City of Manitowoc

Proposed Water Quality Pond

Pond - 136
#6 BMP Alternative

Legend
- Proposed Stormsewer
- Existing Stormsewer
- Proposed Pond
- City Parcels
- Pond Watershed

Intercept flow from existing storm sewer. Redirect to Pond-136

Proposed Outlet Structure Direct into existing storm sewer

Pond 136

0 50 100 Feet
## City of Manitowoc

### Proposed Water Quality Pond - 136

#### #6 BMP Alternative

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Quantity</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
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<td>CY</td>
<td>$4</td>
<td>19,872</td>
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<td>LF</td>
<td>$40</td>
<td>140</td>
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<tr>
<td>3)</td>
<td>Outlet Structure</td>
<td>EA</td>
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<td>LS</td>
<td>$3,337</td>
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</tr>
<tr>
<td>5)</td>
<td>Street Restoration</td>
<td>SY</td>
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<tr>
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<td>Re-Stabilization</td>
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<td>12,395</td>
<td>$12,395</td>
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<tr>
<td>7)</td>
<td>Demolition of Existing Structures</td>
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**DIRECT COST SUBTOTAL** $109,720

**Unexpected Design Details 30%** $25,000

**Engineering Costs 15%** $30,000

**PROBABLE CONSTRUCTION COST ESTIMATE** $164,720

**Land Purchase LS** $106,200

**TOTAL CONCEPTUAL COST ESTIMATE** (2007-$s) $276,230

Notes:
* Engineering Cost to include: Geotechnical, Environmental, Construction Mgmt., Survey, Legal Costs, Property Investigation, Environmental Phase 1 & 2, Design, Plans & Specs., Bid, Construction Observation.
City of Manitowoc
Proposed Water Quality Pond

Pond - 118
#7 BMP Alternative

Legend
- Proposed Stormsewer
- Existing Stormsewer
- Proposed Pond
- City Parcels
- Pond Watershed

Intercept flow from existing storm sewer. Redirect to Pond-118

Proposed Outlet Structure Direct into storm sewer

Intercept flow from existing storm sewer. Redirect to Pond-118
### City of Manitowoc

#### Proposed Water Quality Pond - 118

**#7 BMP Alternative**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<th>Unit Price</th>
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<td>Outlet Structure</td>
<td>EA</td>
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<td>$2,000</td>
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<td>35</td>
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<td>$8,839</td>
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**DIRECT COST SUBTOTAL**

$100,235

**Unexpected Design Details**

30% $25,000 $25,000 Cap

**Engineering Costs**

15% $30,000 $30,000 Min.

**PROBABLE CONSTRUCTION COST ESTIMATE**

$155,235

7) Land Purchase | LS | $180,000 | 1.0 | $180,000

**Prorate from Assessed to Market Value**

5% $9,000

**TOTAL CONCEPTUAL COST ESTIMATE (2007-$$s)**

$344,235

**Notes:**

* Engineering Cost to include: Geotechnical, Environmental, Construction Mgmt., Survey, Legal Costs, Property Investigation, Environmental Phase 1 & 2, Design, Plans & Specs., Bid, Construction Observation.
City of Manitowoc

Proposed Water Quality Pond

Pond - 131
#8 BMP Alternative

Legend

- Proposed Stormsewer
- Existing Stormsewer
- Proposed Pond
- City Parcels
- Pond Watershed

Intercept flow from existing storm sewer. Redirect to Pond-131

Proposed Outlet Structure Direct into existing storm sewer

Pond 131
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Quantity</th>
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<td>Outlet Structure</td>
<td>EA</td>
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<td>$2,000</td>
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<td>4)</td>
<td>Erosion Control</td>
<td>LS</td>
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<td>4,944</td>
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**DIRECT COST SUBTOTAL** $46,566

**Unexpected Design Details** 30% $13,970 $25,000 Cap

**Engineering Costs** 15% $30,000 $30,000 Min.

**PROBABLE CONSTRUCTION COST ESTIMATE** $90,536

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Quantity</th>
<th>Extension</th>
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<tbody>
<tr>
<td>7)</td>
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<td>LS</td>
<td>$0</td>
<td>1.0</td>
<td>$0</td>
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</table>

**TOTAL CONCEPTUAL COST ESTIMATE (2007-$s)** $90,536

**Notes:**
* Engineering Cost to include: Geotechnical, Environmental, Construction Mgmt., Survey, Legal Costs, Property Investigation, Environmental Phase 1 & 2, Design, Plans & Specs., Bid, Construction Observation.
City of Manitowoc

Proposed Water Quality Pond

Pond - 127
#9 BMP Alternative

Legend
- **Proposed Stormsewer**
- **Existing Stormsewer**
- **Proposed Pond**
- **City Parcels**
- **Pond Watershed**

Proposed Outlet Structure
Direct into existing storm sewer

Intercept flow from existing storm sewer. Redirect to Pond-127

Remove abandoned storm sewer during construction.

0 40 80 Feet
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Quantity</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
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<td>CY</td>
<td>$4</td>
<td>2,089</td>
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<td>0</td>
<td>$0</td>
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<tr>
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</table>

**DIRECT COST SUBTOTAL**: $25,672

**Unexpected Design Details 30%**: $7,702 $25,000 Cap* **Engineering Costs 15%**: $30,000 **MINIMUM PROBABLE CONSTRUCTION COST ESTIMATE**: $63,374

**7) Land Purchase**

| LS | $0 | 1.0 | $0 |

**Prorate from Assessed to Market Value 5%**: $0

**TOTAL CONCEPTUAL COST ESTIMATE (2007-$s)**: $63,374

**Notes:**

* Engineering Cost to include: Geotechnical, Environmental, Construction Mgmt., Survey, Legal Costs, Property Investigation, Environmental Phase 1 & 2, Design, Plans & Specs., Bid, Construction Observation.
City of Manitowoc

Proposed Water Quality Pond

Pond - 125
#10 BMP Alternative

Legend
- Green: Proposed Stormsewer
- Cyan: Existing Stormsewer
- Blue: Proposed Pond
- White: City Parcels
- Red: Pond Watershed

Intercept flow from existing storm sewer. Redirect to Pond-125

Remove abandoned storm sewer during construction

Proposed Outlet Structure Direct into existing storm sewer
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Quantity</th>
<th>Extension</th>
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</thead>
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<td>90</td>
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<td>1</td>
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<td>$0</td>
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<td>$20,911</td>
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**DIRECT COST SUBTOTAL** $166,215

Unexpected Design Details 30% $25,000 $25,000 Cap*

* Engineering Costs 15% $30,000 $30,000 Min.

**PROBABLE CONSTRUCTION COST ESTIMATE** $221,215

<table>
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<tr>
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<th>Unit Price</th>
<th>Quantity</th>
<th>Extension</th>
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</thead>
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<tr>
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</table>

Prorate from Assessed to Market Value 5% $9,715

**TOTAL CONCEPTUAL COST ESTIMATE (2007-$s)** $425,230

Notes:
* Engineering Cost to include: Geotechnical, Environmental, Construction Mgmt., Survey, Legal Costs, Property Investigation, Environmental Phase 1 & 2, Design, Plans & Specs., Bid, Construction Observation.