

BRIDGE: MER-219-1210

ESTIMATED QUANTITIES

SFN: 5403287



CALCULATED BY: STK

DATE: 08/04/20

CHECKED BY: MTJ

DATE: 08/04/20

| ITEM   | ITEM EXT.             | DESCRIPTION  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
|--|-----------------------|--|-----------------------|-----------------------|----------|---------|---------|---------|---------|----------------------|----------|----------|----------|----------|-------------------------|--------|--------|--------|--------|-------------------------------|--------|--------|--------|--------|----------------------------|--------|--------|--------|--------|--------------------------|-----------|-----------|-----------|-----------|----------------------|-----------|-----------|-----------|-----------|-------------------------------|----------|----------|----------|----------|---------------------------------|----------|----------|----------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|-------------------------------|----------|----------|----------|----------|----------|----------------------|----------------------|----------------------|----------------------|--|--------------|---------------|--|--|-------------------------|--------|--------|--|--|----------------------------|--------|--------|--|--|------------------|----------|----------|--|--|---------------------|----------|----------|--|--|------------------|-----------|-----------|--|--|-------------------|---|---|--|--|----------|----------------------|----------------------|--|--|
| 202  | 11000                 | STRUCTURE REMOVED  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| <p>Existing structure length = 86.00 ft.<br/>                     Existing structure width = 15.00 ft.<br/>                     Area of deck = 1,290.00 ft<sup>2</sup></p> <p>Total Quantity = LUMP</p>  |                       |  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| 503  | 11100                 | COFFERDAMS AND EXCAVATION BRACING                            |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| <p>Total Quantity = LUMP</p>   |                       |  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| 503  | 21300                 | UNCLASSIFIED EXCAVATION                                      |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| <p>Inlet Volume from Microstation = 55 CY<br/>                     Outlet Volume from Microstation = 57 CY</p> <p>Total Quantity = LUMP</p>  |                       |  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| 509  | 10000                 | EPOXY COATED REINFORCING STEEL                               |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| <p>Wingwall quantity = 1,450 #<br/>                     Footing and cutoff wall quantity = 2,618 #<br/>                     Foreslope wall quantity = 193 #</p> <p>Total Quantity = 4,261 LB</p>   |                       |  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| 511  | 46010                 | CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| <table border="0"> <thead> <tr> <th>WINGWALL</th> <th>Wall #1</th> <th>Wall #2</th> <th>Wall #3</th> <th>Wall #4</th> </tr> </thead> <tbody> <tr> <td>Wingwall thickness =</td> <td>1.00 ft.</td> <td>1.00 ft.</td> <td>1.00 ft.</td> <td>1.00 ft.</td> </tr> <tr> <td>Top of wall elevation =</td> <td>882.64</td> <td>882.64</td> <td>882.02</td> <td>882.02</td> </tr> <tr> <td>Top of sloped end elevation =</td> <td>879.14</td> <td>879.14</td> <td>878.52</td> <td>878.52</td> </tr> <tr> <td>Top of footing elevation =</td> <td>874.14</td> <td>874.14</td> <td>873.52</td> <td>873.52</td> </tr> <tr> <td>Sloped wingwall length =</td> <td>10.60 ft.</td> <td>10.60 ft.</td> <td>10.60 ft.</td> <td>10.60 ft.</td> </tr> <tr> <td>Length of wingwall =</td> <td>10.00 ft.</td> <td>10.00 ft.</td> <td>10.00 ft.</td> <td>10.00 ft.</td> </tr> <tr> <td>Height of walls at tall end =</td> <td>8.50 ft.</td> <td>8.50 ft.</td> <td>8.50 ft.</td> <td>8.50 ft.</td> </tr> <tr> <td>Height of walls at sloped end =</td> <td>5.00 ft.</td> <td>5.00 ft.</td> <td>5.00 ft.</td> <td>5.00 ft.</td> </tr> <tr> <td>Volume =</td> <td>67.50 ft<sup>3</sup></td> <td>67.50 ft<sup>3</sup></td> <td>67.50 ft<sup>3</sup></td> <td>67.50 ft<sup>3</sup></td> </tr> <tr> <td>Plan area of corner =</td> <td>0.41 ft<sup>2</sup></td> <td>0.41 ft<sup>2</sup></td> <td>0.41 ft<sup>2</sup></td> <td>0.41 ft<sup>2</sup></td> </tr> <tr> <td>Height of walls at tall end =</td> <td>8.50 ft.</td> <td>8.50 ft.</td> <td>8.50 ft.</td> <td>8.50 ft.</td> </tr> <tr> <td>Volume =</td> <td>3.49 ft<sup>3</sup></td> <td>3.49 ft<sup>3</sup></td> <td>3.49 ft<sup>3</sup></td> <td>3.49 ft<sup>3</sup></td> </tr> <tr> <td></td> <td><u>Inlet</u></td> <td><u>Outlet</u></td> <td></td> <td></td> </tr> <tr> <td>Top of wall elevation =</td> <td>882.64</td> <td>882.02</td> <td></td> <td></td> </tr> <tr> <td>Top of culvert elevation =</td> <td>881.81</td> <td>881.19</td> <td></td> <td></td> </tr> <tr> <td>Height of wall =</td> <td>0.83 ft.</td> <td>0.83 ft.</td> <td></td> <td></td> </tr> <tr> <td>Thickness of wall =</td> <td>1.00 ft.</td> <td>1.00 ft.</td> <td></td> <td></td> </tr> <tr> <td>Length of wall =</td> <td>11.67 ft.</td> <td>11.67 ft.</td> <td></td> <td></td> </tr> <tr> <td>Number of walls =</td> <td>1</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>Volume =</td> <td>9.68 ft<sup>3</sup></td> <td>9.68 ft<sup>3</sup></td> <td></td> <td></td> </tr> </tbody> </table> <p>Total Quantity = 12 CY</p> |                       |  |                       |                       | WINGWALL | Wall #1 | Wall #2 | Wall #3 | Wall #4 | Wingwall thickness = | 1.00 ft. | 1.00 ft. | 1.00 ft. | 1.00 ft. | Top of wall elevation = | 882.64 | 882.64 | 882.02 | 882.02 | Top of sloped end elevation = | 879.14 | 879.14 | 878.52 | 878.52 | Top of footing elevation = | 874.14 | 874.14 | 873.52 | 873.52 | Sloped wingwall length = | 10.60 ft. | 10.60 ft. | 10.60 ft. | 10.60 ft. | Length of wingwall = | 10.00 ft. | 10.00 ft. | 10.00 ft. | 10.00 ft. | Height of walls at tall end = | 8.50 ft. | 8.50 ft. | 8.50 ft. | 8.50 ft. | Height of walls at sloped end = | 5.00 ft. | 5.00 ft. | 5.00 ft. | 5.00 ft. | Volume = | 67.50 ft <sup>3</sup> | 67.50 ft <sup>3</sup> | 67.50 ft <sup>3</sup> | 67.50 ft <sup>3</sup> | Plan area of corner = | 0.41 ft <sup>2</sup> | 0.41 ft <sup>2</sup> | 0.41 ft <sup>2</sup> | 0.41 ft <sup>2</sup> | Height of walls at tall end = | 8.50 ft. | 8.50 ft. | 8.50 ft. | 8.50 ft. | Volume = | 3.49 ft <sup>3</sup> | 3.49 ft <sup>3</sup> | 3.49 ft <sup>3</sup> | 3.49 ft <sup>3</sup> |  | <u>Inlet</u> | <u>Outlet</u> |  |  | Top of wall elevation = | 882.64 | 882.02 |  |  | Top of culvert elevation = | 881.81 | 881.19 |  |  | Height of wall = | 0.83 ft. | 0.83 ft. |  |  | Thickness of wall = | 1.00 ft. | 1.00 ft. |  |  | Length of wall = | 11.67 ft. | 11.67 ft. |  |  | Number of walls = | 1 | 1 |  |  | Volume = | 9.68 ft <sup>3</sup> | 9.68 ft <sup>3</sup> |  |  |
| WINGWALL   | Wall #1               | Wall #2  | Wall #3               | Wall #4               |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Wingwall thickness =   | 1.00 ft.              | 1.00 ft.   | 1.00 ft.              | 1.00 ft.              |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Top of wall elevation =  | 882.64                | 882.64   | 882.02                | 882.02                |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Top of sloped end elevation =  | 879.14                | 879.14   | 878.52                | 878.52                |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Top of footing elevation =   | 874.14                | 874.14   | 873.52                | 873.52                |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Sloped wingwall length =   | 10.60 ft.             | 10.60 ft.  | 10.60 ft.             | 10.60 ft.             |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Length of wingwall =   | 10.00 ft.             | 10.00 ft.  | 10.00 ft.             | 10.00 ft.             |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Height of walls at tall end =  | 8.50 ft.              | 8.50 ft.   | 8.50 ft.              | 8.50 ft.              |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Height of walls at sloped end =  | 5.00 ft.              | 5.00 ft.   | 5.00 ft.              | 5.00 ft.              |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Volume =   | 67.50 ft <sup>3</sup> | 67.50 ft <sup>3</sup>  | 67.50 ft <sup>3</sup> | 67.50 ft <sup>3</sup> |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Plan area of corner =  | 0.41 ft <sup>2</sup>  | 0.41 ft <sup>2</sup>   | 0.41 ft <sup>2</sup>  | 0.41 ft <sup>2</sup>  |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Height of walls at tall end =  | 8.50 ft.              | 8.50 ft.   | 8.50 ft.              | 8.50 ft.              |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Volume =   | 3.49 ft <sup>3</sup>  | 3.49 ft <sup>3</sup>   | 3.49 ft <sup>3</sup>  | 3.49 ft <sup>3</sup>  |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
|  | <u>Inlet</u>          | <u>Outlet</u>  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Top of wall elevation =  | 882.64                | 882.02   |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Top of culvert elevation =   | 881.81                | 881.19   |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Height of wall =   | 0.83 ft.              | 0.83 ft.   |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Thickness of wall =  | 1.00 ft.              | 1.00 ft.   |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Length of wall =   | 11.67 ft.             | 11.67 ft.  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Number of walls =  | 1                     | 1  |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |
| Volume =   | 9.68 ft <sup>3</sup>  | 9.68 ft <sup>3</sup>   |                       |                       |          |         |         |         |         |                      |          |          |          |          |                         |        |        |        |        |                               |        |        |        |        |                            |        |        |        |        |                          |           |           |           |           |                      |           |           |           |           |                               |          |          |          |          |                                 |          |          |          |          |          |                       |                       |                       |                       |                       |                      |                      |                      |                      |                               |          |          |          |          |          |                      |                      |                      |                      |  |              |               |  |  |                         |        |        |  |  |                            |        |        |  |  |                  |          |          |  |  |                     |          |          |  |  |                  |           |           |  |  |                   |   |   |  |  |          |                      |                      |  |  |

| 511 | 46510 | CLASS QC1 CONCRETE, FOOTING                    |                        |                        |                       |
|-----|-------|--|------------------------|------------------------|-----------------------|
|     |       | <u>Inlet</u>                                   | <u>Outlet</u>          |                        |                       |
|     |       | Footing thickness =                            | 1.50 ft.               | 1.50 ft.               |                       |
|     |       | Depth of cutoff wall below bottom of footing = | 2.50 ft.               | 2.50 ft.               |                       |
|     |       | Plan area =                                    | 182.68 ft <sup>2</sup> | 182.68 ft <sup>2</sup> |                       |
|     |       | Cutoff wall area =                             | 44.85 ft <sup>2</sup>  | 44.85 ft <sup>2</sup>  |                       |
|     |       | Volume =                                       | 386.15 ft <sup>3</sup> | 386.15 ft <sup>3</sup> |                       |
|     |       | Average width of closure pour =                | 2.25 ft.               |                        |                       |
|     |       | Thickness of closure pour =                    | 0.83 ft.               |                        |                       |
|     |       | Length of closure pour =                       | 11.67 ft.              |                        |                       |
|     |       | Number of locations =                          | 2                      |                        |                       |
|     |       | Volume =                                       | 43.76 ft <sup>3</sup>  |                        |                       |
|     |       | Total Quantity =                               | 31 CY                  |                        |                       |
| 512 | 10100 | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)  |                        |                        |                       |
|     |       | <u>Wall #1</u>                                 | <u>Wall #2</u>         | <u>Wall #3</u>         | <u>Wall #4</u>        |
|     |       | Wall thickness =                               | 1.00 ft.               | 1.00 ft.               | 1.00 ft.              |
|     |       | Wall area =                                    | 43.33 ft <sup>2</sup>  | 43.33 ft <sup>2</sup>  | 43.33 ft <sup>2</sup> |
|     |       | Wall length across top =                       | 10.60 ft.              | 10.60 ft.              | 10.60 ft.             |
|     |       | Top of wall area =                             | 10.60 ft <sup>2</sup>  | 10.60 ft <sup>2</sup>  | 10.60 ft <sup>2</sup> |
|     |       | Length behind wall =                           | 0.50 ft.               | 0.50 ft.               | 0.50 ft.              |
|     |       | Behind wall area =                             | 5.30 ft <sup>2</sup>   | 5.30 ft <sup>2</sup>   | 5.30 ft <sup>2</sup>  |
|     |       | Top of wall elevation at end =                 | 879.14                 | 879.14                 | 878.52                |
|     |       | Ground elevation at end =                      | 878.64                 | 878.64                 | 878.02                |
|     |       | End area =                                     | 0.50 ft <sup>2</sup>   | 0.50 ft <sup>2</sup>   | 0.50 ft <sup>2</sup>  |
|     |       | Plan area of corner =                          | 0.41 ft <sup>2</sup>   | 0.41 ft <sup>2</sup>   | 0.41 ft <sup>2</sup>  |
|     |       | Total wingwall area =                          | 60.14 ft <sup>2</sup>  | 60.14 ft <sup>2</sup>  | 60.14 ft <sup>2</sup> |
|     |       | <u>Inlet</u>                                   | <u>Outlet</u>          |                        |                       |
|     |       | Headwall height =                              | 0.83 ft.               | 0.83 ft.               |                       |
|     |       | Headwall thickness =                           | 1.00 ft.               | 1.00 ft.               |                       |
|     |       | Headwall length =                              | 11.67 ft.              | 11.67 ft.              |                       |
|     |       | Height behind headwall =                       | 0.50 ft.               | 0.50 ft.               |                       |
|     |       | Headwall area =                                | 9.68 ft <sup>2</sup>   | 9.68 ft <sup>2</sup>   |                       |
|     |       | Top of headwall area =                         | 11.67 ft <sup>2</sup>  | 11.67 ft <sup>2</sup>  |                       |
|     |       | Behind headwall area =                         | 5.83 ft <sup>2</sup>   | 5.83 ft <sup>2</sup>   |                       |
|     |       | Total headwall area =                          | 27.18 ft <sup>2</sup>  | 27.18 ft <sup>2</sup>  |                       |
|     |       | <u>Inside culvert</u>                          |                        |                        |                       |
|     |       | Rise =   | 6.00 ft.               |                        |                       |
|     |       | Span =   | 10.00 ft.              |                        |                       |
|     |       | Distance into culvert =                        | 2.00 ft.               |                        |                       |
|     |       | Area of culvert face =                         | 21.10 ft <sup>2</sup>  |                        |                       |
|     |       | Total inside area =                            | 130.20 ft <sup>2</sup> |                        |                       |
|     |       | Total area =                                   | 425.13 ft <sup>2</sup> |                        |                       |
|     |       | Total Quantity =                               | 48 SY                  |                        |                       |

| 512   | 33000                 | TYPE 2 WATERPROOFING                          |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
|---|-----------------------|---|-----------------------|-----------------------|--|--|----------------|----------------|----------------|----------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|----------|----------|----------|----------|---------------|----------------------|----------------------|----------------------|----------------------|----------|----------|----------|----------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|
| <p>Height of culvert legs = 7.67 ft.<br/> Length of culvert = 88.00 ft.<br/> Culvert length minus wingwall thickness = 86.00 ft.<br/> Top width of culvert = 11.67 ft.<br/> Amount of lap at leg and top corner = 1.00 ft.<br/> Amount of lap at wall corner = 1.00 ft.<br/> Total area = 2,524.67 ft<sup>2</sup></p> <p>Total Quantity = 281 SY</p>  |                       |   |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| 516   | 13600                 | 1" PREFORMED EXPANSION JOINT FILLER           |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
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|   | <u>Wall #1</u>        | <u>Wall #2</u>                                | <u>Wall #3</u>        | <u>Wall #4</u>        |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Height of wall =  | 8.50 ft.              | 8.50 ft.                                      | 8.50 ft.              | 8.50 ft.              |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Thickness of wall =   | 1.00 ft.              | 1.00 ft.                                      | 1.00 ft.              | 1.00 ft.              |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Area =  | 8.50 ft <sup>2</sup>  | 8.50 ft <sup>2</sup>                          | 8.50 ft <sup>2</sup>  | 8.50 ft <sup>2</sup>  |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| 518   | 21200                 | POROUS BACKFILL WITH GEOTEXTILE FABRIC        |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
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|   | <u>Wall #1</u>        | <u>Wall #2</u>                                | <u>Wall #3</u>        | <u>Wall #4</u>        |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Area behind walls =   | 27.79 ft <sup>2</sup> | 27.79 ft <sup>2</sup>                         | 27.79 ft <sup>2</sup> | 27.79 ft <sup>2</sup> |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Thickness =   | 2.00 ft.              |   |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Corner area =   | 3.48 ft <sup>2</sup>  | 3.48 ft <sup>2</sup>                          | 3.48 ft <sup>2</sup>  | 3.48 ft <sup>2</sup>  |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Height =  | 5.74 ft.              | 5.74 ft.                                      | 5.74 ft.              | 5.74 ft.              |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| Volume =  | 75.56 ft <sup>3</sup> | 75.56 ft <sup>3</sup>                         | 75.56 ft <sup>3</sup> | 75.56 ft <sup>3</sup> |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| 611   | 95200                 | 10' x 6' CONDUIT, TYPE A, 706.05 (6 FT COVER) |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |
| <p>Total Quantity = 88 FT</p>   |                       |   |                       |                       |  |  |                |                |                |                |                     |                       |                       |                       |                       |                     |          |          |          |          |               |                      |                      |                      |                      |          |          |          |          |          |          |                       |                       |                       |                       |