## Design Settings

| | | | |
|---|---|---|---|
| Rainfall Methodology | FSR | Maximum Time of Concentration (mins) | 30.00 |
| Return Period (years) | 5 | Maximum Rainfall (mm/hr) | 200.0 |
| Additional Flow (%) | 0 | Minimum Velocity (m/s) | 1.00 |
| FSR Region | England and Wales | Connection Type | Level Soffits |
| M5-60 (mm) | 17.000 | Minimum Backdrop Height (m) | 0.500 |
| Ratio-R | 0.300 | Preferred Cover Depth (m) | 1.200 |
| CV | 1.000 | Include Intermediate Ground | ✓ |
| Time of Entry (mins) | 2.00 | Enforce best practice design rules | ✓ |

## Nodes

| Name | Area (ha) | T of E (mins) | Cover Level (m) | Diameter (mm) | Easting (m) | Northing (m) | Depth (m) | Invert Level (m) |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.025 | 2.00 | 66.685 | 1200 | 414892.387 | 416829.912 | 1.335 | 65.350 |
| 2 | 0.067 | 2.00 | 66.827 | 1350 | 414890.545 | 416839.328 | 1.648 | 65.179 |
| 3 | | | 66.900 | 1350 | 414907.463 | 416842.339 | 1.893 | 65.007 |
| 4 | 0.059 | 2.00 | 66.800 | 1200 | 414875.151 | 416871.271 | 1.000 | 65.800 |
| 5 | | | 66.500 | 1200 | 414901.615 | 416875.269 | 0.950 | 65.550 |
| 6 | | | 66.900 | 1350 | 414904.125 | 416864.869 | 2.121 | 64.779 |
| 7 | 0.018 | 2.00 | 66.177 | 1200 | 414922.067 | 416847.640 | 1.327 | 64.850 |
| 8 | | | 66.042 | 1350 | 414919.858 | 416867.878 | 1.640 | 64.402 |
| Tank Inlet 1 | | | 65.967 | | 414924.236 | 416868.671 | 3.167 | 62.800 |
| 9 | 0.026 | 2.00 | 64.501 | 1200 | 414936.118 | 416846.695 | 1.401 | 63.100 |
| 10 | 0.049 | 2.00 | 65.805 | 1350 | 414928.978 | 416854.563 | 2.305 | 63.500 |
| 11 | 0.033 | 2.00 | 65.641 | 1350 | 414934.410 | 416857.223 | 2.762 | 62.879 |
| 12 | | | 65.557 | 1350 | 414933.144 | 416864.761 | 2.729 | 62.828 |
| Tank Inlet 2 | | | 65.563 | | 414932.802 | 416867.011 | 2.763 | 62.800 |
| Tank Outlet 1 | | 2.00 | 65.504 | | 414934.109 | 416870.260 | 2.704 | 62.800 |
| 13 | | | 65.442 | 1800 | 414935.501 | 416870.566 | 2.652 | 62.790 |
| Outfall to Canal | | | 65.300 | 1350 | 414938.428 | 416871.140 | 2.547 | 62.753 |
| 14 | 0.036 | 2.00 | 67.507 | 1350 | 414865.017 | 416920.105 | 1.507 | 66.000 |
| 15 | 0.040 | 2.00 | 67.377 | 1350 | 414871.932 | 416933.056 | 1.819 | 65.558 |
| Tank Inlet 3 | | | 67.348 | | 414870.382 | 416933.988 | 1.848 | 65.500 |
| Tank Outlet 2 | | 2.00 | 67.260 | | 414866.143 | 416936.597 | 1.760 | 65.500 |
| 16 | 0.041 | 2.00 | 67.238 | 1500 | 414864.615 | 416937.535 | 1.750 | 65.488 |
| Outfall to Sewer | | | 67.151 | 1350 | 414857.115 | 416941.966 | 1.721 | 65.430 |

## Links

| Name | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) | Rain (mm/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 1 | 2 | 9.594 | 0.600 | 65.350 | 65.254 | 0.096 | 100.0 | 150 | 2.16 | 86.2 |
| 1.001 | 2 | 3 | 17.184 | 0.600 | 65.179 | 65.007 | 0.172 | 100.0 | 225 | 2.38 | 84.2 |
| 1.002 | 3 | 6 | 22.776 | 0.600 | 65.007 | 64.779 | 0.228 | 100.0 | 225 | 2.67 | 81.6 |
| 2.000 | 4 | 5 | 26.764 | 0.600 | 65.800 | 65.550 | 0.250 | 107.1 | 225 | 2.35 | 84.4 |
| 2.001 | 5 | 6 | 10.699 | 0.600 | 65.550 | 64.779 | 0.771 | 13.9 | 225 | 2.40 | 83.9 |
| 1.003 | 6 | 8 | 16.018 | 0.600 | 64.779 | 64.459 | 0.320 | 50.0 | 225 | 2.81 | 80.5 |
| 3.000 | 7 | 8 | 20.358 | 0.600 | 64.850 | 64.477 | 0.373 | 54.6 | 150 | 2.25 | 85.4 |
| 1.004 | 8 | Tank Inlet 1 | 4.449 | 0.600 | 64.402 | 64.313 | 0.089 | 50.0 | 225 | 2.85 | 80.1 |

| Name | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) | Pro Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 1.005 | 17.8 | 7.8 | 1.185 | 1.423 | 0.025 | 0.0 | 69 | 0.972 |
| 1.001 | 1.307 | 52.0 | 28.0 | 1.423 | 1.668 | 0.092 | 0.0 | 117 | 1.329 |
| 1.002 | 1.307 | 52.0 | 27.1 | 1.668 | 1.896 | 0.092 | 0.0 | 116 | 1.322 |
| 2.000 | 1.263 | 50.2 | 18.0 | 0.775 | 0.725 | 0.059 | 0.0 | 93 | 1.159 |
| 2.001 | 3.531 | 140.4 | 17.9 | 0.725 | 1.896 | 0.059 | 0.0 | 54 | 2.445 |
| 1.003 | 1.854 | 73.7 | 43.9 | 1.896 | 1.358 | 0.151 | 0.0 | 125 | 1.932 |
| 3.000 | 1.364 | 24.1 | 5.6 | 1.177 | 1.415 | 0.018 | 0.0 | 49 | 1.111 |
| 1.004 | 1.854 | 73.7 | 48.9 | 1.415 | 1.429 | 0.169 | 0.0 | 134 | 1.978 |

## Links

| Name | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) | Rain (mm/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.000 | 9 | 11 | 10.666 | 0.600 | 63.100 | 63.029 | 0.071 | 150.0 | 150 | 2.22 | 85.7 |
| 5.000 | 10 | 11 | 6.048 | 0.600 | 63.500 | 63.029 | 0.471 | 12.8 | 150 | 2.04 | 87.4 |
| 4.001 | 11 | 12 | 7.644 | 0.600 | 62.879 | 62.828 | 0.051 | 150.0 | 300 | 2.32 | 84.7 |
| 4.002 | 12 | Tank Inlet 2 | 2.276 | 0.600 | 62.828 | 62.813 | 0.015 | 150.0 | 300 | 2.35 | 84.5 |
| 1.005 | Tank Outlet 1 | 13 | 1.425 | 0.600 | 62.800 | 62.790 | 0.010 | 150.0 | 300 | 2.02 | 87.6 |
| 1.006 | 13 | Outfall to Canal | 2.983 | 0.600 | 62.790 | 62.753 | 0.037 | 80.0 | 225 | 2.05 | 87.3 |
| 6.000 | 14 | 15 | 14.681 | 0.600 | 66.000 | 65.633 | 0.367 | 40.0 | 150 | 2.15 | 86.3 |
| 6.001 | 15 | Tank Inlet 3 | 1.809 | 0.600 | 65.558 | 65.535 | 0.023 | 80.0 | 225 | 2.17 | 86.1 |
| 5.002 | Tank Outlet 2 | 16 | 1.793 | 0.600 | 65.500 | 65.488 | 0.012 | 150.0 | 225 | 2.03 | 87.5 |
| 5.003 | 16 | Outfall to Sewer | 8.711 | 0.600 | 65.488 | 65.430 | 0.058 | 150.0 | 225 | 2.16 | 86.2 |

| Name | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) | Pro Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|---|
| 4.000 | 0.818 | 14.5 | 8.0 | 1.251 | 2.462 | 0.026 | 0.0 | 80 | 0.840 |
| 5.000 | 2.826 | 49.9 | 15.5 | 2.155 | 2.462 | 0.049 | 0.0 | 57 | 2.495 |
| 4.001 | 1.281 | 90.6 | 33.1 | 2.462 | 2.429 | 0.108 | 0.0 | 125 | 1.183 |
| 4.002 | 1.281 | 90.6 | 33.0 | 2.429 | 2.450 | 0.108 | 0.0 | 125 | 1.183 |
| 1.005 | 1.281 | 90.6 | 0.0 | 2.404 | 2.352 | 0.000 | 0.0 | 0 | 0.000 |
| 1.006 | 1.463 | 58.2 | 0.0 | 2.427 | 2.322 | 0.000 | 0.0 | 0 | 0.000 |
| 6.000 | 1.596 | 28.2 | 11.2 | 1.357 | 1.594 | 0.036 | 0.0 | 66 | 1.508 |
| 6.001 | 1.463 | 58.2 | 23.6 | 1.594 | 1.588 | 0.076 | 0.0 | 100 | 1.389 |
| 5.002 | 1.065 | 42.3 | 0.0 | 1.535 | 1.525 | 0.000 | 0.0 | 0 | 0.000 |
| 5.003 | 1.065 | 42.3 | 12.8 | 1.525 | 1.496 | 0.041 | 0.0 | 85 | 0.936 |

## Pipeline Schedule

| Link | Length (m) | Slope (1:X) | Dia (mm) | Link Type | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 9.594 | 100.0 | 150 | 1 STANDARD | 66.685 | 65.350 | 1.185 | 66.827 | 65.254 | 1.423 |
| 1.001 | 17.184 | 100.0 | 225 | 1 STANDARD | 66.827 | 65.179 | 1.423 | 66.900 | 65.007 | 1.668 |
| 1.002 | 22.776 | 100.0 | 225 | 1 STANDARD | 66.900 | 65.007 | 1.668 | 66.900 | 64.779 | 1.896 |
| 2.000 | 26.764 | 107.1 | 225 | 1 STANDARD | 66.800 | 65.800 | 0.775 | 66.500 | 65.550 | 0.725 |
| 2.001 | 10.699 | 13.9 | 225 | 1 STANDARD | 66.500 | 65.550 | 0.725 | 66.900 | 64.779 | 1.896 |
| 1.003 | 16.018 | 50.0 | 225 | 1 STANDARD | 66.900 | 64.779 | 1.896 | 66.042 | 64.459 | 1.358 |
| 3.000 | 20.358 | 54.6 | 150 | 1 STANDARD | 66.177 | 64.850 | 1.177 | 66.042 | 64.477 | 1.415 |
| 1.004 | 4.449 | 50.0 | 225 | 1 STANDARD | 66.042 | 64.402 | 1.415 | 65.967 | 64.313 | 1.429 |
| 4.000 | 10.666 | 150.0 | 150 | 1 STANDARD | 64.501 | 63.100 | 1.251 | 65.641 | 63.029 | 2.462 |
| 5.000 | 6.048 | 12.8 | 150 | 1 STANDARD | 65.805 | 63.500 | 2.155 | 65.641 | 63.029 | 2.462 |
| 4.001 | 7.644 | 150.0 | 300 | 1 STANDARD | 65.641 | 62.879 | 2.462 | 65.557 | 62.828 | 2.429 |
| 4.002 | 2.276 | 150.0 | 300 | 1 STANDARD | 65.557 | 62.828 | 2.429 | 65.563 | 62.813 | 2.450 |
| 1.005 | 1.425 | 150.0 | 300 | 1 STANDARD | 65.504 | 62.800 | 2.404 | 65.442 | 62.790 | 2.352 |
| 1.006 | 2.983 | 80.0 | 225 | 1 STANDARD | 65.442 | 62.790 | 2.427 | 65.300 | 62.753 | 2.322 |

| Link | US Node | Dia (mm) | Node Type | MH Type | DS Node | Dia (mm) | Node Type | MH Type |
|---|---|---|---|---|---|---|---|---|
| 1.000 | 1 | 1200 | Manhole | 1 STANDARD | 2 | 1350 | Manhole | 1 STANDARD |
| 1.001 | 2 | 1350 | Manhole | 1 STANDARD | 3 | 1350 | Manhole | 1 STANDARD |
| 1.002 | 3 | 1350 | Manhole | 1 STANDARD | 6 | 1350 | Manhole | 1 STANDARD |
| 2.000 | 4 | 1200 | Manhole | 1 STANDARD | 5 | 1200 | Manhole | 1 STANDARD |
| 2.001 | 5 | 1200 | Manhole | 1 STANDARD | 6 | 1350 | Manhole | 1 STANDARD |
| 1.003 | 6 | 1350 | Manhole | 1 STANDARD | 8 | 1350 | Manhole | 1 STANDARD |
| 3.000 | 7 | 1200 | Manhole | 1 STANDARD | 8 | 1350 | Manhole | 1 STANDARD |
| 1.004 | 8 | 1350 | Manhole | 1 STANDARD | Tank Inlet 1 | | Junction | |
| 4.000 | 9 | 1200 | Manhole | 1 STANDARD | 11 | 1350 | Manhole | 1 STANDARD |
| 5.000 | 10 | 1350 | Manhole | 1 STANDARD | 11 | 1350 | Manhole | 1 STANDARD |
| 4.001 | 11 | 1350 | Manhole | 1 STANDARD | 12 | 1350 | Manhole | 1 STANDARD |
| 4.002 | 12 | 1350 | Manhole | 1 STANDARD | Tank Inlet 2 | | Junction | |
| 1.005 | Tank Outlet 1 | | Junction | | 13 | 1800 | Manhole | 1 STANDARD |
| 1.006 | 13 | 1800 | Manhole | 1 STANDARD | Outfall to Canal | 1350 | Manhole | 1 STANDARD |

## Pipeline Schedule

| Link | Length (m) | Slope (1:X) | Dia (mm) | Link Type | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.000 | 14.681 | 40.0 | 150 | 1 STANDARD | 67.507 | 66.000 | 1.357 | 67.377 | 65.633 | 1.594 |
| 6.001 | 1.809 | 80.0 | 225 | 1 STANDARD | 67.377 | 65.558 | 1.594 | 67.348 | 65.535 | 1.588 |
| 5.002 | 1.793 | 150.0 | 225 | 1 STANDARD | 67.260 | 65.500 | 1.535 | 67.238 | 65.488 | 1.525 |
| 5.003 | 8.711 | 150.0 | 225 | 1 STANDARD | 67.238 | 65.488 | 1.525 | 67.151 | 65.430 | 1.496 |

| Link | US Node | Dia (mm) | Node Type | MH Type | DS Node | Dia (mm) | Node Type | MH Type |
|---|---|---|---|---|---|---|---|---|
| 6.000 | 14 | 1350 | Manhole | 1 STANDARD | 15 | 1350 | Manhole | 1 STANDARD |
| 6.001 | 15 | 1350 | Manhole | 1 STANDARD | Tank Inlet 3 | | Junction | |
| 5.002 | Tank Outlet 2 | | Junction | | 16 | 1500 | Manhole | 1 STANDARD |
| 5.003 | 16 | 1500 | Manhole | 1 STANDARD | Outfall to Sewer | 1350 | Manhole | 1 STANDARD |

## Manhole Schedule

| Node | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 414892.387 | 416829.912 | 66.685 | 1.335 | 1200 | 0 | 1.000 | 65.350 | 150 |
| 2 | 414890.545 | 416839.328 | 66.827 | 1.648 | 1350 | 1<br>0 | 1.000<br>1.001 | 65.254<br>65.179 | 150<br>225 |
| 3 | 414907.463 | 416842.339 | 66.900 | 1.893 | 1350 | 1<br>0 | 1.001<br>1.002 | 65.007<br>65.007 | 225<br>225 |
| 4 | 414875.151 | 416871.271 | 66.800 | 1.000 | 1200 | 0 | 2.000 | 65.800 | 225 |
| 5 | 414901.615 | 416875.269 | 66.500 | 0.950 | 1200 | 1<br>0 | 2.000<br>2.001 | 65.550<br>65.550 | 225<br>225 |
| 6 | 414904.125 | 416864.869 | 66.900 | 2.121 | 1350 | 1<br>2<br>0 | 2.001<br>1.002<br>1.003 | 64.779<br>64.779<br>64.779 | 225<br>225<br>225 |
| 7 | 414922.067 | 416847.640 | 66.177 | 1.327 | 1200 | 0 | 3.000 | 64.850 | 150 |
| 8 | 414919.858 | 416867.878 | 66.042 | 1.640 | 1350 | 1<br>2<br>0 | 3.000<br>1.003<br>1.004 | 64.477<br>64.459<br>64.402 | 150<br>225<br>225 |
| Tank Inlet 1 | 414924.236 | 416868.671 | 65.967 | 3.167 | | 1 | 1.004 | 64.313 | 225 |
| 9 | 414936.118 | 416846.695 | 64.501 | 1.401 | 1200 | 0 | 4.000 | 63.100 | 150 |
| 10 | 414928.978 | 416854.563 | 65.805 | 2.305 | 1350 | 0 | 5.000 | 63.500 | 150 |

## Manhole Schedule

| Node | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 414934.410 | 416857.223 | 65.641 | 2.762 | 1350 | 1 | 5.000 | 63.029 | 150 |
| | | | | | | 2 | 4.000 | 63.029 | 150 |
| | | | | | | 0 | 4.001 | 62.879 | 300 |
| 12 | 414933.144 | 416864.761 | 65.557 | 2.729 | 1350 | 1 | 4.001 | 62.828 | 300 |
| | | | | | | 0 | 4.002 | 62.828 | 300 |
| Tank Inlet 2 | 414932.802 | 416867.011 | 65.563 | 2.763 | | 1 | 4.002 | 62.813 | 300 |
| Tank Outlet 1 | 414934.109 | 416870.260 | 65.504 | 2.704 | | 0 | 1.005 | 62.800 | 300 |
| 13 | 414935.501 | 416870.566 | 65.442 | 2.652 | 1800 | 1 | 1.005 | 62.790 | 300 |
| | | | | | | 0 | 1.006 | 62.790 | 225 |
| Outfall to Canal | 414938.428 | 416871.140 | 65.300 | 2.547 | 1350 | 1 | 1.006 | 62.753 | 225 |
| 14 | 414865.017 | 416920.105 | 67.507 | 1.507 | 1350 | 0 | 6.000 | 66.000 | 150 |
| 15 | 414871.932 | 416933.056 | 67.377 | 1.819 | 1350 | 1 | 6.000 | 65.633 | 150 |
| | | | | | | 0 | 6.001 | 65.558 | 225 |
| Tank Inlet 3 | 414870.382 | 416933.988 | 67.348 | 1.848 | | 1 | 6.001 | 65.535 | 225 |
| Tank Outlet 2 | 414866.143 | 416936.597 | 67.260 | 1.760 | | 0 | 5.002 | 65.500 | 225 |
| 16 | 414864.615 | 416937.535 | 67.238 | 1.750 | 1500 | 1 | 5.002 | 65.488 | 225 |
| | | | | | | 0 | 5.003 | 65.488 | 225 |
| Outfall to Sewer | 414857.115 | 416941.966 | 67.151 | 1.721 | 1350 | 1 | 5.003 | 65.430 | 225 |

## Simulation Settings

| | | | |
|---|---|---|---|
| Rainfall Methodology | FSR | Analysis Speed | Normal |
| Rainfall Events | Singular | Skip Steady State | x |
| FSR Region | England and Wales | Drain Down Time (mins) | 240 |
| M5-60 (mm) | 17.000 | Additional Storage (m³/ha) | 0.0 |
| Ratio-R | 0.300 | Starting Level (m) | |
| Summer CV | 1.000 | Check Discharge Rate(s) | x |
| Winter CV | 1.000 | Check Discharge Volume | x |

**Storm Durations**

| 15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 |
|---|---|---|---|---|---|---|---|---|---|---|---|

| Return Period (years) | Climate Change (CC %) | Additional Area (A %) | Additional Flow (Q %) | Return Period (years) | Climate Change (CC %) | Additional Area (A %) | Additional Flow (Q %) |
|---|---|---|---|---|---|---|---|
| 2 | 0 | 0 | 0 | 100 | 40 | 0 | 0 |
| 30 | 0 | 0 | 0 | | | | |

## Node 13 Online Hydro-Brake® Control

| | | | |
|---|---|---|---|
| Flap Valve | x | Objective | (HE) Minimise upstream storage |
| Replaces Downstream Link | x | Sump Available | ✓ |
| Invert Level (m) | 62.790 | Product Number | CTL-SHE-0178-1730-1600-1730 |
| Design Depth (m) | 1.600 | Min Outlet Diameter (m) | 0.225 |
| Design Flow (l/s) | 17.3 | Min Node Diameter (mm) | 1800 |

## Node 16 Online Hydro-Brake® Control

| | | | |
|---|---|---|---|
| Flap Valve | x | Objective | (HE) Minimise upstream storage |
| Replaces Downstream Link | x | Sump Available | ✓ |
| Invert Level (m) | 65.488 | Product Number | CTL-SHE-0145-9400-0800-9400 |
| Design Depth (m) | 0.800 | Min Outlet Diameter (m) | 0.225 |
| Design Flow (l/s) | 9.4 | Min Node Diameter (mm) | 1200 |

## Node Tank Outlet 1 Tank Storage Structure

Invert Level (m) 62.800 | Time to half empty (mins) 68 | Analyse flow through structure x

**Inlets**

Tank Inlet 1 | Tank Inlet 2

| Depth (m) | Area (m²) | Depth (m) | Area (m²) | Depth (m) | Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 49.6 | 1.600 | 49.6 | 1.601 | 0.0 |

## Node Tank Outlet 2 Tank Storage Structure

Invert Level (m) 65.500 | Time to half empty (mins) 58 | Analyse flow through structure x

**Inlets**

Tank Inlet 3

| Depth (m) | Area (m²) | Depth (m) | Area (m²) | Depth (m) | Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 42.8 | 0.800 | 42.8 | 0.801 | 0.0 |

**Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 9 | 65.415 | 0.065 | 6.2 | 0.0732 | 0.0000 | OK |
| 15 minute summer | 2 | 9 | 65.290 | 0.111 | 22.9 | 0.1585 | 0.0000 | OK |
| 15 minute summer | 3 | 9 | 65.116 | 0.109 | 22.9 | 0.1557 | 0.0000 | OK |
| 15 minute summer | 4 | 9 | 65.891 | 0.091 | 14.7 | 0.1030 | 0.0000 | OK |
| 15 minute summer | 5 | 9 | 65.599 | 0.049 | 14.7 | 0.0555 | 0.0000 | OK |
| 15 minute summer | 6 | 9 | 64.901 | 0.122 | 37.7 | 0.1752 | 0.0000 | OK |
| 15 minute summer | 7 | 9 | 64.894 | 0.044 | 4.5 | 0.0497 | 0.0000 | OK |
| 15 minute summer | 8 | 9 | 64.535 | 0.133 | 41.4 | 0.1910 | 0.0000 | OK |
| 60 minute summer | Tank Inlet 1 | 38 | 63.138 | 0.338 | 23.8 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 9 | 9 | 63.174 | 0.074 | 6.5 | 0.0841 | 0.0000 | OK |
| 15 minute summer | 10 | 9 | 63.555 | 0.055 | 12.2 | 0.0790 | 0.0000 | OK |
| 60 minute summer | 11 | 38 | 63.133 | 0.254 | 15.3 | 0.3630 | 0.0000 | OK |
| 60 minute summer | 12 | 38 | 63.133 | 0.305 | 14.1 | 0.4360 | 0.0000 | SURCHARGED |
| 60 minute summer | Tank Inlet 2 | 38 | 63.133 | 0.333 | 12.8 | 0.0000 | 0.0000 | OK |
| 60 minute summer | Tank Outlet 1 | 38 | 63.120 | 0.320 | 21.7 | 16.0162 | 0.0000 | SURCHARGED |
| 60 minute summer | 13 | 38 | 63.119 | 0.329 | 16.2 | 0.8371 | 0.0000 | SURCHARGED |
| 60 minute summer | Outfall to Canal | 38 | 62.833 | 0.080 | 15.9 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 14 | 9 | 66.061 | 0.061 | 9.0 | 0.0870 | 0.0000 | OK |
| 60 minute summer | 15 | 37 | 65.689 | 0.131 | 10.8 | 0.1880 | 0.0000 | OK |
| 60 minute summer | Tank Inlet 3 | 37 | 65.689 | 0.189 | 10.5 | 0.0000 | 0.0000 | OK |
| 60 minute summer | Tank Outlet 2 | 37 | 65.678 | 0.178 | 5.5 | 7.6505 | 0.0000 | OK |
| 60 minute summer | 16 | 37 | 65.678 | 0.190 | 7.1 | 0.3359 | 0.0000 | OK |
| 60 minute summer | Outfall to Sewer | 37 | 65.492 | 0.062 | 7.1 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 2 | 6.2 | 0.886 | 0.349 | 0.0671 | |
| 15 minute summer | 2 | 1.001 | 3 | 22.9 | 1.191 | 0.441 | 0.3304 | |
| 15 minute summer | 3 | 1.002 | 6 | 23.0 | 1.119 | 0.442 | 0.4677 | |
| 15 minute summer | 4 | 2.000 | 5 | 14.7 | 1.398 | 0.293 | 0.2867 | |
| 15 minute summer | 5 | 2.001 | 6 | 14.7 | 1.138 | 0.105 | 0.1521 | |
| 15 minute summer | 6 | 1.003 | 8 | 36.9 | 1.768 | 0.501 | 0.3344 | |
| 15 minute summer | 7 | 3.000 | 8 | 4.5 | 0.973 | 0.187 | 0.1084 | |
| 15 minute summer | 8 | 1.004 | Tank Inlet 1 | 41.0 | 1.790 | 0.556 | 0.1020 | |
| 15 minute summer | 9 | 4.000 | 11 | 6.5 | 0.774 | 0.449 | 0.0895 | |
| 15 minute summer | 10 | 5.000 | 11 | 12.2 | 2.201 | 0.244 | 0.0335 | |
| 60 minute summer | 11 | 4.001 | 12 | 14.1 | 0.517 | 0.156 | 0.5120 | |
| 60 minute summer | 12 | 4.002 | Tank Inlet 2 | 12.8 | 0.505 | 0.141 | 0.1603 | |
| 60 minute summer | Tank Outlet 1 | 1.005 | 13 | 16.2 | 0.462 | 0.179 | 0.1003 | |
| 60 minute summer | 13 | 1.006 | Outfall to Canal | 15.9 | 1.120 | 0.274 | 0.0425 | 37.6 |
| 15 minute summer | 14 | 6.000 | 15 | 9.0 | 1.384 | 0.319 | 0.0955 | |
| 60 minute summer | 15 | 6.001 | Tank Inlet 3 | 10.5 | 0.872 | 0.180 | 0.0480 | |
| 60 minute summer | Tank Outlet 2 | 5.002 | 16 | 5.2 | -0.251 | 0.124 | 0.0624 | |
| 60 minute summer | 16 | 5.003 | Outfall to Sewer | 7.1 | 0.766 | 0.167 | 0.0804 | 15.8 |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.93%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 9 | 65.448 | 0.098 | 11.7 | 0.1103 | 0.0000 | OK |
| 15 minute summer | 2 | 9 | 65.352 | 0.173 | 43.1 | 0.2479 | 0.0000 | OK |
| 15 minute summer | 3 | 9 | 65.177 | 0.170 | 43.1 | 0.2430 | 0.0000 | OK |
| 15 minute summer | 4 | 9 | 65.931 | 0.131 | 27.6 | 0.1477 | 0.0000 | OK |
| 15 minute summer | 5 | 9 | 65.617 | 0.067 | 27.6 | 0.0762 | 0.0000 | OK |
| 15 minute summer | 6 | 9 | 64.981 | 0.202 | 70.8 | 0.2884 | 0.0000 | OK |
| 15 minute summer | 7 | 9 | 64.911 | 0.061 | 8.4 | 0.0690 | 0.0000 | OK |
| 15 minute summer | 8 | 10 | 64.656 | 0.254 | 77.0 | 0.3632 | 0.0000 | SURCHARGED |
| 60 minute summer | Tank Inlet 1 | 41 | 63.535 | 0.735 | 45.4 | 0.0000 | 0.0000 | OK |
| 60 minute summer | 9 | 42 | 63.529 | 0.429 | 7.1 | 0.4854 | 0.0000 | SURCHARGED |
| 15 minute summer | 10 | 8 | 63.580 | 0.080 | 22.9 | 0.1143 | 0.0000 | OK |
| 60 minute summer | 11 | 42 | 63.529 | 0.650 | 28.0 | 0.9298 | 0.0000 | SURCHARGED |
| 60 minute summer | 12 | 42 | 63.528 | 0.700 | 26.3 | 1.0024 | 0.0000 | SURCHARGED |
| 60 minute summer | Tank Inlet 2 | 42 | 63.528 | 0.728 | 24.8 | 0.0000 | 0.0000 | OK |
| 60 minute summer | Tank Outlet 1 | 42 | 63.513 | 0.713 | 36.2 | 35.1669 | 0.0000 | SURCHARGED |
| 60 minute summer | 13 | 42 | 63.512 | 0.722 | 19.7 | 1.8363 | 0.0000 | SURCHARGED |
| 30 minute summer | Outfall to Canal | 19 | 62.837 | 0.084 | 17.3 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 14 | 9 | 66.089 | 0.089 | 16.9 | 0.1272 | 0.0000 | OK |
| 60 minute summer | 15 | 39 | 65.868 | 0.310 | 20.8 | 0.4440 | 0.0000 | SURCHARGED |
| 60 minute summer | Tank Inlet 3 | 39 | 65.868 | 0.368 | 19.4 | 0.0000 | 0.0000 | OK |
| 60 minute summer | Tank Outlet 2 | 39 | 65.853 | 0.353 | 10.2 | 14.9983 | 0.0000 | SURCHARGED |
| 60 minute summer | 16 | 39 | 65.853 | 0.365 | 11.2 | 0.6443 | 0.0000 | SURCHARGED |
| 120 minute summer | Outfall to Sewer | 72 | 65.501 | 0.071 | 9.4 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 2 | 11.7 | 0.965 | 0.659 | 0.1168 | |
| 15 minute summer | 2 | 1.001 | 3 | 43.1 | 1.333 | 0.829 | 0.5581 | |
| 15 minute summer | 3 | 1.002 | 6 | 43.2 | 1.232 | 0.831 | 0.7935 | |
| 15 minute summer | 4 | 2.000 | 5 | 27.6 | 1.642 | 0.550 | 0.4531 | |
| 15 minute summer | 5 | 2.001 | 6 | 27.6 | 1.370 | 0.197 | 0.2541 | |
| 15 minute summer | 6 | 1.003 | 8 | 68.6 | 1.946 | 0.930 | 0.5656 | |
| 15 minute summer | 7 | 3.000 | 8 | 8.4 | 0.995 | 0.348 | 0.2477 | |
| 15 minute summer | 8 | 1.004 | Tank Inlet 1 | 73.8 | 1.879 | 1.002 | 0.1746 | |
| 60 minute summer | 9 | 4.000 | 11 | 5.8 | 0.709 | 0.399 | 0.1878 | |
| 15 minute summer | 10 | 5.000 | 11 | 23.4 | 2.504 | 0.469 | 0.0708 | |
| 60 minute summer | 11 | 4.001 | 12 | 26.3 | 0.636 | 0.290 | 0.5383 | |
| 60 minute summer | 12 | 4.002 | Tank Inlet 2 | 24.8 | 0.574 | 0.274 | 0.1603 | |
| 60 minute summer | Tank Outlet 1 | 1.005 | 13 | 19.7 | 0.556 | 0.218 | 0.1003 | |
| 60 minute summer | 13 | 1.006 | Outfall to Canal | 17.3 | 1.143 | 0.297 | 0.0451 | 71.8 |
| 15 minute summer | 14 | 6.000 | 15 | 17.1 | 1.555 | 0.606 | 0.1660 | |
| 60 minute summer | 15 | 6.001 | Tank Inlet 3 | 19.4 | 0.767 | 0.334 | 0.0719 | |
| 60 minute summer | Tank Outlet 2 | 5.002 | 16 | 8.0 | -0.440 | 0.188 | 0.0713 | |
| 60 minute summer | 16 | 5.003 | Outfall to Sewer | 9.4 | 0.826 | 0.222 | 0.0990 | 30.4 |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.83%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 10 | 66.229 | 0.879 | 21.1 | 0.9940 | 0.0000 | SURCHARGED |
| 15 minute summer | 2 | 10 | 66.126 | 0.947 | 69.4 | 1.3544 | 0.0000 | SURCHARGED |
| 15 minute summer | 3 | 10 | 65.893 | 0.886 | 59.8 | 1.2682 | 0.0000 | SURCHARGED |
| 15 minute summer | 4 | 9 | 65.998 | 0.198 | 49.7 | 0.2237 | 0.0000 | OK |
| 15 minute summer | 5 | 9 | 65.675 | 0.125 | 50.1 | 0.1408 | 0.0000 | OK |
| 15 minute summer | 6 | 10 | 65.567 | 0.788 | 99.0 | 1.1278 | 0.0000 | SURCHARGED |
| 15 minute summer | 7 | 9 | 64.946 | 0.096 | 15.2 | 0.1087 | 0.0000 | OK |
| 15 minute summer | 8 | 10 | 64.830 | 0.428 | 108.3 | 0.6121 | 0.0000 | SURCHARGED |
| 120 minute summer | Tank Inlet 1 | 80 | 64.526 | 1.726 | 54.5 | 0.0000 | 0.0000 | OK |
| 120 minute summer | 9 | 78 | 64.501 | 1.401 | 8.4 | 1.5845 | 1.3409 | FLOOD |
| 120 minute summer | 10 | 78 | 64.514 | 1.014 | 15.8 | 1.4508 | 0.0000 | SURCHARGED |
| 120 minute summer | 11 | 78 | 64.509 | 1.630 | 31.5 | 2.3319 | 0.0000 | SURCHARGED |
| 120 minute summer | 12 | 78 | 64.509 | 1.681 | 29.6 | 2.4055 | 0.0000 | SURCHARGED |
| 120 minute summer | Tank Inlet 2 | 78 | 64.509 | 1.709 | 27.8 | 0.0000 | 0.0000 | OK |
| 120 minute summer | Tank Outlet 1 | 80 | 64.496 | 1.696 | 40.3 | 77.7824 | 0.0000 | SURCHARGED |
| 120 minute summer | 13 | 80 | 64.495 | 1.705 | 19.9 | 4.3384 | 0.0000 | SURCHARGED |
| 120 minute summer | Outfall to Canal | 80 | 62.837 | 0.084 | 17.3 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 14 | 9 | 66.327 | 0.327 | 30.3 | 0.4677 | 0.0000 | SURCHARGED |
| 120 minute summer | 15 | 80 | 66.297 | 0.739 | 24.4 | 1.0581 | 0.0000 | SURCHARGED |
| 120 minute summer | Tank Inlet 3 | 80 | 66.297 | 0.797 | 23.1 | 0.0000 | 0.0000 | OK |
| 120 minute summer | Tank Outlet 2 | 80 | 66.281 | 0.781 | 12.9 | 32.8201 | 0.0000 | SURCHARGED |
| 120 minute summer | 16 | 80 | 66.280 | 0.792 | 13.2 | 1.3996 | 0.0000 | SURCHARGED |
| 15 minute winter | Outfall to Sewer | 9 | 65.501 | 0.071 | 9.4 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 2 | 15.8 | 0.982 | 0.891 | 0.1689 | |
| 15 minute summer | 2 | 1.001 | 3 | 59.8 | 1.503 | 1.150 | 0.6834 | |
| 15 minute summer | 3 | 1.002 | 6 | 55.9 | 1.405 | 1.075 | 0.9058 | |
| 15 minute summer | 4 | 2.000 | 5 | 50.1 | 1.764 | 0.997 | 0.7967 | |
| 15 minute summer | 5 | 2.001 | 6 | 47.5 | 1.702 | 0.339 | 0.3333 | |
| 15 minute summer | 6 | 1.003 | 8 | 97.2 | 2.444 | 1.319 | 0.6371 | |
| 15 minute summer | 7 | 3.000 | 8 | 14.5 | 1.004 | 0.600 | 0.3006 | |
| 15 minute summer | 8 | 1.004 | Tank Inlet 1 | 109.1 | 2.743 | 1.480 | 0.1752 | |
| 120 minute summer | 9 | 4.000 | 11 | 6.9 | 0.584 | 0.480 | 0.1878 | |
| 120 minute summer | 10 | 5.000 | 11 | 14.0 | 1.648 | 0.279 | 0.1065 | |
| 120 minute summer | 11 | 4.001 | 12 | 29.6 | 0.577 | 0.327 | 0.5383 | |
| 120 minute summer | 12 | 4.002 | Tank Inlet 2 | 27.8 | 0.593 | 0.307 | 0.1603 | |
| 120 minute summer | Tank Outlet 1 | 1.005 | 13 | 19.9 | 0.578 | 0.219 | 0.1003 | |
| 120 minute summer | 13 | 1.006 | Outfall to Canal | 17.3 | 1.144 | 0.298 | 0.0452 | 167.8 |
| 15 minute summer | 14 | 6.000 | 15 | 26.7 | 1.567 | 0.948 | 0.2585 | |
| 120 minute summer | 15 | 6.001 | Tank Inlet 3 | 23.1 | 0.711 | 0.398 | 0.0719 | |
| 120 minute summer | Tank Outlet 2 | 5.002 | 16 | 9.0 | -0.491 | 0.213 | 0.0713 | |
| 120 minute summer | 16 | 5.003 | Outfall to Sewer | 9.4 | 0.826 | 0.222 | 0.0990 | 71.4 |