

# Energy Use Summary

| Construction Phase (gallons/construction period) | Gasoline      | Diesel         |
|--|---------------|----------------|
| Construction Vehicles                            | 30,569        | 362,201        |
| Worker Trips                                     | 38,413        | 95             |
| Vendor Trips                                     | 6,815         | 70             |
| Haul Trucks                                      | 110           | 111,822        |
| <b>Total</b>                                     | <b>75,906</b> | <b>474,188</b> |

| Operations Phase (gallons/year) | Gasoline | Diesel   | Natural Gas (kBTU/yr) | Electricity (kWh/yr) |
|---------------------------------|----------|----------|-----------------------|----------------------|
| Dam                             | 0        | 0        | 0                     | 0                    |
| 0                               | 0        | 0        | 0                     | 0                    |
| 0                               | 0        | 0        | 0                     | 0                    |
| 0                               | 0        | 0        | 0                     | 0                    |
| 0                               | 0        | 0        | 0                     | 0                    |
| 0                               | 0        | 0        | 0                     | 0                    |
| <b>All Land Uses</b>            | <b>0</b> | <b>0</b> | <b>0</b>              | <b>0</b>             |

# Offroad Construction Equipment Energy Use

| Phase Name                           | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|--------------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Part 1 Site Demolition (Excludes     | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Part 1 Site Demolition (Excludes     | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Part 2 Site Demolition (Excludes     | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Part 2 Site Demolition (Excludes     | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Spillway Demolition: Existing Spill  | Concrete/Industrial Saws  | Diesel    | Average     | 4          | 10            | 33         | 0.73        | 25                  |
| Spillway Demolition: Existing Spill  | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Spillway Demolition: Existing Spill  | Crushing/Proc. Equipment  | Gasoline  | Average     | 2          | 10            | 12         | 0.85        | 25                  |
| Spillway Demolition: Existing Spill  | Excavators                | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 300                 |
| Spillway Demolition: Existing Spill  | Off-Highway Trucks        | Diesel    | Average     | 1          | 10            | 376        | 0.38        | 300                 |
| Spillway Demolition: Existing Spill  | Welders                   | Diesel    | Average     | 1          | 10            | 46         | 0.45        | 50                  |
| Spillway Demolition: Existing Spill  | Air Compressors           | Diesel    | Average     | 3          | 10            | 37         | 0.48        | 50                  |
| Spillway Demolition: Crush Concr     | Crushing/Proc. Equipment  | Gasoline  | Average     | 1          | 10            | 12         | 0.85        | 25                  |
| Spillway Demolition: Crush Concr     | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Spillway Demolition: Crush Concr     | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Spillway Demolition: Crush Concr     | Off-Highway Trucks        | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Spillway Demolition: Bridge Pier a   | Concrete/Industrial Saws  | Diesel    | Average     | 4          | 10            | 33         | 0.73        | 25                  |
| Spillway Demolition: Bridge Pier a   | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Spillway Demolition: Bridge Pier a   | Crushing/Proc. Equipment  | Gasoline  | Average     | 2          | 10            | 12         | 0.85        | 25                  |
| Spillway Demolition: Bridge Pier a   | Excavators                | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 300                 |
| Spillway Demolition: Bridge Pier a   | Off-Highway Trucks        | Diesel    | Average     | 1          | 10            | 376        | 0.38        | 300                 |
| Spillway Demolition: Bridge Pier a   | Welders                   | Diesel    | Average     | 1          | 10            | 46         | 0.45        | 50                  |
| Spillway Demolition: Bridge Pier a   | Air Compressors           | Diesel    | Average     | 3          | 10            | 37         | 0.48        | 50                  |
| Temporary Flood Control Berm         | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Temporary Flood Control Berm         | Off-Highway Trucks        | Diesel    | Average     | 4          | 10            | 464        | 0.38        | 300                 |
| Temporary Flood Control Berm         | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 474        | 0.4         | 100                 |
| Temporary Flood Control Berm         | Rollers                   | Diesel    | Average     | 1          | 10            | 117        | 0.38        | 100                 |
| Mobilization                         | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Mobilization                         | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Mobilization                         | Off-Highway Trucks        | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Mobilization                         | Graders                   | Diesel    | Average     | 1          | 10            | 180        | 0.41        | 175                 |
| Mobilization                         | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Mobilization                         | Skid Steer Loaders        | Diesel    | Average     | 2          | 10            | 107        | 0.37        | 50                  |
| Mobilization                         | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Demobilization                       | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Demobilization                       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Demobilization                       | Off-Highway Trucks        | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Demobilization                       | Graders                   | Diesel    | Average     | 1          | 10            | 180        | 0.41        | 175                 |
| Demobilization                       | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Demobilization                       | Skid Steer Loaders        | Diesel    | Average     | 2          | 10            | 107        | 0.37        | 50                  |
| Demobilization                       | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Cleanup                              | Scrapers                  | Diesel    | Average     | 2          | 10            | 515        | 0.48        | 600                 |
| Cleanup                              | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 354        | 0.4         | 100                 |
| Cleanup                              | Graders                   | Diesel    | Average     | 1          | 10            | 290        | 0.41        | 175                 |
| Cleanup                              | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 313        | 0.37        | 300                 |
| Allowance for Piping Install         | Excavators                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Allowance for Piping Install         | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 241        | 0.37        | 300                 |
| Allowance for Piping Install         | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Bypass Pumping Diversion Beam        | Generator Sets            | Diesel    | Average     | 1          | 24            | 14         | 0.74        | 25                  |
| Inclined Inlet Structure: Steel Pipe | Rollers                   | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 100                 |
| Inclined Inlet Structure: Steel Pipe | Excavators                | Diesel    | Average     | 2          | 20            | 36         | 0.38        | 300                 |
| Inclined Inlet Structure: Steel Pipe | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 84         | 0.37        | 300                 |
| Inclined Inlet Structure: Steel Pipe | Welders                   | Diesel    | Average     | 1          | 10            | 46         | 0.45        | 50                  |
| Inclined Inlet Structure: Steel Pipe | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |

# Offroad Construction Equipment Energy Use

| Phase Name                           | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|--------------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Inclined Inlet Structure: Reinforce  | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Inclined Inlet Structure: Reinforce  | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Inclined Inlet Structure: Reinforce  | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Inclined Inlet Structure: Reinforce  | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Inclined Inlet Structure: Reinforce  | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Inclined Inlet Structure: Reinforce  | Cement and Mortar Mixers  | Diesel    | Average     | 3          | 10            | 10         | 0.56        | 25                  |
| Inclined Inlet Structure: Drilled Fo | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Inclined Inlet Structure: Drilled Fo | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 100                 |
| Inclined Inlet Structure: Drilled Fo | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Inclined Inlet Structure: Excavatio  | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Inclined Inlet Structure: Excavatio  | Off-Highway Trucks        | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Inclined Inlet Structure: Stainless  | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Inclined Inlet Structure: Stainless  | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Inclined Inlet Structure: Stainless  | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Inclined Inlet Structure: Pneumat    | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Inclined Inlet Structure: Pneumat    | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Inclined Inlet Structure: Pneumat    | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Cofferdam Installation and Remov     | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Cofferdam Installation and Remov     | Rough Terrain Forklifts   | Diesel    | Average     | 1          | 10            | 96         | 0.4         | 100                 |
| Cofferdam Installation and Remov     | Aerial Lifts              | Diesel    | Average     | 2          | 10            | 46         | 0.31        | 50                  |
| Cofferdam Installation and Remov     | Generator Sets            | Diesel    | Average     | 2          | 24            | 14         | 0.74        | 25                  |
| Cofferdam Installation and Remov     | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Cofferdam Installation and Remov     | Rough Terrain Forklifts   | Diesel    | Average     | 1          | 10            | 96         | 0.4         | 100                 |
| Cofferdam Installation and Remov     | Aerial Lifts              | Diesel    | Average     | 2          | 10            | 46         | 0.31        | 50                  |
| Access Road, Crest Ramp, and E       | Graders                   | Diesel    | Average     | 1          | 10            | 290        | 0.41        | 175                 |
| Access Road, Crest Ramp, and E       | Scrapers                  | Diesel    | Average     | 3          | 10            | 515        | 0.48        | 600                 |
| Access Road, Crest Ramp, and E       | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 265        | 0.4         | 100                 |
| Access Road, Crest Ramp, and E       | Off-Highway Trucks        | Diesel    | Average     | 1          | 10            | 464        | 0.38        | 300                 |
| Access Road, Crest Ramp, and E       | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 474        | 0.4         | 100                 |
| Access Road, Crest Ramp, and E       | Rollers                   | Diesel    | Average     | 1          | 10            | 405        | 0.38        | 100                 |
| Access Road, Crest Ramp, and E       | Graders                   | Diesel    | Average     | 1          | 10            | 238        | 0.41        | 175                 |
| Access Road, Crest Ramp, and E       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 241        | 0.37        | 300                 |
| Access Road, Crest Ramp, and E       | Rollers                   | Diesel    | Average     | 1          | 10            | 112        | 0.38        | 100                 |
| Access Road, Crest Ramp, and E       | Excavators                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Access Road, Crest Ramp, and E       | Off-Highway Trucks        | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Access Road, Crest Ramp, and E       | Rubber Tired Dozers       | Diesel    | Average     | 1          | 5             | 170        | 0.4         | 100                 |
| Access Road, Crest Ramp, and E       | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Access Road, Crest Ramp, and E       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 241        | 0.37        | 300                 |
| Access Road, Crest Ramp, and E       | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Access Road, Crest Ramp, and E       | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 106        | 0.37        | 50                  |
| Access Road, Crest Ramp, and E       | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Access Road, Crest Ramp, and E       | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Access Road, Crest Ramp, and E       | Generator Sets            | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Access Road, Crest Ramp, and E       | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Access Road, Crest Ramp, and E       | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Access Road, Crest Ramp, and E       | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Access Road, Crest Ramp, and E       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Access Road, Crest Ramp, and E       | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Access Road, Crest Ramp, and E       | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Dam Control Building: Pt 1 CMU (     | Forklifts                 | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Dam Control Building: Pt 1 CMU (     | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Dam Control Building: Pt 1 CMU (     | Excavators                | Diesel    | Average     | 1          | 5             | 74         | 0.38        | 75                  |
| Dam Control Building: Pt 2 CMU (     | Forklifts                 | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |

# Offroad Construction Equipment Energy Use

| Phase Name   | Equipment Type | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|--|----------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Dam Control Building: Pt 2 CMU ( Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Dam Control Building: Pt 2 CMU ( Excavators                |                | Diesel    | Average     | 1          | 5             | 74         | 0.38        | 75                  |
| Dam Control Building: Reinforced Forklifts                 |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Dam Control Building: Reinforced Generator Sets            |                | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Dam Control Building: Reinforced Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 100                 |
| Dam Control Building: Reinforced Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Dam Control Building: Reinforced Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Dam Control Building: Reinforced Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Dam Control Building: Reinforced Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Dam Control Building: Reinforced Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Dam Control Building: Metal Fram Forklifts                 |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Dam Control Building: Metal Fram Cranes                    |                | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Dam Control Building: Ancillary Ft Forklifts               |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Dam Control Building: Ancillary Ft Cranes                  |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Downstream Outlet Works Piping Off-Highway Trucks          |                | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Downstream Outlet Works Piping Rubber Tired Dozers         |                | Diesel    | Average     | 1          | 10            | 170        | 0.4         | 175                 |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 10            | 241        | 0.37        | 300                 |
| Downstream Outlet Works Piping Off-Highway Trucks          |                | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Downstream Outlet Works Piping Plate Compactors            |                | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Downstream Outlet Works Piping Cranes                      |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Downstream Outlet Works Piping Forklifts                   |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Downstream Outlet Works Piping Generator Sets              |                | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Downstream Outlet Works Piping Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Downstream Outlet Works Piping Pumps                       |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Downstream Outlet Works Piping Bore/Drill Rigs             |                | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Downstream Outlet Works Piping Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Downstream Outlet Works Piping Cement and Mortar Mixers    |                | Diesel    | Average     | 3          | 10            | 10         | 0.56        | 25                  |
| Downstream Outlet Works Piping Rollers                     |                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 100                 |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 300                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 10            | 84         | 0.37        | 300                 |
| Downstream Outlet Works Piping Welders                     |                | Diesel    | Average     | 1          | 10            | 46         | 0.45        | 50                  |
| Downstream Outlet Works Piping Rollers                     |                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 100                 |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 300                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 10            | 84         | 0.37        | 300                 |
| Downstream Outlet Works Piping Welders                     |                | Diesel    | Average     | 1          | 10            | 46         | 0.45        | 50                  |
| Downstream Outlet Works Piping Forklifts                   |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Downstream Outlet Works Piping Cranes                      |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 1          | 8             | 300        | 0.38        | 300                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 5             | 241        | 0.37        | 300                 |
| Downstream Outlet Works Piping Plate Compactors            |                | Diesel    | Average     | 1          | 5             | 8          | 0.43        | 25                  |
| Downstream Outlet Works Piping Generator Sets              |                | Diesel    | Average     | 1          | 24            | 14         | 0.74        | 25                  |
| Downstream Outlet Works Piping Excavators                  |                | Diesel    | Average     | 1          | 5             | 300        | 0.38        | 300                 |
| Downstream Outlet Works Piping Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 5             | 241        | 0.37        | 300                 |
| Downstream Outlet Works Piping Plate Compactors            |                | Diesel    | Average     | 1          | 5             | 8          | 0.43        | 25                  |
| Pedestrian Access Walkway, Stai Excavators                 |                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Pedestrian Access Walkway, Stai Off-Highway Trucks         |                | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Pedestrian Access Walkway, Stai Cranes                     |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Pedestrian Access Walkway, Stai Forklifts                  |                | Diesel    | Average     | 1          | 5             | 142        | 0.2         | 175                 |
| Pedestrian Access Walkway, Stai Generator Sets             |                | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Pedestrian Access Walkway, Stai Skid Steer Loaders         |                | Diesel    | Average     | 1          | 8             | 107        | 0.37        | 50                  |

# Offroad Construction Equipment Energy Use

| Phase Name  | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|---|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Pedestrian Access Walkway, Stai Pumps                       |                           | Diesel    | Average     | 1          | 5             | 11         | 0.74        | 25                  |
| Pedestrian Access Walkway, Stai Bore/Drill Rigs             |                           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Pedestrian Access Walkway, Stai Tractors/Loaders/Backhoes   |                           | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Pedestrian Access Walkway, Stai Skid Steer Loaders          |                           | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Pedestrian Access Walkway, Stai Cement and Mortar Mixers    |                           | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Pedestrian Access Walkway, Stai Cranes                      |                           | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Pedestrian Access Walkway, Stai Forklifts                   |                           | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Pedestrian Access Walkway, Stai Generator Sets              |                           | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Pedestrian Access Walkway, Stai Forklifts                   |                           | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Pedestrian Access Walkway, Stai Cranes                      |                           | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Pedestrian Access Walkway, Stai Graders                     |                           | Diesel    | Average     | 1          | 10            | 290        | 0.41        | 175                 |
| Pedestrian Access Walkway, Stai Scrapers                    |                           | Diesel    | Average     | 3          | 10            | 515        | 0.48        | 600                 |
| Pedestrian Access Walkway, Stai Rubber Tired Dozers         |                           | Diesel    | Average     | 1          | 10            | 265        | 0.4         | 100                 |
| Pedestrian Access Walkway, Stai Bore/Drill Rigs             |                           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Pedestrian Access Walkway, Stai Skid Steer Loaders          |                           | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Pedestrian Access Walkway, Stai Forklifts                   |                           | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Pedestrian Access Walkway, Stai Bore/Drill Rigs             |                           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Pedestrian Access Walkway, Stai Skid Steer Loaders          |                           | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 100                 |
| Pedestrian Access Walkway, Stai Forklifts                   |                           | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Pedestrian Access Walkway, Stai Excavators                  |                           | Diesel    | Average     | 1          | 10            | 201        | 0.38        | 300                 |
| Pedestrian Access Walkway, Stai Pumps                       |                           | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Pedestrian Access Walkway, Stai Bore/Drill Rigs             |                           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Pedestrian Access Walkway, Stai Tractors/Loaders/Backhoes   |                           | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Pedestrian Access Walkway, Stai Cement and Mortar Mixers    |                           | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Pedestrian Access Walkway, Stai Air Compressors             |                           | Diesel    | Average     | 1          | 10            | 37         | 0.48        | 50                  |
| Spillway Site Excavations                                   | Excavators                | Diesel    | Average     | 1          | 10            | 485        | 0.38        | 300                 |
| Spillway Site Excavations                                   | Excavators                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Spillway Site Excavations                                   | Off-Highway Trucks        | Diesel    | Average     | 4          | 10            | 464        | 0.38        | 300                 |
| Spillway Site Excavations                                   | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 474        | 0.4         | 100                 |
| Rock Slope Stabilization                                    | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Rock Slope Stabilization                                    | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Rock Slope Stabilization                                    | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Rock Slope Stabilization                                    | Excavators                | Diesel    | Average     | 1          | 10            | 201        | 0.38        | 300                 |
| Rock Slope Stabilization                                    | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Rock Slope Stabilization                                    | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Rock Slope Stabilization                                    | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Rock Slope Stabilization                                    | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Rock Slope Stabilization                                    | Air Compressors           | Diesel    | Average     | 1          | 10            | 37         | 0.48        | 50                  |
| RCC Weir Support Block                                      | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| RCC Weir Support Block                                      | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 25                  |
| RCC Weir Support Block                                      | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| RCC Weir Support Block                                      | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| RCC Weir Support Block                                      | Generator Sets            | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| RCC Weir Support Block                                      | Tractors/Loaders/Backhoes | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 300                 |
| RCC Weir Support Block                                      | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 25                  |
| RCC Weir Support Block                                      | Rollers                   | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 100                 |
| RCC Weir Support Block                                      | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 100                 |
| RCC Weir Support Block                                      | Off-Highway Trucks        | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Side Channel Control Structure (Z Bore/Drill Rigs           |                           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Side Channel Control Structure (Z Pumps                     |                           | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 25                  |
| Side Channel Control Structure (Z Plate Compactors          |                           | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Side Channel Control Structure (Z Generator Sets            |                           | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| Side Channel Control Structure (Z Tractors/Loaders/Backhoes |                           | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 100                 |

# Offroad Construction Equipment Energy Use

| Phase Name  | Equipment Type | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|---|----------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Side Channel Control Structure (Z Pumps                     |                | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 25                  |
| Side Channel Control Structure (Z Rollers                   |                | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 50                  |
| Side Channel Control Structure (Z Rubber Tired Dozers       |                | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 300                 |
| Side Channel Control Structure (Z Cranes                    |                | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Side Channel Control Structure (Z Off-Highway Trucks        |                | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Side Channel Control Structure (Z Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Side Channel Control Structure (Z Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Side Channel Control Structure (Z Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Side Channel Control Structure (Z Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Side Channel Control Structure (Z Generator Sets            |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Side Channel Control Structure (Z Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Side Channel Control Structure (Z Cement and Mortar Mixers  |                | Diesel    | Average     | 2          | 5             | 10         | 0.56        | 25                  |
| Side Channel Control Structure (Z Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Side Channel Control Structure (Z Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Side Channel Control Structure (Z Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Side Channel Control Structure (Z Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Side Channel Control Structure (Z Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Side Channel Control Structure (Z Generator Sets            |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Side Channel Control Structure (Z Bore/Drill Rigs           |                | Diesel    | Average     | 2          | 10            | 173        | 0.5         | 175                 |
| Side Channel Control Structure (Z Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Left (0+ Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Left (0+ Cement and Mortar Mixers  |                | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Excavators                |                | Diesel    | Average     | 2          | 10            | 425        | 0.38        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Off-Highway Trucks        |                | Diesel    | Average     | 3          | 10            | 464        | 0.38        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Rubber Tired Dozers       |                | Diesel    | Average     | 1          | 10            | 354        | 0.4         | 100                 |
| Wall Type 1 Tieback Wall Left (0+ Plate Compactors          |                | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 100                 |
| Wall Type 1 Tieback Wall Left (0+ Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Left (0+ Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Left (0+ Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Air Compressors           |                | Diesel    | Average     | 1          | 10            | 37         | 0.48        | 50                  |
| Wall Type 1 Tieback Wall Left (0+ Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 1 Tieback Wall Left (0+ Generator Sets            |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Left (0+ Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Left (0+ Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Left (0+ Bore/Drill Rigs           |                | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Wall Type 1 Tieback Wall Left (0+ Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Left (0+ Forklifts                 |                | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Wall Type 1 Tieback Wall Left (0+ Excavators                |                | Diesel    | Average     | 1          | 10            | 201        | 0.38        | 300                 |
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Right (( Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Right (( Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |

# Offroad Construction Equipment Energy Use

| Phase Name  | Equipment Type | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|---|----------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders          |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Cement and Mortar Mixers    |                | Diesel    | Average     | 4          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Right (( Excavators                  |                | Diesel    | Average     | 2          | 10            | 425        | 0.38        | 300                 |
| Wall Type 1 Tieback Wall Right (( Off-Highway Trucks          |                | Diesel    | Average     | 3          | 10            | 464        | 0.38        | 300                 |
| Wall Type 1 Tieback Wall Right (( Rubber Tired Dozers         |                | Diesel    | Average     | 1          | 10            | 354        | 0.4         | 100                 |
| Wall Type 1 Tieback Wall Right (( Plate Compactors            |                | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Wall Type 1 Tieback Wall Right (( Pumps                       |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Bore/Drill Rigs             |                | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Right (( Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Cement and Mortar Mixers    |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Right (( Air Compressors             |                | Diesel    | Average     | 1          | 10            | 37         | 0.48        | 50                  |
| Wall Type 1 Tieback Wall Right (( Surfacing Equipment         |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 1 Tieback Wall Right (( Pumps                       |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Right (( Cranes                      |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 1 Tieback Wall Right (( Rough Terrain Forklifts     |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 1 Tieback Wall Right (( Generator Sets              |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 1 Tieback Wall Right (( Bore/Drill Rigs             |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 1 Tieback Wall Right (( Tractors/Loaders/Backhoes   |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders          |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Cement and Mortar Mixers    |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 1 Tieback Wall Right (( Bore/Drill Rigs             |                | Diesel    | Average     | 2          | 10            | 83         | 0.5         | 100                 |
| Wall Type 1 Tieback Wall Right (( Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 1 Tieback Wall Right (( Forklifts                   |                | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Wall Type 1 Tieback Wall Right (( Excavators                  |                | Diesel    | Average     | 1          | 10            | 201        | 0.38        | 300                 |
| Wall Transitions: Left Secant Pile Excavators                 |                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Wall Transitions: Left Secant Pile Cranes                     |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Wall Transitions: Left Secant Pile Excavators                 |                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Wall Transitions: Left Secant Pile Forklifts                  |                | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Wall Transitions: Left Secant Pile Skid Steer Loaders         |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Transitions: Left Secant Pile Bore/Drill Rigs            |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Transitions: Left Secant Pile Tractors/Loaders/Backhoes  |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Transitions: Left Secant Pile Skid Steer Loaders         |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Transitions: Left Secant Pile Cement and Mortar Mixers   |                | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Wall Transitions: Right Secant Pile Excavators                |                | Diesel    | Average     | 2          | 10            | 425        | 0.38        | 300                 |
| Wall Transitions: Right Secant Pile Cranes                    |                | Diesel    | Average     | 1          | 5             | 367        | 0.29        | 300                 |
| Wall Transitions: Right Secant Pile Forklifts                 |                | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Wall Transitions: Right Secant Pile Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Transitions: Right Secant Pile Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Transitions: Right Secant Pile Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Transitions: Right Secant Pile Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Transitions: Right Secant Pile Cement and Mortar Mixers  |                | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Right Closure Wall: Work Platform Excavators                  |                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Right Closure Wall: Work Platform Off-Highway Trucks          |                | Diesel    | Average     | 2          | 10            | 464        | 0.38        | 300                 |
| Right Closure Wall: Work Platform Rubber Tired Dozers         |                | Diesel    | Average     | 1          | 10            | 354        | 0.4         | 100                 |
| Right Closure Wall: Work Platform Plate Compactors            |                | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Right Closure Wall: Secant Pile V Excavators                  |                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Right Closure Wall: Secant Pile V Cranes                      |                | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Right Closure Wall: Secant Pile V Excavators                  |                | Diesel    | Average     | 1          | 10            | 425        | 0.38        | 300                 |
| Right Closure Wall: Secant Pile V Forklifts                   |                | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Right Closure Wall: Secant Pile V Skid Steer Loaders          |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Right Closure Wall: Secant Pile V Bore/Drill Rigs             |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |

# Offroad Construction Equipment Energy Use

| Phase Name   | Equipment Type | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|--|----------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Right Closure Wall: Secant Pile V Tractors/Loaders/Backhoes  |                | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Right Closure Wall: Secant Pile V Skid Steer Loaders         |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Right Closure Wall: Secant Pile V Cement and Mortar Mixers   |                | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Right Closure Wall: Backfill Conci Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Right Closure Wall: Backfill Conci Pumps                     |                | Diesel    | Average     | 1          | 5             | 11         | 0.74        | 50                  |
| Right Closure Wall: Backfill Conci Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Right Closure Wall: Backfill Conci Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Right Closure Wall: Backfill Conci Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Right Closure Wall: Backfill Conci Cement and Mortar Mixers  |                | Diesel    | Average     | 3          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: Leveling Conci Skid Steer Loaders        |                | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: Leveling Conci Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Left: Leveling Conci Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Left: Leveling Conci Cement and Mortar Mixers  |                | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: Leveling Conci Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Left: 1 Inch Concret Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Left: 1 Inch Concret Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Left: 1 Inch Concret Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Left: 1 Inch Concret Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Left: 1 Inch Concret Generator Sets            |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Left: 1 Inch Concret Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Left: 1 Inch Concret Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Left: 1 Inch Concret Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: 1 Inch Concret Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: 2.5 Inch Concr Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Left: 2.5 Inch Concr Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Left: 2.5 Inch Concr Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Left: 2.5 Inch Concr Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Left: 2.5 Inch Concr Generator Sets            |                | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Left: 2.5 Inch Concr Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Left: 2.5 Inch Concr Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Left: 2.5 Inch Concr Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: 2.5 Inch Concr Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: Concrete Footi Surfacing Equipment       |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Left: Concrete Footi Pumps                     |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Left: Concrete Footi Cranes                    |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Left: Concrete Footi Rough Terrain Forklifts   |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Left: Concrete Footi Generator Sets            |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Left: Concrete Footi Bore/Drill Rigs           |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Left: Concrete Footi Tractors/Loaders/Backhoes |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Left: Concrete Footi Skid Steer Loaders        |                | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: Concrete Footi Cement and Mortar Mixers  |                | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: Backfill Graders                         |                | Diesel    | Average     | 1          | 10            | 215        | 0.41        | 175                 |
| Wall Type 2 - Left: Backfill Excavators                      |                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 300                 |
| Wall Type 2 - Left: Backfill Rollers                         |                | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 100                 |
| Wall Type 2 - Left: Backfill Off-Highway Trucks              |                | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Wall Type 2 - Left: Backfill Off-Highway Trucks              |                | Diesel    | Average     | 1          | 10            | 376        | 0.38        | 300                 |
| Wall Type 2 - Left: Reinforced Co Surfacing Equipment        |                | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Left: Reinforced Co Pumps                      |                | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Left: Reinforced Co Cranes                     |                | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Left: Reinforced Co Rough Terrain Forklifts    |                | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Left: Reinforced Co Generator Sets             |                | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Left: Reinforced Co Bore/Drill Rigs            |                | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Left: Reinforced Co Tractors/Loaders/Backhoes  |                | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |



# Offroad Construction Equipment Energy Use

| Phase Name                         | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|------------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Wall Type 2 - Left: Reinforced Co  | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: Reinforced Co  | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Left: Footing Rock / | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Wall Type 2 - Left: Footing Rock / | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Wall Type 2 - Left: Footing Rock / | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Wall Type 2 - Left: Footing Rock / | Graders                   | Diesel    | Average     | 1          | 10            | 215        | 0.41        | 175                 |
| Wall Type 2 - Left: Footing Rock / | Excavators                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 50                  |
| Wall Type 2 - Left: Footing Rock / | Rollers                   | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 50                  |
| Wall Type 2 - Left: Footing Rock / | Off-Highway Trucks        | Diesel    | Average     | 6          | 10            | 376        | 0.38        | 300                 |
| Wall Type 2 - Wall Right: Leveling | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Wall Right: Leveling | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Wall Right: Leveling | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Wall Right: Leveling | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Wall Right: Leveling | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Wall Right: Leveling | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Wall Right: Leveling | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Wall Right: Leveling | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Wall Right: Leveling | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Wall Right: 1 Inch V | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Wall Right: 1 Inch V | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Wall Right: 1 Inch V | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Wall Right: 1 Inch V | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Wall Right: 1 Inch V | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Wall Right: 1 Inch V | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Wall Right: 1 Inch V | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Wall Right: 1 Inch V | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Wall Right: 1 Inch V | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Wall Right: 2.5 Inch | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Wall Right: 2.5 Inch | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Wall Right: 2.5 Inch | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Wall Right: 2.5 Inch | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Wall Right: 2.5 Inch | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Wall Right: 2.5 Inch | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Wall Right: 2.5 Inch | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Wall Right: 2.5 Inch | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Wall Type 2 - Wall Right: 2.5 Inch | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Wall Right: Concret  | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 2 - Wall Right: Concret  | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 2 - Wall Right: Concret  | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 2 - Wall Right: Concret  | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 2 - Wall Right: Concret  | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 2 - Wall Right: Concret  | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 2 - Wall Right: Concret  | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 2 - Wall Right: Concret  | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Wall Type 2 - Wall Right: Concret  | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Wall Type 2 - Wall Right: Backfill | Graders                   | Diesel    | Average     | 1          | 10            | 215        | 0.41        | 175                 |
| Wall Type 2 - Wall Right: Backfill | Excavators                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 50                  |
| Wall Type 2 - Wall Right: Backfill | Rollers                   | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 50                  |
| Wall Type 2 - Wall Right: Backfill | Off-Highway Trucks        | Diesel    | Average     | 6          | 10            | 376        | 0.38        | 300                 |
| Wall Type 3 - Left: Roller Compac  | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Wall Type 3 - Left: Roller Compac  | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Left: Roller Compac  | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Wall Type 3 - Left: Roller Compac  | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |

# Offroad Construction Equipment Energy Use

| Phase Name                        | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|-----------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Wall Type 3 - Left: Roller Compac | Generator Sets            | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| Wall Type 3 - Left: Roller Compac | Tractors/Loaders/Backhoes | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 300                 |
| Wall Type 3 - Left: Roller Compac | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Left: Roller Compac | Rollers                   | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 50                  |
| Wall Type 3 - Left: Roller Compac | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 300                 |
| Wall Type 3 - Left: Roller Compac | Off-Highway Trucks        | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Wall Type 3 - Left: CVC Facing    | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 3 - Left: CVC Facing    | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Left: CVC Facing    | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 3 - Left: CVC Facing    | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 3 - Left: CVC Facing    | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 3 - Left: CVC Facing    | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 3 - Left: CVC Facing    | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 3 - Left: CVC Facing    | Skid Steer Loaders        | Diesel    | Average     | 5          | 5             | 71         | 0.37        | 50                  |
| Wall Type 3 - Left: CVC Facing    | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Wall Type 3 - Right: Roller Comp: | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Wall Type 3 - Right: Roller Comp: | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Right: Roller Comp: | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Wall Type 3 - Right: Roller Comp: | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Wall Type 3 - Right: Roller Comp: | Generator Sets            | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| Wall Type 3 - Right: Roller Comp: | Tractors/Loaders/Backhoes | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 100                 |
| Wall Type 3 - Right: Roller Comp: | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Right: Roller Comp: | Rollers                   | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 50                  |
| Wall Type 3 - Right: Roller Comp: | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 300                 |
| Wall Type 3 - Right: Roller Comp: | Off-Highway Trucks        | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Wall Type 3 - Right: CVC Facing   | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Wall Type 3 - Right: CVC Facing   | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Wall Type 3 - Right: CVC Facing   | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Wall Type 3 - Right: CVC Facing   | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Wall Type 3 - Right: CVC Facing   | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Wall Type 3 - Right: CVC Facing   | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Wall Type 3 - Right: CVC Facing   | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Wall Type 3 - Right: CVC Facing   | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Wall Type 3 - Right: CVC Facing   | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Wall Type 3 - Right: Backfill     | Graders                   | Diesel    | Average     | 1          | 10            | 215        | 0.41        | 175                 |
| Wall Type 3 - Right: Backfill     | Excavators                | Diesel    | Average     | 1          | 10            | 36         | 0.38        | 50                  |
| Wall Type 3 - Right: Backfill     | Rollers                   | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 50                  |
| Wall Type 3 - Right: Backfill     | Off-Highway Trucks        | Diesel    | Average     | 6          | 10            | 376        | 0.38        | 300                 |
| Stilling Basin: RCC               | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Stilling Basin: RCC               | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: RCC               | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Stilling Basin: RCC               | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Stilling Basin: RCC               | Generator Sets            | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| Stilling Basin: RCC               | Tractors/Loaders/Backhoes | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 300                 |
| Stilling Basin: RCC               | Pumps                     | Diesel    | Average     | 3          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: RCC               | Rollers                   | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 50                  |
| Stilling Basin: RCC               | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 300                 |
| Stilling Basin: RCC               | Off-Highway Trucks        | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Stilling Basin: Upstream/Downstre | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Stilling Basin: Upstream/Downstre | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: Upstream/Downstre | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Stilling Basin: Upstream/Downstre | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Stilling Basin: Upstream/Downstre | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |

## Offroad Construction Equipment Energy Use

| Phase Name                        | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|-----------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Stilling Basin: Upstream/Downstre | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Stilling Basin: Upstream/Downstre | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Stilling Basin: Upstream/Downstre | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 100                 |
| Stilling Basin: Upstream/Downstre | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Stilling Basin: Basin Steps       | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Stilling Basin: Basin Steps       | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: Basin Steps       | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Stilling Basin: Basin Steps       | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Stilling Basin: Basin Steps       | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Stilling Basin: Basin Steps       | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Stilling Basin: Basin Steps       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Stilling Basin: Basin Steps       | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Stilling Basin: Basin Steps       | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 10            | 10         | 0.56        | 25                  |
| Stilling Basin: Chute Blocks      | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Stilling Basin: Chute Blocks      | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: Chute Blocks      | Cranes                    | Diesel    | Average     | 2          | 8             | 367        | 0.29        | 300                 |
| Stilling Basin: Chute Blocks      | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Stilling Basin: Chute Blocks      | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Stilling Basin: Chute Blocks      | Bore/Drill Rigs           | Diesel    | Average     | 1          | 2             | 173        | 0.5         | 175                 |
| Stilling Basin: Chute Blocks      | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 2             | 286        | 0.37        | 300                 |
| Stilling Basin: Chute Blocks      | Skid Steer Loaders        | Diesel    | Average     | 1          | 2             | 107        | 0.37        | 50                  |
| Stilling Basin: Chute Blocks      | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 2             | 10         | 0.56        | 25                  |
| Stilling Basin: Dentated Sill     | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Stilling Basin: Dentated Sill     | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Stilling Basin: Dentated Sill     | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Stilling Basin: Dentated Sill     | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Stilling Basin: Dentated Sill     | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Stilling Basin: Dentated Sill     | Bore/Drill Rigs           | Diesel    | Average     | 1          | 2             | 173        | 0.5         | 175                 |

# Offroad Construction Equipment Energy Use

| Phase Name                          | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|-------------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Stilling Basin: Dentated Sill       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 2             | 286        | 0.37        | 300                 |
| Stilling Basin: Dentated Sill       | Skid Steer Loaders        | Diesel    | Average     | 1          | 2             | 107        | 0.37        | 50                  |
| Stilling Basin: Dentated Sill       | Cement and Mortar Mixers  | Diesel    | Average     | 2          | 2             | 10         | 0.56        | 25                  |
| Spillway Slab Construction: RCC     | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 173        | 0.5         | 175                 |
| Spillway Slab Construction: RCC     | Pumps                     | Diesel    | Average     | 6          | 10            | 11         | 0.74        | 50                  |
| Spillway Slab Construction: RCC     | Plate Compactors          | Diesel    | Average     | 1          | 10            | 8          | 0.43        | 25                  |
| Spillway Slab Construction: RCC     | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Spillway Slab Construction: RCC     | Generator Sets            | Diesel    | Average     | 4          | 10            | 14         | 0.74        | 25                  |
| Spillway Slab Construction: RCC     | Tractors/Loaders/Backhoes | Diesel    | Average     | 3          | 10            | 84         | 0.37        | 100                 |
| Spillway Slab Construction: RCC     | Rollers                   | Diesel    | Average     | 3          | 10            | 36         | 0.38        | 50                  |
| Spillway Slab Construction: RCC     | Rubber Tired Dozers       | Diesel    | Average     | 3          | 10            | 367        | 0.4         | 300                 |
| Spillway Slab Construction: RCC     | Off-Highway Trucks        | Diesel    | Average     | 5          | 10            | 376        | 0.38        | 300                 |
| Spillway Slab Construction: Spillw  | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Spillway Slab Construction: Spillw  | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Spillway Slab Construction: Spillw  | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Spillway Slab Construction: Spillw  | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Spillway Slab Construction: Spillw  | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Spillway Slab Construction: Spillw  | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Spillway Slab Construction: Spillw  | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Spillway Slab Construction: Spillw  | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Spillway Slab Construction: Spillw  | Cement and Mortar Mixers  | Diesel    | Average     | 3          | 10            | 10         | 0.56        | 25                  |
| Spillway Slab Construction: Stillir | Surfacing Equipment       | Diesel    | Average     | 2          | 10            | 399        | 0.3         | 300                 |
| Spillway Slab Construction: Stillir | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Spillway Slab Construction: Stillir | Cranes                    | Diesel    | Average     | 2          | 10            | 367        | 0.29        | 300                 |
| Spillway Slab Construction: Stillir | Rough Terrain Forklifts   | Diesel    | Average     | 2          | 10            | 96         | 0.4         | 100                 |
| Spillway Slab Construction: Stillir | Generator Sets            | Diesel    | Average     | 2          | 10            | 14         | 0.74        | 25                  |
| Spillway Slab Construction: Stillir | Bore/Drill Rigs           | Diesel    | Average     | 1          | 5             | 173        | 0.5         | 175                 |
| Spillway Slab Construction: Stillir | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 5             | 286        | 0.37        | 300                 |
| Spillway Slab Construction: Stillir | Skid Steer Loaders        | Diesel    | Average     | 1          | 5             | 107        | 0.37        | 50                  |
| Spillway Slab Construction: Stillir | Cement and Mortar Mixers  | Diesel    | Average     | 3          | 10            | 10         | 0.56        | 25                  |
| Spillway Slab Construction: Zone    | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Spillway Slab Construction: Zone    | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Spillway Slab Construction: Zone    | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Spillway Slab Construction: Zone    | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Spillway Slab Construction: Zone    | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Spillway Slab Construction: Zone    | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Spillway Drains and Cleanouts: W    | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Spillway Drains and Cleanouts: W    | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Spillway Drains and Cleanouts: Lr   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Spillway Drains and Cleanouts: Lr   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Spillway Drains and Cleanouts: Tl   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Spillway Drains and Cleanouts: Tl   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Spillway Drains and Cleanouts: Dl   | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Spillway Drains and Cleanouts: Dl   | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 170        | 0.4         | 100                 |
| Spillway Drains and Cleanouts: Dl   | Off-Highway Trucks        | Diesel    | Average     | 1          | 10            | 376        | 0.38        | 300                 |
| Spillway Drains and Cleanouts: Fl   | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Spillway Drains and Cleanouts: Fl   | Rubber Tired Dozers       | Diesel    | Average     | 1          | 10            | 170        | 0.4         | 100                 |
| Spillway Drains and Cleanouts: Fl   | Off-Highway Trucks        | Diesel    | Average     | 1          | 10            | 376        | 0.38        | 300                 |
| Surface Ditch from Landfill: Excav  | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Surface Ditch from Landfill: Excav  | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Surface Ditch from Landfill: Drop   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Surface Ditch from Landfill: Drop   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Surface Ditch from Landfill: Ditch  | Excavators                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |

# Offroad Construction Equipment Energy Use

| Phase Name                           | Equipment Type            | Fuel Type | Engine Tier | Number per | Hours Per Day | Horsepower | Load Factor | Horsepower Category |
|--------------------------------------|---------------------------|-----------|-------------|------------|---------------|------------|-------------|---------------------|
| Surface Ditch from Landfill: Ditch   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Surface Ditch from Landfill: Ditch   | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Surface Ditch from Landfill: Ditch   | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 241        | 0.37        | 300                 |
| Surface Ditch from Landfill: Ditch   | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Downstream Apron: Concrete Apr       | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Downstream Apron: Concrete Apr       | Generator Sets            | Diesel    | Average     | 1          | 10            | 14         | 0.74        | 25                  |
| Downstream Apron: Concrete Apr       | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Downstream Apron: Concrete Apr       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Downstream Apron: Concrete Apr       | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Downstream Apron: Concrete Apr       | Cement and Mortar Mixers  | Diesel    | Average     | 1          | 10            | 10         | 0.56        | 25                  |
| Downstream Apron: Concrete Apr       | Cranes                    | Diesel    | Average     | 1          | 10            | 367        | 0.29        | 300                 |
| Downstream Apron: Concrete Apr       | Pumps                     | Diesel    | Average     | 1          | 10            | 11         | 0.74        | 50                  |
| Downstream Apron: Concrete Apr       | Bore/Drill Rigs           | Diesel    | Average     | 1          | 10            | 385        | 0.5         | 300                 |
| Downstream Apron: Zone C             | Bore/Drill Rigs           | Diesel    | Average     | 2          | 10            | 385        | 0.5         | 300                 |
| Downstream Apron: Zone C             | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Downstream Apron: Zone C             | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Downstream Apron: Riprap Apron       | Excavators                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Downstream Apron: Riprap Apron       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Downstream Apron: Riprap Apron       | Dumpers/Tenders           | Diesel    | Average     | 2          | 10            | 16         | 0.38        | 25                  |
| Downstream Apron: Riprap Beddi       | Excavators                | Diesel    | Average     | 1          | 10            | 300        | 0.38        | 300                 |
| Downstream Apron: Riprap Beddi       | Tractors/Loaders/Backhoes | Diesel    | Average     | 1          | 10            | 286        | 0.37        | 300                 |
| Downstream Apron: Riprap Beddi       | Dumpers/Tenders           | Diesel    | Average     | 2          | 10            | 16         | 0.38        | 25                  |
| Furnish and Install Electrical / Cor | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Furnish and Install Electrical / Cor | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Furnish and Install Electrical / Cor | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Furnish and Install Aeration Syste   | Forklifts                 | Diesel    | Average     | 1          | 10            | 142        | 0.2         | 175                 |
| Furnish and Install Aeration Syste   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Furnish and Install Aeration Syste   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Part 1 Furnish and Install Erosion   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Part 1 Furnish and Install Erosion   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Part 2 Furnish and Install Erosion   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Part 2 Furnish and Install Erosion   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Part 3 Furnish and Install Erosion   | Skid Steer Loaders        | Diesel    | Average     | 1          | 10            | 107        | 0.37        | 50                  |
| Part 3 Furnish and Install Erosion   | Excavators                | Diesel    | Average     | 1          | 10            | 74         | 0.38        | 300                 |
| Embankment Mitigation                | Rubber Tired Dozers       | Diesel    | Average     | 4          | 10            | 367        | 0.4         | 100                 |
| Embankment Mitigation                | Excavators                | Diesel    | Average     | 2          | 10            | 36         | 0.38        | 300                 |
| Embankment Mitigation                | Graders                   | Diesel    | Average     | 2          | 10            | 148        | 0.41        | 175                 |
| Embankment Mitigation                | Tractors/Loaders/Backhoes | Diesel    | Average     | 2          | 10            | 84         | 0.37        | 300                 |
| Embankment Mitigation                | Dumpers/Tenders           | Diesel    | Average     | 4          | 10            | 16         | 0.38        | 25                  |
| Embankment Mitigation                | Plate Compactors          | Diesel    | Average     | 3          | 10            | 8          | 0.43        | 25                  |

# Offroad Construc

| Phase Name                           | Num Days | Year | Fuel Consumption Rate<br>(gal/hour) | Fuel Type | Total Fuel Consumption<br>(gal/construction period) |
|--------------------------------------|----------|------|-------------------------------------|-----------|---|
| Part 1 Site Demolition (Excludes §   | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Part 1 Site Demolition (Excludes §   | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Part 2 Site Demolition (Excludes §   | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Part 2 Site Demolition (Excludes §   | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 0.8                                 | Gasoline  | 512   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 3.3                                 | Diesel    | 209   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 1.0                                 | Gasoline  | 369   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 4.3                                 | Diesel    | 723   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 4.1                                 | Diesel    | 346   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 2.4                                 | Gasoline  | 239   |
| Spillway Demolition: Existing Spill  | 22       | 2024 | 0.9                                 | Diesel    | 277   |
| Spillway Demolition: Crush Concr     | 22       | 2024 | 1.0                                 | Gasoline  | 185   |
| Spillway Demolition: Crush Concr     | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Spillway Demolition: Crush Concr     | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Spillway Demolition: Crush Concr     | 22       | 2024 | 4.1                                 | Diesel    | 693   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 0.8                                 | Gasoline  | 512   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 3.3                                 | Diesel    | 209   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 1.0                                 | Gasoline  | 369   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 4.3                                 | Diesel    | 723   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 4.1                                 | Diesel    | 346   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 2.4                                 | Gasoline  | 239   |
| Spillway Demolition: Bridge Pier a   | 22       | 2024 | 0.9                                 | Diesel    | 277   |
| Temporary Flood Control Berm         | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Temporary Flood Control Berm         | 22       | 2024 | 4.1                                 | Diesel    | 1,385   |
| Temporary Flood Control Berm         | 22       | 2024 | 1.7                                 | Diesel    | 152   |
| Temporary Flood Control Berm         | 22       | 2024 | 1.7                                 | Diesel    | 142   |
| Mobilization                         | 22       | 2024 | 2.6                                 | Diesel    | 116   |
| Mobilization                         | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Mobilization                         | 22       | 2024 | 4.1                                 | Diesel    | 693   |
| Mobilization                         | 22       | 2024 | 3.2                                 | Diesel    | 285   |
| Mobilization                         | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Mobilization                         | 22       | 2024 | 0.9                                 | Diesel    | 151   |
| Mobilization                         | 22       | 2024 | 3.3                                 | Diesel    | 209   |
| Demobilization                       | 22       | 2024 | 2.6                                 | Diesel    | 116   |
| Demobilization                       | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Demobilization                       | 22       | 2024 | 4.1                                 | Diesel    | 693   |
| Demobilization                       | 22       | 2024 | 3.2                                 | Diesel    | 285   |
| Demobilization                       | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Demobilization                       | 22       | 2024 | 0.9                                 | Diesel    | 151   |
| Demobilization                       | 22       | 2024 | 3.3                                 | Diesel    | 209   |
| Cleanup                              | 22       | 2024 | 10.6                                | Diesel    | 2,230   |
| Cleanup                              | 22       | 2024 | 1.7                                 | Diesel    | 456   |
| Cleanup                              | 22       | 2024 | 3.2                                 | Diesel    | 285   |
| Cleanup                              | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Allowance for Piping Install         | 22       | 2024 | 4.3                                 | Diesel    | 361   |
| Allowance for Piping Install         | 22       | 2024 | 3.9                                 | Diesel    | 321   |
| Allowance for Piping Install         | 22       | 2024 | 0.9                                 | Diesel    | 75  |
| Bypass Pumping Diversion Beam        | 78       | 2024 | 0.7                                 | Gasoline  | 975   |
| Inclined Inlet Structure: Steel Pipe | 67       | 2024 | 1.7                                 | Diesel    | 431   |
| Inclined Inlet Structure: Steel Pipe | 67       | 2024 | 4.3                                 | Diesel    | 4,403   |
| Inclined Inlet Structure: Steel Pipe | 67       | 2024 | 3.9                                 | Diesel    | 979   |
| Inclined Inlet Structure: Steel Pipe | 67       | 2024 | 2.4                                 | Gasoline  | 727   |
| Inclined Inlet Structure: Steel Pipe | 67       | 2024 | 3.3                                 | Diesel    | 635   |

**Onroad Construction Energy Use**

Year: 2024

| Vehicle Types | MPG by Fuel Type |        |             |             |                |            | Population by Fuel Type |         |             |             |                |       |
|---------------|------------------|--------|-------------|-------------|----------------|------------|-------------------------|---------|-------------|-------------|----------------|-------|
|               | Gasoline         | Diesel | Electricity | Natural Gas | Plug-in Hybrid | Total      | Gasoline                | Diesel  | Electricity | Natural Gas | Plug-in Hybrid | Total |
| LDA           | 29.3             | 41.2   | 0.4         | 0.000       | 28.2           | 5,451,205  | 15,009                  | 284,963 | 0           | 152,679     | 5,903,856      |       |
| LDT1          | 24.4             | 23.4   | 0.4         | 0.000       | 28.0           | 505,255    | 186                     | 1,243   | 0           | 739         | 507,423        |       |
| LDT2          | 23.9             | 31.9   | 0.4         | 0.000       | 27.9           | 2,551,917  | 8,409                   | 16,572  | 0           | 21,729      | 2,598,626      |       |
| LHDT1         | 13.6             | 20.5   | 0.6         | 0.000       | 0.0            | 205,772    | 107,344                 | 793     | 0           | 0           | 313,909        |       |
| LHDT2         | 11.9             | 17.3   | 0.6         | 0.000       | 0.0            | 32,210     | 47,494                  | 205     | 0           | 0           | 79,909         |       |
| MCY           | 41.5             | 0.0    | 0.0         | 0.000       | 0.0            | 248,270    | 0                       | 0       | 0           | 0           | 248,270        |       |
| MDV           | 19.5             | 23.7   | 0.4         | 0.000       | 27.6           | 1,622,854  | 20,420                  | 18,088  | 0           | 13,081      | 1,674,443      |       |
| MH            | 4.9              | 10.1   | 0.0         | 0.000       | 0.0            | 30,227     | 12,282                  | 0       | 0           | 0           | 42,510         |       |
| MHDT          | 5.2              | 8.9    | 1.0         | 8.3         | 0.0            | 25,496     | 117,140                 | 365     | 1,526       | 0           | 144,526        |       |
| HHDT          | 4.0              | 6.1    | 1.8         | 6.0         | 0.0            | 66         | 101,735                 | 317     | 10,386      | 0           | 112,504        |       |
| OBUS          | 5.1              | 7.0    | 1.1         | 8.8         | 0.0            | 5,427      | 3,049                   | 12      | 487         | 0           | 8,975          |       |
| SBUS          | 8.9              | 7.3    | 1.2         | 4.2         | 0.0            | 2,859      | 3,436                   | 23      | 3,247       | 0           | 9,564          |       |
| UBUS          | 7.0              | 6.6    | 2.1         | 3.2         | 0.0            | 894        | 14                      | 132     | 5,035       | 0           | 6,076          |       |
|               |                  |        |             |             |                | 10,682,454 | 436,518                 | 322,712 | 20,681      | 188,228     | 11,650,593     |       |

| Daily Trips<br>Phase Name   | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Gasoline Consumption |        |      | Diesel Consumption |        |      |
|---|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|--------|------|--------------------|--------|------|
|   |                    |                    |                     |                    |                    |                     | Worker               | Vendor | Haul | Worker             | Vendor | Haul |
| Part 1 Site Demolition (Excludes Spillway)  | 5                  | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Part 2 Site Demolition (Excludes Spillway)  | 5                  | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Spillway Demolition: Existing Spillway Demo   | 35                 | 0                  | 24                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Spillway Demolition: Crush Concrete Demo  | 13                 | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Spillway Demolition: Bridge Pier and Facing Demo  | 35                 | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Temporary Flood Control Berm  | 18                 | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Mobilization  | 23                 | 0                  | 14                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Demobilization  | 23                 | 0                  | 12                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Cleanup   | 18                 | 0                  | 4                   | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Allowance for Piping Install  | 8                  | 0                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Bypass Pumping Diversion Beam   | 3                  | 0                  | 128                 | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Steel Pipe and Appurtenances  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Reinforced Concrete   | 7                  | 3                  | 83                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Drilled Foundation Anchors  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Excavation  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Stainless Steel Platform  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Inclined Inlet Structure: Pneumatic Actuation Control System                                  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Cofferdam Installation and Removal: Install Cofferdam H/King Piles                            | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Cofferdam Installation and Removal: Dewatering  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Cofferdam Installation and Removal: Remove Cofferdam H/King Piles                             | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: Roadway Excavation                      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: Imported Fill & CMB Surface Course      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: CMB Surface Course                      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: MSE Retaining Wall                      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: Metal Beam Guard Rail                   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Access Road, Crest Ramp, and Existing Crest Widening: 1.5' Conc Parapet Wall                  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Dam Control Building: Pt 1 CMU Control Building   | 7                  | 3                  | 8                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Dam Control Building: Pt 2 CMU Control Building   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Dam Control Building: Reinforced Concrete Foundation  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Dam Control Building: Metal Frame Roofing   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Dam Control Building: Ancillary Features  | 7                  | 3                  | 9                   | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Structure Excavation Shoring & Excavation           | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Structure Bkfl                                      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Reinforced Conc Structures                          | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Piping and Valves                                   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Steel Casing  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Ladders and Platforms                               | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Dam keeper Residence Water Supply System and Piping | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: Dewatering  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Downstream Outlet Works Piping and Vault: ARVs and Valves                                     | 7                  | 3                  | 88                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Structure Excavation                | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Concrete Walkway                    | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Bridge                              | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Roadway Excavation                  | 7                  | 3                  | 17                  | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Slope Anchors                       | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Pedestrian Access Walkway, Stairs, Catwalk, Vehicle Ramp: Tie Back Wall                       | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Spillway Site Excavations   | 7                  | 3                  | 18                  | 18.5               | 10.2               | 12.1                |                      |        |      |                    |        |      |
| Rock Slope Stabilization  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| RCC Weir Support Block  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Side Channel Control Structure (Zone A): Ogee Weir RCC 7 days per week                        | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Side Channel Control Structure (Zone A): Ogee Weir concrete Overlay - CVC                     | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Side Channel Control Structure (Zone A): Side Channel Reinforced Concrete                     | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Left (0+27 to 2+17): CLSM Backfill                                   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Left (0+27 to 2+17): Work Platform Construction                      | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Left (0+27 to 2+17): Temp Shotcrete Facing                           | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Left (0+27 to 2+17): Permanent Reinforced Concrete Facing            | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Left (0+27 to 2+17): Post Tensioned Rock Anchors                     | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Right (0+27 to 2+17): CLSM Backfill                                  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Right (0+27 to 2+17): Work Platform Construction                     | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Right (0+27 to 2+17): Temp Shotcrete Facing                          | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Right (0+27 to 2+17): Permanent Reinforced Concrete Facing           | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 1 Tieback Wall Right (0+27 to 2+17): Post Tensioned Rock Anchors                    | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Transitions: Left Secant Pile Walls  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Transitions: Right Secant Pile Wall  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Right Closure Wall: Work Platform Construction  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Right Closure Wall: Secant Pile Wall  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Right Closure Wall: Backfill Concrete   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: Leveling Concrete   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: 1 Inch Concrete Wall  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: 2.5 Inch Concrete Wall  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: Concrete Footing  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: Backfill  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: Reinforced Concrete Wall  | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Left: Footing Rock Anchors and Backfill   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Wall Right: Leveling Concrete   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |
| Wall Type 2 - Wall Right: 1 Inch Wall   | 7                  | 3                  | 0                   | 18.5               | 10.2               | 20                  |                      |        |      |                    |        |      |





|  |       |     |       |      |      |      |               |              |            |           |           |                |
|--|-------|-----|-------|------|------|------|---------------|--------------|------------|-----------|-----------|----------------|
| Right Closure Wall: Work Platform Construction                 | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Right Closure Wall: Secant Pile Wall                           | 469   | 201 | 0     | 18.5 | 10.2 | 20   | 356           | 102          | 0          | 1         | 1         | 0              |
| Right Closure Wall: Backfill Concrete                          | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Left: Leveling Concrete                          | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Left: 1 Inch Concrete Wall                       | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Left: 2.5 Inch Concrete Wall                     | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Left: Concrete Footing                           | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Left: Backfill                                   | 308   | 132 | 0     | 18.5 | 10.2 | 20   | 234           | 67           | 0          | 1         | 1         | 0              |
| Wall Type 2 - Left: Reinforced Concrete Wall                   | 469   | 201 | 0     | 18.5 | 10.2 | 20   | 356           | 102          | 0          | 1         | 1         | 0              |
| Wall Type 2 - Left: Footing Rock Anchors and Backfill          | 308   | 132 | 0     | 18.5 | 10.2 | 20   | 234           | 67           | 0          | 1         | 1         | 0              |
| Wall Type 2 - Wall Right: Leveling Concrete                    | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Wall Right: 1 Inch Wall                          | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Wall Right: 2.5 Inch Wall                        | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Wall Right: Concrete Footing                     | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 2 - Wall Right: Backfill                             | 154   | 66  | 682   | 18.5 | 10.2 | 12.1 | 117           | 34           | 1          | 0         | 0         | 1,233          |
| Wall Type 3 - Left: Roller Compacted Concrete                  | 308   | 132 | 0     | 18.5 | 10.2 | 20   | 234           | 67           | 0          | 1         | 1         | 0              |
| Wall Type 3 - Left: CVC Facing                                 | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 3 - Right: Roller Compacted Concrete                 | 315   | 0   | 0     | 18.5 | 10.2 | 20   | 239           | 69           | 0          | 1         | 1         | 0              |
| Wall Type 3 - Right: CVC Facing                                | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Wall Type 3 - Right: Backfill                                  | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Stilling Basin: RCC  | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Stilling Basin: Upstream/Downstream CVC Facing                 | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Stilling Basin: Basin Steps                                    | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Stilling Basin: Chute Blocks                                   | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Stilling Basin: Dentated Sill                                  | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Slab Construction: RCC Foundation Support Block       | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Slab Construction: Spillway Chute Slab                | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Slab Construction: Stilling Basin Slab                | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Slab Construction: Zone B                             | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Slab Construction: Zone C                             | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Drains and Cleanouts: Wall Drains & Cleanouts         | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Drains and Cleanouts: Longitudinal Drains & Cleanouts | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Drains and Cleanouts: Transverse Drains & Cleanouts   | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Drains and Cleanouts: Drain Gravel                    | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Spillway Drains and Cleanouts: Filter Sand                     | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Surface Ditch from Landfill: Excavation                        | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Surface Ditch from Landfill: Drop Structures                   | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Surface Ditch from Landfill: Ditch Lining                      | 308   | 132 | 0     | 18.5 | 10.2 | 20   | 234           | 67           | 0          | 1         | 1         | 0              |
| Downstream Apron: Concrete Apron                               | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Downstream Apron: Zone C                                       | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Downstream Apron: Riprap Apron                                 | 154   | 66  | 1298  | 18.5 | 10.2 | 12.1 | 117           | 34           | 2          | 0         | 0         | 2,348          |
| Downstream Apron: Riprap Bedding                               | 154   | 66  | 1694  | 18.5 | 10.2 | 20   | 117           | 34           | 5          | 0         | 0         | 5,061          |
| Furnish and Install Electrical / Controls and Instrumentation  | 1078  | 462 | 5236  | 18.5 | 10.2 | 12.1 | 818           | 235          | 9          | 2         | 2         | 9,463          |
| Furnish and Install Aeration System                            | 154   | 66  | 0     | 18.5 | 10.2 | 20   | 117           | 34           | 0          | 0         | 0         | 0              |
| Part 1 Furnish and Install Erosion Control Measures            | 308   | 132 | 0     | 18.5 | 10.2 | 20   | 234           | 67           | 0          | 1         | 1         | 0              |
| Part 2 Furnish and Install Erosion Control Measures            | 1078  | 462 | 0     | 18.5 | 10.2 | 20   | 818           | 235          | 0          | 2         | 2         | 0              |
| Part 3 Furnish and Install Erosion Control Measures            | 1078  | 462 | 0     | 18.5 | 10.2 | 20   | 818           | 235          | 0          | 2         | 2         | 0              |
| Embankment Mitigation  | 15050 | 0   | 15050 | 18.5 | 10.2 | 20   | 11,420        | 0            | 44         | 28        | 0         | 44,960         |
| <b>Total</b>   |       |     |       |      |      |      | <b>38,413</b> | <b>6,815</b> | <b>110</b> | <b>95</b> | <b>70</b> | <b>111,822</b> |