.00</i> | <i>0.00</i> | <i>0.00</i> | <i>118,750.57</i> |
| <b>Formwork</b>   | <b>EA</b>  | <b>1.0</b>     | <b>38,360.38</b> | <b>0.00</b>      | <b>4,688.64</b>  | <b>0.00</b> | <b>0.00</b> | <b>43,049.02</b>  |
| <i>RSM 031113859460 C.I.P. concrete forms, walls, steel framed plywood, over 16' to 20' high, based on 50 uses of purchased forms, 4 uses of bracing lumber, includes erecting, bracing, stripping and cleaning</i> | <i>SFC</i> | <i>6,336.0</i> | <i>38,360.38</i> | <i>0.00</i>      | <i>4,688.64</i>  | <i>0.00</i> | <i>0.00</i> | <i>43,049.02</i>  |
| <b>Filler Concrete</b>  | <b>EA</b>  | <b>1.0</b>     | <b>0.00</b>      | <b>0.00</b>      | <b>60.77</b>     | <b>0.00</b> | <b>0.00</b> | <b>60.77</b>      |

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| Description  | UOM       | Quantity   | DirectLabor                              | EQCost                                 | MatlCost                               | SubBidCost                   | UserCost1                | DirectCost                               |
|--|-----------|------------|--|--|--|------------------------------|--------------------------|--|
| RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments  | CY        | 0.6        | 0.0000<br>0.00                           | 0.0000<br>0.00                         | 103.0000<br>60.77                      | 0.0000<br>0.00               | 0.0000<br>0.00           | 103.0000<br>60.77                        |
| <b>24" Flaired End Section</b>   | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>             | <b>0.0000</b><br><b>0.00</b>           | <b>0.0000</b><br><b>0.00</b>           | <b>0.0000</b><br><b>0.00</b> | <b>152,000.00</b>        | <b>152,000.00</b>                        |
| USR 24" Flaired End Section<br>(Note: \$2,000 allowance for each 24" Flaired End Section)  | EA        | 76.0       | 0.0000<br>0.00                           | 0.0000<br>0.00                         | 0.0000<br>0.00                         | 0.0000<br>0.00               | 2,000.0000<br>152,000.00 | 2,000.0000<br>152,000.00                 |
| <b>24" Flaired End Section Trash Rack</b>  | <b>EA</b> | <b>1.0</b> | <b>1,469.2021</b><br><b>1,469.20</b>     | <b>46.3003</b><br><b>46.30</b>         | <b>35,264.0000</b><br><b>35,264.00</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>              | <b>36,779.5025</b><br><b>36,779.50</b>   |
| RSM 055313702200 Floor grating, stainless steel, 1-1/4" x 3/16" bearing bars @ 15/16" O.C., cross bars @ 4" O.C., up to 300 S.F., field fabricated from panels<br>(Note: Each Trash Rack is 4 SF. 76 trash racks x 4 SF per trash rack = 304 SF)                                   | SF        | 304.0      | 4.8329<br>1,469.20                       | 0.1523<br>46.30                        | 116.0000<br>35,264.00                  | 0.0000<br>0.00               | 0.0000<br>0.00           | 120.9852<br>36,779.50                    |
| <b>24" Diameter Reinforced Concrete Pipe</b>   | <b>EA</b> | <b>1.0</b> | <b>23,951.9270</b><br><b>23,951.93</b>   | <b>2,259.1141</b><br><b>2,259.11</b>   | <b>44,966.1600</b><br><b>44,966.16</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>              | <b>71,177.2011</b><br><b>71,177.20</b>   |
| RSM 334113602518 Public Storm Utility Drainage Piping, reinforced concrete pipe (RCP), 24" diameter, class 4, excludes excavation or backfill<br>(Note: Hancock County Material Bids Sheet 2015 24 in. Diameter Pipe from Northern Concrete Pipe \$20.76/LF)                       | LF        | 2,166.0    | 11.0581<br>23,951.93                     | 1.0430<br>2,259.11                     | 20.7600<br>44,966.16                   | 0.0000<br>0.00               | 0.0000<br>0.00           | 32.8611<br>71,177.20                     |
| <b>Chamber</b>   | <b>EA</b> | <b>1.0</b> | <b>129,056.2403</b><br><b>129,056.24</b> | <b>13,550.2454</b><br><b>13,550.25</b> | <b>77,106.4074</b><br><b>77,106.41</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>              | <b>219,712.8931</b><br><b>219,712.89</b> |
| <b>Concrete</b>  | <b>EA</b> | <b>1.0</b> | <b>129,056.2403</b><br><b>129,056.24</b> | <b>13,550.2454</b><br><b>13,550.25</b> | <b>77,106.4074</b><br><b>77,106.41</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>              | <b>219,712.8931</b><br><b>219,712.89</b> |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | CY        | 290.1      | 444.9141<br>129,056.24                   | 46.7137<br>13,550.25                   | 265.8200<br>77,106.41                  | 0.0000<br>0.00               | 0.0000<br>0.00           | 757.4478<br>219,712.89                   |
| <b>Manholes</b>  | <b>EA</b> | <b>1.0</b> | <b>26,193.1939</b><br><b>26,193.19</b>   | <b>4,047.6329</b><br><b>4,047.63</b>   | <b>29,424.0000</b><br><b>29,424.00</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.00</b>              | <b>59,664.8268</b><br><b>59,664.83</b>   |
| RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover   | EA        | 16.0       | 816.7223<br>13,067.56                    | 106.3849<br>1,702.16                   | 1,025.0000<br>16,400.00                | 0.0000<br>0.00               | 0.0000<br>0.00           | 1,948.1071<br>31,169.71                  |
| RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 16 manholes x 4 additional feet per manhole = 64 feet)   | VLF       | 64.0       | 102.0903<br>6,533.78                     | 13.2981<br>851.08                      | 121.0000<br>7,744.00                   | 0.0000<br>0.00               | 0.0000<br>0.00           | 236.3884<br>15,128.86                    |

| Description  | UOM       | Quantity   | DirectLabor                   | EQCost                    | MatlCost                      | SubBidCost            | UserCost1                  | DirectCost                            |
|--|-----------|------------|-------------------------------|---------------------------|-------------------------------|-----------------------|----------------------------|---------------------------------------|
| HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.   | EA        | 16.0       | 223.4636<br>3,575.42          | 26.9523<br>431.24         | 330.0000<br>5,280.00          | 0.0000<br>0.00        | 0.0000<br>0.00             | 580.4159<br>9,286.65                  |
| RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 16 manholes x 17 CY of backfill material per manhole = 272 CY. 272 CY of material will be used as backfill around the manholes.) | LCY       | 272.0      | 1.8145<br>493.54              | 0.5313<br>144.50          | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00             | 2.3457<br>638.04                      |
| RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay, till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 16 manholes x 16 CY per manhole = 256 CY)  | BCY       | 256.0      | 9.8551<br>2,522.90            | 3.5885<br>918.66          | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00             | 13.4436<br>3,441.56                   |
| <b>Erosion Mats</b>  | <b>EA</b> | <b>1.0</b> | 4,163.6832<br><b>4,163.68</b> | 621.1140<br><b>621.11</b> | 3,962.8587<br><b>3,962.86</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>                | 8,747.6559<br><b>8,747.66</b>         |
| RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 136 mats x 156.1 SF/mat = 21,229.6 SF)   | SF        | 21,229.6   | 0.1961<br>4,163.68            | 0.0293<br>621.11          | 0.1867<br>3,962.86            | 0.0000<br>0.00        | 0.0000<br>0.00             | 0.4120<br>8,747.66                    |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of item 09 - Channals and Canals and Contract 1B is \$9,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$360,000.)   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>     | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b> | <b>360,000.00</b>          | 360,000.0000<br><b>360,000.00</b>     |
| USR Mobilization   | LS        | 1.0        | 0.00                          | 0.00                      | 0.00                          | 0.00                  | 360,000.00                 | 360,000.00                            |
| <b>18 Cultural Resources Preservation</b><br>(Note: The approximate value of Contracts 1A and 1B is \$15,300,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$153,000.)   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>     | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b> | <b>153,000.00</b>          | 153,000.0000<br><b>153,000.00</b>     |
| USR Cultural Resources Preservation  | LS        | 1.0        | 0.00                          | 0.00                      | 0.00                          | 0.00                  | 153,000.00                 | 153,000.00                            |
| <b>1.0 - CONTRACT 1B - Bridges Reach 1 0+00 to 120+00</b>  | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>     | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b> | <b>2,352,000.00</b>        | 2,352,000.0000<br><b>2,352,000.00</b> |
| <b>02 Relocations</b>  | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>     | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b> | <b>2,352,000.00</b>        | 2,352,000.0000<br><b>2,352,000.00</b> |
| <b>Bridges</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>     | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b> | <b>2,352,000.00</b>        | 2,352,000.0000<br><b>2,352,000.00</b> |
| USR Bridge TR 130  | EA        | 1.0        | 0.0000<br>0.00                | 0.0000<br>0.00            | 0.0000<br>0.00                | 0.0000<br>0.00        | 965,000.0000<br>965,000.00 | 965,000.0000<br>965,000.00            |
| USR Bridge CR 86   | EA        | 1.0        | 0.0000<br>0.00                | 0.0000<br>0.00            | 0.0000<br>0.00                | 0.0000<br>0.00        | 578,000.0000<br>578,000.00 | 578,000.0000<br>578,000.00            |
| USR Bridge SR 12   | EA        | 1.0        | 0.0000<br>0.00                | 0.0000<br>0.00            | 0.0000<br>0.00                | 0.0000<br>0.00        | 809,000.0000<br>809,000.00 | 809,000.0000<br>809,000.00            |

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| Description  | UOM        | Quantity       | DirectLabor         | EQCost              | MatlCost          | SubBidCost    | UserCost1           | DirectCost          |
|--|------------|----------------|---------------------|---------------------|-------------------|---------------|---------------------|---------------------|
| <b>2.0 - CONTRACT 2A - Diversion Channel Reach 2 120+00 to 235+00</b>  | <b>EA</b>  | <b>1.0</b>     | <b>2,079,586.45</b> | <b>1,980,078.98</b> | <b>521,812.85</b> | <b>0.0000</b> | <b>2,892,048.50</b> | <b>7,473,526.77</b> |
|  |            |                | 2,079,586.4497      | 1,980,078.9768      | 521,812.8485      | 0.0000        |                     | 7,473,526.7700      |
| <b>02 Relocations</b>  | <b>EA</b>  | <b>1.0</b>     | <b>262,570.76</b>   | <b>35,810.92</b>    | <b>255,506.90</b> | <b>0.0000</b> | <b>28,161.62</b>    | <b>582,050.19</b>   |
|  |            |                | 262,570.7586        | 35,810.9174         | 255,506.8961      | 0.0000        |                     | 582,050.1921        |
| <b>Dry Road Crossing 215+73</b>  | <b>EA</b>  | <b>1.0</b>     | <b>229,442.97</b>   | <b>27,657.81</b>    | <b>199,515.04</b> | <b>0.0000</b> | <b>0.00</b>         | <b>456,615.82</b>   |
|  |            |                | 229,442.9743        | 27,657.8069         | 199,515.0400      | 0.0000        |                     | 456,615.8212        |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br/>(Note: Excavated material to be hauled and disposed of offsite.)</i>   | <i>LCY</i> | <i>2,054.0</i> | <i>5,570.64</i>     | <i>3,298.04</i>     | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>4,317.8</i>      |
|  |            |                | 2,7121              | 1,6057              | 0.0000            | 0.0000        | 0.0000              | 4,3178              |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br/>(Note: Concrete Roadway Materials)</i>   | <i>LCY</i> | <i>556.0</i>   | <i>1,507.92</i>     | <i>892.75</i>       | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>2,400.67</i>     |
|  |            |                | 2,7121              | 1,6057              | 0.0000            | 0.0000        | 0.0000              | 4,3178              |
| <i>321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br/>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)</i>               | <i>CY</i>  | <i>556.0</i>   | <i>775.29</i>       | <i>293.61</i>       | <i>9,401.96</i>   | <i>0.0000</i> | <i>0.0000</i>       | <i>18,832.5</i>     |
|  |            |                | 1,3944              | 0,5281              | 16,9100           | 0.0000        | 0.0000              | 18,8325             |
| <i>RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading</i>   | <i>BCY</i> | <i>2,054.0</i> | <i>1,974.13</i>     | <i>729.40</i>       | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>2,703.53</i>     |
|  |            |                | 0,9611              | 0,3551              | 0.0000            | 0.0000        | 0.0000              | 1,3162              |
| <i>RSM 033053402500 Structural concrete, in place, elevated slab (4000 psi), one way joists, 125 psf superimposed load, 30" pans, 15' span, includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br/>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i> | <i>CY</i>  | <i>556.0</i>   | <i>219,615.00</i>   | <i>22,444.01</i>    | <i>190,113.08</i> | <i>0.0000</i> | <i>0.0000</i>       | <i>432,172.09</i>   |
|  |            |                | 394,9910            | 40,3669             | 341,9300          | 0.0000        | 0.0000              | 777,2879            |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>EA</b>  | <b>1.0</b>     | <b>33,127.78</b>    | <b>8,153.11</b>     | <b>55,991.86</b>  | <b>0.0000</b> | <b>28,161.62</b>    | <b>125,434.37</b>   |
|  |            |                | 33,127.7843         | 8,153.1105          | 55,991.8561       | 0.0000        |                     | 125,434.3709        |
| <b>020318 Utilities</b>  | <b>EA</b>  | <b>1.0</b>     | <b>33,127.78</b>    | <b>8,153.11</b>     | <b>55,991.86</b>  | <b>0.0000</b> | <b>20,161.62</b>    | <b>117,434.37</b>   |
|  |            |                | 33,127.7843         | 8,153.1105          | 55,991.8561       | 0.0000        |                     | 117,434.3709        |
| <b>Pipeline at 181+50</b>  | <b>EA</b>  | <b>4.0</b>     | <b>18,880.70</b>    | <b>6,264.16</b>     | <b>11,431.50</b>  | <b>0.0000</b> | <b>0.00</b>         | <b>36,576.36</b>    |
|  |            |                | 4,720.1743          | 1,566.0405          | 2,857.8750        | 0.0000        |                     | 9,144.0898          |
| <i>RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br/>(Note: Material price received from Hancock County Material Bid Sheet.)</i>   | <i>LCY</i> | <i>34.0</i>    | <i>299.48</i>       | <i>36.66</i>        | <i>731.00</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>1,067.14</i>     |
|  |            |                | 8,8084              | 1,0781              | 21,5000           | 0.0000        | 0.0000              | 31,3865             |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck,</i>  | <i>LCY</i> | <i>649.0</i>   | <i>1,760.15</i>     | <i>1,042.08</i>     | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>2,802.22</i>     |
|  |            |                | 2,7121              | 1,6057              | 0.0000            | 0.0000        | 0.0000              | 4,3178              |

| Description   | UOM       | Quantity   | DirectLabor                          | EQCost                           | MatlCost                             | SubBidCost                   | UserCost1               | DirectCost                             |
|---|-----------|------------|--------------------------------------|----------------------------------|--------------------------------------|------------------------------|-------------------------|--|
| highway haulers, excludes loading<br>(Note: Hauling for construction materials. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY)   |           |            |                                      |                                  |                                      |                              |                         |  |
| RSM 331113153040 Water supply distribution piping, ductile iron, cement lined, tyton push-on joint, no fittings, 18' lengths, 8" diameter, class 50, excludes excavation or backfill  | LF        | 300.0      | 12.1500<br>3,645.01                  | 2.0063<br>601.89                 | 22.0000<br>6,600.00                  | 0.0000<br>0.00               | 0.0000<br>0.00          | 36.1563<br>10,846.90                   |
| RSM 331113158040 Water supply distribution piping, fitting, 90 degree bend or elbow, mechanical joint, ductile iron, cement lined, 8" diameter, class 50 water piping   | EA        | 4.0        | 179.8691<br>719.48                   | 0.0000<br>0.00                   | 665.0000<br>2,660.00                 | 0.0000<br>0.00               | 0.0000<br>0.00          | 844.8691<br>3,379.48                   |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 600 CY)   | ECY       | 600.0      | 4.2460<br>2,547.62                   | 0.2410<br>144.62                 | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 4.4871<br>2,692.24                     |
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 600.0      | 0.9611<br>576.67                     | 0.3551<br>213.07                 | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 1.3162<br>789.74                       |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)  | BCY       | 67.0       | 1.3007<br>87.14                      | 0.3864<br>25.89                  | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 1.6870<br>113.03                       |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted   | BCY       | 67.0       | 0.8942<br>59.91                      | 0.2656<br>17.80                  | 21.5000<br>1,440.50                  | 0.0000<br>0.00               | 0.0000<br>0.00          | 22.6598<br>1,518.21                    |
| RSM 024113381100 Selective demolition, water & sewer piping & fittings, ductile iron pipe, 6"-12", diameter, excludes excavation  | LF        | 300.0      | 12.3984<br>3,719.51                  | 1.6161<br>484.82                 | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 14.0144<br>4,204.33                    |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Hauling for disposal. 1.30 compaction factor assumed. (499 CY)*1.30 = 649 CY.) | LCY       | 649.0      | 2.7121<br>1,760.15                   | 1.6057<br>1,042.08               | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 4.3178<br>2,802.22                     |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add   | CY        | 649.0      | 5.7097<br>3,705.57                   | 4.0913<br>2,655.27               | 0.0000<br>0.00                       | 0.0000<br>0.00               | 0.0000<br>0.00          | 9.8010<br>6,360.84                     |
| <b>Overhead Utilities</b>   | <b>EA</b> | <b>1.0</b> | <b>4,196.6055</b><br><b>4,196.61</b> | <b>452.0851</b><br><b>452.09</b> | <b>4,300.8561</b><br><b>4,300.86</b> | <b>0.0000</b><br><b>0.00</b> | <b>20,161.62</b>        | <b>29,111.1667</b><br><b>29,111.17</b> |
| HNC 337116335100 Wood pole, yellow pine, penta-treated, 50', class 3  | EA        | 4.0        | 750.4434<br>3,001.77                 | 73.4311<br>293.72                | 510.0000<br>2,040.00                 | 0.0000<br>0.00               | 0.0000<br>0.00          | 1,333.8745<br>5,335.50                 |
| USR Pole Removal  | EA        | 4.0        | 0.0000<br>0.00                       | 0.0000<br>0.00                   | 0.0000<br>0.00                       | 0.0000<br>0.00               | 4,687.2800<br>18,749.12 | 4,687.2800<br>18,749.12                |

| Description   | UOM       | Quantity   | DirectLabor                     | EQCost                        | MatlCost                        | SubBidCost            | UserCost1          | DirectCost                      |
|---|-----------|------------|---------------------------------|-------------------------------|---------------------------------|-----------------------|--------------------|---------------------------------|
| <i>(Note: Assumed to be 60% of the installation cost per pole. \$7,812.14*0.60 = \$4,687.28)</i>  |           |            |                                 |                               |                                 |                       |                    |                                 |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add<br><i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i>  | CY        | 22.0       | 5.7097<br>125.61                | 4.0913<br>90.01               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00     | 9.8010<br>215.62                |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i> | LCY       | 22.0       | 2.7121<br>59.67                 | 1.6057<br>35.32               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00     | 4.3178<br>94.99                 |
| <b>Overhead AT&amp;T Lines</b>  | <b>EA</b> | <b>1.0</b> | 757.2001<br><b>757.20</b>       | 2.0127<br><b>2.01</b>         | 106.5000<br><b>106.50</b>       | 0.0000<br><b>0.00</b> | <b>0.00</b>        | 865.7128<br><b>865.71</b>       |
| RSM 270505200240 Telephone cable, electrical demolition, remove<br><i>(Note: Three 250 LF overhead AT&amp;T lines will be demolished. 750 total LF.)</i>  | LF        | 750.0      | 0.2129<br>159.65                | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.2129<br>159.65                |
| RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors  | MI        | 0.1        | 387.6232<br>38.76               | 20.1275<br>2.01               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00     | 407.7506<br>40.78               |
| RSM 271513132300 Telephone cable, telephone twisted, PVC insulation, #22-4 conductor<br><i>(Note: Three 250 LF overhead AT&amp;T lines will be installed. 750 total LF.)</i>  | LF        | 750.0      | 0.7450<br>558.78                | 0.0000<br>0.00                | 0.1420<br>106.50                | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.8870<br>665.28                |
| <b>Overhead Electric Lines</b>  | <b>EA</b> | <b>1.0</b> | 252.3534<br><b>252.35</b>       | 31.0143<br><b>31.01</b>       | 2,154.3561<br><b>2,154.36</b>   | 0.0000<br><b>0.00</b> | <b>1,412.50</b>    | 3,850.2237<br><b>3,850.22</b>   |
| USR Overhead Electric Line Removal<br><i>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. One 250 LF overhead electric line will be demolished. 250 total LF.)</i>   | EA        | 250.0      | 0.0000<br>0.00                  | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 5.6500<br>1,412.50 | 5.6500<br>1,412.50              |
| RSM 337139130810 Overhead line conductors & devices, disposal of surplus material, high voltage conductors  | MI        | 0.1        | 387.6232<br>38.76               | 20.1275<br>2.01               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00     | 407.7506<br>40.78               |
| RSM 337139130180 Overhead line conductors & devices, conductors, primary circuits, per wire, over 1600 kcmil<br><i>(Note: One 250 LF overhead electric line will be installed. 250 total LF.)</i>   | LF        | 250.0      | 0.8544<br>213.59                | 0.1160<br>29.00               | 8.6174<br>2,154.36              | 0.0000<br>0.00        | 0.0000<br>0.00     | 9.5878<br>2,396.95              |
| <b>Underground Utilities</b>  | <b>EA</b> | <b>1.0</b> | 10,050.4816<br><b>10,050.48</b> | 1,436.8634<br><b>1,436.86</b> | 40,259.5000<br><b>40,259.50</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>        | 51,746.8450<br><b>51,746.84</b> |
| <b>Underground Fiber Cables</b>   | <b>EA</b> | <b>1.0</b> | 2,660.1784<br><b>2,660.18</b>   | 698.3609<br><b>698.36</b>     | 8,373.5000<br><b>8,373.50</b>   | 0.0000<br><b>0.00</b> | <b>0.00</b>        | 11,732.0393<br><b>11,732.04</b> |
| RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill   | LF        | 250.0      | 0.0291<br>7.29                  | 0.0000<br>0.00                | 0.0560<br>14.00                 | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.0851<br>21.29                 |

| Description  | UOM       | Quantity   | DirectLabor                          | EQCost                           | MatlCost                               | SubBidCost                   | UserCost1                    | DirectCost                             |
|--|-----------|------------|--------------------------------------|----------------------------------|--|------------------------------|------------------------------|--|
| RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: Two 250 LF Fiber Optic Cables will be installed. 500 total LF.)   | LF        | 500.0      | 0.6093<br>304.65                     | 0.0000<br>0.00                   | 1.5000<br>750.00                       | 0.0000<br>0.00               | 0.0000<br>0.00               | 2.1093<br>1,054.65                     |
| RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Two 250 LF Fiber Optic Cables will be installed. Each cable will be installed in a separate condui. 500 total LF of conduit will be installed. Labor cost has been removed from this item.) | LF        | 500.0      | 0.0000<br>0.00                       | 0.0000<br>0.00                   | 13.8000<br>6,900.00                    | 0.0000<br>0.00               | 0.0000<br>0.00               | 13.8000<br>6,900.00                    |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | LCY       | 14.0       | 8.8084<br>123.32                     | 1.0781<br>15.09                  | 21.5000<br>301.00                      | 0.0000<br>0.00               | 0.0000<br>0.00               | 31.3865<br>439.41                      |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)                                   | LCY       | 325.0      | 2.7121<br>881.43                     | 1.6057<br>521.84                 | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00               | 4.3178<br>1,403.27                     |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | BCY       | 19.0       | 1.3007<br>24.71                      | 0.3864<br>7.34                   | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00               | 1.6870<br>32.05                        |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | ECY       | 250.0      | 4.2460<br>1,061.51                   | 0.2410<br>60.26                  | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00               | 4.4871<br>1,121.77                     |
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | BCY       | 250.0      | 0.9611<br>240.28                     | 0.3551<br>88.78                  | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00               | 1.3162<br>329.06                       |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | BCY       | 19.0       | 0.8942<br>16.99                      | 0.2656<br>5.05                   | 21.5000<br>408.50                      | 0.0000<br>0.00               | 0.0000<br>0.00               | 22.6598<br>430.54                      |
| <b>Underground Copper Cables</b>   | <b>EA</b> | <b>1.0</b> | <b>7,390.3032</b><br><b>7,390.30</b> | <b>738.5025</b><br><b>738.50</b> | <b>31,886.0000</b><br><b>31,886.00</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b> | <b>40,014.8057</b><br><b>40,014.81</b> |
| RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill  | LF        | 250.0      | 0.0291<br>7.29                       | 0.0000<br>0.00                   | 0.0560<br>14.00                        | 0.0000<br>0.00               | 0.0000<br>0.00               | 0.0851<br>21.29                        |
| RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Three 250 LF copper cables will be installed. Each cable will be installed in a separate conduit. 750 total LF of conduit will be installed. Labor cost has been removed from this item.)   | LF        | 750.0      | 0.0000<br>0.00                       | 0.0000<br>0.00                   | 13.8000<br>10,350.00                   | 0.0000<br>0.00               | 0.0000<br>0.00               | 13.8000<br>10,350.00                   |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck,   | LCY       | 350.0      | 2.7121<br>949.23                     | 1.6057<br>561.98                 | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00               | 4.3178<br>1,511.21                     |

| Description  | UOM       | Quantity   | DirectLabor                                  | EQCost                                       | MatlCost                                 | SubBidCost                   | UserCost1                              | DirectCost                                   |
|--|-----------|------------|--|--|--|------------------------------|--|--|
| highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)  |           |            |  |  |  |                              |  |  |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | LCY       | 14.0       | 8.8084<br>123.32                             | 1.0781<br>15.09                              | 21.5000<br>301.00                        | 0.0000<br>0.00               | 0.0000<br>0.00                         | 31.3865<br>439.41                            |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)  | ECY       | 250.0      | 4.2460<br>1,061.51                           | 0.2410<br>60.26                              | 0.0000<br>0.00                           | 0.0000<br>0.00               | 0.0000<br>0.00                         | 4.4871<br>1,121.77                           |
| RSM 260526803900 Insulated ground wire, copper, stranded, 1000 kcmil<br>(Note: Three 250 LF Copper Cables will be installed. 750 total LF.)  | LF        | 750.0      | 6.6226<br>4,966.98                           | 0.0000<br>0.00                               | 27.7500<br>20,812.50                     | 0.0000<br>0.00               | 0.0000<br>0.00                         | 34.3726<br>25,779.48                         |
| RSM 312316425100 Excavating, bulk bank measure,sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 250.0      | 0.9611<br>240.28                             | 0.3551<br>88.78                              | 0.0000<br>0.00                           | 0.0000<br>0.00               | 0.0000<br>0.00                         | 1.3162<br>329.06                             |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)   | BCY       | 19.0       | 1.3007<br>24.71                              | 0.3864<br>7.34                               | 0.0000<br>0.00                           | 0.0000<br>0.00               | 0.0000<br>0.00                         | 1.6870<br>32.05                              |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted  | BCY       | 19.0       | 0.8942<br>16.99                              | 0.2656<br>5.05                               | 21.5000<br>408.50                        | 0.0000<br>0.00               | 0.0000<br>0.00                         | 22.6598<br>430.54                            |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of the Utilities Relocation is \$200,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$8,000.) | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>                 | <b>0.0000</b><br><b>0.00</b>                 | <b>0.0000</b><br><b>0.00</b>             | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>8,000.00</b>       | <b>8,000.0000</b><br><b>8,000.00</b>         |
| USR Mobilization   | LS        | 1.0        | 0.00   | 0.00   | 0.00                                     | 0.00                         | 8,000.00                               | 8,000.00                                     |
| <b>08 Roads, Railroads, and Bridges</b>  | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>                 | <b>0.0000</b><br><b>0.00</b>                 | <b>0.0000</b><br><b>0.00</b>             | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>2,084,000.0000</b> | <b>2,084,000.0000</b><br><b>2,084,000.00</b> |
| USR Railroad Bridge  | EA        | 1.0        | 0.00   | 0.00   | 0.00                                     | 0.00                         | 2,084,000.0000                         | 2,084,000.0000                               |
| <b>09 Channels and Canals</b>  | <b>EA</b> | <b>1.0</b> | <b>1,731,165.7690</b><br><b>1,731,165.77</b> | <b>1,932,974.8277</b><br><b>1,932,974.83</b> | <b>219,255.8125</b><br><b>219,255.81</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>453,612.00</b>     | <b>4,337,008.4092</b><br><b>4,337,008.41</b> |
| <b>0901 Channels</b>   | <b>EA</b> | <b>1.0</b> | <b>1,731,165.7690</b><br><b>1,731,165.77</b> | <b>1,932,974.8277</b><br><b>1,932,974.83</b> | <b>219,255.8125</b><br><b>219,255.81</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>197,612.00</b>     | <b>4,081,008.4092</b><br><b>4,081,008.41</b> |
| <b>Drainage Ditch</b>  | <b>EA</b> | <b>1.0</b> | <b>27,709.0495</b><br><b>27,709.05</b>       | <b>21,025.5310</b><br><b>21,025.53</b>       | <b>0.0000</b><br><b>0.00</b>             | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>48,734.5805</b><br><b>48,734.58</b>       |
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler  | BCY       | 17,478.0   | 0.3844<br>6,719.35                           | 0.3566<br>6,233.11                           | 0.0000<br>0.00                           | 0.0000<br>0.00               | 0.0000<br>0.00                         | 0.7411<br>12,952.46                          |



| Description  | UOM       | Quantity   | DirectLabor            | EQCost                 | MatlCost             | SubBidCost     | UserCost1      | DirectCost              |
|--|-----------|------------|------------------------|------------------------|----------------------|----------------|----------------|-------------------------|
| mounted, excluding truck loading   |           |            | 0.9175                 | 0.8193                 | 0.0000               | 0.0000         | 0.0000         | 1.7368                  |
| USR Topsoil Placement<br>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)   | LCY       | 6,063.0    | 5,562.92               | 4,967.20               | 0.00                 | 0.00           | 0.00           | 10,530.12               |
| USR Fine Grading   | ACR       | 3.8        | 2,173.5720<br>8,172.63 | 1,070.2296<br>4,024.06 | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 3,243.8015<br>12,196.69 |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | ACR       | 3.8        | 449.7950<br>1,691.23   | 221.7950<br>833.95     | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 671.5899<br>2,525.18    |
| USR Topsoil Loading  | LCY       | 6,063.0    | 0.9175<br>5,562.92     | 0.8193<br>4,967.20     | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 1.7368<br>10,530.12     |
| <b>Strip and Stockpile Topsoil</b>   | <b>EA</b> | <b>1.0</b> | <b>62,543.20</b>       | <b>60,595.24</b>       | <b>790.0000</b>      | <b>0.0000</b>  | <b>0.0000</b>  | <b>123,928.44</b>       |
| RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer  | CY        | 96,759.3   | 0.6221<br>60,189.68    | 0.6262<br>60,595.24    | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 1.2483<br>120,784.92    |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2.3535<br>2,353.52     | 0.0000<br>0.00         | 0.7900<br>790.00     | 0.0000<br>0.00 | 0.0000<br>0.00 | 3.1435<br>3,143.52      |
| <b>Install Access Road</b>   | <b>EA</b> | <b>1.0</b> | <b>14,172.73</b>       | <b>10,425.07</b>       | <b>38,659.5000</b>   | <b>0.0000</b>  | <b>0.0000</b>  | <b>63,257.30</b>        |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)   | LCY       | 2,982.0    | 2.7121<br>8,087.46     | 1.6057<br>4,788.09     | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 4.3178<br>12,875.55     |
| RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)  | ECY       | 2,130.0    | 2.8569<br>6,085.28     | 2.6465<br>5,636.97     | 18.1500<br>38,659.50 | 0.0000<br>0.00 | 0.0000<br>0.00 | 23.6534<br>50,381.75    |
| <b>Excavation of Diversion Channel</b>   | <b>EA</b> | <b>1.0</b> | <b>973,039.94</b>      | <b>1,582,790.53</b>    | <b>24,581.5250</b>   | <b>0.0000</b>  | <b>0.0000</b>  | <b>2,580,412.00</b>     |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 694,114 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 694,114 CY = 69,411 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.) | BCY       | 69,411.0   | 0.6815<br>47,304.85    | 0.6322<br>43,881.67    | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00 | 1.3137<br>91,186.52     |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2.3535<br>2,353.52     | 0.0000<br>0.00         | 0.7900<br>790.00     | 0.0000<br>0.00 | 0.0000<br>0.00 | 3.1435<br>3,143.52      |

| Description   | UOM       | Quantity   | DirectLabor                       | EQCost                            | MatlCost              | SubBidCost            | UserCost1             | DirectCost                      |
|---|-----------|------------|-----------------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.) | BCY       | 1,063.5    | 0.6629<br>705.01                  | 1.9500<br>2,073.83                | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 2.6129<br>2,778.83              |
| RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.<br>(Note: One half of the rock between Stations 207+00 and 233+00 and 233+00 and 235+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 2,127 CY of rock is contained in these sections. Approximately 1,063.5 CY of the rock in these sections will be excavated via blasting. The remaining 6,737 CY of rock between Stations 120+00 and 235+00 will excavated via blasting. A total of 7,800.50 CY of rock between Stations 120+00 and 235+00 will excavated via blasting.)   | BCY       | 7,800.5    | 4.4423<br>34,652.54               | 1.9497<br>15,208.51               | 3.0500<br>23,791.53   | 0.0000<br>0.00        | 0.0000<br>0.00        | 9.4420<br>73,652.57             |
| USR Scraping<br>(Note: 90% of the 694,114 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 694,114 CY = 624,703 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)  | BCY       | 624,703.0  | 0.7990<br>499,108.97              | 1.3710<br>856,473.81              | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 2.1700<br>1,355,582.79          |
| <b>Hauling and Disposal</b>   | <b>EA</b> | <b>1.0</b> | 388,915.0555<br><b>388,915.06</b> | 665,152.7056<br><b>665,152.71</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 2.1700<br><b>1,054,067.76</b>   |
| USR Rough Grading<br>(Note: Manage piles on purchased property. Sum of the soil and rock hauling quantities: (885,665 CY + 13,296 CY) = 898,961 CY)   | BCY       | 898,961.0  | 0.2973<br>267,244.47              | 0.5271<br>473,875.10              | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.8244<br>741,119.57            |
| USR Diversion Channel Material Hauling<br>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (69,411 CY + 12,833 CY) x 1.30 = 106,917 CY (Assume an expansion factor of 1.30).)   | LCY       | 106,917.0  | 0.4920<br>52,602.02               | 1.1267<br>120,465.49              | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.6187<br>173,067.51            |
| USR Diversion Channel Material Hauling<br>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and blasted x 1.50 = 8,864 CY x 1.50 = 13,296 CY (Assume an expansion factor of 1.30).)  | LCY       | 13,296.0   | 0.4920<br>6,541.49                | 1.1267<br>14,980.87               | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 1.6187<br>21,522.36             |
| USR Diversion Channel Excavation Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (106,917 CY + 13,296 CY) = 120,213 CY)  | LCY       | 120,213.0  | 0.5201<br>62,527.07               | 0.4644<br>55,831.25               | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.9846<br>118,358.32            |
| <b>Grade Channel Embankment</b>   | <b>EA</b> | <b>1.0</b> | 4,959.5472<br><b>4,959.55</b>     | 8,794.2173<br><b>8,794.22</b>     | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 13,753.7644<br><b>13,753.76</b> |
| USR Rough Grading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)   | BCY       | 16,683.0   | 0.2973<br>4,959.55                | 0.5271<br>8,794.22                | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.8244<br>13,753.76             |
| <b>Construct Channel Embankment</b>   | <b>EA</b> | <b>1.0</b> | 40,365.8955<br><b>40,365.90</b>   | 27,159.0830<br><b>27,159.08</b>   | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 67,524.9785<br><b>67,524.98</b> |
|   |           |            | 1.6951                            | 1.0801                            | 0.0000                | 0.0000                | 0.0000                | 2.7752                          |

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| Description   | UOM       | Quantity   | DirectLabor       | EQCost            | MatlCost         | SubBidCost  | UserCost1         | DirectCost        |
|---|-----------|------------|-------------------|-------------------|------------------|-------------|-------------------|-------------------|
| HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)  | LCY       | 16,683.0   | 28,278.64         | 18,019.24         | 0.00             | 0.00        | 0.00              | 46,297.87         |
|   |           |            | 0.2044            | 0.0834            | 0.0000           | 0.0000      | 0.0000            | 0.2878            |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | ECY       | 16,683.0   | 3,409.84          | 1,391.66          | 0.00             | 0.00        | 0.00              | 4,801.50          |
|   |           |            | 0.5201            | 0.4644            | 0.0000           | 0.0000      | 0.0000            | 0.9846            |
| USR Diversion Channel Excavation Loading<br>(Note: 12,833 CY * 1.30 = 16,683 CY)  | LCY       | 16,683.0   | 8,677.42          | 7,748.19          | 0.00             | 0.00        | 0.00              | 16,425.61         |
| <b>Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>EA</b> | <b>1.0</b> | <b>322,648.53</b> | <b>211,290.22</b> | <b>76,025.27</b> | <b>0.00</b> | <b>0.00</b>       | <b>609,964.02</b> |
|   |           |            | 322,648.5301      | 211,290.2199      | 76,025.2680      | 0.0000      |                   | 609,964.0180      |
| USR Topsoil Placement<br>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)  | LCY       | 53,132.0   | 48,749.64         | 43,529.19         | 0.00             | 0.00        | 0.00              | 92,278.83         |
|   |           |            | 0.9175            | 0.8193            | 0.0000           | 0.0000      | 0.0000            | 1.7368            |
| USR Fine Grading<br>(Note: Assume 6" Placement. 40,871 CY * 6 = 245,226 SY = 50.67 Acres)   | ACR       | 50.7       | 110,134.89        | 54,228.53         | 0.00             | 0.00        | 0.00              | 164,363.42        |
|   |           |            | 2,173.5720        | 1,070.2296        | 0.0000           | 0.0000      | 0.0000            | 3,243.8015        |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | ACR       | 50.7       | 22,791.11         | 11,238.35         | 76,025.27        | 0.00        | 0.00              | 110,054.73        |
|   |           |            | 449.7950          | 221.7950          | 1,500.4000       | 0.0000      | 0.0000            | 2,171.9899        |
| USR Topsoil Loading   | LCY       | 53,132.0   | 48,749.64         | 43,529.19         | 0.00             | 0.00        | 0.00              | 92,278.83         |
|   |           |            | 0.9175            | 0.8193            | 0.0000           | 0.0000      | 0.0000            | 1.7368            |
| USR Topsoil Hauling<br>(Note: 40,871 CY * 1.30 = 53,132 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | LCY       | 53,132.0   | 92,223.25         | 58,764.95         | 0.00             | 0.00        | 0.00              | 150,988.20        |
|   |           |            | 1.7357            | 1.1060            | 0.0000           | 0.0000      | 0.0000            | 2.8418            |
| <b>Drainage Outlets</b>   | <b>EA</b> | <b>1.0</b> | <b>59,254.61</b>  | <b>8,766.71</b>   | <b>65,620.90</b> | <b>0.00</b> | <b>187,612.00</b> | <b>321,254.23</b> |
|   |           |            | 59,254.6125       | 8,766.7124        | 65,620.9008      | 0.0000      |                   | 321,254.2257      |
| <b>Riprap</b>   | <b>EA</b> | <b>1.0</b> | <b>1,321.71</b>   | <b>483.98</b>     | <b>4,401.54</b>  | <b>0.00</b> | <b>0.00</b>       | <b>6,207.24</b>   |
|   |           |            | 1,321.7112        | 483.9848          | 4,401.5400       | 0.0000      |                   | 6,207.2361        |
| USR Rip-Rap Placement<br>(Note: 88 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 118.80 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)   | TON       | 118.8      | 1,321.71          | 483.98            | 4,401.54         | 0.00        | 0.00              | 6,207.24          |
|   |           |            | 11.1255           | 4.0739            | 37.0500          | 0.0000      | 0.0000            | 52.2495           |
| <b>Geotextile Under Riprap</b>  | <b>EA</b> | <b>1.0</b> | <b>75.82</b>      | <b>0.00</b>       | <b>258.54</b>    | <b>0.00</b> | <b>0.00</b>       | <b>334.37</b>     |
|   |           |            | 75.8211           | 0.0000            | 258.5440         | 0.0000      |                   | 334.3651          |
| RSM 313219161550 Geosynthetic soil stabilization, geotextile fabric, non-woven, 120 lb. tensile strength, includes scarifying and compaction  | SY        | 228.8      | 75.82             | 0.00              | 258.54           | 0.00        | 0.00              | 334.37            |
|   |           |            | 0.3314            | 0.0000            | 1.1300           | 0.0000      | 0.0000            | 1.4614            |

| Description  | UOM       | Quantity    | DirectLabor     | EQCost       | MatlCost        | SubBidCost  | UserCost1         | DirectCost        |
|--|-----------|-------------|-----------------|--------------|-----------------|-------------|-------------------|-------------------|
| <b>Sluice Gate</b>   | <b>EA</b> | <b>4.0</b>  | <b>0.00</b>     | <b>0.00</b>  | <b>0.00</b>     | <b>0.00</b> | <b>147,612.00</b> | <b>147,612.00</b> |
| USR Furnish 24" Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$19,300 plus 6.75% sales tax = \$20,603)                        | EA        | 4.0         | 0.00            | 0.00         | 0.00            | 0.00        | 82,412.00         | 82,412.00         |
| USR Install 24" Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)   | EA        | 4.0         | 0.00            | 0.00         | 0.00            | 0.00        | 17,200.00         | 17,200.00         |
| USR Backflow Preventer<br>(Note: \$12,000 allowance per 08/18/15 Conference Call with Clifton Office.)   | EA        | 4.0         | 0.00            | 0.00         | 0.00            | 0.00        | 48,000.00         | 48,000.00         |
| <b>24" Diameter Pipe Sleeve</b>  | <b>EA</b> | <b>46.0</b> | <b>61.83</b>    | <b>0.00</b>  | <b>484.00</b>   | <b>0.00</b> | <b>0.00</b>       | <b>545.83</b>     |
| RSM 031505756200 Sleeves and chases, steel pipe, 12" long x 12" diameter, 1 use<br>(Note: Crew Output halved and labor and material prices doubled to account for 24" sleeve.)                                 | EA        | 4.0         | 61.83           | 0.00         | 484.00          | 0.00        | 0.00              | 545.83            |
| <b>2.5'x4' Aluminium Hatch</b>   | <b>EA</b> | <b>1.0</b>  | <b>443.05</b>   | <b>2.78</b>  | <b>2,255.52</b> | <b>0.00</b> | <b>0.00</b>       | <b>2,701.36</b>   |
| RSM 055319300020 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated<br>(Note: Perimeter of Hatch = 13 ft.; 4 hatches x 13 ft. per hatch = 52 ft.)   | LF        | 52.0        | 354.68          | 0.00         | 174.72          | 0.00        | 0.00              | 529.40            |
| RSM 055319300100 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated, for each corner, add<br>(Note: 4 corners per hatch; 4 total hatches x 4 corners per hatch = 16 corners)                            | EA        | 16.0        | 0.00            | 0.00         | 80.80           | 0.00        | 0.00              | 80.80             |
| RSM 055313101900 Floor grating, aluminum, heavy duty extruded plank, 5.0 lb per S.F., 2-1/4" D, field fabricated from panels<br>(Note: 2.5 ft. x 4 ft. = 10 SF per hatch; 4 hatches x 10 SF per hatch = 40 SF) | SF        | 40.0        | 88.37           | 2.78         | 2,000.00        | 0.00        | 0.00              | 2,091.16          |
| <b>Ladder</b>  | <b>EA</b> | <b>1.0</b>  | <b>1,091.67</b> | <b>34.40</b> | <b>2,304.00</b> | <b>0.00</b> | <b>0.00</b>       | <b>3,430.07</b>   |
| RSM 055133130400 Ladder, shop fabricated, aluminum, 20" W, bolted to concrete, excl cage   | VLF       | 48.0        | 1,091.67        | 34.40        | 2,304.00        | 0.00        | 0.00              | 3,430.07          |
| <b>Crushed Stone Bedding</b>   | <b>EA</b> | <b>1.0</b>  | <b>34.15</b>    | <b>21.07</b> | <b>157.50</b>   | <b>0.00</b> | <b>0.00</b>       | <b>212.72</b>     |
| RSM 321123231523 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, compacted, 1-1/2", 12" deep                     | ECY       | 5.0         | 14.91           | 9.83         | 157.50          | 0.00        | 0.00              | 182.25            |

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| Description  | UOM       | Quantity   | DirectLabor                          | EQCost                               | MatlCost                               | SubBidCost                   | UserCost1                              | DirectCost                             |
|--|-----------|------------|--------------------------------------|--------------------------------------|--|------------------------------|--|--|
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. (5 CY)*1.40 = 7 CY)                               | LCY       | 7.0        | 2.7481<br>19.24                      | 1.6057<br>11.24                      | 0.0000<br>0.00                         | 0.0000<br>0.00               | 0.0000<br>0.00                         | 4.3538<br>30.48                        |
| <b>Temporary Sheeting</b>  | <b>EA</b> | <b>1.0</b> | <b>9,274.7788</b><br><b>9,274.78</b> | <b>3,636.2339</b><br><b>3,636.23</b> | <b>8,680.0000</b><br><b>8,680.00</b>   | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>21,591.0127</b><br><b>21,591.01</b> |
| RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales   | SF        | 1,120.0    | 8.2811<br>9,274.78                   | 3.2466<br>3,636.23                   | 7.7500<br>8,680.00                     | 0.0000<br>0.00               | 0.0000<br>0.00                         | 19.2777<br>21,591.01                   |
| <b>Formwork</b>  | <b>EA</b> | <b>1.0</b> | <b>6,974.6144</b><br><b>6,974.61</b> | <b>0.0000</b><br><b>0.00</b>         | <b>852.4800</b><br><b>852.48</b>       | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>7,827.0944</b><br><b>7,827.09</b>   |
| RSM 031113859460 C.I.P. concrete forms, walls, steel framed plywood, over 16' to 20' high, based on 50 uses of purchased forms, 4 uses of bracing lumber, includes erecting, bracing, stripping and cleaning   | SFC       | 1,152.0    | 6.0544<br>6,974.61                   | 0.0000<br>0.00                       | 0.7400<br>852.48                       | 0.0000<br>0.00               | 0.0000<br>0.00                         | 6.7944<br>7,827.09                     |
| <b>Filler Concrete</b>   | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>         | <b>0.0000</b><br><b>0.00</b>         | <b>60.7700</b><br><b>60.77</b>         | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>60.7700</b><br><b>60.77</b>         |
| RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments  | CY        | 0.6        | 0.0000<br>0.00                       | 0.0000<br>0.00                       | 103.0000<br>60.77                      | 0.0000<br>0.00               | 0.0000<br>0.00                         | 103.0000<br>60.77                      |
| <b>24" Flaired End Section</b>   | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>         | <b>0.0000</b><br><b>0.00</b>         | <b>0.0000</b><br><b>0.00</b>           | <b>0.0000</b><br><b>0.00</b> | <b>40,000.0000</b><br><b>40,000.00</b> | <b>40,000.0000</b><br><b>40,000.00</b> |
| USR 24" Flaired End Section<br>(Note: \$2,000 allowance for each 24" Flaired End Section)  | EA        | 20.0       | 0.0000<br>0.00                       | 0.0000<br>0.00                       | 0.0000<br>0.00                         | 0.0000<br>0.00               | 2,000.0000<br>40,000.00                | 2,000.0000<br>40,000.00                |
| <b>24" Flaired End Section Trash Rack</b>  | <b>EA</b> | <b>1.0</b> | <b>386.6321</b><br><b>386.63</b>     | <b>12.1843</b><br><b>12.18</b>       | <b>9,280.0000</b><br><b>9,280.00</b>   | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>9,678.8164</b><br><b>9,678.82</b>   |
| RSM 055313702200 Floor grating, stainless steel, 1-1/4" x 3/16" bearing bars @ 15/16" O.C., cross bars @ 4" O.C., up to 300 S.F., field fabricated from panels<br>(Note: Each Trash Rack is 4 SF. 20 trash racks x 4 SF per trash rack = 80 SF)              | SF        | 80.0       | 4.8329<br>386.63                     | 0.1523<br>12.18                      | 116.0000<br>9,280.00                   | 0.0000<br>0.00               | 0.0000<br>0.00                         | 120.9852<br>9,678.82                   |
| <b>24" Diameter Reinforced Concrete Pipe</b>   | <b>EA</b> | <b>1.0</b> | <b>6,303.1387</b><br><b>6,303.14</b> | <b>594.5037</b><br><b>594.50</b>     | <b>11,833.2000</b><br><b>11,833.20</b> | <b>0.0000</b><br><b>0.00</b> | <b>0.0000</b><br><b>0.00</b>           | <b>18,730.8424</b><br><b>18,730.84</b> |
| RSM 334113602518 Public Storm Utility Drainage Piping, reinforced concrete pipe (RCP), 24" diameter, class 4, excludes excavation or backfill<br>(Note: Hancock County Material Bids Sheet 2015 24 in. Diameter Pipe from Northern Concrete Pipe \$20.76/LF) | LF        | 570.0      | 11.0581<br>6,303.14                  | 1.0430<br>594.50                     | 20.7600<br>11,833.20                   | 0.0000<br>0.00               | 0.0000<br>0.00                         | 32.8611<br>18,730.84                   |

| Description   | UOM       | Quantity   | DirectLabor                       | EQCost                        | MatlCost                        | SubBidCost            | UserCost1                | DirectCost                        |
|---|-----------|------------|-----------------------------------|-------------------------------|---------------------------------|-----------------------|--------------------------|-----------------------------------|
| <b>Chamber</b>  | <b>EA</b> | <b>1.0</b> | 23,464.7710<br><b>23,464.77</b>   | 2,463.6810<br><b>2,463.68</b> | 14,019.3468<br><b>14,019.35</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 39,947.7987<br><b>39,947.80</b>   |
| <b>Concrete</b>   | <b>EA</b> | <b>1.0</b> | 23,464.7710<br><b>23,464.77</b>   | 2,463.6810<br><b>2,463.68</b> | 14,019.3468<br><b>14,019.35</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 39,947.7987<br><b>39,947.80</b>   |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)  | CY        | 52.7       | 444.9141<br>23,464.77             | 46.7137<br>2,463.68           | 265.8200<br>14,019.35           | 0.0000<br>0.00        | 0.0000<br>0.00           | 757.4478<br>39,947.80             |
| <b>Manholes</b>   | <b>EA</b> | <b>1.0</b> | 9,822.4477<br><b>9,822.45</b>     | 1,517.8623<br><b>1,517.86</b> | 11,034.0000<br><b>11,034.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 22,374.3101<br><b>22,374.31</b>   |
| RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover  | EA        | 6.0        | 816.7223<br>4,900.33              | 106.3849<br>638.31            | 1,025.0000<br>6,150.00          | 0.0000<br>0.00        | 0.0000<br>0.00           | 1,948.1071<br>11,688.64           |
| RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 6 manholes x 4 additional feet per manhole = 24 feet)   | VLF       | 24.0       | 102.0903<br>2,450.17              | 13.2981<br>319.15             | 121.0000<br>2,904.00            | 0.0000<br>0.00        | 0.0000<br>0.00           | 236.3884<br>5,673.32              |
| HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.  | EA        | 6.0        | 223.4636<br>1,340.78              | 26.9523<br>161.71             | 330.0000<br>1,980.00            | 0.0000<br>0.00        | 0.0000<br>0.00           | 580.4159<br>3,482.50              |
| RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 6 manholes x 17 CY of backfill material per manhole = 102 CY. 102 CY of material will be used as backfill around the manholes.) | LCY       | 102.0      | 1.8145<br>185.08                  | 0.5313<br>54.19               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 2.3457<br>239.27                  |
| RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 6 manholes x 16 CY per manhole = 96 CY)  | BCY       | 96.0       | 9.8551<br>946.09                  | 3.5885<br>344.50              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 13.4436<br>1,290.59               |
| <b>090113 Traffic Control</b>   | <b>EA</b> | <b>1.0</b> | 212,205.5231<br><b>212,205.52</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>10,000.00</b>         | 222,205.5231<br><b>222,205.52</b> |
| USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)   | EA        | 1.0        | 0.0000<br>0.00                    | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 10,000.0000<br>10,000.00 | 10,000.0000<br>10,000.00          |
| MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160   | HR        | 4,160.0    | 51.0109<br>212,205.52             | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 51.0109<br>212,205.52             |

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| Description  | UOM       | Quantity   | DirectLabor                     | EQCost                          | MatlCost                        | SubBidCost            | UserCost1             | DirectCost                        |
|--|-----------|------------|---------------------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|
| hours)   |           |            |                                 |                                 |                                 |                       |                       |                                   |
| <b>Erosion Mats</b>  | <b>EA</b> | <b>1.0</b> | 14,266.7381<br><b>14,266.74</b> | 2,128.2287<br><b>2,128.23</b>   | 13,578.6187<br><b>13,578.62</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 29,973.5855<br><b>29,973.59</b>   |
| RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 466 mats x 156.1 SF/mat = 72,742.60 SF)  | SF        | 72,742.6   | 0.1961<br>14,266.74             | 0.0293<br>2,128.23              | 0.1867<br>13,578.62             | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.4120<br>29,973.59               |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>  | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>256,000.00</b>     | 256,000.0000<br><b>256,000.00</b> |
| (Note: The approximate value of item 09 - Channals and Canals and Contract 2B is \$6,400,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$256,000.)<br>USR Mobilization              | LS        | 1.0        | 0.00                            | 0.00                            | 0.00                            | 0.00                  | 256,000.00            | 256,000.00                        |
| <b>15 Floodway Control-Diversion Struc</b>   | <b>EA</b> | <b>1.0</b> | 85,849.9221<br><b>85,849.92</b> | 11,293.2317<br><b>11,293.23</b> | 47,050.1400<br><b>47,050.14</b> | 0.0000<br><b>0.00</b> | <b>226,274.88</b>     | 370,468.1688<br><b>370,468.17</b> |
| <b>1500 Floodway Control-Diversion Struc</b>   | <b>EA</b> | <b>1.0</b> | 85,849.9221<br><b>85,849.92</b> | 11,293.2317<br><b>11,293.23</b> | 47,050.1400<br><b>47,050.14</b> | 0.0000<br><b>0.00</b> | <b>226,274.88</b>     | 370,468.1688<br><b>370,468.17</b> |
| <b>150005 Bridges, Foundations</b>   | <b>EA</b> | <b>1.0</b> | 55,757.0842<br><b>55,757.08</b> | 5,932.6410<br><b>5,932.64</b>   | 33,759.1400<br><b>33,759.14</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 95,448.8651<br><b>95,448.87</b>   |
| <b>15000503 Concrete</b>   | <b>EA</b> | <b>1.0</b> | 55,757.0842<br><b>55,757.08</b> | 5,932.6410<br><b>5,932.64</b>   | 33,759.1400<br><b>33,759.14</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 95,448.8651<br><b>95,448.87</b>   |
| <b>15000503 01 Concrete, in Place:</b>   | <b>EA</b> | <b>1.0</b> | 55,757.0842<br><b>55,757.08</b> | 5,932.6410<br><b>5,932.64</b>   | 33,759.1400<br><b>33,759.14</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 95,448.8651<br><b>95,448.87</b>   |
| <b>Unnamed Ditch Crossing 158+00</b>   | <b>EA</b> | <b>1.0</b> | 55,757.0842<br><b>55,757.08</b> | 5,932.6410<br><b>5,932.64</b>   | 33,759.1400<br><b>33,759.14</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 95,448.8651<br><b>95,448.87</b>   |
| <b>Channel Concrete</b>  | <b>EA</b> | <b>1.0</b> | 55,757.0842<br><b>55,757.08</b> | 5,932.6410<br><b>5,932.64</b>   | 33,759.1400<br><b>33,759.14</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>           | 95,448.8651<br><b>95,448.87</b>   |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | CY        | 127.0      | 439.0322<br>55,757.08           | 46.7137<br>5,932.64             | 265.8200<br>33,759.14           | 0.0000<br>0.00        | 0.0000<br>0.00        | 751.5659<br>95,448.87             |
| <b>150006 Bridges, Abutments and Piers</b>   | <b>EA</b> | <b>1.0</b> | 30,092.8379<br><b>30,092.84</b> | 5,360.5907<br><b>5,360.59</b>   | 13,291.0000<br><b>13,291.00</b> | 0.0000<br><b>0.00</b> | <b>82,528.88</b>      | 131,273.3036<br><b>131,273.30</b> |
| <b>15000602 Site Work</b>  | <b>EA</b> | <b>1.0</b> | 8,141.2300<br><b>8,141.23</b>   | 3,024.9053<br><b>3,024.91</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>82,528.88</b>      | 93,695.0103<br><b>93,695.01</b>   |
| <b>15000602 04 Riprap</b>  | <b>EA</b> | <b>1.0</b> | 8,141.2300<br><b>8,141.23</b>   | 3,024.9053<br><b>3,024.91</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>82,528.88</b>      | 93,695.0103<br><b>93,695.01</b>   |
| <b>Unnamed Ditch Crossing 158+00</b>   | <b>EA</b> | <b>1.0</b> | 8,141.2300<br><b>8,141.23</b>   | 3,024.9053<br><b>3,024.91</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>82,528.88</b>      | 93,695.0103<br><b>93,695.01</b>   |
| USR Rip-Rap Placement  | TON       | 742.5      | 10.9646<br>8,141.23             | 4.0739<br>3,024.91              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 111.1500<br>82,528.88 | 126.1886<br>93,695.01             |

| Description   | UOM | Quantity | DirectLabor                     | EQCost                        | MatlCost                        | SubBidCost            | UserCost1                       | DirectCost                        |
|---|-----|----------|---------------------------------|-------------------------------|---------------------------------|-----------------------|---------------------------------|-----------------------------------|
| <i>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 1,100 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 1,100 SY x 0.5 Yard = 550 CY x 1.35 tons/CY = 742.5 tons)</i> |     |          |                                 |                               |                                 |                       |                                 |                                   |
| 15000603 Concrete   | EA  | 1.0      | 21,951.6079<br><b>21,951.61</b> | 2,335.6854<br><b>2,335.69</b> | 13,291.0000<br><b>13,291.00</b> | 0.0000<br><b>0.00</b> | 0.00<br><b>0.00</b>             | 37,578.2934<br><b>37,578.29</b>   |
| 15000603 01 Concrete, in Place  | EA  | 1.0      | 21,951.6079<br><b>21,951.61</b> | 2,335.6854<br><b>2,335.69</b> | 13,291.0000<br><b>13,291.00</b> | 0.0000<br><b>0.00</b> | 0.00<br><b>0.00</b>             | 37,578.2934<br><b>37,578.29</b>   |
| Unnamed Ditch Crossing 158+00   | EA  | 1.0      | 21,951.6079<br><b>21,951.61</b> | 2,335.6854<br><b>2,335.69</b> | 13,291.0000<br><b>13,291.00</b> | 0.0000<br><b>0.00</b> | 0.00<br><b>0.00</b>             | 37,578.2934<br><b>37,578.29</b>   |
| Pier Concrete   | EA  | 1.0      | 4,390.3216<br><b>4,390.32</b>   | 467.1371<br><b>467.14</b>     | 2,658.2000<br><b>2,658.20</b>   | 0.0000<br><b>0.00</b> | 0.00<br><b>0.00</b>             | 7,515.6587<br><b>7,515.66</b>     |
| RSM 033053400900 Structural concrete, in place, column (4000 psi) square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br><i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>  | CY  | 10.0     | 439.0322<br>4,390.32            | 46.7137<br>467.14             | 265.8200<br>2,658.20            | 0.0000<br>0.00        | 0.0000<br>0.00                  | 751.5659<br>7,515.66              |
| Wingwalls   | EA  | 1.0      | 17,561.2864<br><b>17,561.29</b> | 1,868.5483<br><b>1,868.55</b> | 10,632.8000<br><b>10,632.80</b> | 0.0000<br><b>0.00</b> | 0.00<br><b>0.00</b>             | 30,062.6347<br><b>30,062.63</b>   |
| RSM 033053400900 Structural concrete, in place, column (4000 psi) square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br><i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>  | CY  | 40.0     | 439.0322<br>17,561.29           | 46.7137<br>1,868.55           | 265.8200<br>10,632.80           | 0.0000<br>0.00        | 0.0000<br>0.00                  | 751.5659<br>30,062.63             |
| 150041 Gates, Stop Logs-Associated Eqpt   | EA  | 1.0      | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 143,746.00<br><b>143,746.00</b> | 143,746.0000<br><b>143,746.00</b> |
| 15004105 Metals   | EA  | 1.0      | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 143,746.00<br><b>143,746.00</b> | 143,746.0000<br><b>143,746.00</b> |
| 15004105 01 Gates:  | EA  | 1.0      | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 143,746.00<br><b>143,746.00</b> | 143,746.0000<br><b>143,746.00</b> |
| Unnamed Ditch Crossing 158+00   | EA  | 1.0      | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 143,746.00<br><b>143,746.00</b> | 143,746.0000<br><b>143,746.00</b> |
| USR Furnish 3' x 10' Sluice Gate<br><i>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$63,300 plus 6.75% sales tax = \$67,573)</i>   | EA  | 2.0      | 0.0000<br>0.00                  | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 67,573.0000<br>135,146.00       | 67,573.0000<br>135,146.00         |
| USR Install 3' x 10' Sluice Gate<br><i>(Note: Memo of Telecon from Kokosing Construction 08/19/15)</i>  | EA  | 2.0      | 0.0000<br>0.00                  | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 4,300.0000<br>8,600.00          | 4,300.0000<br>8,600.00            |
| 18 Cultural Resources Preservation  | EA  | 1.0      | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 100,000.00<br><b>100,000.00</b> | 100,000.0000<br><b>100,000.00</b> |
| <i>(Note: The approximate value of Contracts 2A and 2B is \$10,000,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$100,000.)</i>  |     |          |                                 |                               |                                 |                       |                                 |                                   |
| USR Cultural Resources Preservation   | LS  | 1.0      | 0.00<br>0.0000                  | 0.00<br>0.0000                | 0.00<br>0.0000                  | 0.00<br>0.0000        | 100,000.00<br>0.0000            | 100,000.00<br>1,082,000.0000      |



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| Description  | UOM        | Quantity     | DirectLabor         | EQCost              | MatlCost          | SubBidCost  | UserCost1           | DirectCost          |
|--|------------|--------------|---------------------|---------------------|-------------------|-------------|---------------------|---------------------|
| <b>2.0 - CONTRACT 2B - Bridges Reach 2 120+00 to 235+00</b>  | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>1,082,000.00</b> | <b>1,082,000.00</b> |
|  |            |              | 0.0000              | 0.0000              | 0.0000            | 0.0000      |                     | 1,082,000.0000      |
| <b>02 Relocations</b>  | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>1,082,000.00</b> | <b>1,082,000.00</b> |
|  |            |              | 0.0000              | 0.0000              | 0.0000            | 0.0000      |                     | 1,082,000.0000      |
| <b>Bridges</b>   | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>1,082,000.00</b> | <b>1,082,000.00</b> |
|  |            |              | 0.0000              | 0.0000              | 0.0000            | 0.0000      | 1,082,000.0000      | 1,082,000.0000      |
| <i>USR Bridge CR 84</i>  | <i>EA</i>  | <i>1.0</i>   | <i>0.00</i>         | <i>0.00</i>         | <i>0.00</i>       | <i>0.00</i> | <i>1,082,000.00</i> | <i>1,082,000.00</i> |
|  |            |              | 2,091,372.5325      | 2,052,879.3471      | 509,352.7718      | 0.0000      |                     | 5,842,986.2504      |
| <b>3.0 - CONTRACT 3A - Diversion Channel Reach 3 235+00 to 350+00</b>  | <b>EA</b>  | <b>1.0</b>   | <b>2,091,372.53</b> | <b>2,052,879.35</b> | <b>509,352.77</b> | <b>0.00</b> | <b>1,189,381.60</b> | <b>5,842,986.25</b> |
|  |            |              | 6,313.1749          | 1,177.4348          | 14,862.2121       | 0.0000      |                     | 47,926.9418         |
| <b>02 Relocations</b>  | <b>EA</b>  | <b>1.0</b>   | <b>6,313.17</b>     | <b>1,177.43</b>     | <b>14,862.21</b>  | <b>0.00</b> | <b>25,574.12</b>    | <b>47,926.94</b>    |
|  |            |              | 6,313.1749          | 1,177.4348          | 14,862.2121       | 0.0000      |                     | 47,926.9418         |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>EA</b>  | <b>1.0</b>   | <b>6,313.17</b>     | <b>1,177.43</b>     | <b>14,862.21</b>  | <b>0.00</b> | <b>25,574.12</b>    | <b>47,926.94</b>    |
|  |            |              | 6,313.1749          | 1,177.4348          | 14,862.2121       | 0.0000      |                     | 43,926.9418         |
| <b>020318 Utilities</b>  | <b>EA</b>  | <b>1.0</b>   | <b>6,313.17</b>     | <b>1,177.43</b>     | <b>14,862.21</b>  | <b>0.00</b> | <b>21,574.12</b>    | <b>43,926.94</b>    |
|  |            |              | 3,652.9965          | 479.0739            | 6,348.7121        | 0.0000      |                     | 32,054.9026         |
| <b>Overhead Utilities</b>  | <b>EA</b>  | <b>1.0</b>   | <b>3,653.00</b>     | <b>479.07</b>       | <b>6,348.71</b>   | <b>0.00</b> | <b>21,574.12</b>    | <b>32,054.90</b>    |
|  |            |              | 750.4434            | 73.4311             | 510.0000          | 0.0000      | 0.0000              | 1,333.8745          |
| <i>HNC 337116335100 Wood pole, yellow pine, penta-treated, 50', class 3</i>  | <i>EA</i>  | <i>4.0</i>   | <i>3,001.77</i>     | <i>293.72</i>       | <i>2,040.00</i>   | <i>0.00</i> | <i>0.00</i>         | <i>5,335.50</i>     |
|  |            |              | 0.0000              | 0.0000              | 0.0000            | 0.0000      | 4,687.2800          | 4,687.2800          |
| <i>USR Pole Removal</i>  | <i>EA</i>  | <i>4.0</i>   | <i>0.00</i>         | <i>0.00</i>         | <i>0.00</i>       | <i>0.00</i> | <i>18,749.12</i>    | <i>18,749.12</i>    |
| <i>(Note: Assumed to be 60% of the installation cost per pole. \$7,812.14*0.60 = \$4,687.28)</i>   |            |              |                     |                     |                   |             |                     |                     |
|  |            |              | 5.7097              | 4.0913              | 0.0000            | 0.0000      | 0.0000              | 9.8010              |
| <i>RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add</i>   | <i>CY</i>  | <i>22.0</i>  | <i>125.61</i>       | <i>90.01</i>        | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>         | <i>215.62</i>       |
| <i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i>  |            |              |                     |                     |                   |             |                     |                     |
|  |            |              | 2.7121              | 1.6057              | 0.0000            | 0.0000      | 0.0000              | 4.3178              |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading</i>    | <i>LCY</i> | <i>22.0</i>  | <i>59.67</i>        | <i>35.32</i>        | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>         | <i>94.99</i>        |
| <i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i>  |            |              |                     |                     |                   |             |                     |                     |
|  |            |              | 465.9445            | 60.0158             | 4,308.7121        | 0.0000      |                     | 7,659.6724          |
| <b>Overhead Electric Lines</b>   | <b>EA</b>  | <b>1.0</b>   | <b>465.94</b>       | <b>60.02</b>        | <b>4,308.71</b>   | <b>0.00</b> | <b>2,825.00</b>     | <b>7,659.67</b>     |
|  |            |              | 0.0000              | 0.0000              | 0.0000            | 0.0000      | 5.6500              | 5.6500              |
| <i>USR Overhead Electric Line Removal</i>  | <i>LF</i>  | <i>500.0</i> | <i>0.00</i>         | <i>0.00</i>         | <i>0.00</i>       | <i>0.00</i> | <i>2,825.00</i>     | <i>2,825.00</i>     |
| <i>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. Two 250 LF of overhead electric lines will be removed. 500 total LF.)</i> |            |              |                     |                     |                   |             |                     |                     |
|  |            |              | 387.6232            | 20.1275             | 0.0000            | 0.0000      | 0.0000              | 407.7506            |
| <i>RSM 337139130810 Overhead line conductors &amp; devices, disposal of surplus material, high voltage conductors</i>  | <i>MI</i>  | <i>0.1</i>   | <i>38.76</i>        | <i>2.01</i>         | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>         | <i>40.78</i>        |
|  |            |              | 0.8544              | 0.1160              | 8.6174            | 0.0000      | 0.0000              | 9.5878              |

| Description   | UOM       | Quantity   | DirectLabor     | EQCost        | MatlCost        | SubBidCost  | UserCost1       | DirectCost       |
|---|-----------|------------|-----------------|---------------|-----------------|-------------|-----------------|------------------|
| RSM 337139130180 Overhead line conductors & devices, conductors, primary circuits, per wire, over 1600 kcmil<br>(Note: Two 250 LF of overhead electric lines will be installed. 500 total LF.)  | LF        | 500.0      | 427.18          | 58.00         | 4,308.71        | 0.00        | 0.00            | 4,793.90         |
| <b>Underground CNI Fiber Optic Cables</b>   | <b>EA</b> | <b>1.0</b> | <b>2,660.18</b> | <b>698.36</b> | <b>8,513.50</b> | <b>0.00</b> | <b>0.00</b>     | <b>11,872.04</b> |
| RSM 330526100500 Utility Line Signs, Markers, and Flags, underground tape, detectable, reinforced, aluminum foil core, 6", excludes excavation and backfill   | LF        | 250.0      | 7.29            | 0.00          | 14.00           | 0.00        | 0.00            | 21.29            |
| RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct burial<br>(Note: Two 250 LF Fiber Optic Cables will be installed. 500 total LF.)  | LF        | 500.0      | 304.65          | 0.00          | 750.00          | 0.00        | 0.00            | 1,054.65         |
| RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br>(Note: Two 250 LF Fiber Optic Cables will be installed. Each cable will be installed in a separate condui. 500 total LF of conduit will be installed. Labor cost has been removed from this item.)        | LF        | 500.0      | 0.00            | 0.00          | 6,900.00        | 0.00        | 0.00            | 6,900.00         |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)  | LCY       | 325.0      | 881.43          | 521.84        | 0.00            | 0.00        | 0.00            | 1,403.27         |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction   | LCY       | 14.0       | 123.32          | 15.09         | 441.00          | 0.00        | 0.00            | 579.41           |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br>(Note: 250 CY)   | ECY       | 250.0      | 1,061.51        | 60.26         | 0.00            | 0.00        | 0.00            | 1,121.77         |
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 250.0      | 240.28          | 88.78         | 0.00            | 0.00        | 0.00            | 329.06           |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br>(Note: Material cost removed. Excavation material re-used as backfill.)  | BCY       | 19.0       | 24.71           | 7.34          | 0.00            | 0.00        | 0.00            | 32.05            |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted   | BCY       | 19.0       | 16.99           | 5.05          | 408.50          | 0.00        | 0.00            | 430.54           |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of the Utilities Relocation is \$100,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$4,000.) | <b>EA</b> | <b>1.0</b> | <b>0.00</b>     | <b>0.00</b>   | <b>0.00</b>     | <b>0.00</b> | <b>4,000.00</b> | <b>4,000.00</b>  |
| USR Mobilization  | LS        | 1.0        | 0.00            | 0.00          | 0.00            | 0.00        | 4,000.00        | 4,000.00         |

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| Description  | UOM        | Quantity         | DirectLabor         | EQCost              | MatlCost          | SubBidCost  | UserCost1         | DirectCost          |
|--|------------|------------------|---------------------|---------------------|-------------------|-------------|-------------------|---------------------|
| <b>09 Channels and Canals</b>  | <b>EA</b>  | <b>1.0</b>       | <b>1,919,311.79</b> | <b>2,009,079.62</b> | <b>336,093.04</b> | <b>0.00</b> | <b>779,644.60</b> | <b>5,044,129.06</b> |
|  |            |                  | 1,919,311.7906      | 2,009,079.6224      | 336,093.0397      | 0.0000      |                   | 5,044,129.0567      |
| <b>0901 Channels</b>   | <b>EA</b>  | <b>1.0</b>       | <b>1,904,758.70</b> | <b>1,999,900.55</b> | <b>329,790.83</b> | <b>0.00</b> | <b>287,644.60</b> | <b>4,522,094.69</b> |
|  |            |                  | 1,904,758.7006      | 1,999,900.5500      | 329,790.8347      | 0.0000      |                   | 4,522,094.6893      |
| <b>Drainage Ditch</b>  | <b>EA</b>  | <b>1.0</b>       | <b>52,876.09</b>    | <b>40,127.71</b>    | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b>       | <b>93,003.80</b>    |
|  |            |                  | 52,876.0942         | 40,127.7060         | 0.0000            | 0.0000      |                   | 93,003.8001         |
| <i>RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading</i>   | <i>BCY</i> | <i>33,367.0</i>  | <i>12,827.82</i>    | <i>11,899.54</i>    | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>24,727.36</i>    |
|  |            |                  | 0.3844              | 0.3566              | 0.0000            | 0.0000      | 0.0000            | 0.7411              |
| <i>USR Topsoil Placement</i><br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | <i>LCY</i> | <i>11,574.0</i>  | <i>10,619.37</i>    | <i>9,482.17</i>     | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>20,101.54</i>    |
|  |            |                  | 0.9175              | 0.8193              | 0.0000            | 0.0000      | 0.0000            | 1.7368              |
| <i>USR Fine Grading</i>  | <i>ACR</i> | <i>7.2</i>       | <i>15,584.51</i>    | <i>7,673.55</i>     | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>23,258.06</i>    |
|  |            |                  | 2,173.5720          | 1,070.2296          | 0.0000            | 0.0000      | 0.0000            | 3,243.8015          |
| <i>USR Hydroseed</i><br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | <i>ACR</i> | <i>7.2</i>       | <i>3,225.03</i>     | <i>1,590.27</i>     | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>4,815.30</i>     |
|  |            |                  | 449.7950            | 221.7950            | 0.0000            | 0.0000      | 0.0000            | 671.5899            |
| <i>USR Topsoil Loading</i>   | <i>LCY</i> | <i>11,574.0</i>  | <i>10,619.37</i>    | <i>9,482.17</i>     | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>20,101.54</i>    |
|  |            |                  | 0.9175              | 0.8193              | 0.0000            | 0.0000      | 0.0000            | 1.7368              |
| <b>Strip and Stockpile Topsoil</b>   | <b>EA</b>  | <b>1.0</b>       | <b>65,019.90</b>    | <b>63,088.63</b>    | <b>790.00</b>     | <b>0.00</b> | <b>0.00</b>       | <b>128,898.53</b>   |
|  |            |                  | 65,019.9016         | 63,088.6316         | 790.0000          | 0.0000      |                   | 128,898.5332        |
| <i>RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer</i>   | <i>CY</i>  | <i>100,740.7</i> | <i>62,666.39</i>    | <i>63,088.63</i>    | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>125,755.02</i>   |
|  |            |                  | 0.6221              | 0.6262              | 0.0000            | 0.0000      | 0.0000            | 1.2483              |
| <i>RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts</i>   | <i>LF</i>  | <i>1,000.0</i>   | <i>2,353.52</i>     | <i>0.00</i>         | <i>790.00</i>     | <i>0.00</i> | <i>0.00</i>       | <i>3,143.52</i>     |
|  |            |                  | 2.3535              | 0.0000              | 0.7900            | 0.0000      | 0.0000            | 3.1435              |
| <b>Install Access Road</b>   | <b>EA</b>  | <b>1.0</b>       | <b>14,172.73</b>    | <b>10,425.07</b>    | <b>38,659.50</b>  | <b>0.00</b> | <b>0.00</b>       | <b>63,257.30</b>    |
|  |            |                  | 14,172.7332         | 10,425.0653         | 38,659.5000       | 0.0000      |                   | 63,257.2984         |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading</i><br><i>(Note: 1.40 compaction factor assumed. 2,130 CY x 1.40 = 2,982 CY)</i>   | <i>LCY</i> | <i>2,982.0</i>   | <i>8,087.46</i>     | <i>4,788.09</i>     | <i>0.00</i>       | <i>0.00</i> | <i>0.00</i>       | <i>12,875.55</i>    |
|  |            |                  | 2.7121              | 1.6057              | 0.0000            | 0.0000      | 0.0000            | 4.3178              |
| <i>RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep</i><br><i>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)</i>  | <i>ECY</i> | <i>2,130.0</i>   | <i>6,085.28</i>     | <i>5,636.97</i>     | <i>38,659.50</i>  | <i>0.00</i> | <i>0.00</i>       | <i>50,381.75</i>    |
|  |            |                  | 2.8569              | 2.6465              | 18.1500           | 0.0000      | 0.0000            | 23.6534             |
|  |            |                  | 1,128,636.6430      | 1,642,512.3995      | 143,598.6250      | 0.0000      |                   | 2,914,747.6675      |

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| Description  | UOM       | Quantity   | DirectLabor         | EQCost              | MatlCost          | SubBidCost  | UserCost1   | DirectCost             |
|--|-----------|------------|---------------------|---------------------|-------------------|-------------|-------------|------------------------|
| <b>Excavation of Diversion Channel</b>   | <b>EA</b> | <b>1.0</b> | <b>1,128,636.64</b> | <b>1,642,512.40</b> | <b>143,598.63</b> | <b>0.00</b> | <b>0.00</b> | <b>2,914,747.67</b>    |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br>(Note: 10% of the 572,714 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 572,714 CY = 57,271 CY. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)   | BCY       | 57,271.0   | 39,031.22           | 36,206.76           | 0.0000            | 0.0000      | 0.0000      | 1.3137<br>75,237.98    |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2,353.52            | 0.00                | 790.00            | 0.00        | 0.00        | 3.1435<br>3,143.52     |
| HNC 312316323520 Ripping sedimentary rock, dozer with double shank ripper, 410 H.P.<br>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.50 CY of the rock will be excavated via very hard ripping. The crew output, labor unit cost and equipment unit cost have been multiplied by a factor of 2.073 to adjust the output and cost of the original 410 HP tractor in this item, to that of an 850 HP tractor that would complete the very hard ripping.) | BCY       | 25,770.5   | 17,083.61           | 50,252.48           | 0.0000            | 0.0000      | 0.0000      | 2.6129<br>67,336.08    |
| RSM 312316300100 Drilling and blasting rock, open face, over 1500 C.Y.<br>(Note: One half of the rock between Stations 235+00 and 317+00 will be excavated via blasting and the other half will be excavated via extremely hard ripping. Approximately 51,541 CY of rock is contained in these sections. Approximately 25,770.5 CY of the rock in these sections will be excavated via blasting. The remaining 21,052 CY of rock between Stations 235+00 and 350+00 will be excavated via blasting. A total of 46,822.5 CY of rock between Stations 120+00 and 235+00 will be excavated via blasting.)   | BCY       | 46,822.5   | 208,001.84          | 91,289.10           | 142,808.63        | 0.00        | 0.00        | 9.4420<br>442,099.57   |
| USR Scraping<br>(Note: 90% of the 572,714 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 572,714 CY = 515,443 CY Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)  | BCY       | 515,443.0  | 411,815.26          | 706,677.30          | 0.00              | 0.00        | 0.00        | 2.1700<br>1,118,492.56 |
| <b>Hauling and Disposal</b>  | <b>EA</b> | <b>1.0</b> | <b>450,351.19</b>   | <b>758,086.76</b>   | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b> | <b>1,208,437.96</b>    |
| USR Rough Grading<br>(Note: Manage the piles on purchased property. Sum of the soil and rock hauling quantities: (729,027 CY + 108,890 CY) = 837,917 CY)   | BCY       | 837,917.0  | 249,097.22          | 441,696.59          | 0.00              | 0.00        | 0.00        | 0.8244<br>690,793.80   |
| USR Diversion Channel Material Hauling<br>(Note: Soil Hauling. Custom Crew created from (Cycle hauling(wait, load, travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (57,271 CY + 11,924) x 1.30 = 89,953 CY (Assume an expansion factor of 1.30).)   | LCY       | 89,953.0   | 44,255.92           | 101,351.82          | 0.00              | 0.00        | 0.00        | 1.6187<br>145,607.73   |
| USR Diversion Channel Material Hauling<br>(Note: Rock Hauling. Custom Crew created from (Cycle hauling(wait, load, travel, unload or dump & return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material ripped and blasted x 1.50 = 72,593 CY x 1.50 = 108,890 CY (Assume an expansion factor of 1.30).)  | LCY       | 108,890.0  | 53,572.72           | 122,688.51          | 0.00              | 0.00        | 0.00        | 1.6187<br>176,261.23   |
| USR Diversion Channel Excavation Loading   | LCY       | 198,843.0  | 103,425.34          | 92,349.85           | 0.00              | 0.00        | 0.00        | 0.9846<br>195,775.19   |

| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                            | MatlCost                        | SubBidCost            | UserCost1                       | DirectCost                        |
|--|-----------|------------|-----------------------------------|-----------------------------------|---------------------------------|-----------------------|---------------------------------|-----------------------------------|
| <i>(Note: Material unit cost has been removed. Existing site material will be loaded out. Sum of the soil and rock hauling quantities: (89,953 CY + 108,890 CY) = 198,843 CY)</i>  |           |            |                                   |                                   |                                 |                       |                                 |                                   |
| <b>Grade Channel Embankment</b>  | <b>EA</b> | <b>1.0</b> | 4,608.1604<br><b>4,608.16</b>     | 8,171.1420<br><b>8,171.14</b>     | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b>           | 12,779.3024<br><b>12,779.30</b>   |
| USR Rough Grading  | BCY       | 15,501.0   | 0.2973<br>4,608.16                | 0.5271<br>8,171.14                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 0.8244<br>12,779.30               |
| <b>Construct Channel Embankment</b>  | <b>EA</b> | <b>1.0</b> | 53,270.9961<br><b>53,271.00</b>   | 33,381.7043<br><b>33,381.70</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b>           | 86,652.7003<br><b>86,652.70</b>   |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 11,924 CY * 1.30 = 15,501 CY)</i>  | LCY       | 15,501.0   | 2.7121<br>42,040.13               | 1.6057<br>24,889.42               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 4.3178<br>66,929.55               |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 15,501.0   | 0.2044<br>3,168.25                | 0.0834<br>1,293.06                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 0.2878<br>4,461.31                |
| USR Diversion Channel Excavation Loading<br><i>(Note: 11,924 CY * 1.30 = 15,501 CY)</i>  | LCY       | 15,501.0   | 0.5201<br>8,062.62                | 0.4644<br>7,199.22                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 0.9846<br>15,261.85               |
| <b>Place Topsoil and Seed</b><br><i>(Note: Topsoil placement for the berm and the channel.)</i>  | <b>EA</b> | <b>1.0</b> | 280,260.0239<br><b>280,260.02</b> | 183,533.8789<br><b>183,533.88</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 66,032.60<br><b>66,032.60</b>   | 529,826.5068<br><b>529,826.51</b> |
| USR Topsoil Placement<br><i>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i>  | LCY       | 46,154.0   | 0.9175<br>42,347.19               | 0.8193<br>37,812.36               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 1.7368<br>80,159.55               |
| USR Fine Grading<br><i>(Note: Assume 6" Placement. 35,503 CY * 6 = 213,018 SY = 44.01 Acres)</i>   | ACR       | 44.0       | 2,173.5720<br>95,658.90           | 1,070.2296<br>47,100.80           | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 3,243.8015<br>142,759.71          |
| USR Hydroseed<br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>  | ACR       | 44.0       | 449.7950<br>19,795.48             | 221.7950<br>9,761.20              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 1,500.4000<br>66,032.60         | 2,171.9899<br>95,589.28           |
| USR Topsoil Loading  | LCY       | 46,154.0   | 0.9175<br>42,347.19               | 0.8193<br>37,812.36               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 1.7368<br>80,159.55               |
| USR Topsoil Hauling<br><i>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.)</i> | LCY       | 46,154.0   | 1.7357<br>80,111.27               | 1.1060<br>51,047.15               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00                  | 2.8418<br>131,158.42              |
| <b>Drainage Outlets</b>  | <b>EA</b> | <b>1.0</b> | 73,358.8027<br><b>73,358.80</b>   | 10,958.3500<br><b>10,958.35</b>   | 92,277.4677<br><b>92,277.47</b> | 0.0000<br><b>0.00</b> | 211,612.00<br><b>211,612.00</b> | 388,206.6205<br><b>388,206.62</b> |
| <b>Riprap</b>  | <b>EA</b> | <b>1.0</b> | 2,103.1237<br><b>2,103.12</b>     | 781.4237<br><b>781.42</b>         | 7,106.5605<br><b>7,106.56</b>   | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b>           | 9,991.1078<br><b>9,991.11</b>     |
|  |           |            | 10.9646                           | 4.0739                            | 37.0500                         | 0.0000                | 0.0000                          | 52.0886                           |

| Description   | UOM       | Quantity   | DirectLabor     | EQCost       | MatlCost        | SubBidCost  | UserCost1         | DirectCost        |
|---|-----------|------------|-----------------|--------------|-----------------|-------------|-------------------|-------------------|
| USR Rip-Rap Placement<br>(Note: 142.08 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 191.81 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.) | TON       | 191.8      | 2,103.12        | 781.42       | 7,106.56        | 0.00        | 0.00              | 9,991.11          |
| <b>Geotextile Under Riprap</b>  | <b>EA</b> | <b>1.0</b> | <b>119.51</b>   | <b>0.00</b>  | <b>413.67</b>   | <b>0.00</b> | <b>0.00</b>       | <b>533.18</b>     |
| RSM 313219161550 Geosynthetic soil stabilization, geotextile fabric, non-woven, 120 lb. tensile strength, includes scarifying and compaction  | SY        | 366.1      | 119.51          | 0.00         | 413.67          | 0.00        | 0.00              | 533.18            |
| <b>Sluice Gate</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>     | <b>0.00</b>  | <b>0.00</b>     | <b>0.00</b> | <b>147,612.00</b> | <b>147,612.00</b> |
| USR Furnish 24" Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$19,300 plus 6.75% sales tax = \$20,603)   | EA        | 4.0        | 0.00            | 0.00         | 0.00            | 0.00        | 82,412.00         | 82,412.00         |
| USR Install 24" Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)  | EA        | 4.0        | 0.00            | 0.00         | 0.00            | 0.00        | 17,200.00         | 17,200.00         |
| USR Backflow Preventer<br>(Note: \$12,000 allowance per 08/18/15 Conference Call with Clifton Office.)  | EA        | 4.0        | 0.00            | 0.00         | 0.00            | 0.00        | 48,000.00         | 48,000.00         |
| <b>24" Diameter Pipe Sleeve</b>   | <b>EA</b> | <b>1.0</b> | <b>60.91</b>    | <b>0.00</b>  | <b>484.00</b>   | <b>0.00</b> | <b>0.00</b>       | <b>544.91</b>     |
| RSM 031505756200 Sleeves and chases, steel pipe, 12" long x 12" diameter, 1 use<br>(Note: Crew Output halved and labor and material prices doubled to account for 24" sleeve.)  | EA        | 4.0        | 60.91           | 0.00         | 484.00          | 0.00        | 0.00              | 544.91            |
| <b>2.5'x4' Aluminium Hatch</b>  | <b>EA</b> | <b>1.0</b> | <b>437.60</b>   | <b>2.78</b>  | <b>2,255.52</b> | <b>0.00</b> | <b>0.00</b>       | <b>2,695.90</b>   |
| RSM 055319300020 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated<br>(Note: Perimeter of Hatch = 13 ft.; 4 hatches x 13 ft. per hatch = 52 ft.)  | LF        | 52.0       | 350.32          | 0.00         | 174.72          | 0.00        | 0.00              | 525.04            |
| RSM 055319300100 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated, for each corner, add<br>(Note: 4 corners per hatch; 4 total hatches x 4 corners per hatch = 16 corners)   | EA        | 16.0       | 0.00            | 0.00         | 80.80           | 0.00        | 0.00              | 80.80             |
| RSM 055313101900 Floor grating, aluminum, heavy duty extruded plank, 5.0 lb per S.F., 2-1/4" D, field fabricated from panels<br>(Note: 2.5 ft. x 4 ft. = 10 SF per hatch; 4 hatches x 10 SF per hatch = 40 SF)                              | SF        | 40.0       | 87.28           | 2.78         | 2,000.00        | 0.00        | 0.00              | 2,090.06          |
| <b>Ladder</b>   | <b>EA</b> | <b>1.0</b> | <b>1,078.15</b> | <b>34.40</b> | <b>2,304.00</b> | <b>0.00</b> | <b>0.00</b>       | <b>3,416.55</b>   |
|   |           |            | 22.4615         | 0.7167       | 48.0000         | 0.0000      | 0.0000            | 71.1782           |

| Description  | UOM       | Quantity   | DirectLabor     | EQCost          | MatlCost         | SubBidCost  | UserCost1        | DirectCost       |
|--|-----------|------------|-----------------|-----------------|------------------|-------------|------------------|------------------|
| RSM 055133130400 Ladder, shop fabricated, aluminum, 20" W, bolted to concrete, excl cage   | VLF       | 48.0       | 1,078.15        | 34.40           | 2,304.00         | 0.00        | 0.00             | 3,416.55         |
| <b>Crushed Stone Bedding</b>   | <b>EA</b> | <b>1.0</b> | <b>53.35</b>    | <b>33.40</b>    | <b>252.00</b>    | <b>0.00</b> | <b>0.00</b>      | <b>338.75</b>    |
| RSM 321123231523 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, compacted, 1-1/2", 12" deep   | ECY       | 8.0        | 23.52           | 15.74           | 252.00           | 0.00        | 0.00             | 291.25           |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. (8 CY)*1.40 = 11 CY)                                | LCY       | 11.0       | 29.83           | 17.66           | 0.00             | 0.00        | 0.00             | 47.50            |
| <b>Temporary Sheeting</b>  | <b>EA</b> | <b>1.0</b> | <b>9,274.78</b> | <b>3,636.23</b> | <b>8,680.00</b>  | <b>0.00</b> | <b>0.00</b>      | <b>21,591.01</b> |
| RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales   | SF        | 1,120.0    | 9,274.78        | 3,636.23        | 8,680.00         | 0.00        | 0.00             | 21,591.01        |
| <b>Formwork</b>  | <b>EA</b> | <b>1.0</b> | <b>6,880.47</b> | <b>0.00</b>     | <b>852.48</b>    | <b>0.00</b> | <b>0.00</b>      | <b>7,732.95</b>  |
| RSM 031113859460 C.I.P. concrete forms, walls, steel framed plywood, over 16' to 20' high, based on 50 uses of purchased forms, 4 uses of bracing lumber, includes erecting, bracing, stripping and cleaning   | SFC       | 1,152.0    | 6,880.47        | 0.00            | 852.48           | 0.00        | 0.00             | 7,732.95         |
| <b>Filler Concrete</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>     | <b>0.00</b>     | <b>60.77</b>     | <b>0.00</b> | <b>0.00</b>      | <b>60.77</b>     |
| RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments  | CY        | 0.6        | 0.00            | 0.00            | 60.77            | 0.00        | 0.00             | 60.77            |
| <b>24" Flaired End Section</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>     | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>64,000.00</b> | <b>64,000.00</b> |
| USR 24" Flaired End Section<br>(Note: \$2,000 allowance for each 24" Flaired End Section)  | EA        | 32.0       | 0.00            | 0.00            | 0.00             | 0.00        | 2,000.00         | 2,000.00         |
| <b>24" Flaired End Section Trash Rack</b>  | <b>EA</b> | <b>1.0</b> | <b>610.95</b>   | <b>19.49</b>    | <b>14,848.00</b> | <b>0.00</b> | <b>0.00</b>      | <b>15,478.45</b> |
| RSM 055313702200 Floor grating, stainless steel, 1-1/4" x 3/16" bearing bars @ 15/16" O.C., cross bars @ 4" O.C., up to 300 S.F., field fabricated from panels<br>(Note: Each Trash Rack is 4 SF. 32 trash racks x 4 SF per trash rack per structure = 128 SF) | SF        | 128.0      | 610.95          | 19.49           | 14,848.00        | 0.00        | 0.00             | 15,478.45        |

| Description  | UOM        | Quantity     | DirectLabor      | EQCost          | MatlCost         | SubBidCost  | UserCost1     | DirectCost       |
|--|------------|--------------|------------------|-----------------|------------------|-------------|---------------|------------------|
| <b>24" Diameter Reinforced Concrete Pipe</b>   | <b>EA</b>  | <b>1.0</b>   | <b>9,940.50</b>  | <b>951.21</b>   | <b>18,933.12</b> | <b>0.00</b> | <b>0.00</b>   | <b>29,824.82</b> |
|  |            |              | 9,940.4987       | 951.2059        | 18,933.1200      | 0.0000      |               | 29,824.8247      |
| <i>RSM 334113602518 Public Storm Utility Drainage Piping, reinforced concrete pipe (RCP), 24" diameter, class 4, excludes excavation or backfill</i>   | <i>LF</i>  | <i>912.0</i> | <i>9,940.50</i>  | <i>951.21</i>   | <i>18,933.12</i> | <i>0.00</i> | <i>0.0000</i> | <i>29,824.82</i> |
| <i>(Note: Hancock County Material Bids Sheet 2015 24 in. Diameter Pipe from Northern Concrete Pipe \$20.76/LF)</i>   |            |              |                  |                 |                  |             |               |                  |
| <b>Chamber</b>   | <b>EA</b>  | <b>1.0</b>   | <b>23,154.56</b> | <b>2,463.68</b> | <b>14,019.35</b> | <b>0.00</b> | <b>0.00</b>   | <b>39,637.58</b> |
|  |            |              | 23,154.5561      | 2,463.6810      | 14,019.3468      | 0.0000      |               | 39,637.5838      |
| <b>Concrete</b>  | <b>EA</b>  | <b>1.0</b>   | <b>23,154.56</b> | <b>2,463.68</b> | <b>14,019.35</b> | <b>0.00</b> | <b>0.00</b>   | <b>39,637.58</b> |
|  |            |              | 23,154.5561      | 2,463.6810      | 14,019.3468      | 0.0000      |               | 39,637.5838      |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i>   | <i>CY</i>  | <i>52.7</i>  | <i>23,154.56</i> | <i>2,463.68</i> | <i>14,019.35</i> | <i>0.00</i> | <i>0.0000</i> | <i>39,637.58</i> |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   |            |              |                  |                 |                  |             |               |                  |
| <b>Manholes</b>  | <b>EA</b>  | <b>1.0</b>   | <b>19,644.90</b> | <b>3,035.72</b> | <b>22,068.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>44,748.62</b> |
|  |            |              | 19,644.8954      | 3,035.7247      | 22,068.0000      | 0.0000      |               | 44,748.6201      |
| <i>RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover</i>  | <i>EA</i>  | <i>12.0</i>  | <i>9,800.67</i>  | <i>1,276.62</i> | <i>12,300.00</i> | <i>0.00</i> | <i>0.0000</i> | <i>23,377.29</i> |
|  |            |              | 816.7223         | 106.3849        | 1,025.0000       | 0.0000      |               | 1,948.1071       |
| <i>RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'</i>   | <i>VLF</i> | <i>48.0</i>  | <i>4,900.33</i>  | <i>638.31</i>   | <i>5,808.00</i>  | <i>0.00</i> | <i>0.0000</i> | <i>11,346.64</i> |
| <i>(Note: 12 manholes x 4 additional feet per manhole = 48 feet)</i>   |            |              |                  |                 |                  |             |               |                  |
| <i>HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.</i>  | <i>EA</i>  | <i>12.0</i>  | <i>2,681.56</i>  | <i>323.43</i>   | <i>3,960.00</i>  | <i>0.00</i> | <i>0.0000</i> | <i>6,964.99</i>  |
|  |            |              | 223.4636         | 26.9523         | 330.0000         | 0.0000      |               | 580.4159         |
| <i>RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering</i>   | <i>LCY</i> | <i>204.0</i> | <i>370.15</i>    | <i>108.38</i>   | <i>0.00</i>      | <i>0.00</i> | <i>0.0000</i> | <i>478.53</i>    |
| <i>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 12 manholes x 17 CY of backfill material per manhole = 204 CY. 204 CY of material will be used as backfill around the manholes.)</i> |            |              |                  |                 |                  |             |               |                  |
| <i>RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe</i>  | <i>BCY</i> | <i>192.0</i> | <i>1,892.18</i>  | <i>688.99</i>   | <i>0.00</i>      | <i>0.00</i> | <i>0.0000</i> | <i>2,581.17</i>  |
| <i>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 12 manholes x 16 CY per manhole = 192 CY)</i>  |            |              |                  |                 |                  |             |               |                  |
|  |            |              | 9.8551           | 3.5885          | 0.0000           | 0.0000      |               | 13.4436          |
|  |            |              | 212,205.5231     | 0.0000          | 0.0000           | 0.0000      |               | 222,205.5231     |



| Description  | UOM       | Quantity   | DirectLabor       | EQCost          | MatlCost         | SubBidCost  | UserCost1         | DirectCost        |
|--|-----------|------------|-------------------|-----------------|------------------|-------------|-------------------|-------------------|
| <b>090113 Traffic Control</b>  | <b>EA</b> | <b>1.0</b> | <b>212,205.52</b> | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>10,000.00</b>  | <b>222,205.52</b> |
| <i>USR Signage and Traffic Cone Allowance<br/>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>  | EA        | 1.0        | 0.00              | 0.00            | 0.00             | 0.00        | 10,000.00         | 10,000.00         |
| <i>MIL B-LABORER Laborers, General (Lowest paid)<br/>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)</i>   | HR        | 4,160.0    | 212,205.52        | 0.00            | 0.00             | 0.00        | 0.00              | 212,205.52        |
| <b>Erosion Mats</b>  | <b>EA</b> | <b>1.0</b> | <b>11,205.21</b>  | <b>1,671.53</b> | <b>10,664.75</b> | <b>0.00</b> | <b>0.00</b>       | <b>23,541.49</b>  |
| <i>RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br/>(Note: 366 mats x 156.1 SF/mat = SF)</i>  | SF        | 57,132.6   | 11,205.21         | 1,671.53        | 10,664.75        | 0.00        | 0.00              | 23,541.49         |
| <b>Drainage Ditch Diversion to Aurund Run</b>  | <b>EA</b> | <b>1.0</b> | <b>9,144.62</b>   | <b>6,030.15</b> | <b>43,800.49</b> | <b>0.00</b> | <b>0.00</b>       | <b>58,975.25</b>  |
| <i>RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading</i>   | BCY       | 4,267.0    | 1,640.43          | 1,521.72        | 0.00             | 0.00        | 0.00              | 3,162.16          |
| <i>RSM 334113600200 Public Storm Utility Drainage Piping, concrete, box culvert, precast, base price, 8' long, 8' x 3', excludes excavation or backfill</i>  | LF        | 80.0       | 1,834.50          | 649.36          | 42,400.00        | 0.00        | 0.00              | 44,883.86         |
| <i>USR Rip-Rap Placement<br/>(Note: 500 SF x 18 in. = 500 SF x 1.5 FT = 750 CF. 750 CF/27 = 28 CY. 28 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 37.8 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)</i>                 | TON       | 37.8       | 414.46            | 154.00          | 1,400.49         | 0.00        | 0.00              | 1,968.95          |
| <i>USR Topsoil Placement<br/>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | LCY       | 1,520.0    | 1,394.63          | 1,245.28        | 0.00             | 0.00        | 0.00              | 2,639.91          |
| <i>USR Fine Grading</i>  | ACR       | 0.9        | 2,043.16          | 1,006.02        | 0.00             | 0.00        | 0.00              | 3,049.17          |
| <i>USR Hydroseed<br/>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | ACR       | 0.9        | 422.81            | 208.49          | 0.00             | 0.00        | 0.00              | 631.29            |
| <i>USR Topsoil Loading</i>   | LCY       | 1,520.0    | 1,394.63          | 1,245.28        | 0.00             | 0.00        | 0.00              | 2,639.91          |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>       | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>492,000.00</b> | <b>492,000.00</b> |
| <i>(Note: The approximate value of item 09 - Channals and Canals and Contract 3B is \$12,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$492,000.)</i>  |           |            |                   |                 |                  |             |                   |                   |

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| Description  | UOM       | Quantity   | DirectLabor       | EQCost           | MatlCost          | SubBidCost  | UserCost1         | DirectCost          |
|--|-----------|------------|-------------------|------------------|-------------------|-------------|-------------------|---------------------|
| USR Mobilization   | LS        | 1.0        | 0.00              | 0.00             | 0.00              | 0.00        | 492,000.00        | 492,000.00          |
| <b>Reroute Tributary Before Stream Crossing</b>  | <b>EA</b> | <b>1.0</b> | <b>14,553.09</b>  | <b>9,179.07</b>  | <b>6,302.21</b>   | <b>0.00</b> | <b>0.00</b>       | <b>30,034.3674</b>  |
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 2,215.0    | 851.55            | 789.93           | 0.00              | 0.00        | 0.00              | 1,641.47            |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading   | LCY       | 4,207.0    | 11,409.77         | 6,755.03         | 0.00              | 0.00        | 0.00              | 18,164.80           |
| USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 84 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 84 SY x 0.5 Yard = 42 CY x 1.35 tons/CY = 56.7 tons.) | TON       | 56.7       | 621.69            | 230.99           | 6,302.21          | 0.00        | 0.00              | 7,154.89            |
| USR Topsoil Placement  | LCY       | 790.0      | 724.84            | 647.22           | 0.00              | 0.00        | 0.00              | 1,372.06            |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)   | ACR       | 0.5        | 220.40            | 108.68           | 0.00              | 0.00        | 0.00              | 329.08              |
| USR Topsoil Loading  | LCY       | 790.0      | 724.84            | 647.22           | 0.00              | 0.00        | 0.00              | 1,372.06            |
| <b>15 Floodway Control-Diversion Struc</b>   | <b>EA</b> | <b>1.0</b> | <b>165,747.57</b> | <b>42,622.29</b> | <b>158,397.52</b> | <b>0.00</b> | <b>247,162.88</b> | <b>613,930.2518</b> |
| <b>1500 Floodway Control-Diversion Struc</b>   | <b>EA</b> | <b>1.0</b> | <b>165,747.57</b> | <b>42,622.29</b> | <b>158,397.52</b> | <b>0.00</b> | <b>247,162.88</b> | <b>613,930.2518</b> |
| <b>150010 Earthwork for Structures</b>   | <b>EA</b> | <b>1.0</b> | <b>75,946.36</b>  | <b>30,908.63</b> | <b>83,205.00</b>  | <b>0.00</b> | <b>10,000.00</b>  | <b>200,059.9903</b> |
| <b>15001002 Site Work</b>  | <b>EA</b> | <b>1.0</b> | <b>27,422.41</b>  | <b>18,335.49</b> | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b>       | <b>45,757.9028</b>  |
| <b>15001002 03 Excavation, Common</b>  | <b>EA</b> | <b>1.0</b> | <b>27,422.41</b>  | <b>18,335.49</b> | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b>       | <b>45,757.9028</b>  |
| <b>Gate Structure</b>  | <b>EA</b> | <b>1.0</b> | <b>14,382.64</b>  | <b>9,616.71</b>  | <b>0.00</b>       | <b>0.00</b> | <b>0.00</b>       | <b>23,999.3560</b>  |
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 3,370.0    | 1,295.58          | 1,201.83         | 0.00              | 0.00        | 0.00              | 2,497.41            |
| RSM 312323157080 Borrow, topsoil or loam, 5 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. (Assume an expansion factor of 1.30). 3,370*1.30 = 4,381 CY)  | BCY       | 4,381.0    | 1,205.39          | 1,380.46         | 0.00              | 0.00        | 0.00              | 2,585.85            |

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| Description   | UOM       | Quantity   | DirectLabor                     | EQCost                          | MatlCost                        | SubBidCost            | UserCost1             | DirectCost                        |
|---|-----------|------------|---------------------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: (Assume an expansion factor of 1.30). 3,370*1.30 = 4,381 CY)                                   | LCY       | 4,381.0    | 2.7121<br>11,881.67             | 1.6057<br>7,034.42              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>18,916.09               |
| <b>Weir Structure</b>   | <b>EA</b> | <b>1.0</b> | 13,039.7661<br><b>13,039.77</b> | 8,718.7807<br><b>8,718.78</b>   | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 21,758.5468<br><b>21,758.55</b>   |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 3,055.0    | 0.3844<br>1,174.48              | 0.3566<br>1,089.49              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.7411<br>2,263.98                |
| RSM 312323157080 Borrow, topsoil or loam, 5 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. (Assume an expansion factor of 1.30). 3,055*1.30 = 3,972 CY) | BCY       | 3,972.0    | 0.2751<br>1,092.86              | 0.3151<br>1,251.59              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.5902<br>2,344.44                |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: (Assume an expansion factor of 1.30). 3,055*1.30 = 3,972 CY)                                   | LCY       | 3,972.0    | 2.7121<br>10,772.43             | 1.6057<br>6,377.70              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>17,150.13               |
| <b>Backfilling</b>  | <b>EA</b> | <b>1.0</b> | 48,523.9451<br><b>48,523.95</b> | 12,573.1423<br><b>12,573.14</b> | 83,205.0000<br><b>83,205.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 144,302.0874<br><b>144,302.09</b> |
| <b>Gate Structure</b>   | <b>EA</b> | <b>1.0</b> | 29,716.2144<br><b>29,716.21</b> | 7,699.8313<br><b>7,699.83</b>   | 50,955.0000<br><b>50,955.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 88,371.0458<br><b>88,371.05</b>   |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (2,370 CY)*1.30 = 3,081 CY)                                    | LCY       | 3,081.0    | 2.7121<br>8,355.95              | 1.6057<br>4,947.06              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>13,303.01               |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)  | LCY       | 2,370.0    | 8.8084<br>20,875.86             | 1.0781<br>2,555.08              | 21.5000<br>50,955.00            | 0.0000<br>0.00        | 0.0000<br>0.00        | 31.3865<br>74,385.93              |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts  | ECY       | 2,370.0    | 0.2044<br>484.40                | 0.0834<br>197.70                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.2878<br>682.10                  |
| <b>Weir Structure</b>   | <b>EA</b> | <b>1.0</b> | 18,807.7307<br><b>18,807.73</b> | 4,873.3110<br><b>4,873.31</b>   | 32,250.0000<br><b>32,250.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 55,931.0416<br><b>55,931.04</b>   |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.30 compaction factor assumed. (1,500 CY)*1.30 = 1,950 CY)                                    | LCY       | 1,950.0    | 2.7121<br>5,288.58              | 1.6057<br>3,131.05              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00        | 4.3178<br>8,419.63                |

| Description  | UOM       | Quantity   | DirectLabor                     | EQCost                        | MatlCost                        | SubBidCost            | UserCost1        | DirectCost                        |
|--|-----------|------------|---------------------------------|-------------------------------|---------------------------------|-----------------------|------------------|-----------------------------------|
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)   | LCY       | 1,500.0    | 8.8084<br>13,212.57             | 1.0781<br>1,617.14            | 21.5000<br>32,250.00            | 0.0000<br>0.00        | 0.0000<br>0.00   | 31.3865<br>47,079.70              |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 1,500.0    | 0.2044<br>306.58                | 0.0834<br>125.13              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00   | 0.2878<br>431.71                  |
| <b>Braced Excavation Temporary Retaining Structure</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>10,000.00</b> | 10,000.0000<br><b>10,000.00</b>   |
| USR Braced Excavation Temporary Retaining Structure<br>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)  | LS        | 1.0        | 0.00                            | 0.00                          | 0.00                            | 0.00                  | 10,000.00        | 10,000.00                         |
| <b>150099 Associated General Items</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 25,750.0000<br><b>25,750.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 25,750.0000<br><b>25,750.00</b>   |
| <b>15009902 Site Work</b>  | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 25,750.0000<br><b>25,750.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 25,750.0000<br><b>25,750.00</b>   |
| <b>Concrete Slope Pavement (15" Thick)</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>         | 25,750.0000<br><b>25,750.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 25,750.0000<br><b>25,750.00</b>   |
| RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments  | CY        | 250.0      | 0.0000<br>0.00                  | 0.0000<br>0.00                | 103.0000<br>25,750.00           | 0.0000<br>0.00        | 0.0000<br>0.00   | 103.0000<br>25,750.00             |
| <b>150005 Bridges, Foundations</b>   | <b>EA</b> | <b>1.0</b> | 59,269.3414<br><b>59,269.34</b> | 6,306.3506<br><b>6,306.35</b> | 35,885.7000<br><b>35,885.70</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 101,461.3921<br><b>101,461.39</b> |
| <b>15000503 Concrete</b>   | <b>EA</b> | <b>1.0</b> | 59,269.3414<br><b>59,269.34</b> | 6,306.3506<br><b>6,306.35</b> | 35,885.7000<br><b>35,885.70</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 101,461.3921<br><b>101,461.39</b> |
| <b>15000503 01 Concrete, in Place:</b>   | <b>EA</b> | <b>1.0</b> | 59,269.3414<br><b>59,269.34</b> | 6,306.3506<br><b>6,306.35</b> | 35,885.7000<br><b>35,885.70</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 101,461.3921<br><b>101,461.39</b> |
| <b>Aurund Run Crossing 302+50</b>  | <b>EA</b> | <b>1.0</b> | 59,269.3414<br><b>59,269.34</b> | 6,306.3506<br><b>6,306.35</b> | 35,885.7000<br><b>35,885.70</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 101,461.3921<br><b>101,461.39</b> |
| <b>Channel Concrete</b>  | <b>EA</b> | <b>1.0</b> | 59,269.3414<br><b>59,269.34</b> | 6,306.3506<br><b>6,306.35</b> | 35,885.7000<br><b>35,885.70</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>      | 101,461.3921<br><b>101,461.39</b> |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | CY        | 135.0      | 439.0322<br>59,269.34           | 46.7137<br>6,306.35           | 265.8200<br>35,885.70           | 0.0000<br>0.00        | 0.0000<br>0.00   | 751.5659<br>101,461.39            |
| <b>150006 Bridges, Abutments and Piers</b>   | <b>EA</b> | <b>1.0</b> | 30,531.8701<br><b>30,531.87</b> | 5,407.3044<br><b>5,407.30</b> | 13,556.8200<br><b>13,556.82</b> | 0.0000<br><b>0.00</b> | <b>82,528.88</b> | 132,024.8695<br><b>132,024.87</b> |
| <b>15000602 Site Work</b>  | <b>EA</b> | <b>1.0</b> | 8,141.2300<br><b>8,141.23</b>   | 3,024.9053<br><b>3,024.91</b> | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>82,528.88</b> | 93,695.0103<br><b>93,695.01</b>   |
|  |           |            | 8,141.2300                      | 3,024.9053                    | 0.0000                          | 0.0000                |                  | 93,695.0103                       |

| Description   | UOM        | Quantity     | DirectLabor      | EQCost          | MatlCost         | SubBidCost  | UserCost1          | DirectCost         |
|---|------------|--------------|------------------|-----------------|------------------|-------------|--------------------|--------------------|
| <b>15000602 04 Riprap</b>   | <b>EA</b>  | <b>1.0</b>   | <b>8,141.23</b>  | <b>3,024.91</b> | <b>0.00</b>      | <b>0.00</b> | <b>82,528.88</b>   | <b>93,695.01</b>   |
|   |            |              | 8,141.2300       | 3,024.9053      | 0.0000           | 0.0000      |                    | 93,695.0103        |
| <b>Aurund Run Crossing 302+50</b>   | <b>EA</b>  | <b>1.0</b>   | <b>8,141.23</b>  | <b>3,024.91</b> | <b>0.00</b>      | <b>0.00</b> | <b>82,528.88</b>   | <b>93,695.01</b>   |
|   |            |              | 10.9646          | 4.0739          | 0.0000           | 0.0000      | 111.1500           | 126.1886           |
| <i>USR Rip-Rap Placement</i>  | <i>TON</i> | <i>742.5</i> | <i>8,141.23</i>  | <i>3,024.91</i> | <i>0.00</i>      | <i>0.00</i> | <i>82,528.88</i>   | <i>93,695.01</i>   |
| <i>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assume that grouted riprap is 3 times the price as ungrouted (3 x \$37.05/ton = \$111.15/ton. Assumed density of rip rap is 1.35 tons/CY 5,334 SY of grouted riprap placed, Assume placement 18" (0.5 yards) thick. 1,100 SY x 0.5 Yard = 550 CY x 1.35 tons/CY = 742.5 tons)</i> |            |              |                  |                 |                  |             |                    |                    |
| <b>15000603 Concrete</b>  | <b>EA</b>  | <b>1.0</b>   | <b>22,390.64</b> | <b>2,382.40</b> | <b>13,556.82</b> | <b>0.00</b> | <b>0.00</b>        | <b>38,329.86</b>   |
|   |            |              | 22,390.6401      | 2,382.3991      | 13,556.8200      | 0.0000      |                    | 38,329.8592        |
| <b>15000603 01 Concrete, in Place</b>   | <b>EA</b>  | <b>1.0</b>   | <b>22,390.64</b> | <b>2,382.40</b> | <b>13,556.82</b> | <b>0.00</b> | <b>0.00</b>        | <b>38,329.86</b>   |
|   |            |              | 22,390.6401      | 2,382.3991      | 13,556.8200      | 0.0000      |                    | 38,329.8592        |
| <b>Aurund Run Crossing 302+50</b>   | <b>EA</b>  | <b>1.0</b>   | <b>22,390.64</b> | <b>2,382.40</b> | <b>13,556.82</b> | <b>0.00</b> | <b>0.00</b>        | <b>38,329.86</b>   |
|   |            |              | 4,829.3537       | 513.8508        | 2,924.0200       | 0.0000      |                    | 8,267.2245         |
| <b>Pier Concrete</b>  | <b>EA</b>  | <b>1.0</b>   | <b>4,829.35</b>  | <b>513.85</b>   | <b>2,924.02</b>  | <b>0.00</b> | <b>0.00</b>        | <b>8,267.22</b>    |
|   |            |              | 439.0322         | 46.7137         | 265.8200         | 0.0000      | 0.0000             | 751.5659           |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i>  | <i>CY</i>  | <i>11.0</i>  | <i>4,829.35</i>  | <i>513.85</i>   | <i>2,924.02</i>  | <i>0.00</i> | <i>0.00</i>        | <i>8,267.22</i>    |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>  |            |              |                  |                 |                  |             |                    |                    |
| <b>Wingwalls</b>  | <b>EA</b>  | <b>1.0</b>   | <b>17,561.29</b> | <b>1,868.55</b> | <b>10,632.80</b> | <b>0.00</b> | <b>0.00</b>        | <b>30,062.63</b>   |
|   |            |              | 17,561.2864      | 1,868.5483      | 10,632.8000      | 0.0000      |                    | 30,062.6347        |
|   |            |              | 439.0322         | 46.7137         | 265.8200         | 0.0000      | 0.0000             | 751.5659           |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i>  | <i>CY</i>  | <i>40.0</i>  | <i>17,561.29</i> | <i>1,868.55</i> | <i>10,632.80</i> | <i>0.00</i> | <i>0.00</i>        | <i>30,062.63</i>   |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>  |            |              |                  |                 |                  |             |                    |                    |
| <b>150041 Gates, Stop Logs-Associated Eqpt</b>  | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>      | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>154,634.00</b>  | <b>154,634.00</b>  |
|   |            |              | 0.0000           | 0.0000          | 0.0000           | 0.0000      |                    | 154,634.0000       |
| <b>15004105 Metals</b>  | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>      | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>154,634.00</b>  | <b>154,634.00</b>  |
|   |            |              | 0.0000           | 0.0000          | 0.0000           | 0.0000      |                    | 154,634.0000       |
| <b>15004105 01 Gates:</b>   | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>      | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>154,634.00</b>  | <b>154,634.00</b>  |
|   |            |              | 0.0000           | 0.0000          | 0.0000           | 0.0000      |                    | 154,634.0000       |
| <b>Aurund Run Crossing 302+50</b>   | <b>EA</b>  | <b>1.0</b>   | <b>0.00</b>      | <b>0.00</b>     | <b>0.00</b>      | <b>0.00</b> | <b>154,634.00</b>  | <b>154,634.00</b>  |
|   |            |              | 0.0000           | 0.0000          | 0.0000           | 0.0000      |                    | 154,634.0000       |
| <i>USR Furnish 4' x 10' Sluice Gate</i>   | <i>EA</i>  | <i>2.0</i>   | <i>0.00</i>      | <i>0.00</i>     | <i>0.00</i>      | <i>0.00</i> | <i>73,017.0000</i> | <i>73,017.0000</i> |
| <i>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$68,400 plus 6.75% sales tax = \$73,017)</i>   |            |              |                  |                 |                  |             |                    |                    |
| <i>USR Install 4' x 10' Sluice Gate</i>   | <i>EA</i>  | <i>2.0</i>   | <i>0.00</i>      | <i>0.00</i>     | <i>0.00</i>      | <i>0.00</i> | <i>4,300.0000</i>  | <i>4,300.0000</i>  |
| <i>(Note: Memo of Telecon from Kokosing Construction 08/19/15)</i>  |            |              |                  |                 |                  |             |                    |                    |

| Description  | UOM       | Quantity   | DirectLabor         | EQCost              | MatlCost          | SubBidCost  | UserCost1           | DirectCost          |
|--|-----------|------------|---------------------|---------------------|-------------------|-------------|---------------------|---------------------|
| <b>18 Cultural Resource Preservation</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>137,000.00</b>   | <b>137,000.00</b>   |
| <i>(Note: The approximate value of Contracts 3A and 3B is \$13,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$137,000.)</i>             |           |            |                     |                     |                   |             |                     |                     |
| USR Cultural Resources Preservation  | LS        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 137,000.00          | 137,000.00          |
| <b>3.0 - CONTRACT 3B - Bridges Reach 3 235+00 to 350+00</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
| <b>02 Relocations</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
| <b>Bridges</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b> | <b>6,491,000.00</b> | <b>6,491,000.00</b> |
| USR Bridge CR 313  | EA        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 799,000.00          | 799,000.00          |
| USR Bridge CR 9  | EA        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 920,000.00          | 920,000.00          |
| USR Bridge I-75 WB and EB  | EA        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 3,910,000.00        | 3,910,000.00        |
| USR Bridge TR 67   | EA        | 1.0        | 0.00                | 0.00                | 0.00              | 0.00        | 862,000.00          | 862,000.00          |
| <b>4.0 - CONTRACT 4A - Diversion Channel Reach 4 350+00 to 490+00</b>  | <b>EA</b> | <b>1.0</b> | <b>2,050,673.89</b> | <b>1,871,926.38</b> | <b>515,924.14</b> | <b>0.00</b> | <b>1,429,379.06</b> | <b>5,867,903.47</b> |
| <b>02 Relocations</b>  | <b>EA</b> | <b>1.0</b> | <b>20,505.63</b>    | <b>5,349.58</b>     | <b>136,001.52</b> | <b>0.00</b> | <b>22,161.62</b>    | <b>184,018.34</b>   |
| <b>0203 Cemetery, Utilities, &amp; Structure</b>   | <b>EA</b> | <b>1.0</b> | <b>6,225.50</b>     | <b>1,150.45</b>     | <b>8,778.36</b>   | <b>0.00</b> | <b>22,161.62</b>    | <b>38,315.92</b>    |
| <b>020318 Utilities</b>  | <b>EA</b> | <b>1.0</b> | <b>6,225.50</b>     | <b>1,150.45</b>     | <b>8,778.36</b>   | <b>0.00</b> | <b>20,161.62</b>    | <b>36,315.92</b>    |
| <b>Overhead Utilities</b>  | <b>EA</b> | <b>1.0</b> | <b>3,717.65</b>     | <b>452.09</b>       | <b>4,229.86</b>   | <b>0.00</b> | <b>20,161.62</b>    | <b>28,561.21</b>    |
| HNC 337116335100 Wood pole, yellow pine, penta-treated, 50', class 3   | EA        | 4.0        | 3,001.77            | 293.72              | 2,040.00          | 0.00        | 0.00                | 5,335.50            |
| USR Pole Removal<br><i>(Note: Assumed to be 60% of the installation cost per pole. \$7,812.14*0.60 = \$4,687.28)</i>   | EA        | 4.0        | 0.00                | 0.00                | 0.00              | 0.00        | 4,687.2800          | 4,687.2800          |
| RSM 024113334500 Minor site demolition, for disposal up to 5 miles, excludes hauling, add<br><i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i> | CY        | 22.0       | 125.61              | 90.01               | 0.00              | 0.00        | 0.00                | 215.62              |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck,   | LCY       | 22.0       | 59.67               | 35.32               | 0.00              | 0.00        | 0.00                | 94.99               |

| Description   | UOM       | Quantity   | DirectLabor                   | EQCost                    | MatlCost                      | SubBidCost            | UserCost1          | DirectCost                    |
|---|-----------|------------|-------------------------------|---------------------------|-------------------------------|-----------------------|--------------------|-------------------------------|
| <i>highway haulers, excludes loading</i>  |           |            |                               |                           |                               |                       |                    |                               |
| <i>(Note: Assume that the 4 utility poles will require one 22 CY truckload to dispose of them.)</i>   |           |            |                               |                           |                               |                       |                    |                               |
| <b>Overhead AT&amp;T Lines</b>  | <b>EA</b> | <b>1.0</b> | 278.2416<br><b>278.24</b>     | 2.0127<br><b>2.01</b>     | 35.5000<br><b>35.50</b>       | 0.0000<br><b>0.00</b> | <b>0.00</b>        | 315.7543<br><b>315.75</b>     |
| RSM 270505200240 Telephone cable, electrical demolition, remove<br><i>(Note: One 250 LF overhead AT&amp;T line will be demolished. 250 total LF.)</i>   | LF        | 250.0      | 0.2129<br>53.22               | 0.0000<br>0.00            | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.2129<br>53.22               |
| RSM 337139130810 Overhead line conductors & devices, disposal of<br>surplus material, high voltage conductors   | MI        | 0.1        | 387.6232<br>38.76             | 20.1275<br>2.01           | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00     | 407.7506<br>40.78             |
| RSM 271513132300 Telephone cable, telephone twisted, PVC<br>insulation, #22-4 conductor<br><i>(Note: One 250 LF overhead AT&amp;T line will be installed. 250 total LF.)</i>  | LF        | 250.0      | 0.7450<br>186.26              | 0.0000<br>0.00            | 0.1420<br>35.50               | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.8870<br>221.76              |
| <b>Overhead Electric Lines</b>  | <b>EA</b> | <b>1.0</b> | 252.3534<br><b>252.35</b>     | 31.0143<br><b>31.01</b>   | 2,154.3561<br><b>2,154.36</b> | 0.0000<br><b>0.00</b> | <b>1,412.50</b>    | 3,850.2237<br><b>3,850.22</b> |
| USR Overhead Electric Line Removal<br><i>(Note: Assumed to be 60% of the installation cost per LF for the cable. \$9.41*0.60 = \$5.65. One 250 LF overhead electric line will be demolished. 250 total LF.)</i>   | LF        | 250.0      | 0.0000<br>0.00                | 0.0000<br>0.00            | 0.0000<br>0.00                | 0.0000<br>0.00        | 5.6500<br>1,412.50 | 5.6500<br>1,412.50            |
| RSM 337139130810 Overhead line conductors & devices, disposal of<br>surplus material, high voltage conductors   | MI        | 0.1        | 387.6232<br>38.76             | 20.1275<br>2.01           | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00     | 407.7506<br>40.78             |
| RSM 337139130180 Overhead line conductors & devices, conductors,<br>primary circuits, per wire, over 1600 kcmil<br><i>(Note: One 250 LF overhead electric line will be installed. 250 total LF.)</i>  | LF        | 250.0      | 0.8544<br>213.59              | 0.1160<br>29.00           | 8.6174<br>2,154.36            | 0.0000<br>0.00        | 0.0000<br>0.00     | 9.5878<br>2,396.95            |
| <b>Underground CNI Fiber Optic Cables</b>   | <b>EA</b> | <b>1.0</b> | 2,507.8512<br><b>2,507.85</b> | 698.3609<br><b>698.36</b> | 4,548.5000<br><b>4,548.50</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>        | 7,754.7121<br><b>7,754.71</b> |
| RSM 330526100500 Utility Line Signs, Markers, and Flags,<br>underground tape, detectable, reinforced, aluminum foil core, 6",<br>excludes excavation and backfill   | LF        | 250.0      | 0.0291<br>7.29                | 0.0000<br>0.00            | 0.0560<br>14.00               | 0.0000<br>0.00        | 0.0000<br>0.00     | 0.0851<br>21.29               |
| RSM 271323131080 Fiber optics cable, 50 microns, 12 fiber, direct<br>burial<br><i>(Note: One 250 LF Fiber Optic Cable will be installed. 250 total LF.)</i>   | LF        | 250.0      | 0.6093<br>152.33              | 0.0000<br>0.00            | 1.5000<br>375.00              | 0.0000<br>0.00        | 0.0000<br>0.00     | 2.1093<br>527.33              |
| RSM 260533350410 Flexible metallic conduit, steel, 4" diameter<br><i>(Note: One 250 LF Fiber Optic Cable will be installed. Each cable will be installed in a separate conduit. 250 total LF of conduit will be installed. Labor cost has been removed from this item.)</i> | LF        | 250.0      | 0.0000<br>0.00                | 0.0000<br>0.00            | 13.8000<br>3,450.00           | 0.0000<br>0.00        | 0.0000<br>0.00     | 13.8000<br>3,450.00           |
| HNC 312323180555 Hauling, excavated or borrow material, loose<br>cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck,<br>highway haulers, excludes loading  | LCY       | 325.0      | 2.7121<br>881.43              | 1.6057<br>521.84          | 0.0000<br>0.00                | 0.0000<br>0.00        | 0.0000<br>0.00     | 4.3178<br>1,403.27            |

| Description   | UOM       | Quantity   | DirectLabor                     | EQCost                        | MatlCost                          | SubBidCost                   | UserCost1       | DirectCost                           |
|---|-----------|------------|---------------------------------|-------------------------------|-----------------------------------|------------------------------|-----------------|--------------------------------------|
| <i>(Note: 1.30 compaction factor assumed. (250 CY)*1.30 = 325 CY)</i>   |           |            |                                 |                               |                                   |                              |                 |                                      |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br><i>(Note: Material price received from Hancock County Material Bid Sheet.)</i>   | LCY       | 14.0       | 8.8084<br>123.32                | 1.0781<br>15.09               | 21.5000<br>301.00                 | 0.0000<br>0.00               | 0.0000<br>0.00  | 31.3865<br>439.41                    |
| RSM 312323238050 Compaction, 3 passes, 6" to 11", 4" lifts, rammer tamper<br><i>(Note: 250 CY)</i>  | ECY       | 250.0      | 4.2460<br>1,061.51              | 0.2410<br>60.26               | 0.0000<br>0.00                    | 0.0000<br>0.00               | 0.0000<br>0.00  | 4.4871<br>1,121.77                   |
| RSM 312316425100 Excavating, bulk bank measure, sandy clay/loam, open site, 1 C.Y. capacity = 120 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 250.0      | 0.9611<br>240.28                | 0.3551<br>88.78               | 0.0000<br>0.00                    | 0.0000<br>0.00               | 0.0000<br>0.00  | 1.3162<br>329.06                     |
| RSM 312323154050 Borrow, common earth, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel-mounted<br><i>(Note: Material cost removed. Excavation material re-used as backfill.)</i>   | BCY       | 19.0       | 1.3007<br>24.71                 | 0.3864<br>7.34                | 0.0000<br>0.00                    | 0.0000<br>0.00               | 0.0000<br>0.00  | 1.6870<br>32.05                      |
| RSM 312323155050 Borrow, select granular fill, 3/4 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted   | BCY       | 19.0       | 0.8942<br>16.99                 | 0.2656<br>5.05                | 21.5000<br>408.50                 | 0.0000<br>0.00               | 0.0000<br>0.00  | 22.6598<br>430.54                    |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br><i>(Note: The approximate value of the Utilities Relocation is \$50,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals, etc), the cost of this item is \$2,000.)</i> | <b>EA</b> | <b>1.0</b> | <b>0.0000</b><br><b>0.00</b>    | <b>0.0000</b><br><b>0.00</b>  | <b>0.0000</b><br><b>0.00</b>      | <b>0.0000</b><br><b>0.00</b> | <b>2,000.00</b> | <b>2,000.0000</b><br><b>2,000.00</b> |
| USR Mobilization  | LS        | 1.0        | 0.00                            | 0.00                          | 0.00                              | 0.00                         | 2,000.00        | 2,000.00                             |
| <b>Roadways</b>   | <b>EA</b> | <b>1.0</b> | 14,280.1280<br><b>14,280.13</b> | 4,199.1300<br><b>4,199.13</b> | 127,223.1600<br><b>127,223.16</b> | 0.0000<br><b>0.00</b>        | <b>0.00</b>     | 145,702.4180<br><b>145,702.42</b>    |
| <b>TR-76 Cul-De-Sac</b>   | <b>EA</b> | <b>1.0</b> | 7,140.0640<br><b>7,140.06</b>   | 2,099.5650<br><b>2,099.57</b> | 63,611.5800<br><b>63,611.58</b>   | 0.0000<br><b>0.00</b>        | <b>0.00</b>     | 72,851.2090<br><b>72,851.21</b>      |
| RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick  | TON       | 471.0      | 4.8347<br>2,277.13              | 1.2016<br>565.94              | 62.0000<br>29,202.00              | 0.0000<br>0.00               | 0.0000<br>0.00  | 68.0362<br>32,045.07                 |
| RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included   | TON       | 314.0      | 7.6741<br>2,409.66              | 1.9073<br>598.88              | 62.0000<br>19,468.00              | 0.0000<br>0.00               | 0.0000<br>0.00  | 71.5813<br>22,476.54                 |
| RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included  | TON       | 157.0      | 9.2941<br>1,459.17              | 2.2699<br>356.38              | 68.0000<br>10,676.00              | 0.0000<br>0.00               | 0.0000<br>0.00  | 79.5640<br>12,491.55                 |
| RSM 320113623240 Asphalt surface treatment, tack coat, emulsion,  | SY        | 1,367.0    | 0.0943<br>128.96                | 0.0461<br>63.02               | 0.3000<br>410.10                  | 0.0000<br>0.00               | 0.0000<br>0.00  | 0.4404<br>602.08                     |



| Description  | UOM       | Quantity   | DirectLabor                    | EQCost                         | MatlCost                         | SubBidCost             | UserCost1              | DirectCost                       |
|--|-----------|------------|--------------------------------|--------------------------------|----------------------------------|------------------------|------------------------|----------------------------------|
| 0.05 gallons per S.Y., 10,000 S.Y.   |           |            |                                |                                |                                  |                        |                        |                                  |
| 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.) | CY        | 228.0      | 1.3944<br>317.92               | 0.5281<br>120.40               | 16.9100<br>3,855.48              | 0.0000<br>0.00         | 0.0000<br>0.00         | 18.8325<br>4,293.81              |
| RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)   | ECY       | 692.0      | 0.3765<br>260.54               | 0.1537<br>106.34               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.5302<br>366.88                 |
| RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer   | SY        | 1,367.0    | 0.2097<br>286.68               | 0.2111<br>288.61               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.4208<br>575.30                 |
| <b>TR-49 Cul-De-Sac</b>  | <b>EA</b> | <b>1.0</b> | <b>7,140.0640<br/>7,140.06</b> | <b>2,099.5650<br/>2,099.57</b> | <b>63,611.5800<br/>63,611.58</b> | <b>0.0000<br/>0.00</b> | <b>0.0000<br/>0.00</b> | <b>72,851.2090<br/>72,851.21</b> |
| RSM 321126132005 Plant mixed asphaltic base courses, aggregate base course for roadways and large paved areas, alternate method to figure base course, bituminous concrete, 4" thick   | TON       | 471.0      | 4.8347<br>2,277.13             | 1.2016<br>565.94               | 62.0000<br>29,202.00             | 0.0000<br>0.00         | 0.0000<br>0.00         | 68.0362<br>32,045.07             |
| RSM 321216130810 Plant-mix asphalt paving, for highways and large paved areas, binder course, alternate method for developing paving costs, 1-1/2" thick, no hauling included  | TON       | 314.0      | 7.6741<br>2,409.66             | 1.9073<br>598.88               | 62.0000<br>19,468.00             | 0.0000<br>0.00         | 0.0000<br>0.00         | 71.5813<br>22,476.54             |
| RSM 321216130850 Plant-mix asphalt paving, for highways and large paved areas, wearing course, alternate method for developing paving costs, 1" thick, no hauling included   | TON       | 157.0      | 9.2941<br>1,459.17             | 2.2699<br>356.38               | 68.0000<br>10,676.00             | 0.0000<br>0.00         | 0.0000<br>0.00         | 79.5640<br>12,491.55             |
| RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.  | SY        | 1,367.0    | 0.0943<br>128.96               | 0.0461<br>63.02                | 0.3000<br>410.10                 | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.4404<br>602.08                 |
| 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.) | CY        | 228.0      | 1.3944<br>317.92               | 0.5281<br>120.40               | 16.9100<br>3,855.48              | 0.0000<br>0.00         | 0.0000<br>0.00         | 18.8325<br>4,293.81              |
| RSM 312323235040 Compaction, riding, vibrating roller, 4 passes, 6" lifts<br>(Note: (2,091 CF+(2,091 CF*2)+(2,091 CF*3)+( 6,150 CF)/27 = 692 CY)   | ECY       | 692.0      | 0.3765<br>260.54               | 0.1537<br>106.34               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.5302<br>366.88                 |
| RSM 329113231250 Soil preparation, structural soil mixing, remove topsoil & stock pile on site, 6" deep, 300' haul, 200 HP dozer   | SY        | 1,367.0    | 0.2097<br>286.68               | 0.2111<br>288.61               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.4208<br>575.30                 |
|  |           |            | 2,030,168.2671                 | 1,866,576.8013                 | 379,922.6241                     | 0.0000                 |                        | 5,607,885.1316                   |

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| Description  | UOM        | Quantity         | DirectLabor         | EQCost              | MatlCost          | SubBidCost    | UserCost1           | DirectCost          |
|--|------------|------------------|---------------------|---------------------|-------------------|---------------|---------------------|---------------------|
| <b>09 Channels and Canals</b>  | <b>EA</b>  | <b>1.0</b>       | <b>2,030,168.27</b> | <b>1,866,576.80</b> | <b>379,922.62</b> | <b>0.00</b>   | <b>1,331,217.44</b> | <b>5,607,885.13</b> |
| <b>0901 Channels</b>   | <b>EA</b>  | <b>1.0</b>       | <b>2,030,168.27</b> | <b>1,866,576.80</b> | <b>379,922.62</b> | <b>0.00</b>   | <b>1,051,217.44</b> | <b>5,327,885.13</b> |
| <b>Drainage Ditch</b>  | <b>EA</b>  | <b>1.0</b>       | <b>106,313.6158</b> | <b>80,698.9926</b>  | <b>0.0000</b>     | <b>0.0000</b> | <b>0.00</b>         | <b>187,012.6084</b> |
| <i>RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading</i>  | <i>BCY</i> | <i>67,131.0</i>  | <i>25,808.26</i>    | <i>23,940.66</i>    | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>49,748.92</i>    |
| <i>USR Topsoil Placement</i><br><i>(Note: Custom crew developed from (Topsoil placement and grading, loam or topsoil, F.E. loader, 1-1/2 C.Y., remove and stockpile on site, spread from pile to rough finish grade) original productivity 25 CY/hr. Loader size increased to 5.5 CY, so productivity increased to 125 CY/hr.)</i> | <i>LCY</i> | <i>23,285.0</i>  | <i>21,364.44</i>    | <i>19,076.59</i>    | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>40,441.03</i>    |
| <i>USR Fine Grading</i>  | <i>ACR</i> | <i>14.4</i>      | <i>31,299.44</i>    | <i>15,411.31</i>    | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>46,710.74</i>    |
| <i>USR Hydroseed</i><br><i>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)</i>   | <i>ACR</i> | <i>14.4</i>      | <i>6,477.05</i>     | <i>3,193.85</i>     | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>9,670.90</i>     |
| <i>USR Topsoil Loading</i>   | <i>LCY</i> | <i>23,285.0</i>  | <i>21,364.44</i>    | <i>19,076.59</i>    | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>40,441.03</i>    |
| <b>Strip and Stockpile Topsoil</b>   | <b>EA</b>  | <b>1.0</b>       | <b>86,365.62</b>    | <b>84,578.18</b>    | <b>790.0000</b>   | <b>0.0000</b> | <b>0.00</b>         | <b>171,733.79</b>   |
| <i>RSM 311413230100 Topsoil stripping and stockpiling, topsoil, sandy loam, adverse conditions, 200 H.P. dozer</i>   | <i>CY</i>  | <i>135,055.5</i> | <i>84,012.10</i>    | <i>84,578.18</i>    | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>168,590.28</i>   |
| <i>RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts</i>   | <i>LF</i>  | <i>1,000.0</i>   | <i>2,353.52</i>     | <i>0.0000</i>       | <i>0.7900</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>3,143.52</i>     |
| <b>Install Access Road</b>   | <b>EA</b>  | <b>1.0</b>       | <b>17,253.47</b>    | <b>12,691.17</b>    | <b>47,062.95</b>  | <b>0.0000</b> | <b>0.00</b>         | <b>77,007.59</b>    |
| <i>HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading</i><br><i>(Note: 1.40 compaction factor assumed. 2,593 CY x 1.40 = 3,630.20 CY)</i>  | <i>LCY</i> | <i>3,630.2</i>   | <i>9,845.43</i>     | <i>5,828.89</i>     | <i>0.0000</i>     | <i>0.0000</i> | <i>0.0000</i>       | <i>15,674.32</i>    |
| <i>RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep</i><br><i>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)</i>  | <i>ECY</i> | <i>2,593.0</i>   | <i>7,408.04</i>     | <i>6,862.28</i>     | <i>47,062.95</i>  | <i>0.0000</i> | <i>0.0000</i>       | <i>61,333.27</i>    |
| <b>Excavation of Diversion Channel</b>   | <b>EA</b>  | <b>1.0</b>       | <b>768,167.50</b>   | <b>1,253,813.77</b> | <b>790.0000</b>   | <b>0.0000</b> | <b>0.00</b>         | <b>2,022,771.27</b> |

| Description  | UOM       | Quantity   | DirectLabor         | EQCost              | MatlCost      | SubBidCost    | UserCost1     | DirectCost          |
|--|-----------|------------|---------------------|---------------------|---------------|---------------|---------------|---------------------|
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading<br><i>(Note: 10% of the 528,324 CY of soil excavated in this reach will be excavated via hydraulic excavator. 0.10 x 528,324 CY = 52,832 CY. Productivity decreased from 300 CY/hr to 150 CY/hr. The production rate of the excavator has been adjusted to match the hauling rate. The hauling rate is 220 LCY/hr. ((220 LCY/hr)/(1.30 LCY/BCY) = 169.2308 BCY/hr.)</i>   | BCY       | 52,832.0   | 36,005.96           | 33,400.42           | 0.00          | 0.00          | 0.00          | 69,406.38           |
| RSM 312513101120 Erosion control, silt fence, polypropylene, 3' high, includes 7.5' posts  | LF        | 1,000.0    | 2,353.52            | 0.00                | 790.00        | 0.00          | 0.00          | 3,143.52            |
| USR Scraping<br><i>(Note: 90% of the 528,324 CY of soil excavated in this reach will be excavated via scraper. 0.90 x 528,324 CY = 475,491 CY. Custom crew created based on (Excavating, large volume projects, 200,000 plus B.C.Y., 44 C.Y., 1500' haul, self propelled scrapers, 1/4 push dozer, average productivity). Added second scraper. Productivity reduced 20% (from 330 CY/hr. to 264 CY/hr.) to account for excavating in the channel.)</i>  | BCY       | 475,491.0  | 379,895.45          | 651,902.73          | 0.00          | 0.00          | 0.00          | 1,031,798.17        |
| <b>Hauling and Disposal</b>  | <b>EA</b> | <b>1.0</b> | <b>349,912.5753</b> | <b>568,510.6170</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>918,423.1923</b> |
| USR Rough Grading<br><i>(Note: Managing piles on purchased property. (Earth Cut (NET Cut) - Total Embankment Fill from Quantity Takeoff)*1.30 = (528,324 CY - 70,256 CY)*1.30 = 595,488 CY (Assume an expansion factor of 1.30).)</i>  | BCY       | 595,488.0  | 182,844.68          | 313,903.43          | 0.00          | 0.00          | 0.00          | 496,748.11          |
| USR Diversion Channel Material Hauling<br><i>(Note: Custom Crew created from (Cycle hauling(wait, load,travel, unload or dump &amp; return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload, 32-44 C.Y. truck, cycle 0.5 mile, 15 MPH, excludes loading equipment). Added second truck. Productivity increased from 110.25 CY/hr. to 220.5 CY/hr. Quantity equal to quantity of material excavated with 3 C.Y. Excavator + Material Re-Used for the levee) x 1.30 = (52,832 CY + 70,256 CY) x 1.30 = 160,014 CY (Assume an expansion factor of 1.30).)</i> | LCY       | 160,014.0  | 81,083.42           | 180,290.93          | 0.00          | 0.00          | 0.00          | 261,374.35          |
| USR Diversion Channel Excavation Loading<br><i>(Note: Note: Material unit cost has been removed. Existing site material will be loaded out.Quantity equal to hauling quantity.)</i>  | LCY       | 160,014.0  | 85,984.48           | 74,316.26           | 0.00          | 0.00          | 0.00          | 160,300.74          |
| <b>Grade Channel Embankment</b>  | <b>EA</b> | <b>1.0</b> | <b>27,151.6108</b>  | <b>48,144.9526</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>75,296.5634</b>  |
| USR Rough Grading<br><i>(Note: 70,256 CY * 1.30 = 91,333 CY)</i>   | BCY       | 91,333.0   | 27,151.61           | 48,144.95           | 0.00          | 0.00          | 0.00          | 75,296.56           |
| <b>Construct Channel Embankment</b>  | <b>EA</b> | <b>1.0</b> | <b>232,864.1201</b> | <b>159,290.1035</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>392,154.2236</b> |
| HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br><i>(Note: 70,256 CY * 1.30 = 91,333 CY)</i>  | LCY       | 91,333.0   | 154,814.64          | 98,648.38           | 0.00          | 0.00          | 0.00          | 253,463.02          |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 91,333.0   | 18,667.54           | 7,618.81            | 0.00          | 0.00          | 0.00          | 26,286.35           |

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| Description   | UOM       | Quantity   | DirectLabor       | EQCost            | MatlCost          | SubBidCost  | UserCost1           | DirectCost          |
|---|-----------|------------|-------------------|-------------------|-------------------|-------------|---------------------|---------------------|
| USR Loading<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. 70,256 CY * 1.30 = 91,333 CY)   | BCY       | 91,333.0   | 59,381.94         | 53,022.92         | 0.00              | 0.00        | 0.00                | 112,404.86          |
|   |           |            | 0.6502            | 0.5805            | 0.0000            | 0.0000      | 0.0000              | 1.2307              |
| <b>Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>EA</b> | <b>1.0</b> | <b>279,946.60</b> | <b>182,577.33</b> | <b>55,964.92</b>  | <b>0.00</b> | <b>0.00</b>         | <b>518,488.85</b>   |
|   |           |            | 279,946.5996      | 182,577.3299      | 55,964.9200       | 0.0000      | 0.0000              | 518,488.8495        |
| HNC 312323180240 Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Productivity increased from 32 CY/hr. to 50 CY/hr.)  | LCY       | 39,113.0   | 42,431.21         | 27,037.30         | 0.00              | 0.00        | 0.00                | 69,468.51           |
|   |           |            | 1.0848            | 0.6913            | 0.0000            | 0.0000      | 0.0000              | 1.7761              |
| USR Topsoil Placement<br>(Note: 30,087 CY * 1.30 = 39,113 CY)   | LCY       | 39,113.0   | 35,886.93         | 32,043.92         | 0.00              | 0.00        | 0.00                | 67,930.85           |
|   |           |            | 0.9175            | 0.8193            | 0.0000            | 0.0000      | 0.0000              | 1.7368              |
| USR Fine Grading<br>(Note: Assume 6" Placement. 30,087 CY * 6 = 180,522 SY = 37.30 Acres)   | ACR       | 37.3       | 81,074.23         | 39,919.56         | 0.00              | 0.00        | 0.00                | 120,993.80          |
|   |           |            | 2,173.5720        | 1,070.2296        | 0.0000            | 0.0000      | 0.0000              | 3,243.8015          |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | ACR       | 37.3       | 16,777.35         | 8,272.95          | 55,964.92         | 0.00        | 0.00                | 81,015.22           |
|   |           |            | 449.7950          | 221.7950          | 1,500.4000        | 0.0000      | 0.0000              | 2,171.9899          |
| USR Topsoil Loading   | LCY       | 39,113.0   | 35,886.93         | 32,043.92         | 0.00              | 0.00        | 0.00                | 67,930.85           |
|   |           |            | 0.9175            | 0.8193            | 0.0000            | 0.0000      | 0.0000              | 1.7368              |
| USR Topsoil Hauling<br>(Note: 30,087 CY * 1.30 = 39,113 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | LCY       | 39,113.0   | 67,889.93         | 43,259.68         | 0.00              | 0.00        | 0.00                | 111,149.61          |
|   |           |            | 1.7357            | 1.1060            | 0.0000            | 0.0000      | 0.0000              | 2.8418              |
| <b>Drainage Outlets</b>   | <b>EA</b> | <b>1.0</b> | <b>291,389.15</b> | <b>43,512.68</b>  | <b>267,214.20</b> | <b>0.00</b> | <b>1,041,217.44</b> | <b>1,643,333.47</b> |
|   |           |            | 291,389.1477      | 43,512.6815       | 267,214.2048      | 0.0000      | 0.0000              | 1,643,333.4730      |
| <b>Riprap</b>   | <b>EA</b> | <b>1.0</b> | <b>4,600.54</b>   | <b>1,709.35</b>   | <b>0.00</b>       | <b>0.00</b> | <b>15,545.44</b>    | <b>21,855.32</b>    |
|   |           |            | 4,600.5350        | 1,709.3465        | 0.0000            | 0.0000      | 0.0000              | 21,855.3205         |
| USR Rip-Rap Placement<br>(Note: 310.08 CY x 1.35 tons/CY (Assumed density of riprap 1.35 tons/CY) = 419.58 tons. Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio.)   | TON       | 419.6      | 4,600.54          | 1,709.35          | 0.00              | 0.00        | 15,545.44           | 21,855.32           |
|   |           |            | 10.9646           | 4.0739            | 0.0000            | 0.0000      | 37.0500             | 52.0886             |
| <b>Geotextile Under Riprap</b>  | <b>EA</b> | <b>1.0</b> | <b>261.44</b>     | <b>0.00</b>       | <b>904.90</b>     | <b>0.00</b> | <b>0.00</b>         | <b>1,166.34</b>     |
|   |           |            | 261.4372          | 0.0000            | 904.9040          | 0.0000      | 0.0000              | 1,166.3412          |
| RSM 313219161550 Geosynthetic soil stabilization, geotextile fabric, non-woven, 120 lb. tensile strength, includes scarifying and compaction  | SY        | 800.8      | 261.44            | 0.00              | 904.90            | 0.00        | 0.00                | 1,166.34            |
|   |           |            | 0.3265            | 0.0000            | 1.1300            | 0.0000      | 0.0000              | 1.4565              |
| <b>Sluice Gate</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>       | <b>0.00</b>       | <b>0.00</b>       | <b>0.00</b> | <b>885,672.00</b>   | <b>885,672.00</b>   |
|   |           |            | 0.0000            | 0.0000            | 0.0000            | 0.0000      | 0.0000              | 885,672.0000        |
|   |           |            | 0.0000            | 0.0000            | 0.0000            | 0.0000      | 20,603.0000         | 20,603.0000         |

| Description  | UOM       | Quantity   | DirectLabor     | EQCost        | MatlCost         | SubBidCost  | UserCost1   | DirectCost       |
|--|-----------|------------|-----------------|---------------|------------------|-------------|-------------|------------------|
| USR Furnish 24" Sluice Gate<br>(Note: Quotation from Ashbrook Simon-Hartley, Houston, TX 09/01/15. Per supplier, no wall thimble is required. \$19,300 plus 6.75% sales tax = \$20,603)                          | EA        | 24.0       | 0.00            | 0.00          | 0.00             | 0.00        | 494,472.00  | 494,472.00       |
| USR Install 24" Sluice Gate<br>(Note: Memo of Telecon from Kokosing Construction 08/19/15)   | EA        | 24.0       | 0.00            | 0.00          | 0.00             | 0.00        | 103,200.00  | 103,200.00       |
| USR Backflow Preventer<br>(Note: \$12,000 allowance per 08/18/15 Conference Call with Clifton Office.)   | EA        | 24.0       | 0.00            | 0.00          | 0.00             | 0.00        | 288,000.00  | 288,000.00       |
| <b>24" Diameter Pipe Sleeve</b>  | <b>EA</b> | <b>1.0</b> | <b>365.49</b>   | <b>0.00</b>   | <b>2,904.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>3,269.49</b>  |
| RSM 031505756200 Sleeves and chases, steel pipe, 12" long x 12" diameter, 1 use<br>(Note: Crew Output halved and labor and material prices doubled to account for 24" sleeve.)                                   | EA        | 24.0       | 365.49          | 0.00          | 2,904.00         | 0.00        | 0.00        | 3,269.49         |
| <b>2.5'x4' Aluminium Hatch</b>   | <b>EA</b> | <b>1.0</b> | <b>2,625.58</b> | <b>16.71</b>  | <b>13,533.12</b> | <b>0.00</b> | <b>0.00</b> | <b>16,175.41</b> |
| RSM 055319300020 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated<br>(Note: Perimeter of Hatch = 13 ft.; 24 hatches x 13 ft. per hatch = 312 ft.)   | LF        | 312.0      | 2,101.91        | 0.00          | 1,048.32         | 0.00        | 0.00        | 3,150.23         |
| RSM 055319300100 Grating frame, aluminum, 1" to 1-1/2" D, field fabricated, for each corner, add<br>(Note: 4 corners per hatch; 24 total hatches x 4 corners per hatch = 96 corners)                             | EA        | 96.0       | 0.00            | 0.00          | 484.80           | 0.00        | 0.00        | 484.80           |
| RSM 055313101900 Floor grating, aluminum, heavy duty extruded plank, 5.0 lb per S.F., 2-1/4" D, field fabricated from panels<br>(Note: 2.5 ft. x 4 ft. = 10 SF per hatch; 24 hatches x 10 SF per hatch = 240 SF) | SF        | 240.0      | 523.67          | 16.71         | 12,000.00        | 0.00        | 0.00        | 12,540.38        |
| <b>Ladder</b>  | <b>EA</b> | <b>1.0</b> | <b>6,468.90</b> | <b>206.42</b> | <b>13,824.00</b> | <b>0.00</b> | <b>0.00</b> | <b>20,499.32</b> |
| RSM 055133130400 Ladder, shop fabricated, aluminum, 20" W, bolted to concrete, excl cage   | VLF       | 288.0      | 6,468.90        | 206.42        | 13,824.00        | 0.00        | 0.00        | 20,499.32        |
| <b>Crushed Stone Bedding</b>   | <b>EA</b> | <b>1.0</b> | <b>119.25</b>   | <b>74.56</b>  | <b>551.25</b>    | <b>0.00</b> | <b>0.00</b> | <b>745.06</b>    |
| RSM 321123231523 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, compacted, 1-1/2", 12" deep                       | ECY       | 17.5       | 51.44           | 34.42         | 551.25           | 0.00        | 0.00        | 637.12           |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading   | LCY       | 25.0       | 67.80           | 40.14         | 0.00             | 0.00        | 0.00        | 107.94           |

| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                          | MatlCost                        | SubBidCost            | UserCost1                | DirectCost                        |
|--|-----------|------------|-----------------------------------|---------------------------------|---------------------------------|-----------------------|--------------------------|-----------------------------------|
| <i>(Note: 1.40 compaction factor assumed. (17.5 CY)*1.40 = 25 CY)</i>  |           |            |                                   |                                 |                                 |                       |                          |                                   |
| <b>Temporary Sheeting</b>  | <b>EA</b> | <b>1.0</b> | 55,648.6728<br><b>55,648.67</b>   | 21,817.4031<br><b>21,817.40</b> | 52,080.0000<br><b>52,080.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 129,546.0759<br><b>129,546.08</b> |
| <i>RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales</i>  | SF        | 6,720.0    | 8.2811<br>55,648.67               | 3.2466<br>21,817.40             | 7.7500<br>52,080.00             | 0.0000<br>0.00        | 0.0000<br>0.00           | 19.2777<br>129,546.08             |
| <b>Formwork</b>  | <b>EA</b> | <b>1.0</b> | 41,282.8226<br><b>41,282.82</b>   | 0.0000<br><b>0.00</b>           | 5,114.8800<br><b>5,114.88</b>   | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 46,397.7026<br><b>46,397.70</b>   |
| <i>RSM 031113859460 C.I.P. concrete forms, walls, steel framed plywood, over 16' to 20' high, based on 50 uses of purchased forms, 4 uses of bracing lumber, includes erecting, bracing, stripping and cleaning</i>  | SFC       | 6,912.0    | 5.9726<br>41,282.82               | 0.0000<br>0.00                  | 0.7400<br>5,114.88              | 0.0000<br>0.00        | 0.0000<br>0.00           | 6.7126<br>46,397.70               |
| <b>Filler Concrete</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 60.7700<br><b>60.77</b>         | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 60.7700<br><b>60.77</b>           |
| <i>RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments</i>   | CY        | 0.6        | 0.0000<br>0.00                    | 0.0000<br>0.00                  | 103.0000<br>60.77               | 0.0000<br>0.00        | 0.0000<br>0.00           | 103.0000<br>60.77                 |
| <b>24" Flaired End Section</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>140,000.00</b>        | 140,000.0000<br><b>140,000.00</b> |
| <i>USR 24" Flaired End Section<br/>(Note: \$2,000 allowance for each 24" Flaired End Section)</i>  | EA        | 70.0       | 0.0000<br>0.00                    | 0.0000<br>0.00                  | 0.0000<br>0.00                  | 0.0000<br>0.00        | 2,000.0000<br>140,000.00 | 2,000.0000<br>140,000.00          |
| <b>24" Flaired End Section Trash Rack</b>  | <b>EA</b> | <b>1.0</b> | 1,336.4576<br><b>1,336.46</b>     | 42.6451<br><b>42.65</b>         | 32,480.0000<br><b>32,480.00</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 33,859.1027<br><b>33,859.10</b>   |
| <i>RSM 055313702200 Floor grating, stainless steel, 1-1/4" x 3/16" bearing bars @ 15/16" O.C., cross bars @ 4" O.C., up to 300 S.F., field fabricated from panels<br/>(Note: Each Trash Rack is 4 SF. 70 trash racks x 4 SF per trash rack = 280 SF)</i>             | SF        | 280.0      | 4.7731<br>1,336.46                | 0.1523<br>42.65                 | 116.0000<br>32,480.00           | 0.0000<br>0.00        | 0.0000<br>0.00           | 120.9254<br>33,859.10             |
| <b>24" Diameter Reinforced Concrete Pipe</b>   | <b>EA</b> | <b>1.0</b> | 21,744.8410<br><b>21,744.84</b>   | 2,080.7630<br><b>2,080.76</b>   | 41,416.2000<br><b>41,416.20</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 65,241.8040<br><b>65,241.80</b>   |
| <i>RSM 334113602518 Public Storm Utility Drainage Piping, reinforced concrete pipe (RCP), 24" diameter, class 4, excludes excavation or backfill<br/>(Note: Hancock County Material Bids Sheet 2015 24 in. Diameter Pipe from Northern Concrete Pipe \$20.76/LF)</i> | LF        | 1,995.0    | 10.8997<br>21,744.84              | 1.0430<br>2,080.76              | 20.7600<br>41,416.20            | 0.0000<br>0.00        | 0.0000<br>0.00           | 32.7027<br>65,241.80              |
| <b>Chamber</b>   | <b>EA</b> | <b>1.0</b> | 138,927.3363<br><b>138,927.34</b> | 14,782.0859<br><b>14,782.09</b> | 84,116.0808<br><b>84,116.08</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 237,825.5030<br><b>237,825.50</b> |
| <b>Concrete</b>  | <b>EA</b> | <b>1.0</b> | 138,927.3363<br><b>138,927.34</b> | 14,782.0859<br><b>14,782.09</b> | 84,116.0808<br><b>84,116.08</b> | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 237,825.5030<br><b>237,825.50</b> |

| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                        | MatlCost                        | SubBidCost            | UserCost1                | DirectCost                        |
|--|-----------|------------|-----------------------------------|-------------------------------|---------------------------------|-----------------------|--------------------------|-----------------------------------|
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)   | CY        | 316.4      | 439.0322<br>138,927.34            | 46.7137<br>14,782.09          | 265.8200<br>84,116.08           | 0.0000<br>0.00        | 0.0000<br>0.00           | 751.5659<br>237,825.50            |
| <b>Manholes</b>  | <b>EA</b> | <b>1.0</b> | 18,007.8208<br><b>18,007.82</b>   | 2,782.7476<br><b>2,782.75</b> | 20,229.0000<br><b>20,229.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b>    | 41,019.5685<br><b>41,019.57</b>   |
| RSM 334913101130 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., 8' deep, excludes footing, excavation, backfill, frame and cover   | EA        | 11.0       | 816.7223<br>8,983.94              | 106.3849<br>1,170.23          | 1,025.0000<br>11,275.00         | 0.0000<br>0.00        | 0.0000<br>0.00           | 1,948.1071<br>21,429.18           |
| RSM 334913101140 Storm Drainage Manholes, Frames, and Covers, concrete, precast, 4' I.D., excludes footing, excavation, backfill, frame and cover, add for depths over 8'<br>(Note: 11 manholes x 4 additional feet per manhole = 44 feet)   | VLF       | 44.0       | 102.0903<br>4,491.97              | 13.2981<br>585.12             | 121.0000<br>5,324.00            | 0.0000<br>0.00        | 0.0000<br>0.00           | 236.3884<br>10,401.09             |
| HNC 334913104620 Manhole frame and cover, cast iron, city type, 30" diameter x 550 lb.   | EA        | 11.0       | 223.4636<br>2,458.10              | 26.9523<br>296.48             | 330.0000<br>3,630.00            | 0.0000<br>0.00        | 0.0000<br>0.00           | 580.4159<br>6,384.57              |
| RSM 312316133020 Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering<br>(Note: Of the 16 CY per manhole in the original excavation, the new manhole will occupy 3.14159*(1.5 ft.^2)*12 ft. = 84.823 cf = 3 CY. The remaining 13 CY of excavated material will be used as backfill material. Assume a 1.30 compaction factor. 13 CY x 1.30 = 17 CY. 11 manholes x 17 CY of backfill material per manhole = 187 CY. 187 CY of material will be used as backfill around the manholes.) | LCY       | 187.0      | 1.8145<br>339.31                  | 0.5313<br>99.35               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 2.3457<br>438.65                  |
| RSM 312316166120 Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, clay,till or blasted rock, 1 C.Y. bucket, machine excavation, hydraulic backhoe<br>(Note: Each manhole excavation will be approximately 6 ft. x 6 ft. x 12 ft. = 432 cf = 16 CY. Total excavation = 11 manholes x 16 CY per manhole = 176 CY)   | BCY       | 176.0      | 9.8551<br>1,734.50                | 3.5885<br>631.58              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 13.4436<br>2,366.07               |
| <b>090113 Traffic Control</b>  | <b>EA</b> | <b>1.0</b> | 212,205.5231<br><b>212,205.52</b> | 0.0000<br><b>0.00</b>         | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | <b>10,000.00</b>         | 222,205.5231<br><b>222,205.52</b> |
| USR Signage and Traffic Cone Allowance<br>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)  | EA        | 1.0        | 0.0000<br>0.00                    | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 10,000.0000<br>10,000.00 | 10,000.0000<br>10,000.00          |
| MIL B-LABORER Laborers, General (Lowest paid)<br>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)   | HR        | 4,160.0    | 51.0109<br>212,205.52             | 0.0000<br>0.00                | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00           | 51.0109<br>212,205.52             |
| <b>Erosion Mats</b>  | <b>EA</b> | <b>1.0</b> | 8,511.0584<br><b>8,511.06</b>     | 1,269.6300<br><b>1,269.63</b> | 8,100.5493<br><b>8,100.55</b>   | 0.0000<br><b>0.00</b> | <b>0.00</b>              | 17,881.2377<br><b>17,881.24</b>   |
|  |           |            | 0.1961                            | 0.0293                        | 0.1867                          | 0.0000                | 0.0000                   | 0.4120                            |

| Description   | UOM       | Quantity   | DirectLabor         | EQCost            | MatlCost            | SubBidCost       | UserCost1           | DirectCost          |
|---|-----------|------------|---------------------|-------------------|---------------------|------------------|---------------------|---------------------|
| RSM 312514160060 Synthetic erosion control, nylon, 3 dimensional geomatrix, 9 mil thick<br>(Note: 278 mats x 156.1 SF/mat = 43,395.80 SF)   | SF        | 43,395.8   | 8,511.06            | 1,269.63          | 8,100.55            | 0.00             | 0.00                | 17,881.24           |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>         | <b>0.00</b>      | <b>280,000.00</b>   | <b>280,000.00</b>   |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$7,000,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$.)</i>  |           |            |                     |                   |                     |                  |                     |                     |
| USR Mobilization  | LS        | 1.0        | 0.00                | 0.00              | 0.00                | 0.00             | 280,000.00          | 280,000.00          |
| <b>18 Cultural Resources Preservation</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>         | <b>0.00</b>      | <b>76,000.00</b>    | <b>76,000.00</b>    |
| <i>(Note: The approximate value of Contract 4A is \$7,600,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$76,000.)</i>  |           |            |                     |                   |                     |                  |                     |                     |
| USR Cultural Resources Preservation   | LS        | 1.0        | 0.00                | 0.00              | 0.00                | 0.00             | 76,000.00           | 76,000.00           |
|   |           |            | 1,527,023.3569      | 200,761.6472      | 1,053,692.1500      | 17,300.0000      |                     | 5,679,643.9436      |
| <b>5.0 - CONTRACT 4B - Diversion Channel Reach 5 490+00 to 495+43 &amp; Gate Structure at Eagle Creek</b>   | <b>EA</b> | <b>1.0</b> | <b>1,527,023.36</b> | <b>200,761.65</b> | <b>1,053,692.15</b> | <b>17,300.00</b> | <b>2,880,866.79</b> | <b>5,679,643.94</b> |
| <b>06 Fish and Wildlife Facilities</b>  | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>         | <b>0.00</b>      | <b>1,379,000.00</b> | <b>1,379,000.00</b> |
| <i>(Note: The stream quantities for mitigation include 9,094 LF at \$100/LF or \$909,400. The wetland mitigation cost reflects improvements to an entire 19.14 acre site. The wetland mitigation cost is 25,000 per acre for 8.6 acres or approximately \$215,000. The remaining 10.5 acres on the mitigation area will be planted as forested upland buffer to help increase the functions and values of our mitigation and further offset the 3.8 acres of forested habitat impacts currently proposed. The 10.5 acres upland buffer would cost approximately \$10,000 per acre or a total of \$105,000. Thus the wetland and forested mitigation would cost a total of \$320,000.)</i> |           |            |                     |                   |                     |                  |                     |                     |
| Stream Mitigation   | EA        | 1.0        | 0.00                | 0.00              | 0.00                | 0.00             | 1,379,000.00        | 1,379,000.00        |
| USR Stream Mitigation   | LS        | 1.0        | 0.00                | 0.00              | 0.00                | 0.00             | 1,379,000.00        | 1,379,000.00        |
| <b>09 Channels and Canals</b>   | <b>EA</b> | <b>1.0</b> | <b>280,007.59</b>   | <b>45,157.50</b>  | <b>222,844.01</b>   | <b>0.00</b>      | <b>77,116.79</b>    | <b>625,125.89</b>   |
| <b>090101 Mob, Demob &amp; Preparatory Work</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>       | <b>0.00</b>         | <b>0.00</b>      | <b>30,400.00</b>    | <b>30,400.00</b>    |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$760,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$30,400.)</i>  |           |            |                     |                   |                     |                  |                     |                     |
| USR Mobilization  | LS        | 1.0        | 0.00                | 0.00              | 0.00                | 0.00             | 30,400.00           | 30,400.00           |
| <b>0901 Channels</b>  | <b>EA</b> | <b>1.0</b> | <b>213,826.34</b>   | <b>509.02</b>     | <b>3,737.15</b>     | <b>0.00</b>      | <b>17,040.00</b>    | <b>235,112.51</b>   |
| <b>Install Access Road</b>  | <b>EA</b> | <b>1.0</b> | <b>672.04</b>       | <b>494.33</b>     | <b>1,833.15</b>     | <b>0.00</b>      | <b>0.00</b>         | <b>2,999.52</b>     |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. 101 CY x 1.40 = 141.40 CY)   | LCY       | 141.4      | 383.49              | 227.04            | 0.00                | 0.00             | 0.00                | 610.53              |
| RSM 321123231505 Base course drainage layers, aggregate base course for roadways and large paved areas, sand, washed and graded, compacted, 6" deep   | ECY       | 101.0      | 288.55              | 267.29            | 1,833.15            | 0.00             | 0.00                | 2,388.99            |



| Description  | UOM       | Quantity   | DirectLabor       | EQCost           | MatlCost          | SubBidCost  | UserCost1        | DirectCost        |
|--|-----------|------------|-------------------|------------------|-------------------|-------------|------------------|-------------------|
| <i>(Note: Hancock County Material Bids Sheet 2015 #9 aggregate at \$11.00/ton. Use 1.65 tons/CY. \$18.15/CY.)</i>  |           |            |                   |                  |                   |             |                  |                   |
| <b>Dewatering</b>  | <b>EA</b> | <b>1.0</b> | <b>948.78</b>     | <b>14.68</b>     | <b>1,904.00</b>   | <b>0.00</b> | <b>7,040.00</b>  | <b>9,907.46</b>   |
| USR Laborers for Dewatering at Eagle Creek   | LS        | 1.0        | 0.00              | 0.00             | 0.00              | 0.00        | 7,040.00         | 7,040.00          |
| <i>(Note: Bare cost for 2 laborers x 2 hours per day x 22 work days per month x 2 months = 176 hours x \$40/hr. = \$7,040)</i>   |           |            |                   |                  |                   |             |                  |                   |
| HTW 026510107173 Petroleum contaminated soil, excavate and stockpile, sandbags for stockpile, excludes transportation and disposal fees  | EA        | 100.0      | 255.64            | 14.68            | 129.00            | 0.00        | 0.00             | 399.32            |
| RSM 225119500900 Swimming pool equipment, filter system, sand or diatomite type, 6,000 gal/hour, incl. pump  | LS        | 1.0        | 693.14            | 0.00             | 1,775.00          | 0.00        | 0.00             | 2,468.14          |
| <b>090113 Traffic Control</b>  | <b>EA</b> | <b>1.0</b> | <b>212,205.52</b> | <b>0.00</b>      | <b>0.00</b>       | <b>0.00</b> | <b>10,000.00</b> | <b>222,205.52</b> |
| USR Signage and Traffic Cone Allowance   | EA        | 1.0        | 0.00              | 0.00             | 0.00              | 0.00        | 10,000.00        | 10,000.00         |
| <i>(Note: A \$10,000 allowance has been included for signage, traffic cones, etc.)</i>   |           |            |                   |                  |                   |             |                  |                   |
| MIL B-LABORER Laborers, General (Lowest paid)  | HR        | 4,160.0    | 212,205.52        | 0.00             | 0.00              | 0.00        | 0.00             | 212,205.52        |
| <i>(Note: Assumed Davis Bacon Laborers: Group 2 General Decision Number: OH150002 08/07/2015 OH2 Traffic Control Cost for 2 laborers, 1 year would be about 2,080 hrs x 2 men = 4,160 hours)</i>                                     |           |            |                   |                  |                   |             |                  |                   |
| <b>090101 Earthen Dam</b>  | <b>EA</b> | <b>1.0</b> | <b>66,181.24</b>  | <b>44,648.48</b> | <b>219,106.86</b> | <b>0.00</b> | <b>29,676.79</b> | <b>359,613.37</b> |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i> |           |            |                   |                  |                   |             |                  |                   |
| <b>090101 Embankment</b>   | <b>EA</b> | <b>1.0</b> | <b>48,216.53</b>  | <b>35,279.16</b> | <b>127,232.00</b> | <b>0.00</b> | <b>0.00</b>      | <b>210,727.69</b> |
| <i>(Note: The approximate value of item 09 - Channals and Canals is \$298,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$11,920.)</i> |           |            |                   |                  |                   |             |                  |                   |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading   | LCY       | 8,325.0    | 22,578.16         | 13,367.16        | 0.00              | 0.00        | 0.00             | 35,945.32         |
| <i>(Note: Common Fill Hauling. 6,404 CY x 1.30 = 8,325 CY)</i>   |           |            |                   |                  |                   |             |                  |                   |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 3,495.0    | 714.34            | 291.55           | 0.00              | 0.00        | 0.00             | 1,005.89          |
| <i>(Note: Impervious Fill Compaction)</i>  |           |            |                   |                  |                   |             |                  |                   |
| USR Common Fill Placement  | LCY       | 8,325.0    | 7,638.35          | 6,820.38         | 0.00              | 0.00        | 0.00             | 14,458.73         |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 6,404.0    | 1,308.91          | 534.21           | 0.00              | 0.00        | 0.00             | 1,843.12          |
| <i>(Note: Common Fill Compaction)</i>  |           |            |                   |                  |                   |             |                  |                   |

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| Description   | UOM       | Quantity   | DirectLabor                   | EQCost                        | MatlCost                        | SubBidCost            | UserCost1               | DirectCost                      |
|---|-----------|------------|-------------------------------|-------------------------------|---------------------------------|-----------------------|-------------------------|---------------------------------|
| RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br>(Note: Impervious Fill. 3,495 CY x 1.30 (Expansion Factor) = 4,544 CY)   | LCY       | 4,544.0    | 0.0000<br>0.00                | 0.0000<br>0.00                | 28.0000<br>127,232.00           | 0.0000<br>0.00        | 0.0000<br>0.00          | 28.0000<br>127,232.00           |
| USR Impervious Fill Placement   | LCY       | 4,544.0    | 0.9175<br>4,169.21            | 0.8193<br>3,722.74            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>7,891.95              |
| USR Common Fill Loading   | LCY       | 8,325.0    | 0.9175<br>7,638.35            | 0.8193<br>6,820.38            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>14,458.73             |
| USR Impervious Fill Loading   | LCY       | 4,544.0    | 0.9175<br>4,169.21            | 0.8193<br>3,722.74            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>7,891.95              |
| <b>Place Topsoil and Seed</b><br>(Note: Topsoil placement for the berm and the channel.)  | <b>EA</b> | <b>1.0</b> | 630.0248<br><b>630.02</b>     | 412.8266<br><b>412.83</b>     | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b> | 147.94<br><b>147.94</b> | 1,190.7909<br><b>1,190.79</b>   |
| USR Topsoil Placement<br>(Note: 477 SY (Assume placed 6 in. or 0,167 yd. thick). 477 SY x 0.167 yd. = 80 CY. 80 CY x 1.30 (Expansion Factor) = 104 CY)  | LCY       | 104.0      | 0.9175<br>95.42               | 0.8193<br>85.20               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>180.63                |
| USR Fine Grading<br>(Note: 477 SY = 0.0986 acres)   | ACR       | 0.1        | 2,173.5720<br>214.31          | 1,070.2296<br>105.52          | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 3,243.8015<br>319.84            |
| USR Hydroseed<br>(Note: Material Cost of \$1,500.40/acre for Lime, Fertilizer, and Seed obtained from www.rsmeansonline.com for Lima, Ohio 2015, Qtr 4.)  | ACR       | 0.1        | 449.7950<br>44.35             | 221.7950<br>21.87             | 0.0000<br>0.00                  | 0.0000<br>0.00        | 1,500.4000<br>147.94    | 2,171.9899<br>214.16            |
| USR Topsoil Hauling<br>(Note: 35,503 CY * 1.30 = 46,154 CY. Custom Crew developed from (Hauling, excavated or borrow material, loose cubic yards, 1 mile round trip @ 20 MPH (4.2 cycles/hour), 8 C.Y. truck, highway haulers, excludes loading). Original productivity 32 CY/hr. Increased number of trucks to 4 to keep pace with loading and placement operations. Productivity increased 4 x to 125 CY/hr.) | LCY       | 104.0      | 1.7357<br>180.52              | 1.1060<br>115.03              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 2.8418<br>295.54                |
| USR Topsoil Loading   | LCY       | 104.0      | 0.9175<br>95.42               | 0.8193<br>85.20               | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>180.63                |
| <b>Inspection Trench</b>  | <b>EA</b> | <b>1.0</b> | 5,287.7249<br><b>5,287.72</b> | 4,569.0416<br><b>4,569.04</b> | 64,708.0000<br><b>64,708.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b>   | 74,564.7665<br><b>74,564.77</b> |
| RSM 312316425400 Excavating, bulk bank measure, sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading   | BCY       | 1,778.0    | 0.3844<br>683.55              | 0.3566<br>634.08              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 0.7411<br>1,317.63              |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts<br>(Note: Impervious Fill Compaction)  | ECY       | 1,778.0    | 0.2044<br>363.41              | 0.0834<br>148.32              | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 0.2878<br>511.72                |
| USR Impervious Fill Placement<br>(Note: Impervious Fill. 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)   | LCY       | 2,311.0    | 0.9175<br>2,120.39            | 0.8193<br>1,893.32            | 0.0000<br>0.00                  | 0.0000<br>0.00        | 0.0000<br>0.00          | 1.7368<br>4,013.71              |

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| Description   | UOM       | Quantity   | DirectLabor                    | EQCost                         | MatlCost                         | SubBidCost             | UserCost1              | DirectCost                       |
|---|-----------|------------|--------------------------------|--------------------------------|----------------------------------|------------------------|------------------------|----------------------------------|
| RSM 354113200050 Clay backfill material delivered, high cost, up to 20 miles haul distance (40 miles round trip for mobilization/demobilization crew), L.C.Y.<br>(Note: Impervious Fill 1,778 CY x 1.30 (Expansion Factor) = 2,311 CY)  | LCY       | 2,311.0    | 0.0000<br>0.00                 | 0.0000<br>0.00                 | 28.0000<br>64,708.00             | 0.0000<br>0.00         | 0.0000<br>0.00         | 28.0000<br>64,708.00             |
| USR Impervious Fill Loading   | LCY       | 2,311.0    | 0.9175<br>2,120.39             | 0.8193<br>1,893.32             | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 1.7368<br>4,013.71               |
| <b>Roadway</b>  | <b>EA</b> | <b>1.0</b> | <b>3,308.1643<br/>3,308.16</b> | <b>1,140.5124<br/>1,140.51</b> | <b>27,166.8600<br/>27,166.86</b> | <b>0.0000<br/>0.00</b> | <b>0.0000<br/>0.00</b> | <b>31,615.5367<br/>31,615.54</b> |
| RSM 320113623240 Asphalt surface treatment, tack coat, emulsion, 0.05 gallons per S.Y., 10,000 S.Y.<br>(Note: Productivity increased 40% from 1,250 SY/hr to 1,750 SY/hr. Ohio DOT uses 0.03 gal/SY rather than 0.05 gal/SY.)   | SY        | 1,067.0    | 0.0674<br>71.90                | 0.0329<br>35.13                | 0.3000<br>320.10                 | 0.0000<br>0.00         | 0.0000<br>0.00         | 0.4003<br>427.13                 |
| 321123232011 Base course drainage layers, aggregate base course for roadways and large paved areas, alternate method to figure base course, crushed stone, 3/4" maximum size, 6" deep<br>(Note: Hancock County Material Bids Sheet 2015 #1 and #2 Stone at \$10.25/ton. Use 1.65 tons/CY. \$16.91/CY.)                          | CY        | 178.0      | 1.3944<br>248.20               | 0.5281<br>94.00                | 16.9100<br>3,009.98              | 0.0000<br>0.00         | 0.0000<br>0.00         | 18.8325<br>3,352.18              |
| RSM 321126130500 Asphalt Paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 4" thick   | SY        | 1,067.0    | 1.0637<br>1,135.00             | 0.2644<br>282.08               | 13.9500<br>14,884.65             | 0.0000<br>0.00         | 0.0000<br>0.00         | 15.2781<br>16,301.74             |
| RSM 321216130080 Plant-mix asphalt paving, for highways and large paved areas, binder course, 1-1/2" thick, no hauling included   | SY        | 1,067.0    | 0.6258<br>667.78               | 0.1555<br>165.96               | 5.0500<br>5,388.35               | 0.0000<br>0.00         | 0.0000<br>0.00         | 5.8314<br>6,222.09               |
| RSM 321216130300 Plant-mix asphalt paving, for highways and large paved areas, wearing course, 1" thick, no hauling included  | SY        | 1,067.0    | 0.5054<br>539.21               | 0.1234<br>131.69               | 3.3400<br>3,563.78               | 0.0000<br>0.00         | 0.0000<br>0.00         | 3.9688<br>4,234.68               |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: Base course aggregate hauling.)  | LCY       | 178.0      | 2.7121<br>482.75               | 1.6057<br>285.81               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 4.3178<br>768.56                 |
| USR Base Course Aggregate Loading   | LCY       | 178.0      | 0.9175<br>163.32               | 0.8193<br>145.83               | 0.0000<br>0.00                   | 0.0000<br>0.00         | 0.0000<br>0.00         | 1.7368<br>309.15                 |
| <b>Place Rip-Rap</b><br>(Note: Topsoil placement for the berm and the channel.)   | <b>EA</b> | <b>1.0</b> | <b>8,738.8017<br/>8,738.80</b> | <b>3,246.9354<br/>3,246.94</b> | <b>0.0000<br/>0.00</b>           | <b>0.0000<br/>0.00</b> | <b>29,528.85</b>       | <b>41,514.5871<br/>41,514.59</b> |
| USR Rip-Rap Placement<br>(Note: Material cost of \$37.05/ton for ungrouted riprap obtained from www.rsmeansonline.com indexed for 2015 Qtr 4, Lima, Ohio. Assumed density of rip rap is 1.35 tons/CY 1,180 SY of riprap placed, Assume placement 18" (0.5 yards) thick. 1,180 SY x 0.5 Yard = 590 CY x 1.35 tons/CY = 797 tons) | TON       | 797.0      | 10.9646<br>8,738.80            | 4.0739<br>3,246.94             | 0.0000<br>0.00                   | 0.0000<br>0.00         | 37.0500<br>29,528.85   | 52.0886<br>41,514.59             |
|   |           |            | 1,247,015.7693                 | 155,604.1487                   | 830,848.1400                     | 17,300.0000            |                        | 3,598,518.0580                   |

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| Description   | UOM       | Quantity   | DirectLabor         | EQCost            | MatlCost          | SubBidCost       | UserCost1           | DirectCost          |
|---|-----------|------------|---------------------|-------------------|-------------------|------------------|---------------------|---------------------|
| <b>15 Floodway Control-Diversion Struc</b>  | <b>EA</b> | <b>1.0</b> | <b>1,247,015.77</b> | <b>155,604.15</b> | <b>830,848.14</b> | <b>17,300.00</b> | <b>1,347,750.00</b> | <b>3,598,518.06</b> |
|   |           |            | 1,247,015.7693      | 155,604.1487      | 830,848.1400      | 17,300.0000      |                     | 3,466,518.0580      |
| <b>1500 Floodway Control-Diversion Struc</b>  | <b>EA</b> | <b>1.0</b> | <b>1,247,015.77</b> | <b>155,604.15</b> | <b>830,848.14</b> | <b>17,300.00</b> | <b>1,215,750.00</b> | <b>3,466,518.06</b> |
|   |           |            | 77,013.3728         | 30,908.6349       | 83,205.0000       | 0.0000           |                     | 201,127.0076        |
| <b>150010 Earthwork for Structures</b>  | <b>EA</b> | <b>1.0</b> | <b>77,013.37</b>    | <b>30,908.63</b>  | <b>83,205.00</b>  | <b>0.00</b>      | <b>10,000.00</b>    | <b>201,127.01</b>   |
|   |           |            | 27,792.9999         | 18,335.4925       | 0.0000            | 0.0000           |                     | 46,128.4924         |
| <b>15001002 Site Work</b>   | <b>EA</b> | <b>1.0</b> | <b>27,793.00</b>    | <b>18,335.49</b>  | <b>0.00</b>       | <b>0.00</b>      | <b>0.00</b>         | <b>46,128.49</b>    |
|   |           |            | 27,792.9999         | 18,335.4925       | 0.0000            | 0.0000           |                     | 46,128.4924         |
| <b>15001002 03 Excavation, Common</b>   | <b>EA</b> | <b>1.0</b> | <b>27,793.00</b>    | <b>18,335.49</b>  | <b>0.00</b>       | <b>0.00</b>      | <b>0.00</b>         | <b>46,128.49</b>    |
|   |           |            | 14,577.0130         | 9,616.7118        | 0.0000            | 0.0000           |                     | 24,193.7248         |
| <b>Gate Structure</b>   | <b>EA</b> | <b>1.0</b> | <b>14,577.01</b>    | <b>9,616.71</b>   | <b>0.00</b>       | <b>0.00</b>      | <b>0.00</b>         | <b>24,193.72</b>    |
|   |           |            | 0.3901              | 0.3566            | 0.0000            | 0.0000           | 0.0000              | 0.7467              |
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | BCY       | 3,370.0    | 1,314.63            | 1,201.83          | 0.00              | 0.00             | 0.00                | 2,516.46            |
|   |           |            | 0.2792              | 0.3151            | 0.0000            | 0.0000           | 0.0000              | 0.5943              |
| RSM 312323157080 Borrow, topsoil or loam, 5 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. (Assume an expansion factor of 1.30). 3,370*1.30 = 4,381 CY) | BCY       | 4,381.0    | 1,222.96            | 1,380.46          | 0.00              | 0.00             | 0.00                | 2,603.42            |
|   |           |            | 2.7481              | 1.6057            | 0.0000            | 0.0000           | 0.0000              | 4.3538              |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: (Assume an expansion factor of 1.30). 3,370*1.30 = 4,381 CY)                                   | LCY       | 4,381.0    | 12,039.43           | 7,034.42          | 0.00              | 0.00             | 0.00                | 19,073.85           |
|   |           |            | 13,215.9868         | 8,718.7807        | 0.0000            | 0.0000           |                     | 21,934.7676         |
| <b>Weir Structure</b>   | <b>EA</b> | <b>1.0</b> | <b>13,215.99</b>    | <b>8,718.78</b>   | <b>0.00</b>       | <b>0.00</b>      | <b>0.00</b>         | <b>21,934.77</b>    |
|   |           |            | 0.3901              | 0.3566            | 0.0000            | 0.0000           | 0.0000              | 0.7467              |
| RSM 312316425400 Excavating, bulk bank measure,sandy clay/loam, open site, 3 C.Y. capacity = 300 C.Y./hour, excavator, hydraulic, crawler mounted, excluding truck loading  | BCY       | 3,055.0    | 1,191.75            | 1,089.49          | 0.00              | 0.00             | 0.00                | 2,281.24            |
|   |           |            | 0.2792              | 0.3151            | 0.0000            | 0.0000           | 0.0000              | 0.5943              |
| RSM 312323157080 Borrow, topsoil or loam, 5 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted<br>(Note: Material unit cost has been removed. Existing site material will be loaded out. (Assume an expansion factor of 1.30). 3,055*1.30 = 3,972 CY) | BCY       | 3,972.0    | 1,108.79            | 1,251.59          | 0.00              | 0.00             | 0.00                | 2,360.37            |
|   |           |            | 2.7481              | 1.6057            | 0.0000            | 0.0000           | 0.0000              | 4.3538              |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: (Assume an expansion factor of 1.30). 3,055*1.30 = 3,972 CY)                                   | LCY       | 3,972.0    | 10,915.45           | 6,377.70          | 0.00              | 0.00             | 0.00                | 17,293.16           |
|   |           |            | 49,220.3729         | 12,573.1423       | 83,205.0000       | 0.0000           |                     | 144,998.5153        |
| <b>Backfilling</b>  | <b>EA</b> | <b>1.0</b> | <b>49,220.37</b>    | <b>12,573.14</b>  | <b>83,205.00</b>  | <b>0.00</b>      | <b>0.00</b>         | <b>144,998.52</b>   |
|   |           |            | 30,142.7090         | 7,699.8313        | 50,955.0000       | 0.0000           |                     | 88,797.5403         |

| Description  | UOM       | Quantity   | DirectLabor         | EQCost             | MatlCost             | SubBidCost     | UserCost1        | DirectCost           |
|--|-----------|------------|---------------------|--------------------|----------------------|----------------|------------------|----------------------|
| <b>Gate Structure</b>  | <b>EA</b> | <b>1.0</b> | <b>30,142.71</b>    | <b>7,699.83</b>    | <b>50,955.00</b>     | <b>0.00</b>    | <b>0.00</b>      | <b>88,797.54</b>     |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. (2,370 CY)*1.30 = 3,081 CY) | LCY       | 3,081.0    | 2.7481<br>8,466.90  | 1.6057<br>4,947.06 | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00   | 4.3538<br>13,413.95  |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)                                 | LCY       | 2,370.0    | 8.9385<br>21,184.35 | 1.0781<br>2,555.08 | 21.5000<br>50,955.00 | 0.0000<br>0.00 | 0.0000<br>0.00   | 31.5166<br>74,694.42 |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 2,370.0    | 0.2074<br>491.46    | 0.0834<br>197.70   | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00   | 0.2908<br>689.17     |
| <b>Weir Structure</b>  | <b>EA</b> | <b>1.0</b> | <b>19,077.66</b>    | <b>4,873.31</b>    | <b>32,250.00</b>     | <b>0.00</b>    | <b>0.00</b>      | <b>56,200.97</b>     |
| HNC 312323180555 Hauling, excavated or borrow material, loose cubic yards, 12 mile round trip @ base wide rate, 12 C.Y. truck, highway haulers, excludes loading<br>(Note: 1.40 compaction factor assumed. (1,500 CY)*1.30 = 1,950 CY) | LCY       | 1,950.0    | 2.7481<br>5,358.79  | 1.6057<br>3,131.05 | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00   | 4.3538<br>8,489.84   |
| RSM 312323160100 Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction<br>(Note: Material price received from Hancock County Material Bid Sheet.)                                 | LCY       | 1,500.0    | 8.9385<br>13,407.82 | 1.0781<br>1,617.14 | 21.5000<br>32,250.00 | 0.0000<br>0.00 | 0.0000<br>0.00   | 31.5166<br>47,274.95 |
| RSM 312323235080 Compaction, riding, vibrating roller, 3 passes, 12" lifts   | ECY       | 1,500.0    | 0.2074<br>311.05    | 0.0834<br>125.13   | 0.0000<br>0.00       | 0.0000<br>0.00 | 0.0000<br>0.00   | 0.2908<br>436.18     |
| <b>Braced Excavation Temporary Retaining Structure</b>   | <b>EA</b> | <b>1.0</b> | <b>0.00</b>         | <b>0.00</b>        | <b>0.00</b>          | <b>0.00</b>    | <b>10,000.00</b> | <b>10,000.00</b>     |
| USR Braced Excavation Temporary Retaining Structure<br>(Note: \$10,000 Allowance Included for Temporary Retaining Structure.)  | LS        | 1.0        | 0.00                | 0.00               | 0.00                 | 0.00           | 10,000.00        | 10,000.00            |
| <b>150011 Foundation Work</b>  | <b>EA</b> | <b>1.0</b> | <b>783.93</b>       | <b>324.66</b>      | <b>775.00</b>        | <b>0.00</b>    | <b>0.00</b>      | <b>1,883.59</b>      |
| <b>15001102 Site Work</b>  | <b>EA</b> | <b>1.0</b> | <b>783.93</b>       | <b>324.66</b>      | <b>775.00</b>        | <b>0.00</b>    | <b>0.00</b>      | <b>1,883.59</b>      |
| <b>15001102 02 Piling, Steel Sheet</b>   | <b>EA</b> | <b>1.0</b> | <b>783.93</b>       | <b>324.66</b>      | <b>775.00</b>        | <b>0.00</b>    | <b>0.00</b>      | <b>1,883.59</b>      |
| <b>Weir Structure</b>  | <b>EA</b> | <b>1.0</b> | <b>783.93</b>       | <b>324.66</b>      | <b>775.00</b>        | <b>0.00</b>    | <b>0.00</b>      | <b>1,883.59</b>      |
| RSM 314116101600 Sheet piling, steel, 27 psf, 20' excavation, per S.F., drive, extract and salvage, excludes wales   | SF        | 100.0      | 7.8393<br>783.93    | 3.2466<br>324.66   | 7.7500<br>775.00     | 0.0000<br>0.00 | 0.0000<br>0.00   | 18.8359<br>1,883.59  |

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| Description  | UOM       | Quantity     | DirectLabor       | EQCost           | MatlCost          | SubBidCost  | UserCost1   | DirectCost          |
|--|-----------|--------------|-------------------|------------------|-------------------|-------------|-------------|---------------------|
| <b>150099 Associated General Items</b>   | <b>EA</b> | <b>1.0</b>   | <b>6,044.65</b>   | <b>363.71</b>    | <b>61,850.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>68,258.36</b>    |
|  |           |              | 6,044.6519        | 363.7090         | 61,850.0000       | 0.0000      |             | 68,258.3608         |
| <b>15009902 Site Work</b>  | <b>EA</b> | <b>1.0</b>   | <b>0.00</b>       | <b>0.00</b>      | <b>25,750.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>25,750.00</b>    |
|  |           |              | 0.0000            | 0.0000           | 25,750.0000       | 0.0000      |             | 25,750.0000         |
| <b>Concrete Slope Pavement (15" Thick)</b>   | <b>EA</b> | <b>1.0</b>   | <b>0.00</b>       | <b>0.00</b>      | <b>25,750.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>25,750.00</b>    |
|  |           |              | 0.0000            | 0.0000           | 25,750.0000       | 0.0000      |             | 25,750.0000         |
| <i>RSM 033105350300 Structural concrete, ready mix, normal weight, 4000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives and treatments</i>   | <i>CY</i> | <i>250.0</i> | <i>0.00</i>       | <i>0.00</i>      | <i>25,750.00</i>  | <i>0.00</i> | <i>0.00</i> | <i>25,750.00</i>    |
|  |           |              | 0.0000            | 0.0000           | 103.0000          | 0.0000      | 0.0000      | 103.0000            |
| <b>15009916 Electrical</b>   | <b>EA</b> | <b>1.0</b>   | <b>6,044.65</b>   | <b>363.71</b>    | <b>36,100.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>42,508.36</b>    |
|  |           |              | 6,044.6519        | 363.7090         | 36,100.0000       | 0.0000      |             | 42,508.3608         |
| <b>15009916 01 Electric Power and Lighting</b>   | <b>EA</b> | <b>1.0</b>   | <b>2,170.76</b>   | <b>0.00</b>      | <b>7,000.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>9,170.76</b>     |
|  |           |              | 2,170.7597        | 0.0000           | 7,000.0000        | 0.0000      |             | 9,170.7597          |
| <i>NLU 344323100200 Heliport floodlights, heliport lighting, on 10' steel pole, 2-500 watt<br/>(Note: Material Cost last updated 1 Jan 2010.)</i>  | <i>EA</i> | <i>4.0</i>   | <i>2,170.76</i>   | <i>0.00</i>      | <i>7,000.00</i>   | <i>0.00</i> | <i>0.00</i> | <i>9,170.76</i>     |
|  |           |              | 542.6899          | 0.0000           | 1,750.0000        | 0.0000      | 0.0000      | 2,292.6899          |
| <b>15009916 02 Standby Power Equipment</b>   | <b>EA</b> | <b>1.0</b>   | <b>3,873.89</b>   | <b>363.71</b>    | <b>29,100.00</b>  | <b>0.00</b> | <b>0.00</b> | <b>33,337.60</b>    |
|  |           |              | 3,873.8922        | 363.7090         | 29,100.0000       | 0.0000      |             | 33,337.6012         |
| <i>RSM 263213132110 Generator set, diesel, 3 phase 4 wire, 277/480 V, 60 kW, incl battery, charger, muffler, automatic transfer switch &amp; day tank, excl conduit, wiring, &amp; concrete</i>  | <i>EA</i> | <i>1.0</i>   | <i>3,873.89</i>   | <i>363.71</i>    | <i>29,100.00</i>  | <i>0.00</i> | <i>0.00</i> | <i>33,337.60</i>    |
|  |           |              | 3,873.8922        | 363.7090         | 29,100.0000       | 0.0000      | 0.0000      | 33,337.6012         |
| <b>150005 Bridges, Foundations</b>   | <b>EA</b> | <b>1.0</b>   | <b>718,536.31</b> | <b>75,442.64</b> | <b>429,299.30</b> | <b>0.00</b> | <b>0.00</b> | <b>1,223,278.25</b> |
|  |           |              | 718,536.3120      | 75,442.6391      | 429,299.3000      | 0.0000      |             | 1,223,278.2511      |
| <b>15000503 Concrete</b>   | <b>EA</b> | <b>1.0</b>   | <b>718,536.31</b> | <b>75,442.64</b> | <b>429,299.30</b> | <b>0.00</b> | <b>0.00</b> | <b>1,223,278.25</b> |
|  |           |              | 718,536.3120      | 75,442.6391      | 429,299.3000      | 0.0000      |             | 1,223,278.2511      |
| <b>Weir Structure</b>  | <b>EA</b> | <b>1.0</b>   | <b>287,859.44</b> | <b>30,223.77</b> | <b>171,985.54</b> | <b>0.00</b> | <b>0.00</b> | <b>490,068.75</b>   |
|  |           |              | 287,859.4389      | 30,223.7694      | 171,985.5400      | 0.0000      |             | 490,068.7483        |
| <b>Structural Reinforced Concrete (Base and Weir)</b>  | <b>EA</b> | <b>1.0</b>   | <b>213,558.78</b> | <b>22,422.58</b> | <b>127,593.60</b> | <b>0.00</b> | <b>0.00</b> | <b>363,574.96</b>   |
|  |           |              | 213,558.7800      | 22,422.5801      | 127,593.6000      | 0.0000      |             | 363,574.9601        |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br/>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i> | <i>CY</i> | <i>480.0</i> | <i>213,558.78</i> | <i>22,422.58</i> | <i>127,593.60</i> | <i>0.00</i> | <i>0.00</i> | <i>363,574.96</i>   |
|  |           |              | 444.9141          | 46.7137          | 265.8200          | 0.0000      | 0.0000      | 757.4478            |
| <b>Structural Reinforced Concrete (Abutment Base)</b>  | <b>EA</b> | <b>1.0</b>   | <b>74,300.66</b>  | <b>7,801.19</b>  | <b>44,391.94</b>  | <b>0.00</b> | <b>0.00</b> | <b>126,493.79</b>   |
|  |           |              | 74,300.6589       | 7,801.1893       | 44,391.9400       | 0.0000      |             | 126,493.7882        |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi),</i>  | <i>CY</i> | <i>167.0</i> | <i>74,300.66</i>  | <i>7,801.19</i>  | <i>44,391.94</i>  | <i>0.00</i> | <i>0.00</i> | <i>126,493.79</i>   |
|  |           |              | 444.9141          | 46.7137          | 265.8200          | 0.0000      | 0.0000      | 757.4478            |

| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                          | MatlCost                          | SubBidCost            | UserCost1             | DirectCost                        |
|--|-----------|------------|-----------------------------------|---------------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------------------|
| square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)  |           |            |                                   |                                 |                                   |                       |                       |                                   |
| <b>Gate Structure</b>  | <b>EA</b> | <b>1.0</b> | 430,676.8731<br><b>430,676.87</b> | 45,218.8698<br><b>45,218.87</b> | 257,313.7600<br><b>257,313.76</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 733,209.5028<br><b>733,209.50</b> |
| <b>Structural Reinforced Concrete (Gate Base Foundation -4' Thick)</b>   | <b>EA</b> | <b>1.0</b> | 230,020.6027<br><b>230,020.60</b> | 24,150.9873<br><b>24,150.99</b> | 137,428.9400<br><b>137,428.94</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 391,600.5299<br><b>391,600.53</b> |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | CY        | 517.0      | 444.9141<br>230,020.60            | 46.7137<br>24,150.99            | 265.8200<br>137,428.94            | 0.0000<br>0.00        | 0.0000<br>0.00        | 757.4478<br>391,600.53            |
| <b>Structural Reinforced Concrete (Wingwall Base Foundation- 3' Thick)</b>   | <b>EA</b> | <b>1.0</b> | 200,656.2704<br><b>200,656.27</b> | 21,067.8825<br><b>21,067.88</b> | 119,884.8200<br><b>119,884.82</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 341,608.9729<br><b>341,608.97</b> |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing<br>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio) | CY        | 451.0      | 444.9141<br>200,656.27            | 46.7137<br>21,067.88            | 265.8200<br>119,884.82            | 0.0000<br>0.00        | 0.0000<br>0.00        | 757.4478<br>341,608.97            |
| <b>150006 Bridges, Abutments and Piers</b>   | <b>EA</b> | <b>1.0</b> | 431,587.0228<br><b>431,587.02</b> | 46,249.3798<br><b>46,249.38</b> | 255,718.8400<br><b>255,718.84</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 733,555.2427<br><b>733,555.24</b> |
| <b>15000602 Site Work</b>  | <b>EA</b> | <b>1.0</b> | 3,579.6345<br><b>3,579.63</b>     | 1,310.7923<br><b>1,310.79</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 4,890.4268<br><b>4,890.43</b>     |
| <b>15000602 04 Riprap</b>  | <b>EA</b> | <b>1.0</b> | 3,579.6345<br><b>3,579.63</b>     | 1,310.7923<br><b>1,310.79</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 4,890.4268<br><b>4,890.43</b>     |
| <b>Gate Structure</b>  | <b>EA</b> | <b>1.0</b> | 3,579.6345<br><b>3,579.63</b>     | 1,310.7923<br><b>1,310.79</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 4,890.4268<br><b>4,890.43</b>     |
| USR Rip-Rap Placement  | TON       | 321.8      | 11.1255<br>3,579.63               | 4.0739<br>1,310.79              | 0.0000<br>0.00                    | 0.0000<br>0.00        | 0.0000<br>0.00        | 15.1995<br>4,890.43               |
| <b>15000603 Concrete</b>   | <b>EA</b> | <b>1.0</b> | 428,007.3883<br><b>428,007.39</b> | 44,938.5875<br><b>44,938.59</b> | 255,718.8400<br><b>255,718.84</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 728,664.8158<br><b>728,664.82</b> |
| <b>15000603 01 Concrete, in Place</b>  | <b>EA</b> | <b>1.0</b> | 428,007.3883<br><b>428,007.39</b> | 44,938.5875<br><b>44,938.59</b> | 255,718.8400<br><b>255,718.84</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 728,664.8158<br><b>728,664.82</b> |
| <b>Weir Structure</b>  | <b>EA</b> | <b>1.0</b> | 77,415.0578<br><b>77,415.06</b>   | 8,128.1853<br><b>8,128.19</b>   | 46,252.6800<br><b>46,252.68</b>   | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 131,795.9230<br><b>131,795.92</b> |
| <b>Structural Reinforced Concrete (Weir Walls)</b>   | <b>EA</b> | <b>1.0</b> | 14,237.2520<br><b>14,237.25</b>   | 1,494.8387<br><b>1,494.84</b>   | 8,506.2400<br><b>8,506.24</b>     | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 24,238.3307<br><b>24,238.33</b>   |
| RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing  | CY        | 32.0       | 444.9141<br>14,237.25             | 46.7137<br>1,494.84             | 265.8200<br>8,506.24              | 0.0000<br>0.00        | 0.0000<br>0.00        | 757.4478<br>24,238.33             |

| Description  | UOM       | Quantity   | DirectLabor                       | EQCost                          | MatlCost                          | SubBidCost                      | UserCost1           | DirectCost                            |
|--|-----------|------------|-----------------------------------|---------------------------------|-----------------------------------|---------------------------------|---------------------|---------------------------------------|
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   |           |            |                                   |                                 |                                   |                                 |                     |                                       |
| <b>Structural Reinforced Concrete (Abutment Walls)</b>   | <b>EA</b> | <b>1.0</b> | 63,177.8058<br><b>63,177.81</b>   | 6,633.3466<br><b>6,633.35</b>   | 37,746.4400<br><b>37,746.44</b>   | 0.0000<br><b>0.00</b>           | <b>0.00</b>         | 107,557.5924<br><b>107,557.59</b>     |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i> | CY        | 142.0      | 444.9141<br>63,177.81             | 46.7137<br>6,633.35             | 265.8200<br>37,746.44             | 0.0000<br>0.00                  | 0.0000<br>0.00      | 757.4478<br>107,557.59                |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   |           |            |                                   |                                 |                                   |                                 |                     |                                       |
| <b>Gate Structure</b>  | <b>EA</b> | <b>1.0</b> | 350,592.3306<br><b>350,592.33</b> | 36,810.4023<br><b>36,810.40</b> | 209,466.1600<br><b>209,466.16</b> | 0.0000<br><b>0.00</b>           | <b>0.00</b>         | 596,868.8928<br><b>596,868.89</b>     |
| <b>Structural Reinforced Concrete (Gate Abutments and Center Pier)</b>   | <b>EA</b> | <b>1.0</b> | 133,474.2375<br><b>133,474.24</b> | 14,014.1125<br><b>14,014.11</b> | 79,746.0000<br><b>79,746.00</b>   | 0.0000<br><b>0.00</b>           | <b>0.00</b>         | 227,234.3501<br><b>227,234.35</b>     |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i> | CY        | 300.0      | 444.9141<br>133,474.24            | 46.7137<br>14,014.11            | 265.8200<br>79,746.00             | 0.0000<br>0.00                  | 0.0000<br>0.00      | 757.4478<br>227,234.35                |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   |           |            |                                   |                                 |                                   |                                 |                     |                                       |
| <b>Structural Reinforced Concrete (Wingwall Walls)</b>   | <b>EA</b> | <b>1.0</b> | 217,118.0930<br><b>217,118.09</b> | 22,796.2897<br><b>22,796.29</b> | 129,720.1600<br><b>129,720.16</b> | 0.0000<br><b>0.00</b>           | <b>0.00</b>         | 369,634.5428<br><b>369,634.54</b>     |
| <i>RSM 033053400900 Structural concrete, in place, column (4000 psi), square, min reinforcing, 24" x 24", includes forms(4 uses), reinforcing steel, concrete, placing and finishing</i> | CY        | 488.0      | 444.9141<br>217,118.09            | 46.7137<br>22,796.29            | 265.8200<br>129,720.16            | 0.0000<br>0.00                  | 0.0000<br>0.00      | 757.4478<br>369,634.54                |
| <i>(Note: Material cost obtained from www.rsmeansonline.com; Indexed for 2015 Qtr 4, Lima, Ohio)</i>   |           |            |                                   |                                 |                                   |                                 |                     |                                       |
| <b>150007 Bridges, Superstructure and Deck</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>             | 17,300.0000<br><b>17,300.00</b> | <b>0.00</b>         | 17,300.0000<br><b>17,300.00</b>       |
| <b>15000703 Concrete</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>             | 17,300.0000<br><b>17,300.00</b> | <b>0.00</b>         | 17,300.0000<br><b>17,300.00</b>       |
| <b>15000703 04 Precast Concrete:</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>             | 17,300.0000<br><b>17,300.00</b> | <b>0.00</b>         | 17,300.0000<br><b>17,300.00</b>       |
| <b>Precast Concrete Bridge with rails (12'-wide, 85'-long)</b>   | <b>EA</b> | <b>1.0</b> | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | 0.0000<br><b>0.00</b>             | 17,300.0000<br><b>17,300.00</b> | <b>0.00</b>         | 17,300.0000<br><b>17,300.00</b>       |
| <i>RSM 323410101610 Fabricated highway bridges, precast, prestressed concrete, I beams, 80' to 100' span</i>   | EA        | 1.0        | 0.0000<br>0.00                    | 0.0000<br>0.00                  | 0.0000<br>0.00                    | 17,300.0000<br>17,300.00        | 0.0000<br>0.00      | 17,300.0000<br>17,300.00              |
| <b>150041 Gates, Stop Logs-Associated Eqpt</b>   | <b>EA</b> | <b>1.0</b> | 13,050.4804<br><b>13,050.48</b>   | 2,315.1221<br><b>2,315.12</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | <b>1,205,750.00</b> | 1,221,115.6026<br><b>1,221,115.60</b> |
| <b>15004105 Metals</b>   | <b>EA</b> | <b>1.0</b> | 13,050.4804<br><b>13,050.48</b>   | 2,315.1221<br><b>2,315.12</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | <b>1,205,750.00</b> | 1,221,115.6026<br><b>1,221,115.60</b> |
| <b>15004105 01 Gates:</b>  | <b>EA</b> | <b>1.0</b> | 13,050.4804<br><b>13,050.48</b>   | 2,315.1221<br><b>2,315.12</b>   | 0.0000<br><b>0.00</b>             | 0.0000<br><b>0.00</b>           | <b>1,205,750.00</b> | 1,221,115.6026<br><b>1,221,115.60</b> |



| Description  | UOM | Quantity | DirectLabor           | EQCost                | MatlCost              | SubBidCost            | UserCost1                      | DirectCost                     |
|--|-----|----------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------------|--------------------------------|
| USR Obermeyer Gate and Appurtenances<br>(Note: Quotation from Rob Eckman, Obermeyer Hydro, Inc., September 1, 2015 for two, 17 ft. x 28 ft. Obermeyer Gates (including freight).)  | EA  | 1.0      | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 1,190,750.0000<br>1,190,750.00 | 1,190,750.0000<br>1,190,750.00 |
| RSM 015419500200 Crane crew, daily use for small jobs, 25-ton truck-mounted hydraulic crane, portal to portal  | DAY | 6.0      | 518.1510<br>3,108.91  | 385.8537<br>2,315.12  | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00                 | 904.0047<br>5,424.03           |
| MIL B-LABORERG Laborers, General (Lowest paid)<br>(Note: Four laborers required at 48 hours each to install the gates)   | HR  | 192.0    | 51.7790<br>9,941.57   | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00                 | 51.7790<br>9,941.57            |
| USR Testing<br>(Note: Per September 1, 2015 Obermeyer Hydro Quotation the cost of having an Obermeyer Hydro Representative onsite for testing is \$1,500/day. An estimate 10 days of testing are required for the gates.)  | EA  | 10.0     | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 1,500.0000<br>15,000.00        | 1,500.0000<br>15,000.00        |
| <b>090101 Mob, Demob &amp; Preparatory Work</b><br>(Note: The approximate value of Floodway Control-Diversion Struc is \$3,300,000. Therefore, assuming a mobilization cost of 4% for prep work (such as survey layout, permits, submittals,etc), the cost of this item is \$132,000.) | EA  | 1.0      | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | <b>132,000.00</b>              | <b>132,000.00</b>              |
| USR Mobilization   | LS  | 1.0      | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 132,000.00                     | 132,000.00                     |
| <b>18 Cultural Resources Preservation</b><br>(Note: The approximate value of Contract 4B is \$7,700,000. Therefore, assuming a cultural resources preservation markup of 1%, the cost of this item is \$77,000.)   | EA  | 1.0      | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | 0.0000<br><b>0.00</b> | <b>77,000.00</b>               | <b>77,000.00</b>               |
| USR Cultural Resources Preservation  | LS  | 1.0      | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 0.0000<br>0.00        | 77,000.00                      | 77,000.00                      |