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Engineering Services Report

Proposed Residential Development
Belmount, Academy Street, Navan,
County Meath

Client: Coindale Limited

Job No. D061

November 2019

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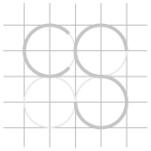

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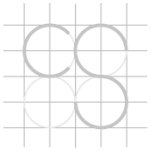
ENGINEERING SERVICES REPORT

PROPOSED RESIDENTIAL DEVELOPMENT BELMOUNT, ACADEMY STREET, NAVAN, COUNTY MEATH

CONTENTS

File Location: J:\D_JOBS\Job-D061\B_Documents\C_Civil\A_CS Reports\ESR

Job Ref.	Author	Reviewed By	Authorised By	Issue Date	Rev. No.
D061	GS	RFM	RFM	20.11.2019	-



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1.0 INTRODUCTION

1.1 Scope

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Coindale Limited to prepare an Engineering Services Report for a proposed residential development at Belmount, Academy Street, Navan, County Meath.

This report assesses the proposed development under the following headings:

- Stormwater Drainage Infrastructure;
- Foul Drainage Infrastructure;
- Potable Water Infrastructure.

In preparing this report, CS Consulting has made reference to the following:

- Meath County Council Development Plan 2013–2019;
- Irish Water Code of Practice for Potable Water;
- Irish Water Code of Practice for Waste Water;
- SuDs Manual – C753, (CIRIA & HR Wallingford, 2005);
- Irish Water & Meath County Council Records;
- A review of the opinion of An Bord Pleanála, (item 2.0 regarding water supply and wastewater infrastructure constraints & item No. 9.0, pertaining to storm water management).

The Engineering Services Report is to be read in conjunction with the engineering drawings and documents submitted by CS Consulting and with the various additional information submitted by the other members of the design team, as part of the planning submission.

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The site of the proposed development lies along the west of Academy Street and the Dublin Road. The site has a total area of approx. 15.10 ha and is located in the administrative jurisdiction of Meath County Council.

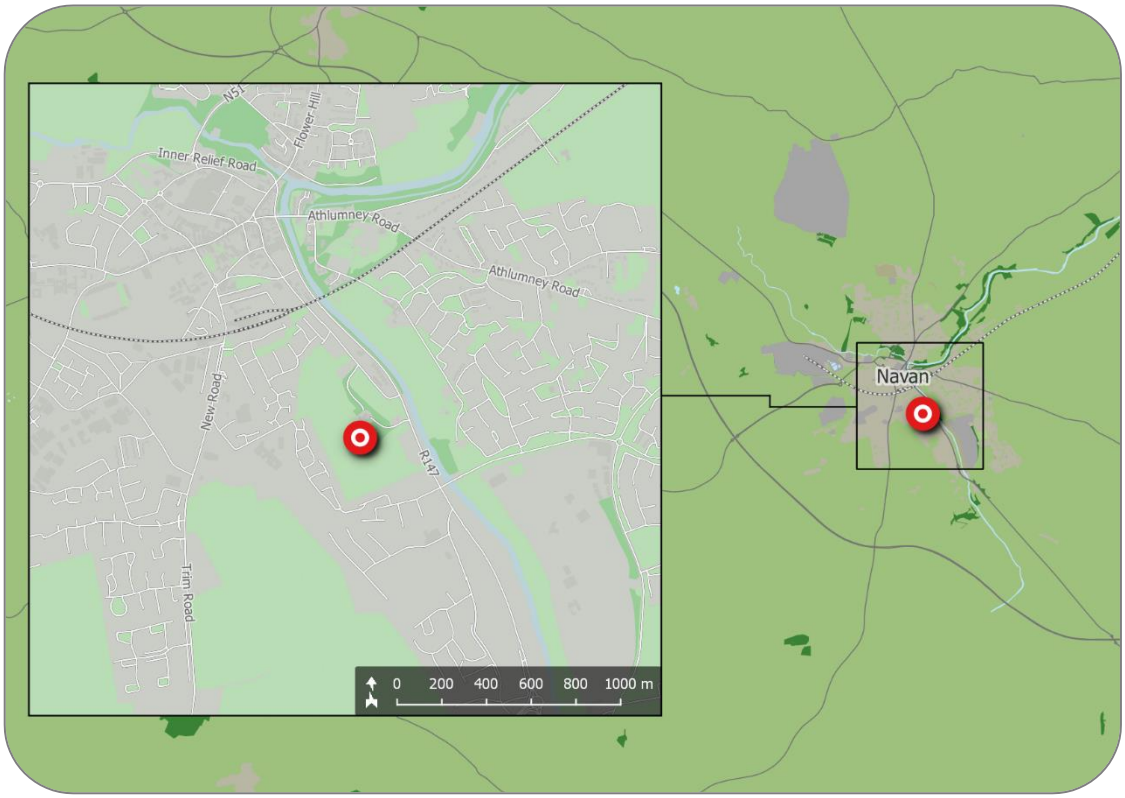


Figure 1 – Location of proposed development site
(map data sources: EPA, OSM Contributors)

The location of the proposed development site is shown in Figure 1 above; the indicative extents of the development site, as well as relevant elements of the surrounding road network, are shown in more detail in figure 2.

The site is bounded to the west and south by existing dwellings; to the east by existing dwellings and Academy Street and to the north by agricultural

lands and Belmount House located in proximity to the centre of the subject site.

Figure 2 – Site extents and transport infrastructure
(map data and imagery sources: NTA, OSM Contributors, Google)

2.2 Existing Land Use

The subject site is greenfield and predominantly agricultural in use without any prominent water features on site.

2.3 Description of Proposed Development

The proposal relates to a residential development of 544 no. dwellings on a site of c. 15.1 hectares comprising 260 no. houses (18 no. 2 bed, 207 no. 3 bed & 35 no. 4 bed) and 198 no. apartments (46 no. 1 bed, 152 no 2 bed), 30 no. duplex apartments (15 no. 2 bed & 15 no. 3 bed), and 56 no. dwellings in corner blocks (16 no. 1 bed, 24 no. 2 bed & 16 no. 3 bed) as well as the provision of two crèches (ground floor of apartment building [c. 195 sq. m] and single storey creche in housing area [c. 443 sq. m]) Open Space of c. 2.63 hectares including playground areas; all ancillary landscape works with public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of cycle paths; Provision of vehicular and pedestrian looped access through the site from 3 no. junctions located on Academy Street as well as pedestrian connection in south east of site to Dublin Road and upgrade works to junction onto the Dublin Road; along with 875 no. car parking spaces (including 4 no. car sharing spaces) and 581 cycle spaces; Surface water attenuation measures and underground attenuation systems as well as all ancillary site development works (reprofiling of site as required) as well as connection to existing public water supply and drainage services. All site development and landscape works.

The proposed development shall be constructed in five phases. Please refer the Figure 3 for the site layout phasing.

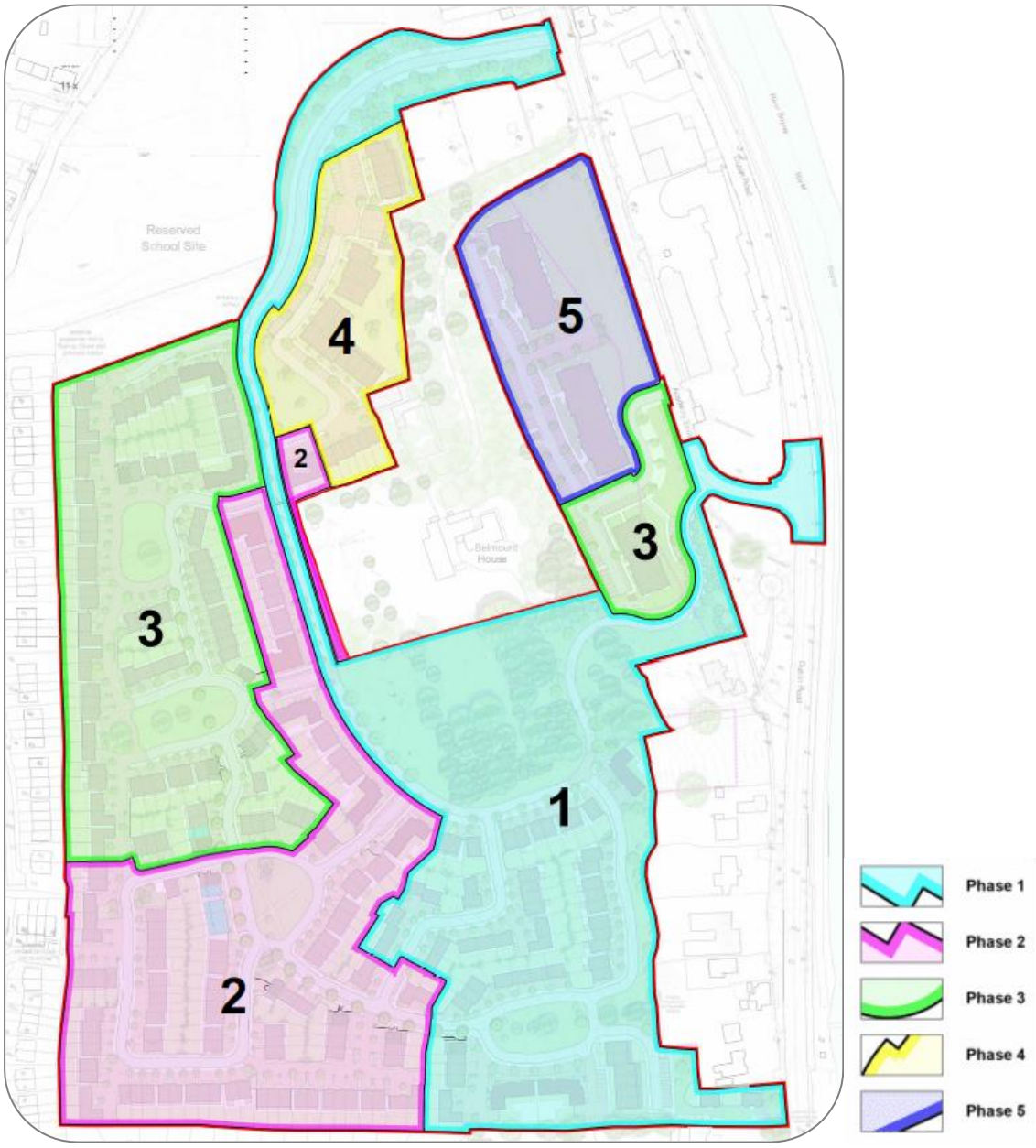


Figure 3 – Site Layout Phasing
(imagery data: Conroy Crowe Kelly Architects)

3.0 STORM WATER INFRASTRUCTURE

3.1 Existing Storm Water Infrastructure

Following receipt of Meath County Council's drainage records the information provided does not indicate a public storm sewer within the immediate area of the development site. However, discussions with MCC Road Department indicate that a public storm sewer is located in Academy Street. See **Appendix A** for a copy of the local authority drainage records.

3.2 Proposed Storm Water Arrangements

3.2.1 In accordance with Meath County Council requirements, storm water is to be managed in two phases. The *first* is to restrict storm water runoff from the proposed development to greenfield runoff rates.

3.2.2 The greenfield runoff has been established as 2.47 L/sec/ha, a minimum discharge rate of 2.0l/sec/ha is allowable under *Regional Drainage Code of Practice & Greater Dublin Strategic Drainage Study*. The green field runoff rate was established by reviewing:

i) Soil Type (From Flood Studies Report) – **Soil type 2**,

ii) Standard Annual Average Rainfall (From Met Eireann) – **908mm/yr.**

iii) Climate Change factor – **10% Increase**.

3.2.3 The hardstanding area of the proposed developed was established and a storm water network was designed in accordance with Meath County Council requirements. The stormwater network was modelled using the micro drainage '*WinDes*' software and a simulation carried out to ensure

no-onsite flooding would be experienced during a 1-in-100year storm event, increased by 10% for the predicated effects of climate change.

3.2.4 To retain the attenuation required for the proposed development a number of underground storage tanks are proposed. These tanks will allow storm water not retained in sustainable urban drainage features to be withheld on site and released at a controlled rate. By restricting the discharge rate to the greenfield runoff rate for all storm water events the required attenuation volume to be retained is **4594m³**. This volume is to be provide in a 6No. of underground tanks.

3.2.5 The proposed storm water network will require two outfall locations. At each location an attenuated discharge rate has been applied for all stormwater events. *Storm Outfall 1* has a discharge rate of **6.1l/sec** & *Storm Outfall 2* has a discharge rate of **30.1l/sec**. These restricted flows will be provided by the use of flow control devises.

3.2.6 It is proposed to outfall the storm water, (from Storm outfall 1 & 2) from the proposed development into an existing storm water culvert which crosses from Academy St. heading east and outfalls into the River Boyne.

3.2.7 The proposed development also consists of two detached houses adjacent to Dublin Road. These two units are not connected to the main storm water drainage network and have their own onsite storm water attenuation system. Due to small hardstanding area of these two units a restricted flow of **0.6l/sec** is proposed, and these will be controlled via a throttle pipe. On site attenuation has been calculated as **8m³** and will be provided by the inclusion on site of an oversized manhole.

3.2.8 See CS Consulting's drawing D061-012, D061-013, D061-014 and D061-015 for details of the proposed drainage system. See **Appendix B** for attenuation & storm water design calculations.

3.2.9 The *second* aspect to be included in new applications is to incorporate sustainable urban drainage systems, (SuDs) proposals into the scheme. SuDs requires that storm water quality is increased before disposal and, where applicable, storm water is discharged into the ground on site.

3.2.10 A Site Investigation Report has been carried out by IGSL Ltd and infiltration testing was performed in accordance with BRE Digest 365 'Soakaway Design'. The infiltration rate is 0.00049 metres/minute which characterize the soils on the subject site unsuited for soakaway or percolations purposes. The low permeability is typical of the local glacial till deposition. See **Appendix C** for a copy of the IGSL's infiltration testing.

3.2.11 To implement these requirements, a number of SuDs measures are proposed:

i) To include low water usage sanitary appliances,

ii) To provide for 'water butts' to retain rain water on site for local re-use, for landscaping and maintenance purposes,

iii) Permeable paving for car parking bays,

iv) To install local infiltration drains to the rear of the housing units to allow for initial storage of rainwater,

v) Ultimately storm water storage is required for the extreme storm events. This will be provided by an on-site attenuation tank designed for 100-year event plus 10% climate change, as noted above.

Refer to CS Consulting drawings D061-070 for proposed overall SuDs strategy.

4.0 FOUL WATER INFRASTRUCTURE

4.1 Existing Foul Infrastructure

4.1.1 A review of Irish Water records indicates that there is a public foul sewer on Academy Street. A site visit was carried out by CS Consulting which identified same as a 225mm diameter material. See **Appendix A** for a copy of Irish Waters records. This sewer drains from south to north along the Dublin Road.

4.1.2 There is an existing wastewater treatment plant in Navan, constructed in 2007 to serve Navan (town of County Meath), which has an organic design treatment capacity of 50,000 PE (population equivalent) and that the current size of the agglomeration served is approx. 37,286 PE; the plant therefore currently has a spare capacity of 12,714 PE.

4.2.0 Proposed Foul Infrastructure

4.2.1 The proposed development is to consist of 544no. residential units and 2 no. creches, 638m^2 GFA.

Based on Irish Water guidelines, the foul effluent generated will be:

- For the residential units:
  - ⇒ 446l/ residential unit (based on 2.7 persons per residential unit x 150l/person/day, + a 10% increase factor).
  - ⇒ 446l/day/residential unit x 544 units = 242,624l/day = 242.64 m^3/day;
  - ⇒ 2.808l/sec Average flow (1 DWF);
  - ⇒ 8.424l/sec Peak Flow (3 DWF – popular between 1001 and 5000).

- For the creche:

  ⇒ 105 children/staff x 90l/day/person = 9,450 l/day = 9.45 m^3/day;

  ⇒ 0.109 l/sec Average flow (1 DWF);

  ⇒ 0.656 l/sec Peak Flow (6 DWF).

Therefore, the proposed development will generate wastewater in order of 252.09 m^3/day, which equates to:

- 2.392 l/sec Average flow; and
- 9.08 l/sec Peak Flow.

4.2.2 All foul effluent generated from the proposed development will be collected in pipes of 225mm in diameter and flow under gravity to the existing 225mm diameter foul sewer on Academy Street via a new connection. The drainage network for the development will be in accordance with Part H of the Building Regulations and to the requirements and specifications of Irish Water.

4.2.3 As required by Irish Water, who since 2014 are in control of foul drainage services, a pre-connection enquiry, PCE, is required to be submitted for all SHD applications to ensure that current existing infrastructure is available. CS Consulting submitted the PCE to Irish Water and received a response on the 26/02/2018. Their response gave details of substantial offsite works which would be required to facilitate the proposed development.

4.2.4 Discussions were held with Irish Water who reviewed their response and carried out additional checks on the current network. Following Irish Waters internal review, a second pre-connection enquiry was lodged with Irish Water for which a response was received on the 19/08/2019. This response indicated that a section of foul sewer was required to be constructed for the development. Please see **Appendix D** for the Confirmation of Feasibility

Letter. No third-party permissions or CPO is required for the connection or up-grade works. In accordance with the requirements of the SHD process the applicants proposed design is to be submitted to Irish Water for vetting and approval. This has bene carried out and a copy of the Design Acceptance letter is located in **Appendix D**.

4.2.5 The proposed foul drainage infrastructure has been designed using the WinDes Micro Drainage Program and a copy of the sewer design is included in **Appendix E**. See CS Consulting drawings D061-012, D061-013, D061-014 and D061-015 for details and drawing D061-069 for extents of foul sewer improvement works.

5.0 POTABLE WATER SUPPLY

5.1 Existing Potable Water Infrastructure

A review of Irish Water records indicates a 200mm diameter cast iron watermain. See **Appendix A** for a copy of the Irish Water records.

5.2 Proposed Potable Water Infrastructure

The proposed development is to consist of 544no. residential units and 2 No. creches, 638m2 GFA.

Based on Irish Water guidelines, the water demand will be:

- For the residential units:
  - ⇒ 405l/day per residential unit (based on 2.7 persons per unit x 150l/person/day).
  - ⇒ 405l/day /unit x 544 units = 220,320.00 l/day = 220.32 m^3/day.
  - ⇒ 2.55 l/sec Average water demand,
  - ⇒ 7.65 l/sec Peak water demand (3 times average water demand).
- For the creche:
  - ⇒ 105 children x 90l/day/person = 9,450 l/day = 9.45 m^3/day;
  - ⇒ 0.109 l/sec Average water demand;
  - ⇒ 0.547 l/sec Peak water demand (5 times average water demand).

As such, the overall water demand from the proposed development is 229.77 m^3/day. The peak water demand is 8.197 l/s.

It is proposed to connect into the existing potable water supply located on Academy Street. A new Pre-Connection Enquiry response was issued by Irish Water. Details of same are included in this report. Please see **Appendix D** for the Confirmation of Feasibility Letter.

Refer to CS Consulting drawing D061-022, D061-023, D061-024 and D061-025 for details.

5.3 Upgrade Works Required

5.3.1 Discussions were held with Irish Water who reviewed their response and carried out additional checks on the current network. Following Irish Waters internal review, a second pre-connection enquiry was lodged with Irish Water for which a response was received on the 19/08/2019. This response indicated that a section of watermain was required to be constructed for the development. Please see **Appendix D** for the Confirmation of Feasibility Letter. No third party permissions or CPO's are required for the connection or up-grade works. In accordance with the requirements of the SHD process the applicants proposed design is to be submitted to Irish Water for vetting and approval. This has bene carried out and a copy of the Design Acceptance letter is located in **Appendix D**.

5.3.2 See CS Consulting drawings D061-022, D061-023, D061-024 and D061-025 for details and drawing D061-069 for extents of potable watermain improvement works.

5.4.0 Response To Planning Board Opinion No.2

5.4.1 Following the initial submission to An Bord Pleanála, the applicant received a number of points to be clarified as part of this submission. These are noted below.

'Further consideration/clarification of the documents as they relate to both water supply and wastewater infrastructure constraints in the network serving the proposed development. The documentation at application stage should clearly indicate the nature of any constraints, the proposals to address the constraints, whether such constraints require statutory consent and/or may be subject to a compulsory purchase process and if such consent has been received or CPO completed, who is going to undertake the works required and the timelines involved in addressing these constraints relative to the construction and completion of the proposed development.'

5.4.2 As noted Irish Water have clarified their initial pre-connection response regarding both foul & potable water capacity issues in the general Navan region. Their revised pre-connection enquiry response indicates that the local wastewater network & potable system have sufficient capacity for the proposed development in line with the associated up-grade works required.

5.4.3 All up-grade works as noted in the Irish Water response for both wastewater & potable water do not require statutory consents, compulsory purchase orders or third-party consent.

5.4.4 The proposed works would be subject to consultation and agreement from the applicant to progress.

6.0 SERVICE ROAD INFRASTRUCTURE

6.1 Site Development Access

The proposed development will consist of 3 vehicular priority junctions to/from Academy Street. The site development will facilitate and provide ample pedestrian permeability links to existing road infrastructure adjoining and surrounding the development site.

The site development accesses have been identified throughout the application as Access 1, Access 2 and Access 3. See figure 4 below for their locations.

Figure 4 – Site Development Access Locations
(imagery data: Conroy Crowe Kelly Architects)

6.1.1 Access 1

The main entrance to the proposed development is located to the northern boundary of the overall site, outside Belmount House curtilage (a protected structure). The road 1 alignment is adjoining the proposed school site to the north and has been designed to accommodate future access to the school site in addition as the main access road to the residential scheme.

This service road shall consist of the following road cross-section;

- 6m wide carriageway
- 2m wide off-road cycle track on both sides
- 2m wide footpath on both sides

The road geometry does not exceed 5% in gradient and the footpath and cycle track alignment follows alongside the carriageway roadside kerbed edge.

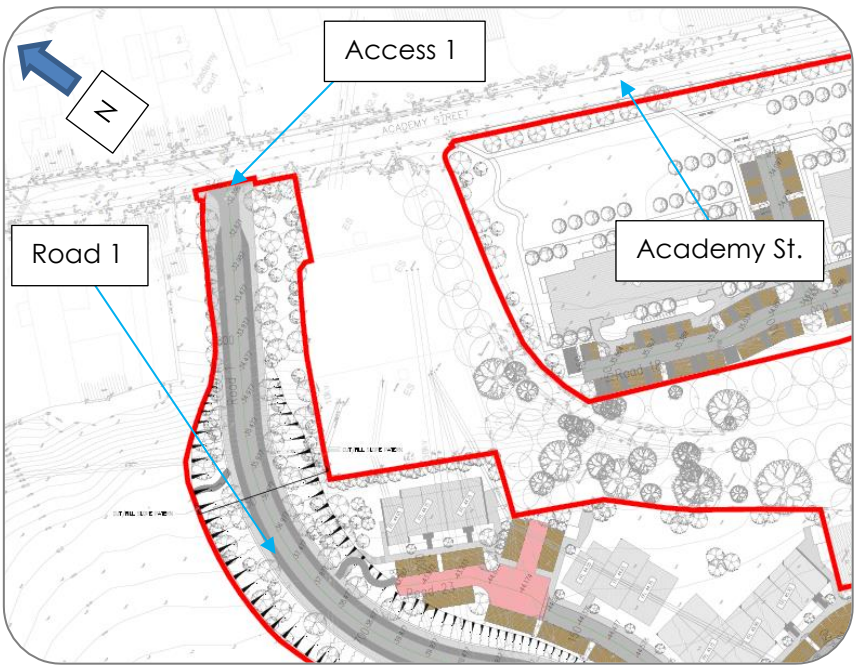


Figure 5 – Access 1, Road 1
(imagery data: CS Consulting Drawing D061-028)

6.1.2 Access 2

The apartment development will be accessed separately from the housing scheme via a proposed priority junction to/from Academy St. The junction with Academy Street has been designed to meet visibility splays and gradients as required for a priority junction in accordance with the Design Manual for Urban Roads and Streets.

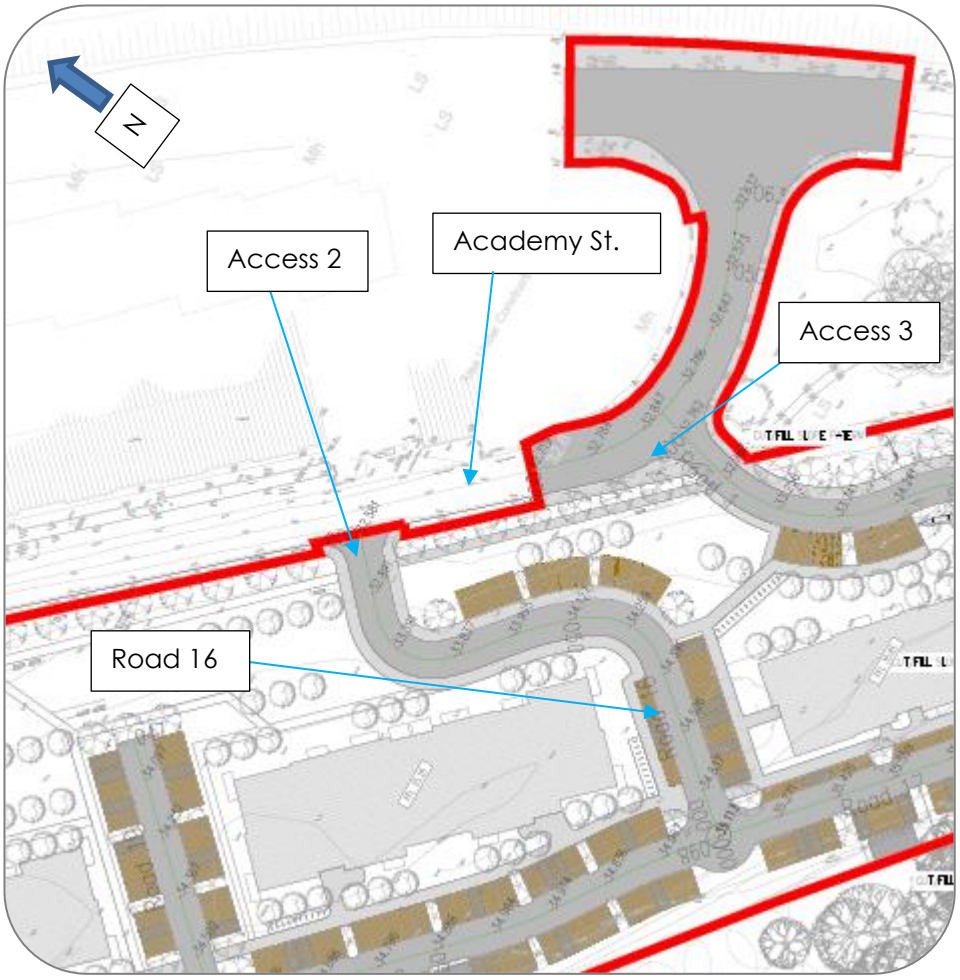


Figure 6 – Access 2, Road 16
(imagery data: CS Consulting Drawing D061-028)

6.1.3 Access 3

A secondary access to the site has been provided known as access (No. 3) Following discussions with Meath County Council and in conjunction with the design team Arborists the location of this entrance is at the southern end of the site boundary with Academy Street.

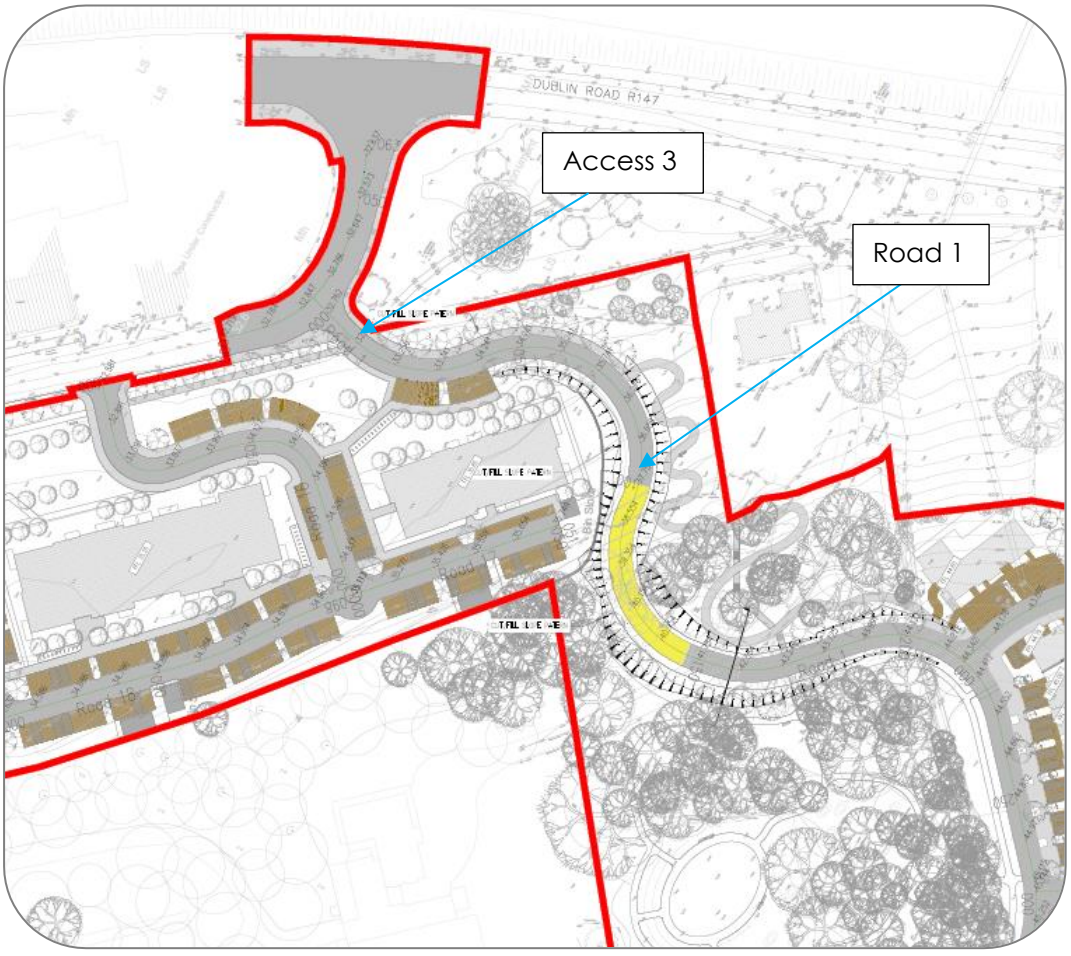


Figure 7 – Access 3, Road 2
(imagery data: CS Consulting Drawing D061-029)

There are several constraints on the design of this secondary entrance to the residential development and they are identified below,

- There is an existing stand of trees wrapping around the south of Belmount House continuing the preserved trees in front of the House, on a relatively steep hill. These are being maintained.

- The existing right of way from Belmount House through this stand of trees must be maintained.

- The proposed entrance road must meet the right of way at grade.

- The proposed entrance road must minimise impact on the root systems of the stand of trees.

- The proposed entrance must meet Academy Street with adequate sightlines and gradients for a priority junction. Refer to drawing D061-043 for development access sightline

The road has been designed to meet the existing ground level as it reaches the residential development within the site. Refer to Drawing D061-029 Road Layout for details which shows the proposed road in the overall site context.

This design incorporates specialist advice on tree preservation. It uses a 5.5 metre width carriageway. The 2.0-metre-wide footpath is not "tied" to the carriageway but follows a more natural route through the trees.

This does have an impact on achievable gradients. The road through this area reaches a maximum 8% gradient. The derived road alignment results in the following proactive design thereby minimising the impact on existing trees:

- It minimises the distance that the road would impact on the stand of trees thereby reducing the number of trees affected.

- It minimises the impact of cut required to achieve lower road gradients on the southern boundary to the trees in front of the proposed houses within the development site.

- It also minimises impact on the ridge of the site between Belmount House and these houses maintaining the existing ground level of 44.5m at the end of the right of way at Belmount and the residential T-junction between houses 238 and 269 / 273also at 44.5 (see DRG D061-029).

- Alternative vehicle access locations were looked at during the design process including immediate access from the Old Dublin Road. Following discussions with the local authority access from Academy St was the preferred option on road safety grounds.

The junction with Academy Street has been designed to meet visibility splays and gradients as required for a priority junction in accordance with the Design Manual for Urban Roads and Streets.

Included within the overall development is an upgrade of the existing Old Dublin Road / Academy St priority junction to a signalised junction thereby improving pedestrian permeability and traffic safety at this junction.

6.2 Road Layout

The internal road layout of the proposed development is designed in accordance with the guidance provided in the Design Manual for Urban Roads and Streets (DMURS). As stated in the introduction to the DMURS:

"Better street design in urban areas will facilitate the implementation of policy on sustainable living by achieving a better balance between all modes of transport and road users. It will encourage more people to

choose to walk, cycle or use public transport by making the experience safer and more pleasant."

Given the location, shape and topography of the site, and the scale and type of the residential development proposed, we submit that the proposed site layout is well suited to this residentially zoned development lands.

The development layout design put forward improves the existing roads environs with enhanced pedestrian facilities. The development design ensures pedestrian permeability to the west, north and east while also providing for future pedestrian connectivity to the south.

The final development layout incorporates features that benefit vulnerable road users by encouraging low vehicle speeds (such as reduced road corner radii, kerb buildouts, plantings, etc.), following the principle that roads should serve a community and not dominating it. The provision of good permeability for pedestrians, cyclists & public transport are all key objectives of the proposed site layout.

The proposed internal service road shall have a minimum width of 5.5m, to permit safe access for service and emergency vehicles, with a vehicle turning head provided where required. Car parking areas are arranged so as to minimise conflicts with pedestrian movements.

Raised footpaths flank the service road to either side connecting to existing footpaths along Academy St. Further footpaths connecting directly to adjacent residential communities to the south and west shall provide good permeability for the development lands.

The internal layout of the proposed development incorporates numerous design features such as distinctive surface materials and colours, strong

landscaping proposals and modern furniture structures, in order to establish a sense of place within an urban neighbourhood environment.

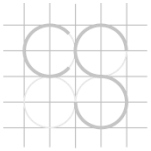
The proposed development will consist of 3 vehicular priority junctions to/from Academy Street. The site development will facilitate and provide ample pedestrian permeability links to existing road infrastructure adjoining and surrounding the development site.

6.3 Swept Path Analysis

Swept path analyses has been carried out for a refuse collection vehicle and a fire tender accessing and manoeuvring within the proposed development. These analyses, provided on drawings D061-044 to D061-49 within this planning application, indicate that the design of the development accesses and internal layout can accommodate these vehicle movements where required.

Appendix A:

Drainage & Watermain Records



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UISCE ÉIREANN : IRISH WATER

Legend

Sewer Gravity Mains (Irish Water owned)

Liquid Type

- Combined
- Foul
- Overflow
- Unknown

Sewer Manholes

Manhole Type

- Cascade
- Catchpit
- Hatchbox
- Lamphole
- Standard
- Other; Unknown

0 0.05 0.1 0.2 Km

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale @ A3:	**1:7,018**
Drawing No.:	**IW-AGG-2015-360 (2/2)**
Drawn By:	**CD**
Checked By:	**RS**
Approved By:	**<Add Name>**
Drawn Date	**<dd/mm/yyyy>**
Checked Date:	**<dd/mm/yyyy>**
Approved Date:	**<dd/mm/yyyy>**

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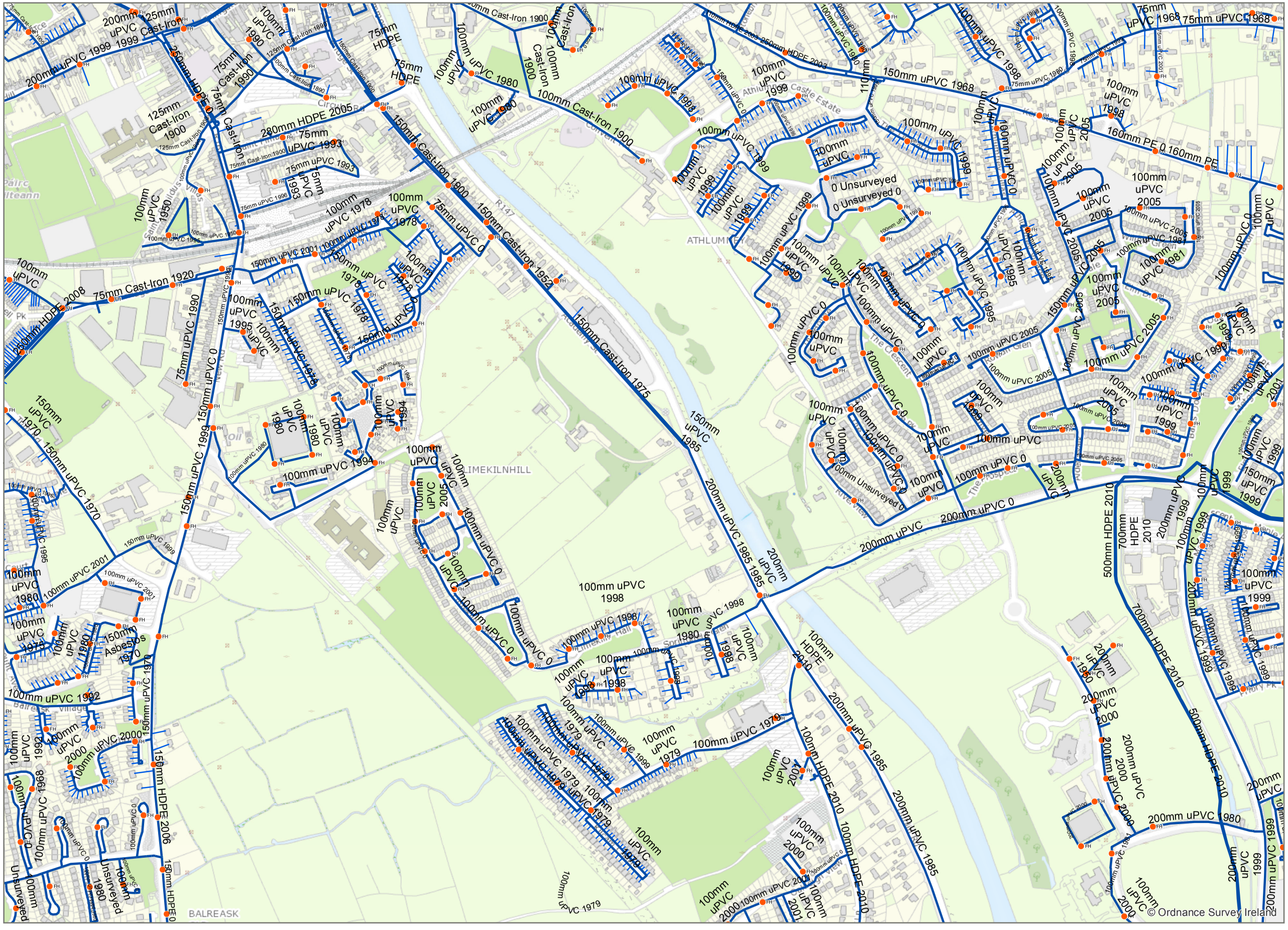
Map Template Design: kcarroll@water.ie

Limekiln, Navan, Co. Meath
Waste Water Network



UISCE ÉIREANN : IRISH WATER

Legend

Water Mains(Irish Water Owned)

Liquid Type

- Untreated
- Potable Water

Water Hydrants

Hydrant Function

- FH — Fire Hydrant
- FH/WO — Fire Hydrant/Washout
- WO — Washout

0 0.05 0.1 0.2 Km

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale @ A3:	**1:7,018**
Drawing No.:	**IW-AGG-2015-360-(2/2)**
Drawn By:	**CD**
Checked By:	**RS**
Approved By:	**<Add Name>**
Drawn Date	**<dd/mm/yyyy>**
Checked Date:	**<dd/mm/yyyy>**
Approved Date:	**<dd/mm/yyyy>**

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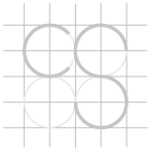
Map Template Design: kcarroll@water.ie

Limekiln, Navan, Co. Meath
Water Network

Appendix B:

Storm Network and Attenuation Calculations



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Project: Academy Street
Project No.: Outfall 1
Calculation: Attenuation 100-year
Calcs By: DD
Checked By: RFM
Date: 8/1/19

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Site Location:	Meath		
Design Storm Return Period:	100 years		
Climate Change Factor:	10 %		
Soil Type:	2		
Total Site Area:	2.48 ha		
Hardstand Area:	1.42 ha	.....@	80% Impervious
Softstand Area:	1.06 ha	.....@	20% Impervious
Effective Impermeable Area:	1.35 ha		

Allowable Outflow	**Calculate**	
IH124: QBAR = 0.00108 x $AREA^{0.89}$ x $SAAR^{1.17}$ x $SOIL^{2.17}$		
AREA:	0.02 km^2	
SAAR:	908 mm	
SOIL:	0.3	
QBAR/ha	2.47 l/s/ha	
Allowable Outflow	**6.1 l/s**	Smallest Allowable Discharge Rate

Storage required =	**737 m^3**	

Duration (min)	Rainfall 100-Year (mm)	Rainfall 100-Year with CCF (mm)	Intensity (mm/hr)	Discharge (Q = 2.78iA) (l/s)	Proposed Runoff (m^3)	Contiguous Land Runoff (m^3)	Total Runoff (m^3)	Allowable Outflow (m^3)	Storage Required (m^3)
2	0.0	0.0	0.0	0	0	0	0	1	-1
5	12.6	13.9	166.3	622	187	0	187	2	185
10	17.6	19.4	116.2	435	261	0	261	4	257
15	20.7	22.8	91.1	341	307	0	307	6	301
30	25.5	28.1	56.1	210	378	0	378	11	367
60	31.6	34.8	34.8	130	468	0	468	22	446
120	39.1	43.0	21.5	80	579	0	579	44	535
180	44.2	48.6	16.2	61	655	0	655	66	589
240	48.3	53.1	13.3	50	716	0	716	88	628
360	54.7	60.2	10.0	38	811	0	811	132	678
540	61.9	68.1	7.6	28	917	0	917	198	719
720	67.6	74.4	6.2	23	1002	0	1002	264	737
1080	76.5	84.2	4.7	17	1134	0	1134	396	737
1440	83.6	92.0	3.8	14	1239	0	1239	529	710
2880	93.6	103.0	2.1	8	1387	0	1387	1057	330
4320	102.7	113.0	1.6	6	1522	0	1522	1586	-64
5760	111.0	122.1	1.3	5	1645	0	1645	2115	-470
8640	126.1	138.7	1.0	4	1869	0	1869	3172	-1303
11520	139.6	153.6	0.8	3	2069	0	2069	4229	-2161
14400	152.2	167.4	0.7	3	2255	0	2255	5286	-3031
17280	164.0	180.4	0.6	2	2430	0	2430	6344	-3914
23040	186.1	204.7	0.5	2	2758	0	2758	8458	-5701
28800	206.6	227.3	0.5	2	3061	0	3061	10573	-7512
36000	230.8	253.9	0.4	2	3420	0	3420	13216	-9796

Project: Academy Street
Project No.: Outfall 2
Calculation: Attenuation 100-year
Calcs By: DD
Checked By: RFM
Date: 8/1/19

CS CONSULTING GROUP
DUBLIN - LONDON - LIMERICK

Site Location:	Meath		
Design Storm Return Period:	100 years		
Climate Change Factor:	10 %		
Soil Type:	2		
Total Site Area:	12.20 ha		
Hardstand Area:	7.42 ha	.....@	80% Impervious
Softstand Area:	4.79 ha	.....@	20% Impervious
Effective Impermeable Area:	6.89 ha		

Allowable Outflow	**Calculate**	
IH124: QBAR = 0.00108 x $AREA^{0.89}$ x $SAAR^{1.17}$ x $SOIL^{2.17}$		
AREA:	0.12 km^2	
SAAR:	908 mm	
SOIL:	0.3	
QBAR/ha	2.47 l/s/ha	
Allowable Outflow	**30.1 l/s**	Smallest Allowable Discharge Rate

Storage required =	**3849 m^3**	

Duration (min)	Rainfall 100-Year (mm)	Rainfall 100-Year with CCF (mm)	Intensity (mm/hr)	Discharge (Q = 2.78iA) (l/s)	Proposed Runoff (m^3)	Contiguous Land Runoff (m^3)	Total Runoff (m^3)	Allowable Outflow (m^3)	Storage Required (m^3)
2	0.0	0.0	0.0	0	0	0	0	4	-4
5	12.6	13.9	166.3	3186	956	0	956	9	947
10	17.6	19.4	116.2	2225	1335	0	1335	18	1317
15	20.7	22.8	91.1	1745	1570	0	1570	27	1543
30	25.5	28.1	56.1	1075	1934	0	1934	54	1880
60	31.6	34.8	34.8	666	2397	0	2397	109	2288
120	39.1	43.0	21.5	412	2966	0	2966	217	2749
180	44.2	48.6	16.2	310	3353	0	3353	326	3027
240	48.3	53.1	13.3	254	3663	0	3663	434	3229
360	54.7	60.2	10.0	192	4149	0	4149	651	3498
540	61.9	68.1	7.6	145	4695	0	4695	977	3718
720	67.6	74.4	6.2	119	5127	0	5127	1302	3825
1080	76.5	84.2	4.7	90	5802	0	5802	1953	3849
1440	83.6	92.0	3.8	73	6341	0	6341	2604	3736
2880	93.6	103.0	2.1	41	7099	0	7099	5209	1890
4320	102.7	113.0	1.6	30	7790	0	7790	7813	-24
5760	111.0	122.1	1.3	24	8419	0	8419	10418	-1999
8640	126.1	138.7	1.0	18	9564	0	9564	15627	-6063
11520	139.6	153.6	0.8	15	10588	0	10588	20836	-10248
14400	152.2	167.4	0.7	13	11544	0	11544	26045	-14501
17280	164.0	180.4	0.6	12	12439	0	12439	31254	-18815
23040	186.1	204.7	0.5	10	14115	0	14115	41672	-27557
28800	206.6	227.3	0.5	9	15670	0	15670	52090	-36420
36000	230.8	253.9	0.4	8	17506	0	17506	65112	-47607

Project: Academy Street
Project No.: Outfall 2
Calculation: Attenuation 100-year
Calcs By: DD
Checked By: RFM
Date: 8/1/19

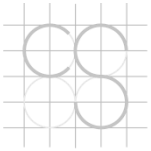
CS CONSULTING GROUP
DUBLIN - LONDON - LIMERICK

Site Location:	Meath		
Design Storm Return Period:	100 years		
Climate Change Factor:	10 %		
Soil Type:	2		
Total Site Area:	0.21 ha		
Hardstand Area:	0.04 ha	.....@	80% Impervious
Softstand Area:	0.00 ha	.....@	20% Impervious
Effective Impermeable Area:	0.03 ha		

Allowable Outflow	**Calculate**	
IH124: QBAR = 0.00108 x $AREA^{0.89}$ x $SAAR^{1.17}$ x $SOIL^{2.17}$		
AREA:	0.00 km^2	
SAAR:	908 mm	
SOIL:	0.3	
QBAR/ha	2.47 l/s/ha	
Allowable Outflow	**0.6 l/s**	Smallest Allowable Discharge Rate

Storage required =	**8 m^3**	

Duration (min)	Rainfall 100-Year (mm)	Rainfall 100-Year with CCF (mm)	Intensity (mm/hr)	Discharge (Q = 2.78iA) (l/s)	Proposed Runoff (m^3)	Contiguous Land Runoff (m^3)	Total Runoff (m^3)	Allowable Outflow (m^3)	Storage Required (m^3)
2	0.0	0.0	0.0	0	0	0	0	0	0
5	12.6	13.9	166.3	13	4	0	4	0	4
10	17.6	19.4	116.2	9	5	0	5	0	5
15	20.7	22.8	91.1	7	6	0	6	1	6
30	25.5	28.1	56.1	4	8	0	8	1	7
60	31.6	34.8	34.8	3	10	0	10	2	8
120	39.1	43.0	21.5	2	12	0	12	4	8
180	44.2	48.6	16.2	1	14	0	14	6	7
240	48.3	53.1	13.3	1	15	0	15	9	6
360	54.7	60.2	10.0	1	17	0	17	13	4
540	61.9	68.1	7.6	1	19	0	19	19	0
720	67.6	74.4	6.2	0	21	0	21	26	-5
1080	76.5	84.2	4.7	0	24	0	24	39	-15
1440	83.6	92.0	3.8	0	26	0	26	52	-26
2880	93.6	103.0	2.1	0	29	0	29	104	-75
4320	102.7	113.0	1.6	0	32	0	32	156	-124
5760	111.0	122.1	1.3	0	34	0	34	207	-173
8640	126.1	138.7	1.0	0	39	0	39	311	-272
11520	139.6	153.6	0.8	0	43	0	43	415	-372
14400	152.2	167.4	0.7	0	47	0	47	518	-471
17280	164.0	180.4	0.6	0	51	0	51	622	-572
23040	186.1	204.7	0.5	0	57	0	57	829	-772
28800	206.6	227.3	0.5	0	64	0	64	1037	-973
36000	230.8	253.9	0.4	0	71	0	71	1296	-1225



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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - Scotland and Ireland

Return Period (years)	5	Add Flow / Climate Change (%)	0
M5-60 (mm)	17.500	Minimum Backdrop Height (m)	0.000
Ratio R	0.333	Maximum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	50	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500
PIMP (%)	100		

Designed with Level Inverts

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
2.000	22.656	0.390	58.1	0.052	4.00	0.0	0.600	o	225
2.001	38.771	0.388	100.0	0.053	0.00	0.0	0.600	o	225
2.002	28.413	0.284	100.0	0.109	0.00	0.0	0.600	o	225
2.003	14.364	0.144	100.0	0.045	0.00	0.0	0.600	o	225
3.000	32.852	0.329	99.9	0.093	4.00	0.0	0.600	o	225
2.004	52.226	0.522	100.0	0.132	0.00	0.0	0.600	o	225
2.005	41.628	0.416	100.1	0.035	0.00	0.0	0.600	o	225
2.006	19.958	0.200	99.8	0.046	0.00	0.0	0.600	o	225
4.000	22.453	0.225	100.0	0.070	4.00	0.0	0.600	o	225
4.001	9.641	0.096	100.0	0.022	0.00	0.0	0.600	o	300
4.002	40.577	0.403	100.6	0.179	0.00	0.0	0.600	o	300
4.003	10.003	0.100	100.0	0.069	0.00	0.0	0.600	o	300
4.004	32.455	0.809	40.1	0.059	0.00	0.0	0.600	o	300
4.005	42.548	1.064	40.0	0.083	0.00	0.0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
2.000	50.00	4.22	45.424	0.052	0.0	0.0	0.0	1.72	68.4	7.1
2.001	50.00	4.71	45.034	0.105	0.0	0.0	0.0	1.31	52.0	14.3
2.002	50.00	5.08	44.000	0.214	0.0	0.0	0.0	1.31	52.0	29.0
2.003	50.00	5.26	43.716	0.259	0.0	0.0	0.0	1.31	52.0	35.1
3.000	50.00	4.42	43.500	0.093	0.0	0.0	0.0	1.31	52.0	12.5
2.004	50.00	4.67	41.200	0.000	2.0	0.0	0.0	1.31	52.0	2.0
2.005	50.00	5.20	39.000	0.035	2.0	0.0	0.0	1.31	52.0	6.8
2.006	50.00	5.45	37.700	0.081	2.0	0.0	0.0	1.31	52.0	13.0
4.000	50.00	4.29	43.800	0.070	0.0	0.0	0.0	1.31	52.0	9.4
4.001	50.00	4.39	43.575	0.092	0.0	0.0	0.0	1.57	111.1	12.5
4.002	50.00	4.82	43.479	0.271	0.0	0.0	0.0	1.57	110.8	36.7
4.003	50.00	4.93	43.076	0.339	0.0	0.0	0.0	1.57	111.1	45.9
4.004	50.00	5.14	42.976	0.398	0.0	0.0	0.0	2.49	176.0	53.9
4.005	50.00	5.43	42.166	0.481	0.0	0.0	0.0	2.49	176.2	65.1

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
5.000	21.514	0.545	39.5	0.042	4.00	0.0	0.600	o	225
4.006	14.318	0.367	39.0	0.090	0.00	0.0	0.600	o	300
4.007	13.241	0.331	40.0	0.063	0.00	0.0	0.600	o	300
4.008	10.053	0.393	25.6	0.055	0.00	0.0	0.600	o	300
4.009	12.896	0.161	80.0	0.000	0.00	0.0	0.600	o	300
2.007	26.681	0.267	99.9	0.027	0.00	0.0	0.600	o	375
2.008	24.382	0.244	99.9	0.033	0.00	0.0	0.600	o	375
2.009	29.021	0.290	100.1	0.038	0.00	0.0	0.600	o	375
2.010	45.672	0.457	100.0	0.052	0.00	0.0	0.600	o	375
2.011	25.383	0.169	150.0	0.042	0.00	0.0	0.600	o	225
2.012	20.043	0.134	149.6	0.000	0.00	0.0	0.600	o	225
6.000	38.057	0.381	99.9	0.119	4.00	0.0	0.600	o	225
6.001	8.217	0.087	94.4	0.036	0.00	0.0	0.600	o	300
7.000	31.101	0.311	100.0	0.073	4.00	0.0	0.600	o	225
6.002	54.425	0.226	240.8	0.130	0.00	0.0	0.600	o	300
8.000	31.609	0.540	58.5	0.071	4.00	0.0	0.600	o	225
6.003	36.994	0.115	321.7	0.129	0.00	0.0	0.600	o	375
6.004	58.603	0.224	261.6	0.275	0.00	0.0	0.600	o	375
6.005	24.977	0.066	378.4	0.053	0.00	0.0	0.600	o	450
6.006	21.027	0.049	429.1	0.097	0.00	0.0	0.600	o	450

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
5.000	50.00	4.17	42.175	0.042	0.0	0.0	0.0	2.09	83.0	5.7
4.006	50.00	5.52	41.103	0.613	0.0	0.0	0.0	2.53	178.5	83.0
4.007	50.00	5.61	40.736	0.675	0.0	0.0	0.0	2.49	176.2	91.5
4.008	50.00	5.66	38.000	0.730	0.0	0.0	0.0	3.12	220.5	98.9
4.009	50.00	5.79	37.607	0.730	0.0	0.0	0.0	1.76	124.4	98.9
2.007	50.00	6.03	36.500	0.839	2.0	0.0	0.0	1.81	200.2	115.6
2.008	50.00	6.26	35.200	0.871	2.0	0.0	0.0	1.81	200.2	120.0
2.009	50.00	6.52	33.900	0.909	2.0	0.0	0.0	1.81	200.0	125.1
2.010	50.00	6.94	31.400	0.962	2.0	0.0	0.0	1.81	200.1	132.2
2.011	50.00	4.40	30.943	0.000	6.1	0.0	0.0	1.07	42.4	6.1
2.012	50.00	4.71	30.674	0.000	6.1	0.0	0.0	1.07	42.4	6.1
6.000	50.00	4.48	45.500	0.119	0.0	0.0	0.0	1.31	52.0	16.1
6.001	50.00	4.57	45.119	0.155	0.0	0.0	0.0	1.62	114.4	20.9
7.000	50.00	4.40	46.000	0.073	0.0	0.0	0.0	1.31	52.0	9.9
6.002	50.00	5.47	45.032	0.357	0.0	0.0	0.0	1.01	71.3	48.4
8.000	50.00	4.31	46.375	0.071	0.0	0.0	0.0	1.71	68.1	9.6
6.003	50.00	6.08	44.806	0.558	0.0	0.0	0.0	1.00	111.0	75.6
6.004	50.00	6.96	44.691	0.833	0.0	0.0	0.0	1.12	123.2	112.8
6.005	50.00	7.36	44.467	0.886	0.0	0.0	0.0	1.04	165.3	120.0
6.006	50.00	7.72	44.401	0.983	0.0	0.0	0.0	0.98	155.1	133.1

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
9.000	17.267	0.325	53.1	0.000	4.00	0.0	0.600	o	225
9.001	50.024	1.434	34.9	0.181	0.00	0.0	0.600	o	225
9.002	16.390	0.246	66.6	0.060	0.00	0.0	0.600	o	225
9.003	46.292	0.579	80.0	0.138	0.00	0.0	0.600	o	300
9.004	17.695	0.140	126.4	0.059	0.00	0.0	0.600	o	300
10.000	27.143	0.181	150.0	0.100	4.00	0.0	0.600	o	225
10.001	8.773	0.062	141.5	0.000	0.00	0.0	0.600	o	225
9.005	11.492	0.064	179.6	0.042	0.00	0.0	0.600	o	300
11.000	29.260	0.146	200.4	0.134	4.00	0.0	0.600	o	225
11.001	44.774	2.019	22.2	0.061	0.00	0.0	0.600	o	225
11.002	15.715	0.670	23.5	0.042	0.00	0.0	0.600	o	225
9.006	31.323	0.115	272.4	0.091	0.00	0.0	0.600	o	450
9.007	15.831	0.038	416.6	0.037	0.00	0.0	0.600	o	450
6.007	31.132	0.300	103.8	0.080	0.00	0.0	0.600	o	450
6.008	42.137	0.702	60.0	0.081	0.00	0.0	0.600	o	450
12.000	57.623	0.414	139.2	0.246	4.00	0.0	0.600	o	300
13.000	17.614	0.148	119.0	0.057	4.00	0.0	0.600	o	225
13.001	14.680	0.085	172.7	0.037	0.00	0.0	0.600	o	225
13.002	27.107	0.161	168.4	0.051	0.00	0.0	0.600	o	225
12.001	25.810	0.101	254.4	0.046	0.00	0.0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.000	50.00	4.16	48.825	0.000	0.0	0.0	0.0	1.80	71.5	0.0
9.001	50.00	4.54	48.500	0.181	0.0	0.0	0.0	2.22	88.4	24.6
9.002	50.00	4.71	47.066	0.241	0.0	0.0	0.0	1.60	63.8	32.7
9.003	50.00	5.14	46.820	0.380	0.0	0.0	0.0	1.76	124.4	51.4
9.004	50.00	5.35	46.241	0.439	0.0	0.0	0.0	1.40	98.8	59.5
10.000	50.00	4.42	46.110	0.100	0.0	0.0	0.0	1.07	42.4	13.6
10.001	50.00	4.56	45.500	0.100	0.0	0.0	0.0	1.10	43.6	13.6
9.005	50.00	5.52	45.438	0.581	0.0	0.0	0.0	1.17	82.7	78.7
11.000	50.00	4.53	48.810	0.134	0.0	0.0	0.0	0.92	36.6	18.1
11.001	50.00	4.80	48.664	0.194	0.0	0.0	0.0	2.79	111.0	26.3
11.002	50.00	4.89	46.645	0.237	0.0	0.0	0.0	2.71	107.9	32.1
9.006	50.00	5.94	45.374	0.909	0.0	0.0	0.0	1.23	195.1	123.1
9.007	50.00	6.21	45.259	0.946	0.0	0.0	0.0	0.99	157.4	128.1
6.007	50.00	7.98	43.800	2.009	0.0	0.0	0.0	2.00	317.4	272.1
6.008	50.00	8.25	43.500	2.091	0.0	0.0	0.0	2.63	418.0	283.1
12.000	50.00	4.72	46.000	0.246	0.0	0.0	0.0	1.33	94.1	33.3
13.000	50.00	4.25	46.020	0.057	0.0	0.0	0.0	1.20	47.6	7.7
13.001	50.00	4.49	45.500	0.094	0.0	0.0	0.0	0.99	39.4	12.8
13.002	50.00	4.94	45.415	0.145	0.0	0.0	0.0	1.00	39.9	19.6
12.001	50.00	5.38	45.254	0.437	0.0	0.0	0.0	0.98	69.3	59.1

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
14.000	18.334	0.120	153.0	0.000	4.00	0.0	0.600	o	225
14.001	49.653	0.467	106.3	0.208	0.00	0.0	0.600	o	300
14.002	23.512	0.096	245.2	0.044	0.00	0.0	0.600	o	300
12.002	48.490	0.427	113.6	0.044	0.00	0.0	0.600	o	300
15.000	52.681	0.530	99.4	0.098	4.00	0.0	0.600	o	225
16.000	24.902	0.155	161.0	0.076	4.00	0.0	0.600	o	225
16.001	26.548	0.177	150.0	0.000	0.00	0.0	0.600	o	225
15.001	19.074	0.149	128.0	0.101	0.00	0.0	0.600	o	300
15.002	19.497	0.237	82.2	0.031	0.00	0.0	0.600	o	300
17.000	31.585	0.526	60.0	0.178	4.00	0.0	0.600	o	300
18.000	17.991	0.308	58.4	0.000	4.00	0.0	0.600	o	225
17.001	13.612	0.091	150.0	0.110	0.00	0.0	0.600	o	300
17.002	13.288	0.089	149.3	0.062	0.00	0.0	0.600	o	300
15.003	12.601	0.058	217.3	0.059	0.00	0.0	0.600	o	375
15.004	19.837	0.065	305.2	0.049	0.00	0.0	0.600	o	375
15.005	30.247	0.229	131.8	0.025	0.00	0.0	0.600	o	375
15.006	64.977	0.312	208.3	0.222	0.00	0.0	0.600	o	450
15.007	36.841	0.092	400.9	0.121	0.00	0.0	0.600	o	450

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
14.000	50.00	4.29	46.000	0.000	0.0	0.0	0.0	1.05	41.9	0.0
14.001	50.00	4.83	45.880	0.208	0.0	0.0	0.0	1.52	107.8	28.2
14.002	50.00	5.22	45.413	0.252	0.0	0.0	0.0	1.00	70.7	34.1
12.002	50.00	5.93	45.153	0.733	0.0	0.0	0.0	1.47	104.2	99.3
15.000	50.00	4.67	45.800	0.098	0.0	0.0	0.0	1.31	52.1	13.2
16.000	50.00	4.40	45.575	0.076	0.0	0.0	0.0	1.03	40.9	10.3
16.001	50.00	4.82	45.420	0.076	0.0	0.0	0.0	1.07	42.4	10.3
15.001	50.00	5.05	44.800	0.275	0.0	0.0	0.0	1.39	98.1	37.3
15.002	50.00	5.24	44.651	0.306	0.0	0.0	0.0	1.74	122.7	41.5
17.000	50.00	4.26	45.330	0.178	0.0	0.0	0.0	2.03	143.7	24.1
18.000	50.00	4.17	45.352	0.000	0.0	0.0	0.0	1.71	68.2	0.0
17.001	50.00	4.44	44.804	0.288	0.0	0.0	0.0	1.28	90.6	38.9
17.002	50.00	4.61	44.713	0.349	0.0	0.0	0.0	1.28	90.8	47.3
15.003	50.00	5.41	44.414	0.714	0.0	0.0	0.0	1.23	135.3	96.7
15.004	50.00	5.73	44.356	0.763	0.0	0.0	0.0	1.03	114.0	103.3
15.005	50.00	6.05	44.291	0.787	0.0	0.0	0.0	1.58	174.1	106.6
15.006	50.00	6.82	44.061	1.010	0.0	0.0	0.0	1.40	223.4	136.7
15.007	50.00	7.43	43.749	1.131	0.0	0.0	0.0	1.01	160.5	153.2

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
12.003	40.805	0.082	500.0	0.072	0.00	0.0	0.600	o	600
12.004	34.908	0.070	500.0	0.131	0.00	0.0	0.600	o	600
6.009	22.333	0.350	63.8	0.061	0.00	0.0	0.600	o	600
6.010	21.355	0.150	142.4	0.090	0.00	0.0	0.600	o	225
19.000	41.789	1.687	24.8	0.134	4.00	0.0	0.600	o	300
19.001	40.018	1.733	23.1	0.118	0.00	0.0	0.600	o	300
19.002	7.700	0.570	13.5	0.150	0.00	0.0	0.600	o	300
19.003	47.610	1.190	40.0	0.075	0.00	0.0	0.600	o	300
6.011	50.862	0.123	414.0	0.123	0.00	0.0	0.600	o	375
6.012	9.164	0.462	19.8	0.083	0.00	0.0	0.600	o	375
20.000	25.629	0.568	45.1	0.054	4.00	0.0	0.600	o	225
20.001	27.896	1.242	22.5	0.047	0.00	0.0	0.600	o	225
20.002	23.516	1.200	19.6	0.042	0.00	0.0	0.600	o	225
20.003	21.268	1.230	17.3	0.051	0.00	0.0	0.600	o	225
21.000	14.920	0.170	88.0	0.000	4.00	0.0	0.600	o	225
21.001	11.741	0.052	225.8	0.062	0.00	0.0	0.600	o	225
21.002	21.764	1.017	21.4	0.116	0.00	0.0	0.600	o	225
21.003	24.294	1.016	23.9	0.000	0.00	0.0	0.600	o	225
22.000	31.820	0.551	57.7	0.070	4.00	0.0	0.600	o	225
21.004	12.404	0.495	25.1	0.098	0.00	0.0	0.600	o	225

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
12.003	50.00	8.05	43.657	1.936	0.0	0.0	0.0	1.08	306.0	262.2
12.004	50.00	8.59	43.576	2.067	0.0	0.0	0.0	1.08	306.0	279.9
6.009	50.00	8.71	42.798	4.219	0.0	0.0	0.0	3.05	862.9	571.3
6.010	50.00	4.33	42.260	0.000	10.0	0.0	0.0	1.09	43.5	10.0
19.000	50.00	4.22	48.570	0.134	0.0	0.0	0.0	3.17	224.2	18.2
19.001	50.00	4.42	46.883	0.252	0.0	0.0	0.0	3.29	232.3	34.2
19.002	50.00	4.45	45.150	0.402	0.0	0.0	0.0	4.30	303.9	54.4
19.003	50.00	4.77	44.100	0.477	0.0	0.0	0.0	2.49	176.2	64.6
6.011	50.00	5.73	42.110	0.600	10.0	0.0	0.0	0.88	97.7	91.3
6.012	50.00	5.77	41.987	0.683	10.0	0.0	0.0	4.08	451.1	102.5
20.000	50.00	4.22	48.100	0.054	0.0	0.0	0.0	1.95	77.6	7.3
20.001	50.00	4.39	47.532	0.101	0.0	0.0	0.0	2.77	110.3	13.7
20.002	50.00	4.52	46.290	0.144	0.0	0.0	0.0	2.97	118.1	19.5
20.003	50.00	4.63	45.090	0.195	0.0	0.0	0.0	3.16	125.7	26.3
21.000	50.00	4.18	47.600	0.000	0.0	0.0	0.0	1.39	55.4	0.0
21.001	50.00	4.40	47.430	0.062	0.0	0.0	0.0	0.87	34.4	8.4
21.002	50.00	4.53	47.378	0.178	0.0	0.0	0.0	2.84	113.0	24.1
21.003	50.00	4.68	45.800	0.178	0.0	0.0	0.0	2.69	106.8	24.1
22.000	50.00	4.31	45.500	0.070	0.0	0.0	0.0	1.72	68.6	9.4
21.004	50.00	4.76	44.784	0.346	0.0	0.0	0.0	2.62	104.4	46.9

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
23.000	30.065	0.150	200.4	0.071	4.00	0.0	0.600	o	375
23.001	13.492	0.050	269.8	0.028	0.00	0.0	0.600	o	375
23.002	20.750	0.118	175.8	0.017	0.00	0.0	0.600	o	375
21.005	15.363	0.089	172.6	0.046	0.00	0.0	0.600	o	375
20.004	19.644	0.327	60.1	0.031	0.00	0.0	0.600	o	375
20.005	9.056	0.151	60.0	0.000	0.00	0.0	0.600	o	375
20.006	27.686	0.461	60.1	0.043	0.00	0.0	0.600	o	375
20.007	29.714	0.495	60.0	0.100	0.00	0.0	0.600	o	375
20.008	19.495	0.325	60.0	0.000	0.00	0.0	0.600	o	375
20.009	17.443	0.058	300.0	0.068	0.00	0.0	0.600	o	450
20.010	24.882	0.083	300.0	0.019	0.00	0.0	0.600	o	450
6.013	16.020	0.053	300.0	0.089	0.00	0.0	0.600	o	525
6.014	30.994	0.103	300.0	0.014	0.00	0.0	0.600	o	525
6.015	14.664	0.183	80.1	0.013	0.00	0.0	0.600	o	525
6.016	15.216	0.190	80.1	0.008	0.00	0.0	0.600	o	525
6.017	16.942	0.212	79.9	0.009	0.00	0.0	0.600	o	525
6.018	30.539	0.382	79.9	0.015	0.00	0.0	0.600	o	525
6.019	17.120	0.214	80.0	0.022	0.00	0.0	0.600	o	525
6.020	16.027	0.200	80.1	0.022	0.00	0.0	0.600	o	225
6.021	17.041	1.092	15.6	0.012	0.00	0.0	0.600	o	225
6.022	9.382	0.500	18.8	0.010	0.00	0.0	0.600	o	225
6.023	12.303	0.414	29.7	0.026	0.00	0.0	0.600	o	225
6.024	50.083	0.100	500.0	0.014	0.00	0.0	0.600	o	300
6.025	23.162	0.093	249.1	0.000	0.00	0.0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
23.000	50.00	4.39	43.000	0.071	0.0	0.0	0.0	1.28	140.9	9.6
23.001	50.00	4.60	42.850	0.098	0.0	0.0	0.0	1.10	121.3	13.3
23.002	50.00	4.85	42.800	0.116	0.0	0.0	0.0	1.36	150.6	15.6
21.005	50.00	5.04	42.682	0.508	0.0	0.0	0.0	1.38	152.0	68.8
20.004	50.00	5.18	42.300	0.734	0.0	0.0	0.0	2.34	258.6	99.4
20.005	50.00	5.24	41.973	0.734	0.0	0.0	0.0	2.34	258.8	99.4
20.006	50.00	5.44	41.500	0.777	0.0	0.0	0.0	2.34	258.6	105.2
20.007	50.00	5.65	41.039	0.876	0.0	0.0	0.0	2.34	258.8	118.6
20.008	50.00	5.79	40.544	0.876	0.0	0.0	0.0	2.34	258.8	118.6
20.009	50.00	6.04	40.219	0.944	0.0	0.0	0.0	1.17	185.8	127.8
20.010	50.00	6.39	40.161	0.963	0.0	0.0	0.0	1.17	185.8	130.4
6.013	50.00	6.60	40.078	1.734	10.0	0.0	0.0	1.29	278.8	244.9
6.014	50.00	7.00	40.024	1.748	10.0	0.0	0.0	1.29	278.8	246.8
6.015	50.00	7.10	39.921	1.762	10.0	0.0	0.0	2.50	542.0	248.5
6.016	50.00	7.20	39.000	1.770	10.0	0.0	0.0	2.50	542.2	249.6
6.017	50.00	7.31	37.800	1.779	10.0	0.0	0.0	2.51	542.8	250.9
6.018	50.00	7.52	35.500	1.794	10.0	0.0	0.0	2.51	542.7	253.0
6.019	50.00	7.63	34.200	1.817	10.0	0.0	0.0	2.51	542.5	256.0
6.020	50.00	4.18	33.057	0.000	30.0	0.0	0.0	1.46	58.1	30.0
6.021	50.00	4.27	32.857	0.012	30.0	0.0	0.0	3.33	132.4	31.6
6.022	50.00	4.32	31.765	0.022	30.0	0.0	0.0	3.03	120.7	32.9
6.023	50.00	4.40	31.265	0.048	30.0	0.0	0.0	2.41	95.8	36.5
6.024	50.00	5.60	30.851	0.062	30.0	0.0	0.0	0.70	49.2	38.4
6.025	50.00	5.99	30.751	0.062	30.0	0.0	0.0	0.99	70.1	38.4

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
24.000	39.105	1.081	36.2	0.159	4.00	0.0	0.600	o	225
24.001	29.145	0.195	149.5	0.135	0.00	0.0	0.600	o	300
24.002	47.900	0.475	100.8	0.085	0.00	0.0	0.600	o	375
24.003	39.487	0.159	248.3	0.128	0.00	0.0	0.600	o	375
25.000	38.494	0.449	85.7	0.122	4.00	0.0	0.600	o	225
25.001	9.450	0.097	97.4	0.054	0.00	0.0	0.600	o	225
24.004	33.636	0.224	150.2	0.147	0.00	0.0	0.600	o	375
24.005	10.468	0.070	149.5	0.022	0.00	0.0	0.600	o	375
24.006	30.356	0.202	150.3	0.037	0.00	0.0	0.600	o	375
24.007	15.704	0.105	149.6	0.026	0.00	0.0	0.600	o	375
6.026	32.127	0.032	1000.0	0.017	0.00	0.0	0.600	o	600
26.000	26.111	0.174	150.1	0.029	4.00	0.0	0.600	o	225
26.001	12.629	0.631	20.0	0.032	0.00	0.0	0.600	o	225
6.027	89.961	0.360	249.9	0.000	0.00	0.0	0.600	o	225
6.028	10.193	0.041	248.6	0.000	0.00	0.0	0.600	o	225
6.029	50.736	0.203	249.9	0.000	0.00	0.0	0.600	o	225

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
24.000	50.00	4.30	34.731	0.159	0.0	0.0	0.0	2.18	86.8	21.5
24.001	50.00	4.68	33.200	0.294	0.0	0.0	0.0	1.28	90.7	39.7
24.002	50.00	5.12	33.000	0.379	0.0	0.0	0.0	1.80	199.3	51.3
24.003	50.00	5.69	32.525	0.507	0.0	0.0	0.0	1.15	126.5	68.7
25.000	50.00	4.45	34.000	0.122	0.0	0.0	0.0	1.41	56.2	16.5
25.001	50.00	4.57	33.551	0.176	0.0	0.0	0.0	1.32	52.7	23.8
24.004	50.00	6.07	32.366	0.830	0.0	0.0	0.0	1.48	163.1	112.4
24.005	50.00	6.19	32.142	0.852	0.0	0.0	0.0	1.48	163.4	115.4
24.006	50.00	6.53	32.072	0.888	0.0	0.0	0.0	1.48	163.0	120.3
24.007	50.00	6.71	31.870	0.915	0.0	0.0	0.0	1.48	163.4	123.9
6.026	50.00	7.41	30.658	0.994	30.0	0.0	0.0	0.76	215.4	164.6
26.000	50.00	4.41	32.911	0.029	0.0	0.0	0.0	1.07	42.3	3.9
26.001	50.00	4.48	32.737	0.061	0.0	0.0	0.0	2.94	116.9	8.2
6.027	50.00	5.82	30.625	0.000	30.1	0.0	0.0	0.82	32.7	30.1
6.028	50.00	6.03	30.166	0.000	30.1	0.0	0.0	0.82	32.8	30.1
6.029	50.00	7.06	30.125	0.000	30.1	0.0	0.0	0.82	32.7	30.1

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-99	46.800	1.376	Open Manhole	1200	2.000	45.424	225				
SW-100	47.100	2.066	Open Manhole	1200	2.001	45.034	225	2.000	45.034	225	
SW-101	47.000	3.000	Open Manhole	1200	2.002	44.000	225	2.001	44.646	225	646
SW-102	45.650	1.934	Open Manhole	1200	2.003	43.716	225	2.002	43.716	225	
SW-103	46.150	2.650	Open Manhole	1200	3.000	43.500	225				
SW-104	44.750	3.550	Open Manhole	1200	2.004	41.200	225	2.003	43.572	225	2372
								3.000	43.171	225	1971
SW-105	42.175	3.175	Open Manhole	1200	2.005	39.000	225	2.004	40.678	225	1678
SW-106	40.100	2.400	Open Manhole	1200	2.006	37.700	225	2.005	38.584	225	884
SW-107	45.922	2.122	Open Manhole	1200	4.000	43.800	225				
SW-108	45.400	1.825	Open Manhole	1200	4.001	43.575	300	4.000	43.575	225	
SW-109	44.922	1.443	Open Manhole	1200	4.002	43.479	300	4.001	43.479	300	
SW-110	44.602	1.526	Open Manhole	1200	4.003	43.076	300	4.002	43.076	300	
SW-111	44.522	1.546	Open Manhole	1200	4.004	42.976	300	4.003	42.976	300	
SW-112	44.088	1.922	Open Manhole	1200	4.005	42.166	300	4.004	42.166	300	
SW-113	43.600	1.425	Open Manhole	1200	5.000	42.175	225				
SW-114	43.420	2.317	Open Manhole	1200	4.006	41.103	300	4.005	41.103	300	
								5.000	41.630	225	453
SW-115	43.100	2.364	Open Manhole	1200	4.007	40.736	300	4.006	40.736	300	
SW-116	42.919	4.919	Open Manhole	1200	4.008	38.000	300	4.007	40.405	300	2405
SW-117	39.350	1.743	Open Manhole	1200	4.009	37.607	300	4.008	37.607	300	
SW-118	39.075	2.575	Open Manhole	1350	2.007	36.500	375	2.006	37.500	225	850
								4.009	37.446	300	871
SW-119	37.800	2.600	Open Manhole	1350	2.008	35.200	375	2.007	36.233	375	1033
SW-120	36.600	2.700	Open Manhole	1350	2.009	33.900	375	2.008	34.956	375	1056
SW-121	35.230	3.830	Open Manhole	1350	2.010	31.400	375	2.009	33.610	375	2210
SW-122	32.900	1.957	Open Manhole	1350	2.011	30.943	225	2.010	30.943	375	
SW-123	32.300	1.626	Open Manhole	1200	2.012	30.674	225	2.011	30.774	225	100
	32.680	2.140	Open Manhole	0		OUTFALL		2.012	30.540	225	
SW-1	48.050	2.550	Open Manhole	1200	6.000	45.500	225				
SW-2	47.550	2.431	Open Manhole	1200	6.001	45.119	300	6.000	45.119	225	
SW-3	47.800	1.800	Open Manhole	1200	7.000	46.000	225				
SW-4	47.600	2.568	Open Manhole	1200	6.002	45.032	300	6.001	45.032	300	
								7.000	45.689	225	582
SW-5	47.800	1.425	Open Manhole	1200	8.000	46.375	225				
SW-6	48.100	3.294	Open Manhole	1350	6.003	44.806	375	6.002	44.806	300	
								8.000	45.835	225	879
SW-7	47.900	3.209	Open Manhole	1350	6.004	44.691	375	6.003	44.691	375	
SW-8	47.670	3.203	Open Manhole	1350	6.005	44.467	450	6.004	44.467	375	
SW-9	47.560	3.159	Open Manhole	1350	6.006	44.401	450	6.005	44.401	450	
SW-10A	50.250	1.425	Open Manhole	1200	9.000	48.825	225				
SW-10	50.230	1.730	Open Manhole	1200	9.001	48.500	225	9.000	48.500	225	
SW-11	48.850	1.784	Open Manhole	1200	9.002	47.066	225	9.001	47.066	225	
SW-12	48.200	1.380	Open Manhole	1200	9.003	46.820	300	9.002	46.820	225	
SW-13	47.675	1.434	Open Manhole	1200	9.004	46.241	300	9.003	46.241	300	
SW-14	47.400	1.290	Open Manhole	1200	10.000	46.110	225				
SW-15	47.420	1.920	Open Manhole	1200	10.001	45.500	225	10.000	45.929	225	429

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-16	47.525	2.087	Open Manhole	1200	9.005	45.438	300	9.004	46.101	300	663
								10.001	45.438	225	
SW-17	50.310	1.500	Open Manhole	1200	11.000	48.810	225				
SW-18	50.240	1.576	Open Manhole	1200	11.001	48.664	225	11.000	48.664	225	
SW-19	48.225	1.580	Open Manhole	1200	11.002	46.645	225	11.001	46.645	225	
SW-20	47.750	2.376	Open Manhole	1350	9.006	45.374	450	9.005	45.374	300	
								11.002	45.975	225	376
SW-21	48.160	2.901	Open Manhole	1350	9.007	45.259	450	9.006	45.259	450	
SW-22	47.960	4.160	Open Manhole	1350	6.007	43.800	450	6.006	44.352	450	552
								9.007	45.221	450	1421
SW-23	46.940	3.440	Open Manhole	1350	6.008	43.500	450	6.007	43.500	450	
SW-24	47.480	1.480	Open Manhole	1200	12.000	46.000	300				
SW-25	47.500	1.480	Open Manhole	1200	13.000	46.020	225				
SW-26	47.350	1.850	Open Manhole	1200	13.001	45.500	225	13.000	45.872	225	372
SW-27	47.400	1.985	Open Manhole	1200	13.002	45.415	225	13.001	45.415	225	
SW-28	47.740	2.486	Open Manhole	1200	12.001	45.254	300	12.000	45.586	300	332
								13.002	45.254	225	
SW-29A	47.110	1.110	Open Manhole	1200	14.000	46.000	225				
SW-29	47.400	1.520	Open Manhole	1200	14.001	45.880	300	14.000	45.880	225	
SW-30	47.860	2.447	Open Manhole	1200	14.002	45.413	300	14.001	45.413	300	
SW-31	47.825	2.672	Open Manhole	1200	12.002	45.153	300	12.001	45.153	300	
								14.002	45.317	300	165
SW-32	47.700	1.900	Open Manhole	1200	15.000	45.800	225				
SW-33A	47.000	1.425	Open Manhole	1200	16.000	45.575	225				
SW-33	46.850	1.430	Open Manhole	1200	16.001	45.420	225	16.000	45.420	225	
SW-34	46.750	1.950	Open Manhole	1200	15.001	44.800	300	15.000	45.270	225	395
								16.001	45.243	225	368
SW-35	46.700	2.049	Open Manhole	1200	15.002	44.651	300	15.001	44.651	300	
SW-36	46.795	1.465	Open Manhole	1200	17.000	45.330	300				
SW-37A	46.852	1.500	Open Manhole	1200	18.000	45.352	225				
SW-37	47.020	2.216	Open Manhole	1200	17.001	44.804	300	17.000	44.804	300	
								18.000	45.044	225	165
SW-38	47.000	2.287	Open Manhole	1200	17.002	44.713	300	17.001	44.713	300	
SW-39	46.825	2.411	Open Manhole	1350	15.003	44.414	375	15.002	44.414	300	
								17.002	44.624	300	135
SW-40	46.700	2.344	Open Manhole	1350	15.004	44.356	375	15.003	44.356	375	
SW-41	46.480	2.189	Open Manhole	1350	15.005	44.291	375	15.004	44.291	375	
SW-42	45.990	1.929	Open Manhole	1350	15.006	44.061	450	15.005	44.061	375	
SW-43	46.350	2.601	Open Manhole	1350	15.007	43.749	450	15.006	43.749	450	
SW-44	46.690	3.033	Open Manhole	1500	12.003	43.657	600	12.002	44.726	300	768
								15.007	43.657	450	
SW-45	46.280	2.704	Open Manhole	1500	12.004	43.576	600	12.003	43.576	600	
SW-46	45.750	2.952	Open Manhole	1500	6.009	42.798	600	6.008	42.798	450	
								12.004	43.506	600	708
SW-47	45.460	3.200	Open Manhole	1500	6.010	42.260	225	6.009	42.448	600	563
SW-48	50.025	1.455	Open Manhole	1200	19.000	48.570	300				
SW-49	48.500	1.617	Open Manhole	1200	19.001	46.883	300	19.000	46.883	300	

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-50	46.600	1.450	Open Manhole	1200	19.002	45.150	300	19.001	45.150	300	

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-51	46.125	2.025	Open Manhole	1200	19.003	44.100	300	19.002	44.580	300	480
SW-52	45.180	3.070	Open Manhole	1350	6.011	42.110	375	6.010	42.110	225	
								19.003	42.910	300	725
SW-53	44.425	2.438	Open Manhole	1350	6.012	41.987	375	6.011	41.987	375	
SW-54	49.700	1.600	Open Manhole	1200	20.000	48.100	225				
SW-55	49.010	1.478	Open Manhole	1200	20.001	47.532	225	20.000	47.532	225	
SW-56	47.950	1.660	Open Manhole	1200	20.002	46.290	225	20.001	46.290	225	
SW-57	46.750	1.660	Open Manhole	1200	20.003	45.090	225	20.002	45.090	225	
SW-58A	49.147	1.547	Open Manhole	1200	21.000	47.600	225				
SW-58	49.000	1.570	Open Manhole	1200	21.001	47.430	225	21.000	47.430	225	
SW-59	48.930	1.552	Open Manhole	1200	21.002	47.378	225	21.001	47.378	225	
SW-60	47.825	2.025	Open Manhole	1200	21.003	45.800	225	21.002	46.361	225	561
SW-61	46.900	1.400	Open Manhole	1200	22.000	45.500	225				
SW-62	46.772	1.988	Open Manhole	1200	21.004	44.784	225	21.003	44.784	225	
								22.000	44.949	225	165
SW-63	44.975	1.975	Open Manhole	1350	23.000	43.000	375				
SW-64	44.975	2.125	Open Manhole	1350	23.001	42.850	375	23.000	42.850	375	
SW-65	45.425	2.625	Open Manhole	1350	23.002	42.800	375	23.001	42.800	375	
SW-66	46.100	3.418	Open Manhole	1350	21.005	42.682	375	21.004	44.289	225	1457
								23.002	42.682	375	
SW-67	45.670	3.370	Open Manhole	1350	20.004	42.300	375	20.003	43.860	225	1410
								21.005	42.593	375	293
SW-68	44.750	2.777	Open Manhole	1350	20.005	41.973	375	20.004	41.973	375	
SW-69	43.500	2.000	Open Manhole	1350	20.006	41.500	375	20.005	41.822	375	322
SW-70	43.375	2.336	Open Manhole	1350	20.007	41.039	375	20.006	41.039	375	
SW-71	43.425	2.881	Open Manhole	1350	20.008	40.544	375	20.007	40.544	375	
SW-72	43.025	2.806	Open Manhole	1350	20.009	40.219	450	20.008	40.219	375	
SW-73	43.575	3.414	Open Manhole	1350	20.010	40.161	450	20.009	40.161	450	
SW-74	44.300	4.222	Open Manhole	1500	6.013	40.078	525	6.012	41.525	375	1297
								20.010	40.078	450	
SW-75	44.050	4.026	Open Manhole	1500	6.014	40.024	525	6.013	40.024	525	
SW-76	42.900	2.979	Open Manhole	1500	6.015	39.921	525	6.014	39.921	525	
SW-77	41.800	2.800	Open Manhole	1500	6.016	39.000	525	6.015	39.738	525	738
SW-78	40.600	2.800	Open Manhole	1500	6.017	37.800	525	6.016	38.810	525	1010
SW-79	39.300	3.800	Open Manhole	1500	6.018	35.500	525	6.017	37.588	525	2088
SW-80	36.875	2.675	Open Manhole	1500	6.019	34.200	525	6.018	35.118	525	918
SW-81	35.775	2.718	Open Manhole	1500	6.020	33.057	225	6.019	33.986	525	1229
SW-82	34.950	2.093	Open Manhole	1200	6.021	32.857	225	6.020	32.857	225	
SW-83	34.100	2.335	Open Manhole	1200	6.022	31.765	225	6.021	31.765	225	
SW-84	33.600	2.335	Open Manhole	1200	6.023	31.265	225	6.022	31.265	225	
SW-85	33.100	2.249	Open Manhole	1200	6.024	30.851	300	6.023	30.851	225	
SW-86	33.000	2.249	Open Manhole	1200	6.025	30.751	300	6.024	30.751	300	
SW-87	36.081	1.350	Open Manhole	1200	24.000	34.731	225				
SW-88	35.150	1.950	Open Manhole	1200	24.001	33.200	300	24.000	33.650	225	375
SW-89	34.646	1.646	Open Manhole	1350	24.002	33.000	375	24.001	33.005	300	
SW-90	34.984	2.459	Open Manhole	1350	24.003	32.525	375	24.002	32.525	375	
SW-91	35.720	1.720	Open Manhole	1200	25.000	34.000	225				

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-92	35.271	1.720	Open Manhole	1200	25.001	33.551	225	25.000	33.551	225	

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW-93	35.100	2.734	Open Manhole	1350	24.004	32.366	375	24.003	32.366	375	
								25.001	33.454	225	938
SW-94	34.325	2.183	Open Manhole	1350	24.005	32.142	375	24.004	32.142	375	
SW-95	33.641	1.569	Open Manhole	1350	24.006	32.072	375	24.005	32.072	375	
SW-96	33.000	1.130	Open Manhole	1350	24.007	31.870	375	24.006	31.870	375	
SW-97	33.000	2.342	Open Manhole	1500	6.026	30.658	600	6.025	30.658	300	
								24.007	31.765	375	882
SW-98	34.400	1.489	Open Manhole	1200	26.000	32.911	225				
SW-98A	34.030	1.293	Open Manhole	1200	26.001	32.737	225	26.000	32.737	225	
SW-98B	33.400	2.775	Open Manhole	1500	6.027	30.625	225	6.026	30.625	600	
								26.001	32.106	225	1480
SW-98C	32.750	2.584	Open Manhole	1200	6.028	30.166	225	6.027	30.265	225	99
SW-98D	32.230	2.105	Open Manhole	1200	6.029	30.125	225	6.028	30.125	225	
	32.680	2.758	Open Manhole	0		OUTFALL		6.029	29.922	225	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
2.000	o	225	SW-99	46.800	45.424	1.151	Open Manhole	1200
2.001	o	225	SW-100	47.100	45.034	1.841	Open Manhole	1200
2.002	o	225	SW-101	47.000	44.000	2.775	Open Manhole	1200
2.003	o	225	SW-102	45.650	43.716	1.709	Open Manhole	1200
3.000	o	225	SW-103	46.150	43.500	2.425	Open Manhole	1200
2.004	o	225	SW-104	44.750	41.200	3.325	Open Manhole	1200
2.005	o	225	SW-105	42.175	39.000	2.950	Open Manhole	1200
2.006	o	225	SW-106	40.100	37.700	2.175	Open Manhole	1200
4.000	o	225	SW-107	45.922	43.800	1.897	Open Manhole	1200
4.001	o	300	SW-108	45.400	43.575	1.525	Open Manhole	1200
4.002	o	300	SW-109	44.922	43.479	1.143	Open Manhole	1200
4.003	o	300	SW-110	44.602	43.076	1.226	Open Manhole	1200
4.004	o	300	SW-111	44.522	42.976	1.246	Open Manhole	1200
4.005	o	300	SW-112	44.088	42.166	1.622	Open Manhole	1200
5.000	o	225	SW-113	43.600	42.175	1.200	Open Manhole	1200
4.006	o	300	SW-114	43.420	41.103	2.017	Open Manhole	1200
4.007	o	300	SW-115	43.100	40.736	2.064	Open Manhole	1200
4.008	o	300	SW-116	42.919	38.000	4.619	Open Manhole	1200
4.009	o	300	SW-117	39.350	37.607	1.443	Open Manhole	1200
2.007	o	375	SW-118	39.075	36.500	2.200	Open Manhole	1350

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
2.000	22.656	58.1	SW-100	47.100	45.034	1.841	Open Manhole	1200
2.001	38.771	100.0	SW-101	47.000	44.646	2.129	Open Manhole	1200
2.002	28.413	100.0	SW-102	45.650	43.716	1.709	Open Manhole	1200
2.003	14.364	100.0	SW-104	44.750	43.572	0.953	Open Manhole	1200
3.000	32.852	99.9	SW-104	44.750	43.171	1.354	Open Manhole	1200
2.004	52.226	100.0	SW-105	42.175	40.678	1.272	Open Manhole	1200
2.005	41.628	100.1	SW-106	40.100	38.584	1.291	Open Manhole	1200
2.006	19.958	99.8	SW-118	39.075	37.500	1.350	Open Manhole	1350
4.000	22.453	100.0	SW-108	45.400	43.575	1.600	Open Manhole	1200
4.001	9.641	100.0	SW-109	44.922	43.479	1.143	Open Manhole	1200
4.002	40.577	100.6	SW-110	44.602	43.076	1.226	Open Manhole	1200
4.003	10.003	100.0	SW-111	44.522	42.976	1.246	Open Manhole	1200
4.004	32.455	40.1	SW-112	44.088	42.166	1.622	Open Manhole	1200
4.005	42.548	40.0	SW-114	43.420	41.103	2.017	Open Manhole	1200
5.000	21.514	39.5	SW-114	43.420	41.630	1.565	Open Manhole	1200
4.006	14.318	39.0	SW-115	43.100	40.736	2.064	Open Manhole	1200
4.007	13.241	40.0	SW-116	42.919	40.405	2.214	Open Manhole	1200
4.008	10.053	25.6	SW-117	39.350	37.607	1.443	Open Manhole	1200
4.009	12.896	80.0	SW-118	39.075	37.446	1.329	Open Manhole	1350
2.007	26.681	99.9	SW-119	37.800	36.233	1.192	Open Manhole	1350

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
2.008	o	375	SW-119	37.800	35.200	2.225	Open Manhole	1350
2.009	o	375	SW-120	36.600	33.900	2.325	Open Manhole	1350
2.010	o	375	SW-121	35.230	31.400	3.455	Open Manhole	1350
2.011	o	225	SW-122	32.900	30.943	1.732	Open Manhole	1350
2.012	o	225	SW-123	32.300	30.674	1.401	Open Manhole	1200
6.000	o	225	SW-1	48.050	45.500	2.325	Open Manhole	1200
6.001	o	300	SW-2	47.550	45.119	2.131	Open Manhole	1200
7.000	o	225	SW-3	47.800	46.000	1.575	Open Manhole	1200
6.002	o	300	SW-4	47.600	45.032	2.268	Open Manhole	1200
8.000	o	225	SW-5	47.800	46.375	1.200	Open Manhole	1200
6.003	o	375	SW-6	48.100	44.806	2.919	Open Manhole	1350
6.004	o	375	SW-7	47.900	44.691	2.834	Open Manhole	1350
6.005	o	450	SW-8	47.670	44.467	2.753	Open Manhole	1350
6.006	o	450	SW-9	47.560	44.401	2.709	Open Manhole	1350
9.000	o	225	SW-10A	50.250	48.825	1.200	Open Manhole	1200
9.001	o	225	SW-10	50.230	48.500	1.505	Open Manhole	1200
9.002	o	225	SW-11	48.850	47.066	1.559	Open Manhole	1200
9.003	o	300	SW-12	48.200	46.820	1.080	Open Manhole	1200
9.004	o	300	SW-13	47.675	46.241	1.134	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
2.008	24.382	99.9	SW-120	36.600	34.956	1.269	Open Manhole	1350
2.009	29.021	100.1	SW-121	35.230	33.610	1.245	Open Manhole	1350
2.010	45.672	100.0	SW-122	32.900	30.943	1.582	Open Manhole	1350
2.011	25.383	150.0	SW-123	32.300	30.774	1.301	Open Manhole	1200
2.012	20.043	149.6		32.680	30.540	1.915	Open Manhole	0
6.000	38.057	99.9	SW-2	47.550	45.119	2.206	Open Manhole	1200
6.001	8.217	94.4	SW-4	47.600	45.032	2.268	Open Manhole	1200
7.000	31.101	100.0	SW-4	47.600	45.689	1.686	Open Manhole	1200
6.002	54.425	240.8	SW-6	48.100	44.806	2.994	Open Manhole	1350
8.000	31.609	58.5	SW-6	48.100	45.835	2.040	Open Manhole	1350
6.003	36.994	321.7	SW-7	47.900	44.691	2.834	Open Manhole	1350
6.004	58.603	261.6	SW-8	47.670	44.467	2.828	Open Manhole	1350
6.005	24.977	378.4	SW-9	47.560	44.401	2.709	Open Manhole	1350
6.006	21.027	429.1	SW-22	47.960	44.352	3.158	Open Manhole	1350
9.000	17.267	53.1	SW-10	50.230	48.500	1.505	Open Manhole	1200
9.001	50.024	34.9	SW-11	48.850	47.066	1.559	Open Manhole	1200
9.002	16.390	66.6	SW-12	48.200	46.820	1.155	Open Manhole	1200
9.003	46.292	80.0	SW-13	47.675	46.241	1.134	Open Manhole	1200
9.004	17.695	126.4	SW-16	47.525	46.101	1.124	Open Manhole	1200

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
10.000	o	225	SW-14	47.400	46.110	1.065	Open Manhole	1200
10.001	o	225	SW-15	47.420	45.500	1.695	Open Manhole	1200
9.005	o	300	SW-16	47.525	45.438	1.787	Open Manhole	1200
11.000	o	225	SW-17	50.310	48.810	1.275	Open Manhole	1200
11.001	o	225	SW-18	50.240	48.664	1.351	Open Manhole	1200
11.002	o	225	SW-19	48.225	46.645	1.355	Open Manhole	1200
9.006	o	450	SW-20	47.750	45.374	1.926	Open Manhole	1350
9.007	o	450	SW-21	48.160	45.259	2.451	Open Manhole	1350
6.007	o	450	SW-22	47.960	43.800	3.710	Open Manhole	1350
6.008	o	450	SW-23	46.940	43.500	2.990	Open Manhole	1350
12.000	o	300	SW-24	47.480	46.000	1.180	Open Manhole	1200
13.000	o	225	SW-25	47.500	46.020	1.255	Open Manhole	1200
13.001	o	225	SW-26	47.350	45.500	1.625	Open Manhole	1200
13.002	o	225	SW-27	47.400	45.415	1.760	Open Manhole	1200
12.001	o	300	SW-28	47.740	45.254	2.186	Open Manhole	1200
14.000	o	225	SW-29A	47.110	46.000	0.885	Open Manhole	1200
14.001	o	300	SW-29	47.400	45.880	1.220	Open Manhole	1200
14.002	o	300	SW-30	47.860	45.413	2.147	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
10.000	27.143	150.0	SW-15	47.420	45.929	1.266	Open Manhole	1200
10.001	8.773	141.5	SW-16	47.525	45.438	1.862	Open Manhole	1200
9.005	11.492	179.6	SW-20	47.750	45.374	2.076	Open Manhole	1350
11.000	29.260	200.4	SW-18	50.240	48.664	1.351	Open Manhole	1200
11.001	44.774	22.2	SW-19	48.225	46.645	1.355	Open Manhole	1200
11.002	15.715	23.5	SW-20	47.750	45.975	1.550	Open Manhole	1350
9.006	31.323	272.4	SW-21	48.160	45.259	2.451	Open Manhole	1350
9.007	15.831	416.6	SW-22	47.960	45.221	2.289	Open Manhole	1350
6.007	31.132	103.8	SW-23	46.940	43.500	2.990	Open Manhole	1350
6.008	42.137	60.0	SW-46	45.750	42.798	2.502	Open Manhole	1500
12.000	57.623	139.2	SW-28	47.740	45.586	1.854	Open Manhole	1200
13.000	17.614	119.0	SW-26	47.350	45.872	1.253	Open Manhole	1200
13.001	14.680	172.7	SW-27	47.400	45.415	1.760	Open Manhole	1200
13.002	27.107	168.4	SW-28	47.740	45.254	2.261	Open Manhole	1200
12.001	25.810	254.4	SW-31	47.825	45.153	2.372	Open Manhole	1200
14.000	18.334	153.0	SW-29	47.400	45.880	1.295	Open Manhole	1200
14.001	49.653	106.3	SW-30	47.860	45.413	2.147	Open Manhole	1200
14.002	23.512	245.2	SW-31	47.825	45.317	2.208	Open Manhole	1200

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
12.002	o	300	SW-31	47.825	45.153	2.372	Open Manhole	1200
15.000	o	225	SW-32	47.700	45.800	1.675	Open Manhole	1200
16.000	o	225	SW-33A	47.000	45.575	1.200	Open Manhole	1200
16.001	o	225	SW-33	46.850	45.420	1.205	Open Manhole	1200
15.001	o	300	SW-34	46.750	44.800	1.650	Open Manhole	1200
15.002	o	300	SW-35	46.700	44.651	1.749	Open Manhole	1200
17.000	o	300	SW-36	46.795	45.330	1.165	Open Manhole	1200
18.000	o	225	SW-37A	46.852	45.352	1.275	Open Manhole	1200
17.001	o	300	SW-37	47.020	44.804	1.916	Open Manhole	1200
17.002	o	300	SW-38	47.000	44.713	1.987	Open Manhole	1200
15.003	o	375	SW-39	46.825	44.414	2.036	Open Manhole	1350
15.004	o	375	SW-40	46.700	44.356	1.969	Open Manhole	1350
15.005	o	375	SW-41	46.480	44.291	1.814	Open Manhole	1350
15.006	o	450	SW-42	45.990	44.061	1.479	Open Manhole	1350
15.007	o	450	SW-43	46.350	43.749	2.151	Open Manhole	1350
12.003	o	600	SW-44	46.690	43.657	2.433	Open Manhole	1500
12.004	o	600	SW-45	46.280	43.576	2.104	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
12.002	48.490	113.6	SW-44	46.690	44.726	1.664	Open Manhole	1500
15.000	52.681	99.4	SW-34	46.750	45.270	1.255	Open Manhole	1200
16.000	24.902	161.0	SW-33	46.850	45.420	1.205	Open Manhole	1200
16.001	26.548	150.0	SW-34	46.750	45.243	1.282	Open Manhole	1200
15.001	19.074	128.0	SW-35	46.700	44.651	1.749	Open Manhole	1200
15.002	19.497	82.2	SW-39	46.825	44.414	2.111	Open Manhole	1350
17.000	31.585	60.0	SW-37	47.020	44.804	1.916	Open Manhole	1200
18.000	17.991	58.4	SW-37	47.020	45.044	1.751	Open Manhole	1200
17.001	13.612	150.0	SW-38	47.000	44.713	1.987	Open Manhole	1200
17.002	13.288	149.3	SW-39	46.825	44.624	1.901	Open Manhole	1350
15.003	12.601	217.3	SW-40	46.700	44.356	1.969	Open Manhole	1350
15.004	19.837	305.2	SW-41	46.480	44.291	1.814	Open Manhole	1350
15.005	30.247	131.8	SW-42	45.990	44.061	1.554	Open Manhole	1350
15.006	64.977	208.3	SW-43	46.350	43.749	2.151	Open Manhole	1350
15.007	36.841	400.9	SW-44	46.690	43.657	2.583	Open Manhole	1500
12.003	40.805	500.0	SW-45	46.280	43.576	2.104	Open Manhole	1500
12.004	34.908	500.0	SW-46	45.750	43.506	1.644	Open Manhole	1500

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.009	o	600	SW-46	45.750	42.798	2.352	Open Manhole	1500
6.010	o	225	SW-47	45.460	42.260	2.975	Open Manhole	1500
19.000	o	300	SW-48	50.025	48.570	1.155	Open Manhole	1200
19.001	o	300	SW-49	48.500	46.883	1.317	Open Manhole	1200
19.002	o	300	SW-50	46.600	45.150	1.150	Open Manhole	1200
19.003	o	300	SW-51	46.125	44.100	1.725	Open Manhole	1200
6.011	o	375	SW-52	45.180	42.110	2.695	Open Manhole	1350
6.012	o	375	SW-53	44.425	41.987	2.063	Open Manhole	1350
20.000	o	225	SW-54	49.700	48.100	1.375	Open Manhole	1200
20.001	o	225	SW-55	49.010	47.532	1.253	Open Manhole	1200
20.002	o	225	SW-56	47.950	46.290	1.435	Open Manhole	1200
20.003	o	225	SW-57	46.750	45.090	1.435	Open Manhole	1200
21.000	o	225	SW-58A	49.147	47.600	1.322	Open Manhole	1200
21.001	o	225	SW-58	49.000	47.430	1.345	Open Manhole	1200
21.002	o	225	SW-59	48.930	47.378	1.327	Open Manhole	1200
21.003	o	225	SW-60	47.825	45.800	1.800	Open Manhole	1200
22.000	o	225	SW-61	46.900	45.500	1.175	Open Manhole	1200
21.004	o	225	SW-62	46.772	44.784	1.763	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.009	22.333	63.8	SW-47	45.460	42.448	2.412	Open Manhole	1500
6.010	21.355	142.4	SW-52	45.180	42.110	2.845	Open Manhole	1350
19.000	41.789	24.8	SW-49	48.500	46.883	1.317	Open Manhole	1200
19.001	40.018	23.1	SW-50	46.600	45.150	1.150	Open Manhole	1200
19.002	7.700	13.5	SW-51	46.125	44.580	1.245	Open Manhole	1200
19.003	47.610	40.0	SW-52	45.180	42.910	1.970	Open Manhole	1350
6.011	50.862	414.0	SW-53	44.425	41.987	2.063	Open Manhole	1350
6.012	9.164	19.8	SW-74	44.300	41.525	2.400	Open Manhole	1500
20.000	25.629	45.1	SW-55	49.010	47.532	1.253	Open Manhole	1200
20.001	27.896	22.5	SW-56	47.950	46.290	1.435	Open Manhole	1200
20.002	23.516	19.6	SW-57	46.750	45.090	1.435	Open Manhole	1200
20.003	21.268	17.3	SW-67	45.670	43.860	1.585	Open Manhole	1350
21.000	14.920	88.0	SW-58	49.000	47.430	1.345	Open Manhole	1200
21.001	11.741	225.8	SW-59	48.930	47.378	1.327	Open Manhole	1200
21.002	21.764	21.4	SW-60	47.825	46.361	1.239	Open Manhole	1200
21.003	24.294	23.9	SW-62	46.772	44.784	1.763	Open Manhole	1200
22.000	31.820	57.7	SW-62	46.772	44.949	1.598	Open Manhole	1200
21.004	12.404	25.1	SW-66	46.100	44.289	1.586	Open Manhole	1350

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
23.000	o	375	SW-63	44.975	43.000	1.600	Open Manhole	1350
23.001	o	375	SW-64	44.975	42.850	1.750	Open Manhole	1350
23.002	o	375	SW-65	45.425	42.800	2.250	Open Manhole	1350
21.005	o	375	SW-66	46.100	42.682	3.043	Open Manhole	1350
20.004	o	375	SW-67	45.670	42.300	2.995	Open Manhole	1350
20.005	o	375	SW-68	44.750	41.973	2.402	Open Manhole	1350
20.006	o	375	SW-69	43.500	41.500	1.625	Open Manhole	1350
20.007	o	375	SW-70	43.375	41.039	1.961	Open Manhole	1350
20.008	o	375	SW-71	43.425	40.544	2.506	Open Manhole	1350
20.009	o	450	SW-72	43.025	40.219	2.356	Open Manhole	1350
20.010	o	450	SW-73	43.575	40.161	2.964	Open Manhole	1350
6.013	o	525	SW-74	44.300	40.078	3.697	Open Manhole	1500
6.014	o	525	SW-75	44.050	40.024	3.501	Open Manhole	1500
6.015	o	525	SW-76	42.900	39.921	2.454	Open Manhole	1500
6.016	o	525	SW-77	41.800	39.000	2.275	Open Manhole	1500
6.017	o	525	SW-78	40.600	37.800	2.275	Open Manhole	1500
6.018	o	525	SW-79	39.300	35.500	3.275	Open Manhole	1500
6.019	o	525	SW-80	36.875	34.200	2.150	Open Manhole	1500
6.020	o	225	SW-81	35.775	33.057	2.493	Open Manhole	1500
6.021	o	225	SW-82	34.950	32.857	1.868	Open Manhole	1200
6.022	o	225	SW-83	34.100	31.765	2.110	Open Manhole	1200
6.023	o	225	SW-84	33.600	31.265	2.110	Open Manhole	1200
6.024	o	300	SW-85	33.100	30.851	1.949	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
23.000	30.065	200.4	SW-64	44.975	42.850	1.750	Open Manhole	1350
23.001	13.492	269.8	SW-65	45.425	42.800	2.250	Open Manhole	1350
23.002	20.750	175.8	SW-66	46.100	42.682	3.043	Open Manhole	1350
21.005	15.363	172.6	SW-67	45.670	42.593	2.702	Open Manhole	1350
20.004	19.644	60.1	SW-68	44.750	41.973	2.402	Open Manhole	1350
20.005	9.056	60.0	SW-69	43.500	41.822	1.303	Open Manhole	1350
20.006	27.686	60.1	SW-70	43.375	41.039	1.961	Open Manhole	1350
20.007	29.714	60.0	SW-71	43.425	40.544	2.506	Open Manhole	1350
20.008	19.495	60.0	SW-72	43.025	40.219	2.431	Open Manhole	1350
20.009	17.443	300.0	SW-73	43.575	40.161	2.964	Open Manhole	1350
20.010	24.882	300.0	SW-74	44.300	40.078	3.772	Open Manhole	1500
6.013	16.020	300.0	SW-75	44.050	40.024	3.501	Open Manhole	1500
6.014	30.994	300.0	SW-76	42.900	39.921	2.454	Open Manhole	1500
6.015	14.664	80.1	SW-77	41.800	39.738	1.537	Open Manhole	1500
6.016	15.216	80.1	SW-78	40.600	38.810	1.265	Open Manhole	1500
6.017	16.942	79.9	SW-79	39.300	37.588	1.187	Open Manhole	1500
6.018	30.539	79.9	SW-80	36.875	35.118	1.232	Open Manhole	1500
6.019	17.120	80.0	SW-81	35.775	33.986	1.264	Open Manhole	1500
6.020	16.027	80.1	SW-82	34.950	32.857	1.868	Open Manhole	1200
6.021	17.041	15.6	SW-83	34.100	31.765	2.110	Open Manhole	1200
6.022	9.382	18.8	SW-84	33.600	31.265	2.110	Open Manhole	1200
6.023	12.303	29.7	SW-85	33.100	30.851	2.024	Open Manhole	1200
6.024	50.083	500.0	SW-86	33.000	30.751	1.949	Open Manhole	1200

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.025	o	300	SW-86	33.000	30.751	1.949	Open Manhole	1200
24.000	o	225	SW-87	36.081	34.731	1.125	Open Manhole	1200
24.001	o	300	SW-88	35.150	33.200	1.650	Open Manhole	1200
24.002	o	375	SW-89	34.646	33.000	1.271	Open Manhole	1350
24.003	o	375	SW-90	34.984	32.525	2.084	Open Manhole	1350
25.000	o	225	SW-91	35.720	34.000	1.495	Open Manhole	1200
25.001	o	225	SW-92	35.271	33.551	1.495	Open Manhole	1200
24.004	o	375	SW-93	35.100	32.366	2.359	Open Manhole	1350
24.005	o	375	SW-94	34.325	32.142	1.808	Open Manhole	1350
24.006	o	375	SW-95	33.641	32.072	1.194	Open Manhole	1350
24.007	o	375	SW-96	33.000	31.870	0.755	Open Manhole	1350
6.026	o	600	SW-97	33.000	30.658	1.742	Open Manhole	1500
26.000	o	225	SW-98	34.400	32.911	1.264	Open Manhole	1200
26.001	o	225	SW-98A	34.030	32.737	1.068	Open Manhole	1200
6.027	o	225	SW-98B	33.400	30.625	2.550	Open Manhole	1500
6.028	o	225	SW-98C	32.750	30.166	2.359	Open Manhole	1200
6.029	o	225	SW-98D	32.230	30.125	1.880	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.025	23.162	249.1	SW-97	33.000	30.658	2.042	Open Manhole	1500
24.000	39.105	36.2	SW-88	35.150	33.650	1.275	Open Manhole	1200
24.001	29.145	149.5	SW-89	34.646	33.005	1.341	Open Manhole	1350
24.002	47.900	100.8	SW-90	34.984	32.525	2.084	Open Manhole	1350
24.003	39.487	248.3	SW-93	35.100	32.366	2.359	Open Manhole	1350
25.000	38.494	85.7	SW-92	35.271	33.551	1.495	Open Manhole	1200
25.001	9.450	97.4	SW-93	35.100	33.454	1.421	Open Manhole	1350
24.004	33.636	150.2	SW-94	34.325	32.142	1.808	Open Manhole	1350
24.005	10.468	149.5	SW-95	33.641	32.072	1.194	Open Manhole	1350
24.006	30.356	150.3	SW-96	33.000	31.870	0.755	Open Manhole	1350
24.007	15.704	149.6	SW-97	33.000	31.765	0.860	Open Manhole	1500
6.026	32.127	1000.0	SW-98B	33.400	30.625	2.175	Open Manhole	1500
26.000	26.111	150.1	SW-98A	34.030	32.737	1.068	Open Manhole	1200
26.001	12.629	20.0	SW-98B	33.400	32.106	1.069	Open Manhole	1500
6.027	89.961	249.9	SW-98C	32.750	30.265	2.260	Open Manhole	1200
6.028	10.193	248.6	SW-98D	32.230	30.125	1.880	Open Manhole	1200
6.029	50.736	249.9		32.680	29.922	2.533	Open Manhole	0

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
2.000	User	-	100	0.052	0.052	0.052
2.001	User	-	100	0.053	0.053	0.053
2.002	User	-	100	0.109	0.109	0.109
2.003	User	-	100	0.045	0.045	0.045
3.000	User	-	100	0.093	0.093	0.093
2.004	User	-	100	0.052	0.052	0.052
	User	-	100	0.081	0.081	0.132
2.005	User	-	100	0.035	0.035	0.035
2.006	User	-	100	0.046	0.046	0.046
4.000	User	-	100	0.070	0.070	0.070
4.001	User	-	100	0.022	0.022	0.022
4.002	User	-	100	0.099	0.099	0.099
	User	-	100	0.080	0.080	0.179
4.003	User	-	100	0.069	0.069	0.069
4.004	User	-	100	0.059	0.059	0.059
4.005	User	-	100	0.083	0.083	0.083
5.000	User	-	100	0.042	0.042	0.042
4.006	User	-	100	0.090	0.090	0.090
4.007	User	-	100	0.063	0.063	0.063
4.008	User	-	100	0.055	0.055	0.055
4.009	-	-	100	0.000	0.000	0.000
2.007	User	-	100	0.027	0.027	0.027
2.008	User	-	100	0.033	0.033	0.033
2.009	User	-	100	0.038	0.038	0.038
2.010	User	-	100	0.052	0.052	0.052
2.011	User	-	100	0.042	0.042	0.042
2.012	-	-	100	0.000	0.000	0.000
6.000	User	-	100	0.119	0.119	0.119
6.001	User	-	100	0.036	0.036	0.036
7.000	User	-	100	0.073	0.073	0.073
6.002	User	-	100	0.100	0.100	0.100
	User	-	100	0.030	0.030	0.130
8.000	User	-	100	0.071	0.071	0.071
6.003	User	-	100	0.129	0.129	0.129
6.004	User	-	100	0.181	0.181	0.181
	User	-	100	0.094	0.094	0.275
6.005	User	-	100	0.053	0.053	0.053
6.006	User	-	100	0.097	0.097	0.097
9.000	-	-	100	0.000	0.000	0.000
9.001	User	-	100	0.181	0.181	0.181
9.002	User	-	100	0.060	0.060	0.060
9.003	User	-	100	0.138	0.138	0.138
9.004	User	-	100	0.059	0.059	0.059
10.000	User	-	100	0.100	0.100	0.100
10.001	-	-	100	0.000	0.000	0.000
9.005	User	-	100	0.042	0.042	0.042
11.000	User	-	100	0.134	0.134	0.134
11.001	User	-	100	0.061	0.061	0.061
11.002	User	-	100	0.042	0.042	0.042
9.006	User	-	100	0.091	0.091	0.091
9.007	User	-	100	0.037	0.037	0.037
6.007	User	-	100	0.080	0.080	0.080
6.008	User	-	100	0.081	0.081	0.081
12.000	User	-	100	0.246	0.246	0.246
13.000	User	-	100	0.057	0.057	0.057
13.001	User	-	100	0.037	0.037	0.037
13.002	User	-	100	0.051	0.051	0.051
12.001	User	-	100	0.046	0.046	0.046
14.000	-	-	100	0.000	0.000	0.000
14.001	User	-	100	0.208	0.208	0.208
14.002	User	-	100	0.044	0.044	0.044
12.002	User	-	100	0.044	0.044	0.044

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
15.000	User	-	100	0.098	0.098	0.098
16.000	User	-	100	0.076	0.076	0.076
16.001	-	-	100	0.000	0.000	0.000
15.001	User	-	100	0.101	0.101	0.101
15.002	User	-	100	0.031	0.031	0.031
17.000	User	-	100	0.178	0.178	0.178
18.000	-	-	100	0.000	0.000	0.000
17.001	User	-	100	0.110	0.110	0.110
17.002	User	-	100	0.062	0.062	0.062
15.003	User	-	100	0.059	0.059	0.059
15.004	User	-	100	0.049	0.049	0.049
15.005	User	-	100	0.025	0.025	0.025
15.006	User	-	100	0.222	0.222	0.222
15.007	User	-	100	0.121	0.121	0.121
12.003	User	-	100	0.072	0.072	0.072
12.004	User	-	100	0.131	0.131	0.131
6.009	User	-	100	0.061	0.061	0.061
6.010	User	-	100	0.090	0.090	0.090
19.000	User	-	100	0.134	0.134	0.134
19.001	User	-	100	0.118	0.118	0.118
19.002	User	-	100	0.083	0.083	0.083
	User	-	100	0.067	0.067	0.150
19.003	User	-	100	0.075	0.075	0.075
6.011	User	-	100	0.123	0.123	0.123
6.012	User	-	100	0.083	0.083	0.083
20.000	User	-	100	0.054	0.054	0.054
20.001	User	-	100	0.047	0.047	0.047
20.002	User	-	100	0.042	0.042	0.042
20.003	User	-	100	0.051	0.051	0.051
21.000	-	-	100	0.000	0.000	0.000
21.001	User	-	100	0.062	0.062	0.062
21.002	User	-	100	0.116	0.116	0.116
21.003	-	-	100	0.000	0.000	0.000
22.000	User	-	100	0.070	0.070	0.070
21.004	User	-	100	0.098	0.098	0.098
23.000	User	-	100	0.071	0.071	0.071
23.001	User	-	100	0.028	0.028	0.028
23.002	User	-	100	0.017	0.017	0.017
21.005	User	-	100	0.046	0.046	0.046
20.004	User	-	100	0.031	0.031	0.031
20.005	-	-	100	0.000	0.000	0.000
20.006	User	-	100	0.043	0.043	0.043
20.007	User	-	100	0.100	0.100	0.100
20.008	-	-	100	0.000	0.000	0.000
20.009	User	-	100	0.068	0.068	0.068
20.010	User	-	100	0.019	0.019	0.019
6.013	User	-	100	0.089	0.089	0.089
6.014	User	-	100	0.014	0.014	0.014
6.015	User	-	100	0.013	0.013	0.013
6.016	User	-	100	0.008	0.008	0.008
6.017	User	-	100	0.009	0.009	0.009
6.018	User	-	100	0.015	0.015	0.015
6.019	User	-	100	0.022	0.022	0.022
6.020	User	-	100	0.022	0.022	0.022
6.021	User	-	100	0.012	0.012	0.012
6.022	User	-	100	0.010	0.010	0.010
6.023	User	-	100	0.010	0.010	0.010
	User	-	100	0.017	0.017	0.026
6.024	User	-	100	0.014	0.014	0.014
6.025	-	-	100	0.000	0.000	0.000
24.000	User	-	100	0.159	0.159	0.159
24.001	User	-	100	0.135	0.135	0.135

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
24.002	User	-	100	0.085	0.085	0.085
24.003	User	-	100	0.128	0.128	0.128
25.000	User	-	100	0.122	0.122	0.122
25.001	User	-	100	0.054	0.054	0.054
24.004	User	-	100	0.117	0.117	0.117
	User	-	100	0.031	0.031	0.147
24.005	User	-	100	0.022	0.022	0.022
24.006	User	-	100	0.037	0.037	0.037
24.007	User	-	100	0.026	0.026	0.026
6.026	User	-	100	0.017	0.017	0.017
26.000	User	-	100	0.029	0.029	0.029
26.001	User	-	100	0.032	0.032	0.032
6.027	-	-	100	0.000	0.000	0.000
6.028	-	-	100	0.000	0.000	0.000
6.029	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				8.690	8.690	8.690

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
2.012		32.680	30.540	29.870	0	0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
6.029		32.680	29.922	29.870	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.840	Additional Flow - % of Total Flow	10.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	5760
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	24

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 5 Number of Storage Structures 6 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Winter
Return Period (years)	100	Cv (Summer)	0.750
Region	Scotland and Ireland	Cv (Winter)	0.840
M5-60 (mm)	17.500	Storm Duration (mins)	2880
Ratio R	0.333		

Online Controls for Storm

Depth/Flow Relationship Manhole: SW-104, DS/PN: 2.004, Volume (m³): 5.8

Invert Level (m) 41.200

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	2.0000	1.400	2.0000	2.600	2.0000	3.800	2.0000	5.000	2.0000
0.400	2.0000	1.600	2.0000	2.800	2.0000	4.000	2.0000	5.200	2.0000
0.600	2.0000	1.800	2.0000	3.000	2.0000	4.200	2.0000	5.400	2.0000
0.800	2.0000	2.000	2.0000	3.200	2.0000	4.400	2.0000	5.600	2.0000
1.000	2.0000	2.200	2.0000	3.400	2.0000	4.600	2.0000	5.800	2.0000
1.200	2.0000	2.400	2.0000	3.600	2.0000	4.800	2.0000	6.000	2.0000

Depth/Flow Relationship Manhole: SW-122, DS/PN: 2.011, Volume (m³): 7.7

Invert Level (m) 30.943

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	6.1000	1.400	6.1000	2.600	6.1000	3.800	6.1000	5.000	6.1000
0.400	6.1000	1.600	6.1000	2.800	6.1000	4.000	6.1000	5.200	6.1000
0.600	6.1000	1.800	6.1000	3.000	6.1000	4.200	6.1000	5.400	6.1000
0.800	6.1000	2.000	6.1000	3.200	6.1000	4.400	6.1000	5.600	6.1000
1.000	6.1000	2.200	6.1000	3.400	6.1000	4.600	6.1000	5.800	6.1000
1.200	6.1000	2.400	6.1000	3.600	6.1000	4.800	6.1000	6.000	6.1000

Depth/Flow Relationship Manhole: SW-47, DS/PN: 6.010, Volume (m³): 11.5

Invert Level (m) 42.260

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	10.0000	1.400	10.0000	2.600	10.0000	3.800	10.0000	5.000	10.0000
0.400	10.0000	1.600	10.0000	2.800	10.0000	4.000	10.0000	5.200	10.0000
0.600	10.0000	1.800	10.0000	3.000	10.0000	4.200	10.0000	5.400	10.0000
0.800	10.0000	2.000	10.0000	3.200	10.0000	4.400	10.0000	5.600	10.0000
1.000	10.0000	2.200	10.0000	3.400	10.0000	4.600	10.0000	5.800	10.0000
1.200	10.0000	2.400	10.0000	3.600	10.0000	4.800	10.0000	6.000	10.0000

Depth/Flow Relationship Manhole: SW-81, DS/PN: 6.020, Volume (m³): 8.2

Invert Level (m) 33.057

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	30.0000	1.400	30.0000	2.600	30.0000	3.800	30.0000	5.000	30.0000
0.400	30.0000	1.600	30.0000	2.800	30.0000	4.000	30.0000	5.200	30.0000
0.600	30.0000	1.800	30.0000	3.000	30.0000	4.200	30.0000	5.400	30.0000
0.800	30.0000	2.000	30.0000	3.200	30.0000	4.400	30.0000	5.600	30.0000
1.000	30.0000	2.200	30.0000	3.400	30.0000	4.600	30.0000	5.800	30.0000
1.200	30.0000	2.400	30.0000	3.600	30.0000	4.800	30.0000	6.000	30.0000

Depth/Flow Relationship Manhole: SW-98B, DS/PN: 6.027, Volume (m³): 14.0

Invert Level (m) 30.625

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	30.1000	1.000	30.1000	1.800	30.1000	2.600	30.1000	3.400	30.1000
0.400	30.1000	1.200	30.1000	2.000	30.1000	2.800	30.1000	3.600	30.1000
0.600	30.1000	1.400	30.1000	2.200	30.1000	3.000	30.1000	3.800	30.1000
0.800	30.1000	1.600	30.1000	2.400	30.1000	3.200	30.1000	4.000	30.1000

Depth/Flow Relationship Manhole: SW-98B, DS/PN: 6.027, Volume (m³): 14.0

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
4.200	30.1000	4.600	30.1000	5.000	30.1000	5.400	30.1000	5.800	30.1000
4.400	30.1000	4.800	30.1000	5.200	30.1000	5.600	30.1000	6.000	30.1000

Storage Structures for Storm

Tank or Pond Manhole: SW-104, DS/PN: 2.004

Invert Level (m) 41.200

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	155.0	1.200	155.0	2.400	0.0	3.600	0.0	4.800	0.0
0.200	155.0	1.400	155.0	2.600	0.0	3.800	0.0	5.000	0.0
0.400	155.0	1.600	155.0	2.800	0.0	4.000	0.0		
0.600	155.0	1.800	155.0	3.000	0.0	4.200	0.0		
0.800	155.0	2.000	155.0	3.200	0.0	4.400	0.0		
1.000	155.0	2.200	0.0	3.400	0.0	4.600	0.0		

Tank or Pond Manhole: SW-122, DS/PN: 2.011

Invert Level (m) 31.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	360.0	1.200	360.0	2.400	0.0	3.600	0.0	4.800	0.0
0.200	360.0	1.400	0.0	2.600	0.0	3.800	0.0	5.000	0.0
0.400	360.0	1.600	0.0	2.800	0.0	4.000	0.0		
0.600	360.0	1.800	0.0	3.000	0.0	4.200	0.0		
0.800	360.0	2.000	0.0	3.200	0.0	4.400	0.0		
1.000	360.0	2.200	0.0	3.400	0.0	4.600	0.0		

Tank or Pond Manhole: SW-47, DS/PN: 6.010

Invert Level (m) 42.760

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	1150.0	1.200	1150.0	2.400	0.0	3.600	0.0	4.800	0.0
0.200	1150.0	1.400	1150.0	2.600	0.0	3.800	0.0	5.000	0.0
0.400	1150.0	1.600	1150.0	2.800	0.0	4.000	0.0		
0.600	1150.0	1.800	1150.0	3.000	0.0	4.200	0.0		
0.800	1150.0	2.000	1150.0	3.200	0.0	4.400	0.0		
1.000	1150.0	2.200	0.0	3.400	0.0	4.600	0.0		

Tank or Pond Manhole: SW-81, DS/PN: 6.020

Invert Level (m) 33.057

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	315.0	1.200	315.0	2.400	0.0	3.600	0.0	4.800	0.0
0.200	315.0	1.400	315.0	2.600	0.0	3.800	0.0	5.000	0.0
0.400	315.0	1.600	315.0	2.800	0.0	4.000	0.0		
0.600	315.0	1.800	315.0	3.000	0.0	4.200	0.0		
0.800	315.0	2.000	315.0	3.200	0.0	4.400	0.0		
1.000	315.0	2.200	0.0	3.400	0.0	4.600	0.0		

Tank or Pond Manhole: SW-86, DS/PN: 6.025

Invert Level (m) 30.751

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	240.0	0.400	240.0	0.800	240.0	1.200	240.0	1.600	240.0
0.100	240.0	0.500	240.0	0.900	240.0	1.300	240.0	1.700	240.0
0.200	240.0	0.600	240.0	1.000	240.0	1.400	240.0	1.800	0.0
0.300	240.0	0.700	240.0	1.100	240.0	1.500	240.0	1.900	0.0

Tank or Pond Manhole: SW-86, DS/PN: 6.025

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
2.000	0.0	2.200	0.0	2.400	0.0				
2.100	0.0	2.300	0.0	2.500	0.0				

Tank or Pond Manhole: SW-98B, DS/PN: 6.027

Invert Level (m) 30.626

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	300.0	0.600	300.0	1.200	300.0	1.800	0.0	2.400	0.0
0.100	300.0	0.700	300.0	1.300	300.0	1.900	0.0	2.500	0.0
0.200	300.0	0.800	300.0	1.400	300.0	2.000	0.0		
0.300	300.0	0.900	300.0	1.500	300.0	2.100	0.0		
0.400	300.0	1.000	300.0	1.600	300.0	2.200	0.0		
0.500	300.0	1.100	300.0	1.700	300.0	2.300	0.0		

Summary of Results for 15 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.517	-0.132	0.000	0.36	0.0	22.7	OK
2.001	SW-100	45.341	0.082	0.000	0.84	0.0	41.5	SURCHARGED
2.002	SW-101	45.111	0.886	0.000	1.58	0.0	76.6	SURCHARGED
2.003	SW-102	44.391	0.450	0.000	2.03	0.0	92.3	SURCHARGED
3.000	SW-103	43.656	-0.069	0.000	0.82	0.0	40.2	OK
2.004	SW-104	41.773	0.348	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.092	-0.133	0.000	0.35	0.0	17.1	OK
2.006	SW-106	37.852	-0.073	0.000	0.78	0.0	36.9	OK
4.000	SW-107	44.104	0.079	0.000	0.59	0.0	28.2	SURCHARGED
4.001	SW-108	44.052	0.177	0.000	0.45	0.0	34.6	SURCHARGED
4.002	SW-109	44.034	0.255	0.000	0.95	0.0	98.2	SURCHARGED
4.003	SW-110	43.729	0.353	0.000	1.45	0.0	114.8	SURCHARGED
4.004	SW-111	43.526	0.250	0.000	0.81	0.0	130.2	SURCHARGED
4.005	SW-112	42.998	0.532	0.000	0.94	0.0	154.1	SURCHARGED
5.000	SW-113	42.249	-0.151	0.000	0.24	0.0	18.2	OK
4.006	SW-114	42.081	0.679	0.000	1.32	0.0	195.7	SURCHARGED
4.007	SW-115	41.444	0.409	0.000	1.49	0.0	214.6	SURCHARGED
4.008	SW-116	39.491	1.191	0.000	1.48	0.0	232.2	SURCHARGED
4.009	SW-117	38.606	0.698	0.000	2.32	0.0	233.2	SURCHARGED
2.007	SW-118	37.254	0.379	0.000	1.56	0.0	272.4	SURCHARGED
2.008	SW-119	35.985	0.410	0.000	1.64	0.0	283.4	SURCHARGED
2.009	SW-120	34.794	0.519	0.000	1.68	0.0	295.6	SURCHARGED
2.010	SW-121	32.591	0.816	0.000	1.66	0.0	305.6	SURCHARGED
2.011	SW-122	31.499	0.331	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	47.642	1.917	0.000	0.65	0.0	31.8	SURCHARGED
6.001	SW-2	47.541	2.122	0.000	0.59	0.0	43.9	FLOOD RISK
7.000	SW-3	47.558	1.333	0.000	0.50	0.0	24.5	FLOOD RISK
6.002	SW-4	47.524	2.192	0.000	1.19	0.0	80.2	FLOOD RISK
8.000	SW-5	47.298	0.698	0.000	0.48	0.0	30.4	SURCHARGED
6.003	SW-6	47.265	2.084	0.000	1.28	0.0	128.0	SURCHARGED
6.004	SW-7	47.115	2.049	0.000	1.75	0.0	201.8	SURCHARGED
6.005	SW-8	46.574	1.657	0.000	1.44	0.0	199.8	SURCHARGED
6.006	SW-9	46.443	1.592	0.000	1.73	0.0	216.1	SURCHARGED
9.000	SW-10A	48.953	-0.097	0.000	0.02	0.0	1.3	OK
9.001	SW-10	48.973	0.248	0.000	0.81	0.0	68.5	SURCHARGED
9.002	SW-11	48.283	0.992	0.000	1.38	0.0	78.4	SURCHARGED
9.003	SW-12	47.890	0.770	0.000	1.04	0.0	120.8	SURCHARGED
9.004	SW-13	47.402	0.861	0.000	1.56	0.0	132.2	FLOOD RISK
10.000	SW-14	47.191	0.856	0.000	0.79	0.0	31.0	FLOOD RISK
10.001	SW-15	47.135	1.410	0.000	0.98	0.0	34.4	FLOOD RISK
9.005	SW-16	47.112	1.374	0.000	2.66	0.0	168.3	SURCHARGED
11.000	SW-17	49.289	0.254	0.000	1.62	0.0	55.3	SURCHARGED
11.001	SW-18	48.813	-0.076	0.000	0.75	0.0	79.3	OK
11.002	SW-19	47.149	0.279	0.000	0.97	0.0	92.6	SURCHARGED
9.006	SW-20	46.747	0.923	0.000	1.67	0.0	281.7	SURCHARGED
9.007	SW-21	46.501	0.792	0.000	2.71	0.0	288.4	SURCHARGED
6.007	SW-22	46.292	2.042	0.000	1.82	0.0	498.2	SURCHARGED
6.008	SW-23	45.313	1.363	0.000	1.37	0.0	510.5	SURCHARGED
12.000	SW-24	47.230	0.930	0.000	0.90	0.0	80.4	FLOOD RISK
13.000	SW-25	47.204	0.959	0.000	0.44	0.0	18.9	FLOOD RISK
13.001	SW-26	47.178	1.453	0.000	0.72	0.0	24.8	FLOOD RISK
13.002	SW-27	47.137	1.497	0.000	1.00	0.0	37.2	FLOOD RISK
12.001	SW-28	46.997	1.443	0.000	1.81	0.0	112.7	SURCHARGED
14.000	SW-29A	46.898	0.673	0.000	0.12	0.0	4.3	FLOOD RISK
14.001	SW-29	46.899	0.719	0.000	0.68	0.0	68.6	SURCHARGED
14.002	SW-30	46.766	1.053	0.000	1.09	0.0	68.3	SURCHARGED

Summary of Results for 15 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	46.658	1.206	0.000	1.96	0.0	191.7	SURCHARGED
15.000	SW-32	46.561	0.536	0.000	0.76	0.0	38.2	SURCHARGED
16.000	SW-33A	46.518	0.718	0.000	0.80	0.0	30.1	SURCHARGED
16.001	SW-33	46.477	0.831	0.000	0.61	0.0	24.1	SURCHARGED
15.001	SW-34	46.436	1.336	0.000	0.79	0.0	67.3	SURCHARGED
15.002	SW-35	46.345	1.394	0.000	0.70	0.0	74.0	SURCHARGED
17.000	SW-36	46.503	0.873	0.000	0.45	0.0	59.3	FLOOD RISK
18.000	SW-37A	46.437	0.860	0.000	0.08	0.0	4.9	SURCHARGED
17.001	SW-37	46.441	1.337	0.000	0.98	0.0	73.5	SURCHARGED
17.002	SW-38	46.356	1.342	0.000	1.19	0.0	89.0	SURCHARGED
15.003	SW-39	46.232	1.443	0.000	1.68	0.0	175.6	SURCHARGED
15.004	SW-40	46.030	1.299	0.000	1.96	0.0	187.6	SURCHARGED
15.005	SW-41	45.780	1.114	0.000	1.26	0.0	193.9	SURCHARGED
15.006	SW-42	45.423	0.912	0.000	1.18	0.0	244.0	SURCHARGED
15.007	SW-43	44.979	0.779	0.000	1.92	0.0	272.3	SURCHARGED
12.003	SW-44	44.628	0.371	0.000	1.82	0.0	474.8	SURCHARGED
12.004	SW-45	44.348	0.173	0.000	1.93	0.0	493.5	SURCHARGED
6.009	SW-46	44.043	0.645	0.000	1.69	0.0	1003.3	SURCHARGED
6.010	SW-47	43.445	0.960	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.677	-0.193	0.000	0.28	0.0	58.2	OK
19.001	SW-49	47.034	-0.149	0.000	0.51	0.0	109.5	OK
19.002	SW-50	45.412	-0.038	0.000	0.91	0.0	172.1	OK
19.003	SW-51	44.950	0.550	0.000	1.20	0.0	199.4	SURCHARGED
6.011	SW-52	43.188	0.703	0.000	2.52	0.0	228.4	SURCHARGED
6.012	SW-53	42.281	-0.081	0.000	0.96	0.0	254.7	OK
20.000	SW-54	48.188	-0.137	0.000	0.33	0.0	23.4	OK
20.001	SW-55	47.635	-0.122	0.000	0.43	0.0	44.0	OK
20.002	SW-56	46.413	-0.102	0.000	0.58	0.0	62.4	OK
20.003	SW-57	45.235	-0.080	0.000	0.74	0.0	84.5	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.599	-0.056	0.000	0.92	0.0	26.9	OK
21.002	SW-59	47.525	-0.079	0.000	0.75	0.0	77.3	OK
21.003	SW-60	46.234	0.209	0.000	0.75	0.0	73.7	SURCHARGED
22.000	SW-61	45.733	0.008	0.000	0.44	0.0	28.4	SURCHARGED
21.004	SW-62	45.640	0.631	0.000	1.51	0.0	135.7	SURCHARGED
23.000	SW-63	44.203	0.828	0.000	0.22	0.0	26.9	SURCHARGED
23.001	SW-64	44.192	0.967	0.000	0.56	0.0	53.3	SURCHARGED
23.002	SW-65	44.183	1.008	0.000	0.58	0.0	74.2	SURCHARGED
21.005	SW-66	44.172	1.115	0.000	1.29	0.0	151.2	SURCHARGED
20.004	SW-67	44.020	1.345	0.000	1.03	0.0	223.0	SURCHARGED
20.005	SW-68	43.712	1.364	0.000	1.38	0.0	210.2	SURCHARGED
20.006	SW-69	43.429	1.554	0.000	0.96	0.0	217.9	FLOOD RISK
20.007	SW-70	43.006	1.592	0.000	1.04	0.0	237.9	SURCHARGED
20.008	SW-71	42.462	1.543	0.000	1.12	0.0	241.8	SURCHARGED
20.009	SW-72	42.074	1.405	0.000	1.75	0.0	256.4	SURCHARGED
20.010	SW-73	41.877	1.266	0.000	1.70	0.0	264.2	SURCHARGED
6.013	SW-74	41.662	1.060	0.000	2.47	0.0	513.6	SURCHARGED
6.014	SW-75	41.203	0.654	0.000	2.20	0.0	515.8	SURCHARGED
6.015	SW-76	40.693	0.247	0.000	1.58	0.0	518.1	SURCHARGED
6.016	SW-77	39.767	0.242	0.000	1.55	0.0	518.4	SURCHARGED
6.017	SW-78	38.551	0.226	0.000	1.47	0.0	517.9	SURCHARGED
6.018	SW-79	36.127	0.102	0.000	1.15	0.0	521.9	SURCHARGED
6.019	SW-80	34.961	0.236	0.000	1.48	0.0	526.3	SURCHARGED
6.020	SW-81	34.074	0.792	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.940	-0.142	0.000	0.28	0.0	33.3	OK
6.022	SW-83	31.861	-0.129	0.000	0.36	0.0	36.2	OK
6.023	SW-84	31.387	-0.103	0.000	0.53	0.0	43.9	OK
6.024	SW-85	31.149	-0.002	0.000	0.98	0.0	45.4	OK
6.025	SW-86	31.066	0.016	0.000	0.67	0.0	41.5	SURCHARGED
24.000	SW-87	35.099	0.143	0.000	0.80	0.0	65.9	SURCHARGED
24.001	SW-88	34.728	1.228	0.000	1.25	0.0	102.4	SURCHARGED

Summary of Results for 15 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	34.519	1.144	0.000	0.59	0.0	109.2	FLOOD RISK
24.003	SW-90	34.353	1.453	0.000	1.25	0.0	143.2	SURCHARGED
25.000	SW-91	34.448	0.223	0.000	0.91	0.0	48.6	SURCHARGED
25.001	SW-92	34.242	0.466	0.000	1.50	0.0	65.3	SURCHARGED
24.004	SW-93	34.105	1.364	0.000	1.61	0.0	235.1	SURCHARGED
24.005	SW-94	33.531	1.014	0.000	2.24	0.0	239.6	SURCHARGED
24.006	SW-95	33.155	0.708	0.000	1.72	0.0	247.7	SURCHARGED
24.007	SW-96	32.549	0.304	0.000	2.00	0.0	253.7	SURCHARGED
6.026	SW-97	31.258	0.000	0.000	1.09	0.0	155.3	OK
26.000	SW-98	32.998	-0.138	0.000	0.32	0.0	12.5	OK
26.001	SW-98A	32.815	-0.147	0.000	0.26	0.0	26.1	OK
6.027	SW-98B	31.005	0.155	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.2	OK
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.1	OK

Summary of Results for 30 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.505	-0.144	0.000	0.28	0.0	17.3	OK
2.001	SW-100	45.175	-0.084	0.000	0.70	0.0	34.6	OK
2.002	SW-101	44.799	0.574	0.000	1.39	0.0	67.2	SURCHARGED
2.003	SW-102	44.246	0.305	0.000	1.78	0.0	80.9	SURCHARGED
3.000	SW-103	43.630	-0.095	0.000	0.62	0.0	30.4	OK
2.004	SW-104	41.958	0.533	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.081	-0.144	0.000	0.28	0.0	13.7	OK
2.006	SW-106	37.828	-0.097	0.000	0.61	0.0	28.7	OK
4.000	SW-107	43.911	-0.114	0.000	0.48	0.0	22.9	OK
4.001	SW-108	43.751	-0.124	0.000	0.38	0.0	29.8	OK
4.002	SW-109	43.732	-0.047	0.000	0.83	0.0	85.9	OK
4.003	SW-110	43.447	0.071	0.000	1.36	0.0	107.4	SURCHARGED
4.004	SW-111	43.186	-0.090	0.000	0.78	0.0	125.9	OK
4.005	SW-112	42.715	0.249	0.000	0.89	0.0	145.6	SURCHARGED
5.000	SW-113	42.240	-0.160	0.000	0.18	0.0	13.9	OK
4.006	SW-114	41.879	0.477	0.000	1.23	0.0	182.1	SURCHARGED
4.007	SW-115	41.326	0.291	0.000	1.38	0.0	198.9	SURCHARGED
4.008	SW-116	39.197	0.897	0.000	1.36	0.0	213.6	SURCHARGED
4.009	SW-117	38.461	0.554	0.000	2.13	0.0	213.8	SURCHARGED
2.007	SW-118	37.127	0.252	0.000	1.41	0.0	246.4	SURCHARGED
2.008	SW-119	35.852	0.277	0.000	1.48	0.0	255.5	SURCHARGED
2.009	SW-120	34.633	0.358	0.000	1.51	0.0	266.1	SURCHARGED
2.010	SW-121	32.400	0.625	0.000	1.51	0.0	277.4	SURCHARGED
2.011	SW-122	31.661	0.493	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	47.306	1.581	0.000	0.56	0.0	27.4	SURCHARGED
6.001	SW-2	47.208	1.789	0.000	0.54	0.0	39.8	SURCHARGED
7.000	SW-3	47.228	1.003	0.000	0.46	0.0	22.5	SURCHARGED
6.002	SW-4	47.190	1.858	0.000	1.11	0.0	75.2	SURCHARGED
8.000	SW-5	46.962	0.362	0.000	0.37	0.0	23.4	SURCHARGED
6.003	SW-6	46.926	1.745	0.000	1.19	0.0	118.8	SURCHARGED
6.004	SW-7	46.784	1.718	0.000	1.58	0.0	181.9	SURCHARGED
6.005	SW-8	46.278	1.361	0.000	1.32	0.0	183.5	SURCHARGED
6.006	SW-9	46.162	1.311	0.000	1.63	0.0	204.5	SURCHARGED
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.641	-0.084	0.000	0.70	0.0	59.5	OK
9.002	SW-11	47.796	0.505	0.000	1.29	0.0	72.9	SURCHARGED
9.003	SW-12	47.441	0.321	0.000	0.95	0.0	110.7	SURCHARGED
9.004	SW-13	47.017	0.476	0.000	1.39	0.0	117.6	SURCHARGED
10.000	SW-14	46.845	0.510	0.000	0.70	0.0	27.7	SURCHARGED
10.001	SW-15	46.787	1.062	0.000	1.02	0.0	35.7	SURCHARGED
9.005	SW-16	46.762	1.024	0.000	2.41	0.0	153.0	SURCHARGED
11.000	SW-17	49.123	0.088	0.000	1.28	0.0	43.6	SURCHARGED
11.001	SW-18	48.789	-0.100	0.000	0.60	0.0	63.1	OK
11.002	SW-19	46.799	-0.071	0.000	0.81	0.0	76.8	OK
9.006	SW-20	46.426	0.602	0.000	1.50	0.0	252.7	SURCHARGED
9.007	SW-21	46.211	0.502	0.000	2.45	0.0	259.8	SURCHARGED
6.007	SW-22	46.031	1.781	0.000	1.71	0.0	468.6	SURCHARGED
6.008	SW-23	45.196	1.246	0.000	1.30	0.0	484.9	SURCHARGED
12.000	SW-24	46.875	0.575	0.000	0.77	0.0	68.8	SURCHARGED
13.000	SW-25	46.879	0.634	0.000	0.37	0.0	15.9	SURCHARGED
13.001	SW-26	46.853	1.128	0.000	0.66	0.0	22.8	SURCHARGED
13.002	SW-27	46.814	1.174	0.000	0.93	0.0	34.4	SURCHARGED
12.001	SW-28	46.685	1.131	0.000	1.68	0.0	104.4	SURCHARGED
14.000	SW-29A	46.602	0.377	0.000	0.08	0.0	2.9	SURCHARGED
14.001	SW-29	46.604	0.424	0.000	0.58	0.0	59.3	SURCHARGED
14.002	SW-30	46.488	0.775	0.000	0.98	0.0	61.5	SURCHARGED

Summary of Results for 30 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	46.397	0.944	0.000	1.80	0.0	176.1	SURCHARGED
15.000	SW-32	46.255	0.230	0.000	0.63	0.0	31.5	SURCHARGED
16.000	SW-33A	46.223	0.423	0.000	0.63	0.0	23.9	SURCHARGED
16.001	SW-33	46.184	0.538	0.000	0.57	0.0	22.5	SURCHARGED
15.001	SW-34	46.146	1.046	0.000	0.75	0.0	63.9	SURCHARGED
15.002	SW-35	46.066	1.115	0.000	0.65	0.0	69.5	SURCHARGED
17.000	SW-36	46.203	0.573	0.000	0.39	0.0	51.6	SURCHARGED
18.000	SW-37A	46.145	0.568	0.000	0.06	0.0	3.4	SURCHARGED
17.001	SW-37	46.148	1.044	0.000	0.91	0.0	67.9	SURCHARGED
17.002	SW-38	46.074	1.061	0.000	1.10	0.0	82.3	SURCHARGED
15.003	SW-39	45.967	1.178	0.000	1.57	0.0	164.1	SURCHARGED
15.004	SW-40	45.791	1.060	0.000	1.83	0.0	175.1	SURCHARGED
15.005	SW-41	45.573	0.907	0.000	1.17	0.0	180.6	SURCHARGED
15.006	SW-42	45.262	0.751	0.000	1.11	0.0	229.8	SURCHARGED
15.007	SW-43	44.870	0.671	0.000	1.82	0.0	257.0	SURCHARGED
12.003	SW-44	44.561	0.304	0.000	1.71	0.0	446.3	SURCHARGED
12.004	SW-45	44.322	0.147	0.000	1.84	0.0	471.3	SURCHARGED
6.009	SW-46	44.080	0.682	0.000	1.60	0.0	950.0	SURCHARGED
6.010	SW-47	43.667	1.182	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.664	-0.206	0.000	0.21	0.0	44.4	OK
19.001	SW-49	47.013	-0.170	0.000	0.39	0.0	83.3	OK
19.002	SW-50	45.337	-0.113	0.000	0.70	0.0	132.4	OK
19.003	SW-51	44.333	-0.067	0.000	0.95	0.0	157.4	OK
6.011	SW-52	42.939	0.454	0.000	2.16	0.0	195.3	SURCHARGED
6.012	SW-53	42.249	-0.113	0.000	0.83	0.0	220.4	OK
20.000	SW-54	48.176	-0.149	0.000	0.25	0.0	17.8	OK
20.001	SW-55	47.621	-0.136	0.000	0.33	0.0	33.4	OK
20.002	SW-56	46.395	-0.120	0.000	0.44	0.0	47.3	OK
20.003	SW-57	45.211	-0.104	0.000	0.56	0.0	63.9	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.570	-0.085	0.000	0.69	0.0	20.4	OK
21.002	SW-59	47.501	-0.102	0.000	0.57	0.0	58.6	OK
21.003	SW-60	45.926	-0.099	0.000	0.60	0.0	58.6	OK
22.000	SW-61	45.593	-0.132	0.000	0.36	0.0	22.9	OK
21.004	SW-62	45.275	0.266	0.000	1.24	0.0	111.0	SURCHARGED
23.000	SW-63	43.596	0.221	0.000	0.18	0.0	22.3	SURCHARGED
23.001	SW-64	43.584	0.359	0.000	0.51	0.0	48.9	SURCHARGED
23.002	SW-65	43.574	0.399	0.000	0.46	0.0	58.3	SURCHARGED
21.005	SW-66	43.560	0.503	0.000	1.23	0.0	143.1	SURCHARGED
20.004	SW-67	43.444	0.769	0.000	0.92	0.0	198.2	SURCHARGED
20.005	SW-68	43.192	0.844	0.000	1.24	0.0	189.1	SURCHARGED
20.006	SW-69	42.959	1.084	0.000	0.88	0.0	199.5	SURCHARGED
20.007	SW-70	42.602	1.188	0.000	0.97	0.0	221.9	SURCHARGED
20.008	SW-71	42.132	1.213	0.000	1.03	0.0	223.5	SURCHARGED
20.009	SW-72	41.792	1.123	0.000	1.63	0.0	239.0	SURCHARGED
20.010	SW-73	41.617	1.006	0.000	1.57	0.0	244.2	SURCHARGED
6.013	SW-74	41.421	0.818	0.000	2.27	0.0	471.2	SURCHARGED
6.014	SW-75	41.046	0.497	0.000	2.01	0.0	471.5	SURCHARGED
6.015	SW-76	40.624	0.178	0.000	1.45	0.0	475.3	SURCHARGED
6.016	SW-77	39.698	0.173	0.000	1.43	0.0	477.6	SURCHARGED
6.017	SW-78	38.479	0.154	0.000	1.36	0.0	479.7	SURCHARGED
6.018	SW-79	36.046	0.021	0.000	1.06	0.0	482.6	SURCHARGED
6.019	SW-80	34.889	0.164	0.000	1.37	0.0	486.5	SURCHARGED
6.020	SW-81	34.405	1.123	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.939	-0.143	0.000	0.29	0.0	33.9	OK
6.022	SW-83	31.860	-0.130	0.000	0.37	0.0	37.1	OK
6.023	SW-84	31.385	-0.105	0.000	0.56	0.0	45.8	OK
6.024	SW-85	31.212	0.061	0.000	1.06	0.0	49.2	SURCHARGED
6.025	SW-86	31.166	0.116	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.862	-0.094	0.000	0.64	0.0	52.2	OK
24.001	SW-88	34.328	0.828	0.000	1.03	0.0	84.8	SURCHARGED

Summary of Results for 30 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	34.152	0.777	0.000	0.55	0.0	100.5	SURCHARGED
24.003	SW-90	34.013	1.113	0.000	1.14	0.0	131.3	SURCHARGED
25.000	SW-91	34.148	-0.077	0.000	0.75	0.0	40.0	OK
25.001	SW-92	33.906	0.130	0.000	1.32	0.0	57.5	SURCHARGED
24.004	SW-93	33.801	1.060	0.000	1.47	0.0	214.9	SURCHARGED
24.005	SW-94	33.312	0.795	0.000	2.05	0.0	219.8	SURCHARGED
24.006	SW-95	32.995	0.548	0.000	1.58	0.0	228.5	SURCHARGED
24.007	SW-96	32.483	0.238	0.000	1.85	0.0	234.6	SURCHARGED
6.026	SW-97	31.242	-0.016	0.000	1.00	0.0	142.4	OK
26.000	SW-98	32.986	-0.150	0.000	0.24	0.0	9.5	OK
26.001	SW-98A	32.805	-0.157	0.000	0.20	0.0	19.9	OK
6.027	SW-98B	31.128	0.277	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.2	SURCHARGED
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.1	OK

Summary of Results for 45 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.495	-0.154	0.000	0.22	0.0	13.5	OK
2.001	SW-100	45.154	-0.105	0.000	0.55	0.0	26.9	OK
2.002	SW-101	44.443	0.218	0.000	1.13	0.0	54.5	SURCHARGED
2.003	SW-102	44.087	0.146	0.000	1.44	0.0	65.4	SURCHARGED
3.000	SW-103	43.612	-0.113	0.000	0.48	0.0	23.7	OK
2.004	SW-104	42.063	0.638	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.072	-0.153	0.000	0.22	0.0	11.0	OK
2.006	SW-106	37.812	-0.113	0.000	0.48	0.0	22.8	OK
4.000	SW-107	43.896	-0.129	0.000	0.38	0.0	17.8	OK
4.001	SW-108	43.692	-0.184	0.000	0.30	0.0	23.5	OK
4.002	SW-109	43.662	-0.117	0.000	0.67	0.0	69.3	OK
4.003	SW-110	43.385	0.009	0.000	1.10	0.0	87.3	SURCHARGED
4.004	SW-111	43.150	-0.125	0.000	0.64	0.0	102.3	OK
4.005	SW-112	42.360	-0.107	0.000	0.75	0.0	122.9	OK
5.000	SW-113	42.232	-0.168	0.000	0.14	0.0	10.8	OK
4.006	SW-114	41.557	0.155	0.000	1.03	0.0	153.0	SURCHARGED
4.007	SW-115	41.155	0.119	0.000	1.16	0.0	166.9	SURCHARGED
4.008	SW-116	38.802	0.502	0.000	1.15	0.0	180.4	SURCHARGED
4.009	SW-117	38.264	0.357	0.000	1.80	0.0	181.4	SURCHARGED
2.007	SW-118	36.980	0.105	0.000	1.20	0.0	208.7	SURCHARGED
2.008	SW-119	35.702	0.127	0.000	1.25	0.0	216.5	SURCHARGED
2.009	SW-120	34.445	0.170	0.000	1.28	0.0	225.6	SURCHARGED
2.010	SW-121	32.189	0.414	0.000	1.28	0.0	236.0	SURCHARGED
2.011	SW-122	31.754	0.586	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	46.714	0.989	0.000	0.51	0.0	25.0	SURCHARGED
6.001	SW-2	46.635	1.216	0.000	0.47	0.0	34.6	SURCHARGED
7.000	SW-3	46.651	0.426	0.000	0.38	0.0	18.6	SURCHARGED
6.002	SW-4	46.619	1.287	0.000	1.06	0.0	71.3	SURCHARGED
8.000	SW-5	46.458	-0.142	0.000	0.29	0.0	18.2	OK
6.003	SW-6	46.406	1.225	0.000	1.07	0.0	107.3	SURCHARGED
6.004	SW-7	46.284	1.218	0.000	1.42	0.0	163.3	SURCHARGED
6.005	SW-8	45.867	0.950	0.000	1.22	0.0	168.7	SURCHARGED
6.006	SW-9	45.772	0.921	0.000	1.49	0.0	186.3	SURCHARGED
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.620	-0.105	0.000	0.55	0.0	46.4	OK
9.002	SW-11	47.341	0.050	0.000	1.09	0.0	61.9	SURCHARGED
9.003	SW-12	47.033	-0.087	0.000	0.83	0.0	97.3	OK
9.004	SW-13	46.631	0.090	0.000	1.32	0.0	112.0	SURCHARGED
10.000	SW-14	46.462	0.127	0.000	0.60	0.0	23.4	SURCHARGED
10.001	SW-15	46.393	0.668	0.000	0.75	0.0	26.5	SURCHARGED
9.005	SW-16	46.365	0.627	0.000	2.27	0.0	144.1	SURCHARGED
11.000	SW-17	49.016	-0.019	0.000	1.00	0.0	34.1	OK
11.001	SW-18	48.773	-0.116	0.000	0.47	0.0	49.5	OK
11.002	SW-19	46.776	-0.094	0.000	0.63	0.0	60.3	OK
9.006	SW-20	46.031	0.207	0.000	1.32	0.0	222.6	SURCHARGED
9.007	SW-21	45.824	0.115	0.000	2.18	0.0	231.8	SURCHARGED
6.007	SW-22	45.663	1.413	0.000	1.55	0.0	425.0	SURCHARGED
6.008	SW-23	44.940	0.990	0.000	1.18	0.0	438.9	SURCHARGED
12.000	SW-24	46.438	0.138	0.000	0.67	0.0	59.9	SURCHARGED
13.000	SW-25	46.461	0.216	0.000	0.31	0.0	13.2	SURCHARGED
13.001	SW-26	46.437	0.712	0.000	0.56	0.0	19.5	SURCHARGED
13.002	SW-27	46.402	0.762	0.000	0.81	0.0	29.9	SURCHARGED
12.001	SW-28	46.294	0.740	0.000	1.48	0.0	92.0	SURCHARGED
14.000	SW-29A	46.227	0.002	0.000	0.03	0.0	1.1	SURCHARGED
14.001	SW-29	46.228	0.048	0.000	0.50	0.0	51.1	SURCHARGED
14.002	SW-30	46.139	0.426	0.000	0.83	0.0	52.4	SURCHARGED

Summary of Results for 45 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	46.070	0.618	0.000	1.56	0.0	153.0	SURCHARGED
15.000	SW-32	45.914	-0.111	0.000	0.50	0.0	24.9	OK
16.000	SW-33A	45.812	0.012	0.000	0.52	0.0	19.4	SURCHARGED
16.001	SW-33	45.776	0.131	0.000	0.50	0.0	19.6	SURCHARGED
15.001	SW-34	45.741	0.641	0.000	0.69	0.0	58.5	SURCHARGED
15.002	SW-35	45.677	0.726	0.000	0.61	0.0	64.5	SURCHARGED
17.000	SW-36	45.786	0.156	0.000	0.33	0.0	43.0	SURCHARGED
18.000	SW-37A	45.738	0.161	0.000	0.03	0.0	1.8	SURCHARGED
17.001	SW-37	45.740	0.636	0.000	0.81	0.0	60.4	SURCHARGED
17.002	SW-38	45.681	0.668	0.000	0.98	0.0	73.4	SURCHARGED
15.003	SW-39	45.597	0.808	0.000	1.39	0.0	145.9	SURCHARGED
15.004	SW-40	45.456	0.725	0.000	1.63	0.0	156.0	SURCHARGED
15.005	SW-41	45.282	0.616	0.000	1.05	0.0	161.6	SURCHARGED
15.006	SW-42	45.030	0.519	0.000	0.99	0.0	205.9	SURCHARGED
15.007	SW-43	44.714	0.515	0.000	1.63	0.0	230.9	SURCHARGED
12.003	SW-44	44.464	0.207	0.000	1.52	0.0	397.7	SURCHARGED
12.004	SW-45	44.271	0.096	0.000	1.65	0.0	422.8	SURCHARGED
6.009	SW-46	44.037	0.639	0.000	1.45	0.0	857.0	SURCHARGED
6.010	SW-47	43.790	1.305	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.652	-0.218	0.000	0.17	0.0	34.6	OK
19.001	SW-49	46.996	-0.187	0.000	0.30	0.0	64.9	OK
19.002	SW-50	45.310	-0.140	0.000	0.54	0.0	102.8	OK
19.003	SW-51	44.295	-0.105	0.000	0.74	0.0	122.0	OK
6.011	SW-52	42.761	0.276	0.000	1.81	0.0	163.4	SURCHARGED
6.012	SW-53	42.217	-0.145	0.000	0.69	0.0	183.7	OK
20.000	SW-54	48.167	-0.158	0.000	0.19	0.0	13.9	OK
20.001	SW-55	47.609	-0.148	0.000	0.25	0.0	26.0	OK
20.002	SW-56	46.381	-0.134	0.000	0.34	0.0	36.7	OK
20.003	SW-57	45.195	-0.120	0.000	0.43	0.0	49.6	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.550	-0.106	0.000	0.54	0.0	15.8	OK
21.002	SW-59	47.484	-0.119	0.000	0.44	0.0	45.6	OK
21.003	SW-60	45.909	-0.116	0.000	0.46	0.0	45.5	OK
22.000	SW-61	45.581	-0.144	0.000	0.28	0.0	17.9	OK
21.004	SW-62	44.983	-0.026	0.000	0.99	0.0	88.9	OK
23.000	SW-63	43.120	-0.255	0.000	0.14	0.0	17.7	OK
23.001	SW-64	43.087	-0.138	0.000	0.26	0.0	25.0	OK
23.002	SW-65	43.075	-0.100	0.000	0.26	0.0	32.8	OK
21.005	SW-66	43.057	0.000	0.000	1.07	0.0	124.9	OK
20.004	SW-67	42.776	0.101	0.000	0.82	0.0	176.7	SURCHARGED
20.005	SW-68	42.581	0.233	0.000	1.12	0.0	170.3	SURCHARGED
20.006	SW-69	42.396	0.521	0.000	0.79	0.0	179.2	SURCHARGED
20.007	SW-70	42.112	0.698	0.000	0.87	0.0	199.3	SURCHARGED
20.008	SW-71	41.732	0.813	0.000	0.93	0.0	200.8	SURCHARGED
20.009	SW-72	41.451	0.782	0.000	1.46	0.0	214.7	SURCHARGED
20.010	SW-73	41.304	0.693	0.000	1.41	0.0	219.5	SURCHARGED
6.013	SW-74	41.149	0.546	0.000	1.99	0.0	412.7	SURCHARGED
6.014	SW-75	40.856	0.306	0.000	1.77	0.0	415.3	SURCHARGED
6.015	SW-76	40.534	0.087	0.000	1.27	0.0	417.6	SURCHARGED
6.016	SW-77	39.609	0.084	0.000	1.25	0.0	418.5	SURCHARGED
6.017	SW-78	38.390	0.065	0.000	1.19	0.0	419.3	SURCHARGED
6.018	SW-79	35.900	-0.125	0.000	0.93	0.0	421.2	OK
6.019	SW-80	34.800	0.075	0.000	1.20	0.0	426.2	SURCHARGED
6.020	SW-81	34.578	1.296	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.938	-0.144	0.000	0.28	0.0	33.1	OK
6.022	SW-83	31.858	-0.132	0.000	0.36	0.0	35.5	OK
6.023	SW-84	31.380	-0.110	0.000	0.52	0.0	42.3	OK
6.024	SW-85	31.285	0.135	0.000	0.99	0.0	45.8	SURCHARGED
6.025	SW-86	31.240	0.189	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.844	-0.112	0.000	0.49	0.0	40.7	OK
24.001	SW-88	33.768	0.268	0.000	0.88	0.0	72.5	SURCHARGED

Summary of Results for 45 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.633	0.258	0.000	0.46	0.0	85.0	SURCHARGED
24.003	SW-90	33.534	0.634	0.000	0.98	0.0	112.6	SURCHARGED
25.000	SW-91	34.126	-0.099	0.000	0.59	0.0	31.2	OK
25.001	SW-92	33.776	0.000	0.000	1.02	0.0	44.5	OK
24.004	SW-93	33.380	0.639	0.000	1.28	0.0	187.2	SURCHARGED
24.005	SW-94	33.023	0.506	0.000	1.79	0.0	191.6	SURCHARGED
24.006	SW-95	32.785	0.338	0.000	1.38	0.0	198.5	SURCHARGED
24.007	SW-96	32.397	0.152	0.000	1.60	0.0	203.4	SURCHARGED
6.026	SW-97	31.209	-0.049	0.000	1.00	0.0	142.4	OK
26.000	SW-98	32.978	-0.158	0.000	0.19	0.0	7.4	OK
26.001	SW-98A	32.796	-0.166	0.000	0.15	0.0	15.5	OK
6.027	SW-98B	31.202	0.352	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 60 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.488	-0.161	0.000	0.18	0.0	11.3	OK
2.001	SW-100	45.142	-0.117	0.000	0.46	0.0	22.6	OK
2.002	SW-101	44.260	0.035	0.000	0.94	0.0	45.7	SURCHARGED
2.003	SW-102	43.999	0.058	0.000	1.22	0.0	55.3	SURCHARGED
3.000	SW-103	43.600	-0.125	0.000	0.41	0.0	20.0	OK
2.004	SW-104	42.138	0.713	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.067	-0.158	0.000	0.19	0.0	9.6	OK
2.006	SW-106	37.801	-0.124	0.000	0.42	0.0	19.6	OK
4.000	SW-107	43.887	-0.138	0.000	0.32	0.0	15.0	OK
4.001	SW-108	43.678	-0.197	0.000	0.25	0.0	19.8	OK
4.002	SW-109	43.642	-0.137	0.000	0.56	0.0	58.1	OK
4.003	SW-110	43.303	-0.072	0.000	0.92	0.0	72.5	OK
4.004	SW-111	43.132	-0.143	0.000	0.53	0.0	85.2	OK
4.005	SW-112	42.340	-0.126	0.000	0.63	0.0	102.8	OK
5.000	SW-113	42.227	-0.173	0.000	0.12	0.0	9.1	OK
4.006	SW-114	41.324	-0.079	0.000	0.88	0.0	130.9	OK
4.007	SW-115	40.990	-0.045	0.000	1.00	0.0	144.1	OK
4.008	SW-116	38.506	0.206	0.000	0.99	0.0	155.6	SURCHARGED
4.009	SW-117	38.118	0.211	0.000	1.55	0.0	155.7	SURCHARGED
2.007	SW-118	36.878	0.003	0.000	1.04	0.0	180.6	SURCHARGED
2.008	SW-119	35.602	0.027	0.000	1.09	0.0	187.4	SURCHARGED
2.009	SW-120	34.322	0.047	0.000	1.10	0.0	194.5	SURCHARGED
2.010	SW-121	32.022	0.247	0.000	1.11	0.0	203.2	SURCHARGED
2.011	SW-122	31.821	0.653	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	46.178	0.453	0.000	0.47	0.0	23.4	SURCHARGED
6.001	SW-2	46.109	0.690	0.000	0.44	0.0	32.4	SURCHARGED
7.000	SW-3	46.125	-0.100	0.000	0.32	0.0	15.7	OK
6.002	SW-4	46.093	0.761	0.000	0.96	0.0	65.0	SURCHARGED
8.000	SW-5	46.450	-0.150	0.000	0.24	0.0	15.4	OK
6.003	SW-6	45.907	0.726	0.000	1.02	0.0	102.0	SURCHARGED
6.004	SW-7	45.800	0.734	0.000	1.33	0.0	153.3	SURCHARGED
6.005	SW-8	45.440	0.523	0.000	1.14	0.0	157.6	SURCHARGED
6.006	SW-9	45.357	0.506	0.000	1.39	0.0	173.9	SURCHARGED
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.608	-0.117	0.000	0.46	0.0	39.2	OK
9.002	SW-11	47.236	-0.055	0.000	0.92	0.0	51.9	OK
9.003	SW-12	47.007	-0.113	0.000	0.70	0.0	81.2	OK
9.004	SW-13	46.563	0.022	0.000	1.11	0.0	94.3	SURCHARGED
10.000	SW-14	46.243	-0.092	0.000	0.55	0.0	21.6	OK
10.001	SW-15	46.190	0.465	0.000	0.65	0.0	22.9	SURCHARGED
9.005	SW-16	46.164	0.426	0.000	1.94	0.0	123.1	SURCHARGED
11.000	SW-17	48.970	-0.065	0.000	0.84	0.0	28.7	OK
11.001	SW-18	48.763	-0.126	0.000	0.39	0.0	41.7	OK
11.002	SW-19	46.763	-0.107	0.000	0.53	0.0	50.7	OK
9.006	SW-20	45.923	0.099	0.000	1.14	0.0	192.1	SURCHARGED
9.007	SW-21	45.774	0.065	0.000	1.87	0.0	199.2	SURCHARGED
6.007	SW-22	45.262	1.012	0.000	1.40	0.0	384.1	SURCHARGED
6.008	SW-23	44.688	0.738	0.000	1.07	0.0	398.0	SURCHARGED
12.000	SW-24	46.170	-0.130	0.000	0.59	0.0	52.5	OK
13.000	SW-25	46.188	-0.057	0.000	0.29	0.0	12.3	OK
13.001	SW-26	46.167	0.442	0.000	0.53	0.0	18.3	SURCHARGED
13.002	SW-27	46.135	0.495	0.000	0.72	0.0	26.8	SURCHARGED
12.001	SW-28	46.050	0.496	0.000	1.32	0.0	82.3	SURCHARGED
14.000	SW-29A	46.016	-0.209	0.000	0.00	0.0	0.1	OK
14.001	SW-29	46.020	-0.160	0.000	0.44	0.0	44.6	OK
14.002	SW-30	45.928	0.215	0.000	0.78	0.0	49.2	SURCHARGED

Summary of Results for 60 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.871	0.419	0.000	1.42	0.0	139.1	SURCHARGED
15.000	SW-32	45.902	-0.123	0.000	0.42	0.0	20.9	OK
16.000	SW-33A	45.679	-0.121	0.000	0.44	0.0	16.5	OK
16.001	SW-33	45.522	-0.123	0.000	0.42	0.0	16.3	OK
15.001	SW-34	45.453	0.353	0.000	0.63	0.0	53.7	SURCHARGED
15.002	SW-35	45.398	0.447	0.000	0.55	0.0	58.2	SURCHARGED
17.000	SW-36	45.481	-0.149	0.000	0.29	0.0	38.6	OK
18.000	SW-37A	45.440	-0.137	0.000	0.01	0.0	0.6	OK
17.001	SW-37	45.440	0.336	0.000	0.71	0.0	53.1	SURCHARGED
17.002	SW-38	45.394	0.381	0.000	0.86	0.0	64.6	SURCHARGED
15.003	SW-39	45.328	0.539	0.000	1.28	0.0	133.6	SURCHARGED
15.004	SW-40	45.211	0.481	0.000	1.49	0.0	142.5	SURCHARGED
15.005	SW-41	45.067	0.401	0.000	0.96	0.0	147.1	SURCHARGED
15.006	SW-42	44.857	0.346	0.000	0.91	0.0	188.1	SURCHARGED
15.007	SW-43	44.599	0.399	0.000	1.49	0.0	210.2	SURCHARGED
12.003	SW-44	44.394	0.137	0.000	1.38	0.0	360.7	SURCHARGED
12.004	SW-45	44.236	0.061	0.000	1.50	0.0	383.9	SURCHARGED
6.009	SW-46	43.976	0.578	0.000	1.30	0.0	772.7	SURCHARGED
6.010	SW-47	43.879	1.394	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.644	-0.226	0.000	0.14	0.0	29.1	OK
19.001	SW-49	46.985	-0.198	0.000	0.25	0.0	54.6	OK
19.002	SW-50	45.293	-0.157	0.000	0.46	0.0	86.8	OK
19.003	SW-51	44.273	-0.127	0.000	0.62	0.0	102.4	OK
6.011	SW-52	42.641	0.156	0.000	1.53	0.0	138.6	SURCHARGED
6.012	SW-53	42.194	-0.168	0.000	0.59	0.0	156.2	OK
20.000	SW-54	48.161	-0.164	0.000	0.16	0.0	11.7	OK
20.001	SW-55	47.602	-0.155	0.000	0.21	0.0	21.9	OK
20.002	SW-56	46.372	-0.143	0.000	0.29	0.0	31.0	OK
20.003	SW-57	45.185	-0.130	0.000	0.37	0.0	41.9	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.537	-0.118	0.000	0.46	0.0	13.4	OK
21.002	SW-59	47.474	-0.130	0.000	0.37	0.0	38.5	OK
21.003	SW-60	45.898	-0.127	0.000	0.39	0.0	38.4	OK
22.000	SW-61	45.574	-0.151	0.000	0.23	0.0	15.1	OK
21.004	SW-62	44.943	-0.066	0.000	0.83	0.0	74.5	OK
23.000	SW-63	43.087	-0.288	0.000	0.12	0.0	15.2	OK
23.001	SW-64	43.002	-0.223	0.000	0.22	0.0	21.1	OK
23.002	SW-65	42.983	-0.192	0.000	0.20	0.0	24.9	OK
21.005	SW-66	42.968	-0.089	0.000	0.93	0.0	108.6	OK
20.004	SW-67	42.539	-0.136	0.000	0.72	0.0	156.6	OK
20.005	SW-68	42.348	0.000	0.000	1.02	0.0	154.9	OK
20.006	SW-69	41.941	0.066	0.000	0.71	0.0	160.8	SURCHARGED
20.007	SW-70	41.709	0.295	0.000	0.78	0.0	179.1	SURCHARGED
20.008	SW-71	41.402	0.484	0.000	0.83	0.0	178.9	SURCHARGED
20.009	SW-72	41.180	0.511	0.000	1.31	0.0	191.4	SURCHARGED
20.010	SW-73	41.065	0.455	0.000	1.26	0.0	195.6	SURCHARGED
6.013	SW-74	40.938	0.335	0.000	1.74	0.0	361.6	SURCHARGED
6.014	SW-75	40.714	0.164	0.000	1.55	0.0	364.3	SURCHARGED
6.015	SW-76	40.465	0.019	0.000	1.12	0.0	366.5	SURCHARGED
6.016	SW-77	39.539	0.014	0.000	1.10	0.0	367.7	SURCHARGED
6.017	SW-78	38.325	0.000	0.000	1.05	0.0	369.2	OK
6.018	SW-79	35.863	-0.162	0.000	0.82	0.0	371.6	OK
6.019	SW-80	34.727	0.002	0.000	1.06	0.0	375.2	SURCHARGED
6.020	SW-81	34.691	1.409	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.937	-0.145	0.000	0.28	0.0	32.6	OK
6.022	SW-83	31.856	-0.134	0.000	0.35	0.0	34.7	OK
6.023	SW-84	31.397	-0.093	0.000	0.49	0.0	40.4	OK
6.024	SW-85	31.342	0.191	0.000	0.93	0.0	43.2	SURCHARGED
6.025	SW-86	31.296	0.246	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.832	-0.124	0.000	0.42	0.0	34.3	OK
24.001	SW-88	33.400	-0.100	0.000	0.77	0.0	63.0	OK

Summary of Results for 60 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.276	-0.099	0.000	0.43	0.0	79.9	OK
24.003	SW-90	33.197	0.297	0.000	0.87	0.0	100.2	SURCHARGED
25.000	SW-91	34.112	-0.113	0.000	0.49	0.0	26.3	OK
25.001	SW-92	33.715	-0.061	0.000	0.87	0.0	37.7	OK
24.004	SW-93	33.083	0.342	0.000	1.11	0.0	161.8	SURCHARGED
24.005	SW-94	32.802	0.285	0.000	1.55	0.0	166.1	SURCHARGED
24.006	SW-95	32.621	0.174	0.000	1.20	0.0	173.1	SURCHARGED
24.007	SW-96	32.328	0.083	0.000	1.40	0.0	178.1	SURCHARGED
6.026	SW-97	31.265	0.007	0.000	1.00	0.0	142.0	SURCHARGED
26.000	SW-98	32.971	-0.165	0.000	0.16	0.0	6.3	OK
26.001	SW-98A	32.791	-0.171	0.000	0.13	0.0	13.1	OK
6.027	SW-98B	31.258	0.408	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 90 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.479	-0.170	0.000	0.14	0.0	8.6	OK
2.001	SW-100	45.126	-0.133	0.000	0.35	0.0	17.2	OK
2.002	SW-101	44.143	-0.082	0.000	0.72	0.0	34.9	OK
2.003	SW-102	43.887	-0.054	0.000	0.93	0.0	42.2	OK
3.000	SW-103	43.586	-0.139	0.000	0.31	0.0	15.1	OK
2.004	SW-104	42.245	0.820	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.059	-0.166	0.000	0.16	0.0	7.8	OK
2.006	SW-106	37.788	-0.137	0.000	0.32	0.0	15.3	OK
4.000	SW-107	43.874	-0.151	0.000	0.24	0.0	11.4	OK
4.001	SW-108	43.665	-0.211	0.000	0.19	0.0	15.0	OK
4.002	SW-109	43.616	-0.163	0.000	0.43	0.0	44.2	OK
4.003	SW-110	43.262	-0.114	0.000	0.70	0.0	55.2	OK
4.004	SW-111	43.108	-0.167	0.000	0.40	0.0	64.7	OK
4.005	SW-112	42.313	-0.154	0.000	0.47	0.0	78.0	OK
5.000	SW-113	42.220	-0.180	0.000	0.09	0.0	6.9	OK
4.006	SW-114	41.284	-0.119	0.000	0.67	0.0	99.2	OK
4.007	SW-115	40.933	-0.102	0.000	0.76	0.0	109.1	OK
4.008	SW-116	38.196	-0.104	0.000	0.75	0.0	117.6	OK
4.009	SW-117	37.957	0.049	0.000	1.17	0.0	117.6	SURCHARGED
2.007	SW-118	36.753	-0.122	0.000	0.79	0.0	137.1	OK
2.008	SW-119	35.462	-0.113	0.000	0.83	0.0	142.5	OK
2.009	SW-120	34.166	-0.109	0.000	0.84	0.0	148.8	OK
2.010	SW-121	31.925	0.150	0.000	0.85	0.0	156.4	SURCHARGED
2.011	SW-122	31.915	0.746	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.598	-0.127	0.000	0.39	0.0	19.4	OK
6.001	SW-2	45.445	0.026	0.000	0.33	0.0	24.0	SURCHARGED
7.000	SW-3	46.075	-0.150	0.000	0.24	0.0	11.9	OK
6.002	SW-4	45.432	0.100	0.000	0.82	0.0	55.2	SURCHARGED
8.000	SW-5	46.440	-0.160	0.000	0.18	0.0	11.6	OK
6.003	SW-6	45.280	0.099	0.000	0.86	0.0	85.8	SURCHARGED
6.004	SW-7	45.195	0.129	0.000	1.11	0.0	127.5	SURCHARGED
6.005	SW-8	44.917	0.000	0.000	0.98	0.0	135.1	OK
6.006	SW-9	44.851	0.000	0.000	1.20	0.0	149.7	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.592	-0.133	0.000	0.35	0.0	29.7	OK
9.002	SW-11	47.205	-0.086	0.000	0.70	0.0	39.4	OK
9.003	SW-12	46.976	-0.144	0.000	0.53	0.0	61.9	OK
9.004	SW-13	46.454	-0.087	0.000	0.84	0.0	71.3	OK
10.000	SW-14	46.211	-0.124	0.000	0.42	0.0	16.4	OK
10.001	SW-15	45.963	0.238	0.000	0.46	0.0	16.2	SURCHARGED
9.005	SW-16	45.944	0.206	0.000	1.48	0.0	94.1	SURCHARGED
11.000	SW-17	48.941	-0.094	0.000	0.64	0.0	21.8	OK
11.001	SW-18	48.748	-0.141	0.000	0.30	0.0	31.7	OK
11.002	SW-19	46.745	-0.125	0.000	0.40	0.0	38.5	OK
9.006	SW-20	45.799	-0.025	0.000	0.87	0.0	147.0	OK
9.007	SW-21	45.710	0.001	0.000	1.44	0.0	152.6	SURCHARGED
6.007	SW-22	44.648	0.398	0.000	1.11	0.0	305.0	SURCHARGED
6.008	SW-23	44.315	0.365	0.000	0.84	0.0	313.5	SURCHARGED
12.000	SW-24	46.141	-0.159	0.000	0.45	0.0	40.0	OK
13.000	SW-25	46.091	-0.154	0.000	0.22	0.0	9.3	OK
13.001	SW-26	45.800	0.075	0.000	0.42	0.0	14.7	SURCHARGED
13.002	SW-27	45.773	0.133	0.000	0.61	0.0	22.6	SURCHARGED
12.001	SW-28	45.713	0.159	0.000	1.10	0.0	68.4	SURCHARGED
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	46.000	-0.180	0.000	0.33	0.0	33.9	OK
14.002	SW-30	45.633	-0.080	0.000	0.63	0.0	39.8	OK

Summary of Results for 90 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.590	0.137	0.000	1.17	0.0	114.3	SURCHARGED
15.000	SW-32	45.887	-0.138	0.000	0.32	0.0	15.9	OK
16.000	SW-33A	45.664	-0.136	0.000	0.33	0.0	12.5	OK
16.001	SW-33	45.507	-0.138	0.000	0.32	0.0	12.4	OK
15.001	SW-34	45.007	-0.093	0.000	0.52	0.0	44.4	OK
15.002	SW-35	44.964	0.013	0.000	0.44	0.0	47.4	SURCHARGED
17.000	SW-36	45.425	-0.205	0.000	0.22	0.0	29.1	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	45.000	-0.104	0.000	0.62	0.0	46.7	OK
17.002	SW-38	44.962	-0.051	0.000	0.75	0.0	55.8	OK
15.003	SW-39	44.916	0.127	0.000	1.05	0.0	110.0	SURCHARGED
15.004	SW-40	44.838	0.107	0.000	1.23	0.0	117.0	SURCHARGED
15.005	SW-41	44.741	0.075	0.000	0.78	0.0	120.5	SURCHARGED
15.006	SW-42	44.601	0.089	0.000	0.74	0.0	154.0	SURCHARGED
15.007	SW-43	44.427	0.228	0.000	1.21	0.0	171.0	SURCHARGED
12.003	SW-44	44.290	0.032	0.000	1.13	0.0	295.2	SURCHARGED
12.004	SW-45	44.184	0.008	0.000	1.23	0.0	314.6	SURCHARGED
6.009	SW-46	44.009	0.611	0.000	1.05	0.0	625.4	SURCHARGED
6.010	SW-47	44.005	1.520	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.635	-0.235	0.000	0.11	0.0	21.9	OK
19.001	SW-49	46.972	-0.211	0.000	0.19	0.0	41.2	OK
19.002	SW-50	45.272	-0.178	0.000	0.35	0.0	65.6	OK
19.003	SW-51	44.245	-0.155	0.000	0.47	0.0	77.6	OK
6.011	SW-52	42.520	0.035	0.000	1.18	0.0	106.9	SURCHARGED
6.012	SW-53	42.165	-0.197	0.000	0.45	0.0	119.8	OK
20.000	SW-54	48.152	-0.173	0.000	0.12	0.0	8.8	OK
20.001	SW-55	47.592	-0.165	0.000	0.16	0.0	16.5	OK
20.002	SW-56	46.361	-0.154	0.000	0.22	0.0	23.4	OK
20.003	SW-57	45.171	-0.144	0.000	0.28	0.0	31.7	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.522	-0.134	0.000	0.34	0.0	10.1	OK
21.002	SW-59	47.460	-0.144	0.000	0.28	0.0	29.1	OK
21.003	SW-60	45.884	-0.141	0.000	0.30	0.0	29.0	OK
22.000	SW-61	45.564	-0.161	0.000	0.18	0.0	11.4	OK
21.004	SW-62	44.914	-0.095	0.000	0.63	0.0	56.4	OK
23.000	SW-63	43.077	-0.298	0.000	0.09	0.0	11.5	OK
23.001	SW-64	42.965	-0.260	0.000	0.17	0.0	15.9	OK
23.002	SW-65	42.936	-0.239	0.000	0.15	0.0	18.6	OK
21.005	SW-66	42.917	-0.140	0.000	0.70	0.0	82.1	OK
20.004	SW-67	42.500	-0.175	0.000	0.55	0.0	118.5	OK
20.005	SW-68	42.225	-0.123	0.000	0.78	0.0	118.1	OK
20.006	SW-69	41.701	-0.174	0.000	0.55	0.0	125.2	OK
20.007	SW-70	41.254	-0.160	0.000	0.62	0.0	141.2	OK
20.008	SW-71	40.995	0.076	0.000	0.65	0.0	141.2	SURCHARGED
20.009	SW-72	40.859	0.190	0.000	1.03	0.0	151.4	SURCHARGED
20.010	SW-73	40.797	0.186	0.000	0.99	0.0	153.9	SURCHARGED
6.013	SW-74	40.716	0.113	0.000	1.38	0.0	287.3	SURCHARGED
6.014	SW-75	40.576	0.027	0.000	1.23	0.0	289.3	SURCHARGED
6.015	SW-76	40.306	-0.140	0.000	0.88	0.0	290.4	OK
6.016	SW-77	39.381	-0.144	0.000	0.87	0.0	290.8	OK
6.017	SW-78	38.168	-0.157	0.000	0.83	0.0	291.7	OK
6.018	SW-79	35.810	-0.215	0.000	0.65	0.0	294.8	OK
6.019	SW-80	34.841	0.116	0.000	0.84	0.0	298.6	SURCHARGED
6.020	SW-81	34.833	1.551	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.936	-0.146	0.000	0.27	0.0	31.9	OK
6.022	SW-83	31.855	-0.135	0.000	0.34	0.0	33.5	OK
6.023	SW-84	31.480	-0.010	0.000	0.46	0.0	37.8	OK
6.024	SW-85	31.425	0.274	0.000	0.85	0.0	39.6	SURCHARGED
6.025	SW-86	31.379	0.329	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.818	-0.138	0.000	0.32	0.0	25.9	OK
24.001	SW-88	33.365	-0.135	0.000	0.58	0.0	47.9	OK

Summary of Results for 90 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.150	-0.225	0.000	0.34	0.0	61.6	OK
24.003	SW-90	32.823	-0.077	0.000	0.70	0.0	80.4	OK
25.000	SW-91	34.095	-0.130	0.000	0.37	0.0	19.9	OK
25.001	SW-92	33.685	-0.091	0.000	0.66	0.0	28.6	OK
24.004	SW-93	32.744	0.003	0.000	0.90	0.0	131.1	SURCHARGED
24.005	SW-94	32.563	0.046	0.000	1.25	0.0	134.4	SURCHARGED
24.006	SW-95	32.446	-0.001	0.000	0.97	0.0	139.7	OK
24.007	SW-96	32.257	0.012	0.000	1.13	0.0	143.3	SURCHARGED
6.026	SW-97	31.347	0.090	0.000	0.91	0.0	129.1	SURCHARGED
26.000	SW-98	32.963	-0.173	0.000	0.12	0.0	4.7	OK
26.001	SW-98A	32.784	-0.178	0.000	0.10	0.0	9.9	OK
6.027	SW-98B	31.340	0.490	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 120 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.474	-0.175	0.000	0.11	0.0	7.0	OK
2.001	SW-100	45.116	-0.143	0.000	0.28	0.0	14.0	OK
2.002	SW-101	44.124	-0.101	0.000	0.59	0.0	28.6	OK
2.003	SW-102	43.863	-0.078	0.000	0.76	0.0	34.6	OK
3.000	SW-103	43.576	-0.149	0.000	0.25	0.0	12.4	OK
2.004	SW-104	42.321	0.896	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.055	-0.170	0.000	0.14	0.0	6.7	OK
2.006	SW-106	37.780	-0.145	0.000	0.27	0.0	12.9	OK
4.000	SW-107	43.867	-0.158	0.000	0.20	0.0	9.3	OK
4.001	SW-108	43.655	-0.221	0.000	0.16	0.0	12.3	OK
4.002	SW-109	43.601	-0.178	0.000	0.35	0.0	36.1	OK
4.003	SW-110	43.238	-0.137	0.000	0.57	0.0	45.3	OK
4.004	SW-111	43.094	-0.182	0.000	0.33	0.0	53.1	OK
4.005	SW-112	42.296	-0.170	0.000	0.39	0.0	64.1	OK
5.000	SW-113	42.215	-0.185	0.000	0.07	0.0	5.6	OK
4.006	SW-114	41.262	-0.141	0.000	0.55	0.0	81.7	OK
4.007	SW-115	40.908	-0.128	0.000	0.63	0.0	90.1	OK
4.008	SW-116	38.171	-0.129	0.000	0.62	0.0	97.4	OK
4.009	SW-117	37.842	-0.066	0.000	0.97	0.0	97.4	OK
2.007	SW-118	36.721	-0.154	0.000	0.65	0.0	113.8	OK
2.008	SW-119	35.428	-0.147	0.000	0.68	0.0	118.1	OK
2.009	SW-120	34.132	-0.143	0.000	0.70	0.0	123.1	OK
2.010	SW-121	31.989	0.214	0.000	0.70	0.0	129.2	SURCHARGED
2.011	SW-122	31.981	0.813	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.588	-0.137	0.000	0.32	0.0	15.9	OK
6.001	SW-2	45.238	-0.181	0.000	0.28	0.0	20.6	OK
7.000	SW-3	46.068	-0.157	0.000	0.20	0.0	9.7	OK
6.002	SW-4	45.219	-0.113	0.000	0.71	0.0	47.7	OK
8.000	SW-5	46.432	-0.168	0.000	0.15	0.0	9.5	OK
6.003	SW-6	45.092	-0.089	0.000	0.73	0.0	72.8	OK
6.004	SW-7	45.031	-0.035	0.000	0.94	0.0	107.8	OK
6.005	SW-8	44.834	-0.083	0.000	0.82	0.0	113.4	OK
6.006	SW-9	44.779	-0.072	0.000	1.00	0.0	125.2	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.582	-0.143	0.000	0.29	0.0	24.2	OK
9.002	SW-11	47.188	-0.103	0.000	0.57	0.0	32.2	OK
9.003	SW-12	46.958	-0.162	0.000	0.43	0.0	50.7	OK
9.004	SW-13	46.425	-0.116	0.000	0.69	0.0	58.6	OK
10.000	SW-14	46.200	-0.135	0.000	0.34	0.0	13.4	OK
10.001	SW-15	45.880	0.155	0.000	0.38	0.0	13.4	SURCHARGED
9.005	SW-16	45.864	0.126	0.000	1.22	0.0	77.6	SURCHARGED
11.000	SW-17	48.926	-0.109	0.000	0.52	0.0	17.9	OK
11.001	SW-18	48.739	-0.150	0.000	0.25	0.0	25.9	OK
11.002	SW-19	46.734	-0.136	0.000	0.33	0.0	31.6	OK
9.006	SW-20	45.768	-0.056	0.000	0.72	0.0	121.3	OK
9.007	SW-21	45.709	0.000	0.000	1.19	0.0	126.2	OK
6.007	SW-22	44.380	0.130	0.000	0.95	0.0	259.9	SURCHARGED
6.008	SW-23	44.163	0.213	0.000	0.71	0.0	263.6	SURCHARGED
12.000	SW-24	46.125	-0.175	0.000	0.37	0.0	32.8	OK
13.000	SW-25	46.084	-0.161	0.000	0.18	0.0	7.6	OK
13.001	SW-26	45.594	-0.131	0.000	0.36	0.0	12.6	OK
13.002	SW-27	45.531	-0.109	0.000	0.52	0.0	19.4	OK
12.001	SW-28	45.483	-0.071	0.000	0.94	0.0	58.2	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.986	-0.194	0.000	0.27	0.0	27.8	OK
14.002	SW-30	45.570	-0.144	0.000	0.54	0.0	33.6	OK

Summary of Results for 120 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.392	-0.060	0.000	1.00	0.0	97.8	OK
15.000	SW-32	45.878	-0.147	0.000	0.26	0.0	13.0	OK
16.000	SW-33A	45.654	-0.146	0.000	0.27	0.0	10.2	OK
16.001	SW-33	45.498	-0.148	0.000	0.26	0.0	10.2	OK
15.001	SW-34	44.937	-0.163	0.000	0.43	0.0	36.7	OK
15.002	SW-35	44.820	-0.131	0.000	0.38	0.0	40.4	OK
17.000	SW-36	45.416	-0.214	0.000	0.18	0.0	23.7	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.956	-0.148	0.000	0.51	0.0	38.4	OK
17.002	SW-38	44.885	-0.128	0.000	0.62	0.0	46.6	OK
15.003	SW-39	44.779	-0.010	0.000	0.90	0.0	94.2	OK
15.004	SW-40	44.731	0.000	0.000	1.04	0.0	99.7	OK
15.005	SW-41	44.557	-0.109	0.000	0.66	0.0	101.7	OK
15.006	SW-42	44.463	-0.049	0.000	0.61	0.0	126.8	OK
15.007	SW-43	44.348	0.149	0.000	1.00	0.0	141.9	SURCHARGED
12.003	SW-44	44.257	0.000	0.000	0.93	0.0	243.6	OK
12.004	SW-45	44.152	-0.023	0.000	1.00	0.0	255.5	OK
6.009	SW-46	44.101	0.703	0.000	0.87	0.0	517.5	SURCHARGED
6.010	SW-47	44.097	1.612	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.629	-0.241	0.000	0.09	0.0	17.9	OK
19.001	SW-49	46.962	-0.221	0.000	0.16	0.0	33.7	OK
19.002	SW-50	45.258	-0.192	0.000	0.28	0.0	53.6	OK
19.003	SW-51	44.229	-0.171	0.000	0.38	0.0	63.6	OK
6.011	SW-52	42.409	-0.076	0.000	0.99	0.0	90.0	OK
6.012	SW-53	42.147	-0.215	0.000	0.38	0.0	101.1	OK
20.000	SW-54	48.147	-0.178	0.000	0.10	0.0	7.2	OK
20.001	SW-55	47.586	-0.171	0.000	0.13	0.0	13.5	OK
20.002	SW-56	46.353	-0.162	0.000	0.18	0.0	19.2	OK
20.003	SW-57	45.162	-0.153	0.000	0.23	0.0	26.0	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.511	-0.144	0.000	0.28	0.0	8.3	OK
21.002	SW-59	47.451	-0.152	0.000	0.23	0.0	23.8	OK
21.003	SW-60	45.875	-0.150	0.000	0.24	0.0	23.8	OK
22.000	SW-61	45.557	-0.168	0.000	0.14	0.0	9.3	OK
21.004	SW-62	44.899	-0.110	0.000	0.52	0.0	46.2	OK
23.000	SW-63	43.068	-0.307	0.000	0.08	0.0	9.4	OK
23.001	SW-64	42.948	-0.277	0.000	0.14	0.0	13.1	OK
23.002	SW-65	42.913	-0.262	0.000	0.12	0.0	15.4	OK
21.005	SW-66	42.887	-0.170	0.000	0.58	0.0	67.8	OK
20.004	SW-67	42.477	-0.198	0.000	0.45	0.0	97.9	OK
20.005	SW-68	42.192	-0.156	0.000	0.64	0.0	97.9	OK
20.006	SW-69	41.678	-0.197	0.000	0.46	0.0	103.6	OK
20.007	SW-70	41.229	-0.185	0.000	0.51	0.0	116.8	OK
20.008	SW-71	40.819	-0.100	0.000	0.54	0.0	116.3	OK
20.009	SW-72	40.724	0.055	0.000	0.85	0.0	124.8	SURCHARGED
20.010	SW-73	40.677	0.067	0.000	0.81	0.0	126.6	SURCHARGED
6.013	SW-74	40.621	0.018	0.000	1.15	0.0	239.1	SURCHARGED
6.014	SW-75	40.549	0.000	0.000	1.02	0.0	238.8	OK
6.015	SW-76	40.259	-0.187	0.000	0.73	0.0	241.0	OK
6.016	SW-77	39.334	-0.191	0.000	0.73	0.0	242.5	OK
6.017	SW-78	38.122	-0.203	0.000	0.69	0.0	244.1	OK
6.018	SW-79	35.775	-0.250	0.000	0.54	0.0	246.3	OK
6.019	SW-80	34.925	0.200	0.000	0.70	0.0	249.2	SURCHARGED
6.020	SW-81	34.917	1.635	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.936	-0.146	0.000	0.27	0.0	31.6	OK
6.022	SW-83	31.854	-0.136	0.000	0.33	0.0	32.9	OK
6.023	SW-84	31.553	0.063	0.000	0.44	0.0	36.4	SURCHARGED
6.024	SW-85	31.497	0.347	0.000	0.82	0.0	37.9	SURCHARGED
6.025	SW-86	31.452	0.401	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.808	-0.148	0.000	0.26	0.0	21.2	OK
24.001	SW-88	33.346	-0.154	0.000	0.48	0.0	39.2	OK

Summary of Results for 120 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.133	-0.242	0.000	0.27	0.0	50.5	OK
24.003	SW-90	32.732	-0.168	0.000	0.59	0.0	67.6	OK
25.000	SW-91	34.085	-0.140	0.000	0.31	0.0	16.3	OK
25.001	SW-92	33.669	-0.107	0.000	0.54	0.0	23.5	OK
24.004	SW-93	32.646	-0.095	0.000	0.74	0.0	108.4	OK
24.005	SW-94	32.517	0.000	0.000	1.03	0.0	110.0	OK
24.006	SW-95	32.331	-0.116	0.000	0.80	0.0	115.3	OK
24.007	SW-96	32.160	-0.085	0.000	0.94	0.0	119.2	OK
6.026	SW-97	31.419	0.162	0.000	0.82	0.0	116.3	SURCHARGED
26.000	SW-98	32.958	-0.178	0.000	0.10	0.0	3.9	OK
26.001	SW-98A	32.779	-0.183	0.000	0.08	0.0	8.1	OK
6.027	SW-98B	31.412	0.562	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 180 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.468	-0.181	0.000	0.08	0.0	5.3	OK
2.001	SW-100	45.104	-0.155	0.000	0.21	0.0	10.6	OK
2.002	SW-101	44.105	-0.120	0.000	0.44	0.0	21.5	OK
2.003	SW-102	43.838	-0.103	0.000	0.57	0.0	26.0	OK
3.000	SW-103	43.566	-0.159	0.000	0.19	0.0	9.3	OK
2.004	SW-104	42.422	0.997	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.050	-0.175	0.000	0.11	0.0	5.6	OK
2.006	SW-106	37.771	-0.154	0.000	0.22	0.0	10.2	OK
4.000	SW-107	43.857	-0.168	0.000	0.15	0.0	7.0	OK
4.001	SW-108	43.644	-0.232	0.000	0.12	0.0	9.2	OK
4.002	SW-109	43.583	-0.196	0.000	0.26	0.0	27.2	OK
4.003	SW-110	43.213	-0.163	0.000	0.43	0.0	34.1	OK
4.004	SW-111	43.077	-0.199	0.000	0.25	0.0	40.0	OK
4.005	SW-112	42.277	-0.189	0.000	0.29	0.0	48.2	OK
5.000	SW-113	42.209	-0.191	0.000	0.06	0.0	4.2	OK
4.006	SW-114	41.237	-0.166	0.000	0.41	0.0	61.4	OK
4.007	SW-115	40.880	-0.155	0.000	0.47	0.0	67.7	OK
4.008	SW-116	38.144	-0.156	0.000	0.47	0.0	73.1	OK
4.009	SW-117	37.798	-0.109	0.000	0.73	0.0	73.1	OK
2.007	SW-118	36.686	-0.189	0.000	0.49	0.0	85.9	OK
2.008	SW-119	35.392	-0.183	0.000	0.52	0.0	89.2	OK
2.009	SW-120	34.094	-0.181	0.000	0.53	0.0	93.1	OK
2.010	SW-121	32.076	0.301	0.000	0.53	0.0	97.8	SURCHARGED
2.011	SW-122	32.069	0.901	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.575	-0.150	0.000	0.24	0.0	12.0	OK
6.001	SW-2	45.213	-0.206	0.000	0.21	0.0	15.5	OK
7.000	SW-3	46.058	-0.167	0.000	0.15	0.0	7.3	OK
6.002	SW-4	45.188	-0.144	0.000	0.53	0.0	35.9	OK
8.000	SW-5	46.425	-0.175	0.000	0.11	0.0	7.2	OK
6.003	SW-6	45.008	-0.173	0.000	0.56	0.0	55.8	OK
6.004	SW-7	44.929	-0.137	0.000	0.72	0.0	83.3	OK
6.005	SW-8	44.761	-0.156	0.000	0.64	0.0	88.5	OK
6.006	SW-9	44.702	-0.149	0.000	0.78	0.0	98.0	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.570	-0.155	0.000	0.22	0.0	18.3	OK
9.002	SW-11	47.169	-0.122	0.000	0.43	0.0	24.3	OK
9.003	SW-12	46.938	-0.182	0.000	0.33	0.0	38.2	OK
9.004	SW-13	46.395	-0.146	0.000	0.52	0.0	44.1	OK
10.000	SW-14	46.187	-0.148	0.000	0.26	0.0	10.1	OK
10.001	SW-15	45.711	-0.014	0.000	0.29	0.0	10.0	OK
9.005	SW-16	45.699	-0.039	0.000	0.92	0.0	58.3	OK
11.000	SW-17	48.908	-0.127	0.000	0.39	0.0	13.5	OK
11.001	SW-18	48.729	-0.160	0.000	0.18	0.0	19.5	OK
11.002	SW-19	46.721	-0.149	0.000	0.25	0.0	23.8	OK
9.006	SW-20	45.649	-0.175	0.000	0.54	0.0	91.0	OK
9.007	SW-21	45.590	-0.119	0.000	0.89	0.0	94.8	OK
6.007	SW-22	44.250	0.000	0.000	0.73	0.0	200.7	OK
6.008	SW-23	44.239	0.289	0.000	0.54	0.0	203.5	SURCHARGED
12.000	SW-24	46.107	-0.193	0.000	0.28	0.0	24.7	OK
13.000	SW-25	46.075	-0.170	0.000	0.13	0.0	5.7	OK
13.001	SW-26	45.580	-0.145	0.000	0.27	0.0	9.5	OK
13.002	SW-27	45.513	-0.127	0.000	0.39	0.0	14.6	OK
12.001	SW-28	45.441	-0.113	0.000	0.70	0.0	43.8	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.972	-0.208	0.000	0.21	0.0	20.9	OK
14.002	SW-30	45.546	-0.168	0.000	0.40	0.0	25.3	OK

Summary of Results for 180 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.348	-0.105	0.000	0.75	0.0	73.4	OK
15.000	SW-32	45.867	-0.158	0.000	0.20	0.0	9.8	OK
16.000	SW-33A	45.644	-0.156	0.000	0.20	0.0	7.7	OK
16.001	SW-33	45.488	-0.158	0.000	0.20	0.0	7.7	OK
15.001	SW-34	44.918	-0.182	0.000	0.33	0.0	27.7	OK
15.002	SW-35	44.761	-0.190	0.000	0.29	0.0	30.7	OK
17.000	SW-36	45.403	-0.227	0.000	0.14	0.0	17.9	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.933	-0.171	0.000	0.39	0.0	28.9	OK
17.002	SW-38	44.858	-0.155	0.000	0.47	0.0	35.1	OK
15.003	SW-39	44.650	-0.139	0.000	0.68	0.0	71.6	OK
15.004	SW-40	44.611	-0.119	0.000	0.80	0.0	76.3	OK
15.005	SW-41	44.481	-0.184	0.000	0.51	0.0	78.9	OK
15.006	SW-42	44.283	-0.228	0.000	0.49	0.0	101.0	OK
15.007	SW-43	44.259	0.060	0.000	0.79	0.0	112.4	SURCHARGED
12.003	SW-44	44.253	-0.004	0.000	0.74	0.0	192.5	OK
12.004	SW-45	44.234	0.058	0.000	0.80	0.0	204.9	SURCHARGED
6.009	SW-46	44.230	0.832	0.000	0.68	0.0	406.0	SURCHARGED
6.010	SW-47	44.227	1.742	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.619	-0.251	0.000	0.06	0.0	13.5	OK
19.001	SW-49	46.951	-0.232	0.000	0.12	0.0	25.4	OK
19.002	SW-50	45.244	-0.206	0.000	0.21	0.0	40.4	OK
19.003	SW-51	44.210	-0.190	0.000	0.29	0.0	47.9	OK
6.011	SW-52	42.360	-0.125	0.000	0.77	0.0	70.1	OK
6.012	SW-53	42.126	-0.236	0.000	0.29	0.0	78.3	OK
20.000	SW-54	48.141	-0.184	0.000	0.08	0.0	5.4	OK
20.001	SW-55	47.579	-0.178	0.000	0.10	0.0	10.2	OK
20.002	SW-56	46.344	-0.171	0.000	0.13	0.0	14.5	OK
20.003	SW-57	45.152	-0.163	0.000	0.17	0.0	19.5	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.500	-0.155	0.000	0.21	0.0	6.2	OK
21.002	SW-59	47.441	-0.162	0.000	0.17	0.0	17.9	OK
21.003	SW-60	45.865	-0.160	0.000	0.18	0.0	17.9	OK
22.000	SW-61	45.549	-0.176	0.000	0.11	0.0	7.0	OK
21.004	SW-62	44.881	-0.128	0.000	0.39	0.0	34.8	OK
23.000	SW-63	43.057	-0.318	0.000	0.06	0.0	7.1	OK
23.001	SW-64	42.932	-0.293	0.000	0.10	0.0	9.9	OK
23.002	SW-65	42.889	-0.286	0.000	0.09	0.0	11.6	OK
21.005	SW-66	42.855	-0.202	0.000	0.44	0.0	51.0	OK
20.004	SW-67	42.451	-0.224	0.000	0.34	0.0	73.6	OK
20.005	SW-68	42.157	-0.191	0.000	0.48	0.0	73.5	OK
20.006	SW-69	41.652	-0.223	0.000	0.34	0.0	77.8	OK
20.007	SW-70	41.200	-0.214	0.000	0.38	0.0	87.7	OK
20.008	SW-71	40.710	-0.209	0.000	0.41	0.0	87.8	OK
20.009	SW-72	40.536	-0.133	0.000	0.65	0.0	94.6	OK
20.010	SW-73	40.501	-0.110	0.000	0.62	0.0	96.4	OK
6.013	SW-74	40.461	-0.142	0.000	0.88	0.0	183.5	OK
6.014	SW-75	40.377	-0.172	0.000	0.79	0.0	184.8	OK
6.015	SW-76	40.204	-0.242	0.000	0.57	0.0	185.9	OK
6.016	SW-77	39.281	-0.244	0.000	0.56	0.0	186.5	OK
6.017	SW-78	38.072	-0.253	0.000	0.53	0.0	187.5	OK
6.018	SW-79	35.735	-0.290	0.000	0.42	0.0	189.1	OK
6.019	SW-80	35.001	0.276	0.000	0.54	0.0	191.3	SURCHARGED
6.020	SW-81	34.994	1.712	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.935	-0.147	0.000	0.26	0.0	31.2	OK
6.022	SW-83	31.853	-0.137	0.000	0.32	0.0	32.2	OK
6.023	SW-84	31.652	0.162	0.000	0.42	0.0	34.8	SURCHARGED
6.024	SW-85	31.597	0.446	0.000	0.77	0.0	35.9	SURCHARGED
6.025	SW-86	31.551	0.500	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.798	-0.158	0.000	0.19	0.0	16.0	OK
24.001	SW-88	33.324	-0.176	0.000	0.36	0.0	29.5	OK

Summary of Results for 180 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.115	-0.260	0.000	0.21	0.0	38.0	OK
24.003	SW-90	32.700	-0.200	0.000	0.44	0.0	50.9	OK
25.000	SW-91	34.073	-0.152	0.000	0.23	0.0	12.3	OK
25.001	SW-92	33.651	-0.125	0.000	0.41	0.0	17.7	OK
24.004	SW-93	32.570	-0.171	0.000	0.57	0.0	83.2	OK
24.005	SW-94	32.396	-0.121	0.000	0.80	0.0	85.3	OK
24.006	SW-95	32.286	-0.161	0.000	0.62	0.0	89.0	OK
24.007	SW-96	32.107	-0.138	0.000	0.72	0.0	91.7	OK
6.026	SW-97	31.518	0.261	0.000	0.64	0.0	90.8	SURCHARGED
26.000	SW-98	32.951	-0.185	0.000	0.07	0.0	2.9	OK
26.001	SW-98A	32.773	-0.189	0.000	0.06	0.0	6.1	OK
6.027	SW-98B	31.512	0.661	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	SURCHARGED
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 240 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.462	-0.187	0.000	0.07	0.0	4.3	OK
2.001	SW-100	45.097	-0.162	0.000	0.17	0.0	8.6	OK
2.002	SW-101	44.093	-0.132	0.000	0.36	0.0	17.5	OK
2.003	SW-102	43.824	-0.117	0.000	0.47	0.0	21.1	OK
3.000	SW-103	43.559	-0.166	0.000	0.15	0.0	7.6	OK
2.004	SW-104	42.491	1.066	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.047	-0.178	0.000	0.10	0.0	4.9	OK
2.006	SW-106	37.765	-0.160	0.000	0.18	0.0	8.6	OK
4.000	SW-107	43.851	-0.174	0.000	0.12	0.0	5.7	OK
4.001	SW-108	43.638	-0.238	0.000	0.10	0.0	7.5	OK
4.002	SW-109	43.573	-0.206	0.000	0.21	0.0	22.1	OK
4.003	SW-110	43.198	-0.178	0.000	0.35	0.0	27.7	OK
4.004	SW-111	43.067	-0.209	0.000	0.20	0.0	32.5	OK
4.005	SW-112	42.265	-0.201	0.000	0.24	0.0	39.2	OK
5.000	SW-113	42.206	-0.194	0.000	0.05	0.0	3.4	OK
4.006	SW-114	41.222	-0.180	0.000	0.34	0.0	50.0	OK
4.007	SW-115	40.864	-0.172	0.000	0.38	0.0	55.1	OK
4.008	SW-116	38.128	-0.172	0.000	0.38	0.0	59.5	OK
4.009	SW-117	37.773	-0.134	0.000	0.59	0.0	59.5	OK
2.007	SW-118	36.665	-0.210	0.000	0.40	0.0	70.4	OK
2.008	SW-119	35.370	-0.205	0.000	0.42	0.0	73.0	OK
2.009	SW-120	34.072	-0.203	0.000	0.43	0.0	76.1	OK
2.010	SW-121	32.136	0.361	0.000	0.43	0.0	80.0	SURCHARGED
2.011	SW-122	32.130	0.962	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.568	-0.157	0.000	0.20	0.0	9.7	OK
6.001	SW-2	45.202	-0.217	0.000	0.17	0.0	12.6	OK
7.000	SW-3	46.052	-0.173	0.000	0.12	0.0	5.9	OK
6.002	SW-4	45.169	-0.163	0.000	0.43	0.0	29.1	OK
8.000	SW-5	46.421	-0.179	0.000	0.09	0.0	5.8	OK
6.003	SW-6	44.983	-0.198	0.000	0.45	0.0	45.5	OK
6.004	SW-7	44.898	-0.168	0.000	0.59	0.0	67.9	OK
6.005	SW-8	44.723	-0.194	0.000	0.52	0.0	71.9	OK
6.006	SW-9	44.663	-0.188	0.000	0.64	0.0	79.7	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.563	-0.162	0.000	0.17	0.0	14.8	OK
9.002	SW-11	47.157	-0.134	0.000	0.35	0.0	19.7	OK
9.003	SW-12	46.925	-0.195	0.000	0.27	0.0	31.0	OK
9.004	SW-13	46.377	-0.164	0.000	0.42	0.0	35.8	OK
10.000	SW-14	46.179	-0.156	0.000	0.21	0.0	8.2	OK
10.001	SW-15	45.653	-0.072	0.000	0.23	0.0	8.2	OK
9.005	SW-16	45.644	-0.094	0.000	0.75	0.0	47.4	OK
11.000	SW-17	48.897	-0.138	0.000	0.32	0.0	10.9	OK
11.001	SW-18	48.722	-0.167	0.000	0.15	0.0	15.9	OK
11.002	SW-19	46.713	-0.157	0.000	0.20	0.0	19.3	OK
9.006	SW-20	45.608	-0.216	0.000	0.44	0.0	74.1	OK
9.007	SW-21	45.544	-0.165	0.000	0.73	0.0	77.1	OK
6.007	SW-22	44.341	0.091	0.000	0.60	0.0	163.1	SURCHARGED
6.008	SW-23	44.333	0.383	0.000	0.45	0.0	166.9	SURCHARGED
12.000	SW-24	46.096	-0.204	0.000	0.22	0.0	20.0	OK
13.000	SW-25	46.069	-0.176	0.000	0.11	0.0	4.7	OK
13.001	SW-26	45.572	-0.153	0.000	0.22	0.0	7.7	OK
13.002	SW-27	45.502	-0.138	0.000	0.32	0.0	11.8	OK
12.001	SW-28	45.417	-0.137	0.000	0.57	0.0	35.6	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.962	-0.218	0.000	0.17	0.0	17.0	OK
14.002	SW-30	45.531	-0.182	0.000	0.33	0.0	20.6	OK

Summary of Results for 240 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.322	-0.131	0.000	0.61	0.0	59.8	OK
15.000	SW-32	45.860	-0.165	0.000	0.16	0.0	8.0	OK
16.000	SW-33A	45.636	-0.164	0.000	0.17	0.0	6.2	OK
16.001	SW-33	45.480	-0.165	0.000	0.16	0.0	6.2	OK
15.001	SW-34	44.904	-0.196	0.000	0.26	0.0	22.5	OK
15.002	SW-35	44.749	-0.202	0.000	0.23	0.0	25.0	OK
17.000	SW-36	45.396	-0.234	0.000	0.11	0.0	14.5	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.919	-0.185	0.000	0.31	0.0	23.5	OK
17.002	SW-38	44.841	-0.172	0.000	0.38	0.0	28.5	OK
15.003	SW-39	44.617	-0.172	0.000	0.56	0.0	58.3	OK
15.004	SW-40	44.577	-0.154	0.000	0.65	0.0	62.2	OK
15.005	SW-41	44.459	-0.207	0.000	0.42	0.0	64.2	OK
15.006	SW-42	44.341	-0.170	0.000	0.40	0.0	82.2	OK
15.007	SW-43	44.336	0.137	0.000	0.65	0.0	91.8	SURCHARGED
12.003	SW-44	44.332	0.074	0.000	0.60	0.0	157.0	SURCHARGED
12.004	SW-45	44.328	0.152	0.000	0.66	0.0	167.7	SURCHARGED
6.009	SW-46	44.326	0.928	0.000	0.56	0.0	333.5	SURCHARGED
6.010	SW-47	44.323	1.838	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.614	-0.256	0.000	0.05	0.0	10.9	OK
19.001	SW-49	46.945	-0.238	0.000	0.10	0.0	20.6	OK
19.002	SW-50	45.233	-0.217	0.000	0.17	0.0	32.8	OK
19.003	SW-51	44.198	-0.202	0.000	0.24	0.0	38.9	OK
6.011	SW-52	42.331	-0.154	0.000	0.65	0.0	58.9	OK
6.012	SW-53	42.113	-0.249	0.000	0.25	0.0	65.7	OK
20.000	SW-54	48.136	-0.189	0.000	0.06	0.0	4.4	OK
20.001	SW-55	47.574	-0.183	0.000	0.08	0.0	8.3	OK
20.002	SW-56	46.339	-0.176	0.000	0.11	0.0	11.7	OK
20.003	SW-57	45.145	-0.170	0.000	0.14	0.0	15.9	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.493	-0.163	0.000	0.17	0.0	5.1	OK
21.002	SW-59	47.434	-0.169	0.000	0.14	0.0	14.5	OK
21.003	SW-60	45.857	-0.168	0.000	0.15	0.0	14.5	OK
22.000	SW-61	45.545	-0.180	0.000	0.09	0.0	5.7	OK
21.004	SW-62	44.870	-0.139	0.000	0.32	0.0	28.3	OK
23.000	SW-63	43.051	-0.324	0.000	0.05	0.0	5.8	OK
23.001	SW-64	42.923	-0.302	0.000	0.08	0.0	8.0	OK
23.002	SW-65	42.877	-0.298	0.000	0.07	0.0	9.4	OK
21.005	SW-66	42.836	-0.221	0.000	0.36	0.0	41.5	OK
20.004	SW-67	42.434	-0.241	0.000	0.28	0.0	59.8	OK
20.005	SW-68	42.136	-0.212	0.000	0.39	0.0	59.8	OK
20.006	SW-69	41.635	-0.240	0.000	0.28	0.0	63.3	OK
20.007	SW-70	41.182	-0.232	0.000	0.31	0.0	71.5	OK
20.008	SW-71	40.692	-0.227	0.000	0.33	0.0	71.5	OK
20.009	SW-72	40.487	-0.182	0.000	0.52	0.0	76.9	OK
20.010	SW-73	40.450	-0.161	0.000	0.50	0.0	78.3	OK
6.013	SW-74	40.412	-0.191	0.000	0.73	0.0	151.1	OK
6.014	SW-75	40.333	-0.216	0.000	0.65	0.0	151.9	OK
6.015	SW-76	40.173	-0.273	0.000	0.47	0.0	153.1	OK
6.016	SW-77	39.250	-0.275	0.000	0.46	0.0	153.9	OK
6.017	SW-78	38.043	-0.282	0.000	0.44	0.0	154.7	OK
6.018	SW-79	35.712	-0.313	0.000	0.34	0.0	156.0	OK
6.019	SW-80	35.020	0.295	0.000	0.44	0.0	157.8	SURCHARGED
6.020	SW-81	35.012	1.730	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.935	-0.147	0.000	0.26	0.0	31.0	OK
6.022	SW-83	31.852	-0.138	0.000	0.32	0.0	31.8	OK
6.023	SW-84	31.730	0.240	0.000	0.41	0.0	33.9	SURCHARGED
6.024	SW-85	31.675	0.524	0.000	0.75	0.0	34.7	SURCHARGED
6.025	SW-86	31.629	0.579	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.790	-0.166	0.000	0.16	0.0	12.9	OK
24.001	SW-88	33.310	-0.190	0.000	0.29	0.0	23.9	OK

Summary of Results for 240 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.102	-0.273	0.000	0.17	0.0	30.9	OK
24.003	SW-90	32.680	-0.220	0.000	0.36	0.0	41.4	OK
25.000	SW-91	34.065	-0.160	0.000	0.19	0.0	10.0	OK
25.001	SW-92	33.640	-0.136	0.000	0.33	0.0	14.3	OK
24.004	SW-93	32.545	-0.196	0.000	0.46	0.0	67.7	OK
24.005	SW-94	32.362	-0.155	0.000	0.65	0.0	69.5	OK
24.006	SW-95	32.260	-0.187	0.000	0.50	0.0	72.4	OK
24.007	SW-96	32.077	-0.168	0.000	0.59	0.0	74.5	OK
6.026	SW-97	31.597	0.339	0.000	0.54	0.0	76.5	SURCHARGED
26.000	SW-98	32.947	-0.189	0.000	0.06	0.0	2.4	OK
26.001	SW-98A	32.769	-0.193	0.000	0.05	0.0	4.9	OK
6.027	SW-98B	31.590	0.740	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.2	OK

Summary of Results for 360 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.456	-0.193	0.000	0.05	0.0	3.2	OK
2.001	SW-100	45.087	-0.172	0.000	0.13	0.0	6.4	OK
2.002	SW-101	44.079	-0.146	0.000	0.27	0.0	12.9	OK
2.003	SW-102	43.807	-0.134	0.000	0.34	0.0	15.7	OK
3.000	SW-103	43.550	-0.175	0.000	0.11	0.0	5.6	OK
2.004	SW-104	42.577	1.152	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.043	-0.182	0.000	0.08	0.0	4.1	OK
2.006	SW-106	37.757	-0.168	0.000	0.15	0.0	6.9	OK
4.000	SW-107	43.845	-0.180	0.000	0.09	0.0	4.2	OK
4.001	SW-108	43.628	-0.248	0.000	0.07	0.0	5.6	OK
4.002	SW-109	43.558	-0.221	0.000	0.16	0.0	16.4	OK
4.003	SW-110	43.179	-0.197	0.000	0.26	0.0	20.5	OK
4.004	SW-111	43.053	-0.223	0.000	0.15	0.0	24.1	OK
4.005	SW-112	42.251	-0.216	0.000	0.18	0.0	29.0	OK
5.000	SW-113	42.202	-0.198	0.000	0.03	0.0	2.5	OK
4.006	SW-114	41.204	-0.199	0.000	0.25	0.0	37.0	OK
4.007	SW-115	40.844	-0.192	0.000	0.28	0.0	40.8	OK
4.008	SW-116	38.108	-0.192	0.000	0.28	0.0	44.1	OK
4.009	SW-117	37.746	-0.161	0.000	0.44	0.0	44.1	OK
2.007	SW-118	36.640	-0.235	0.000	0.30	0.0	52.7	OK
2.008	SW-119	35.344	-0.231	0.000	0.32	0.0	54.6	OK
2.009	SW-120	34.046	-0.229	0.000	0.32	0.0	56.9	OK
2.010	SW-121	32.208	0.433	0.000	0.33	0.0	59.8	SURCHARGED
2.011	SW-122	32.202	1.034	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.557	-0.168	0.000	0.15	0.0	7.2	OK
6.001	SW-2	45.189	-0.230	0.000	0.13	0.0	9.3	OK
7.000	SW-3	46.045	-0.180	0.000	0.09	0.0	4.4	OK
6.002	SW-4	45.148	-0.184	0.000	0.32	0.0	21.6	OK
8.000	SW-5	46.413	-0.187	0.000	0.07	0.0	4.3	OK
6.003	SW-6	44.956	-0.225	0.000	0.34	0.0	33.7	OK
6.004	SW-7	44.864	-0.202	0.000	0.44	0.0	50.3	OK
6.005	SW-8	44.679	-0.238	0.000	0.39	0.0	53.5	OK
6.006	SW-9	44.619	-0.232	0.000	0.47	0.0	59.3	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.553	-0.172	0.000	0.13	0.0	11.0	OK
9.002	SW-11	47.143	-0.148	0.000	0.26	0.0	14.6	OK
9.003	SW-12	46.910	-0.210	0.000	0.20	0.0	22.9	OK
9.004	SW-13	46.356	-0.185	0.000	0.31	0.0	26.5	OK
10.000	SW-14	46.169	-0.166	0.000	0.15	0.0	6.1	OK
10.001	SW-15	45.608	-0.117	0.000	0.17	0.0	6.1	OK
9.005	SW-16	45.601	-0.137	0.000	0.55	0.0	35.1	OK
11.000	SW-17	48.884	-0.151	0.000	0.24	0.0	8.1	OK
11.001	SW-18	48.714	-0.175	0.000	0.11	0.0	11.7	OK
11.002	SW-19	46.703	-0.167	0.000	0.15	0.0	14.3	OK
9.006	SW-20	45.565	-0.259	0.000	0.33	0.0	54.9	OK
9.007	SW-21	45.494	-0.215	0.000	0.54	0.0	57.1	OK
6.007	SW-22	44.463	0.213	0.000	0.44	0.0	121.3	SURCHARGED
6.008	SW-23	44.458	0.508	0.000	0.33	0.0	124.2	SURCHARGED
12.000	SW-24	46.082	-0.218	0.000	0.17	0.0	14.8	OK
13.000	SW-25	46.062	-0.183	0.000	0.08	0.0	3.4	OK
13.001	SW-26	45.561	-0.164	0.000	0.16	0.0	5.7	OK
13.002	SW-27	45.489	-0.151	0.000	0.24	0.0	8.8	OK
12.001	SW-28	45.390	-0.164	0.000	0.42	0.0	26.4	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.950	-0.230	0.000	0.12	0.0	12.6	OK
14.002	SW-30	45.513	-0.200	0.000	0.24	0.0	15.2	OK

Summary of Results for 360 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.294	-0.159	0.000	0.45	0.0	44.3	OK
15.000	SW-32	45.851	-0.174	0.000	0.12	0.0	5.9	OK
16.000	SW-33A	45.627	-0.173	0.000	0.12	0.0	4.6	OK
16.001	SW-33	45.471	-0.174	0.000	0.12	0.0	4.6	OK
15.001	SW-34	44.890	-0.210	0.000	0.20	0.0	16.6	OK
15.002	SW-35	44.735	-0.216	0.000	0.17	0.0	18.5	OK
17.000	SW-36	45.387	-0.243	0.000	0.08	0.0	10.8	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.902	-0.202	0.000	0.23	0.0	17.4	OK
17.002	SW-38	44.821	-0.192	0.000	0.28	0.0	21.1	OK
15.003	SW-39	44.581	-0.208	0.000	0.41	0.0	43.2	OK
15.004	SW-40	44.539	-0.192	0.000	0.48	0.0	46.1	OK
15.005	SW-41	44.467	-0.199	0.000	0.31	0.0	47.6	OK
15.006	SW-42	44.463	-0.048	0.000	0.29	0.0	61.0	OK
15.007	SW-43	44.460	0.261	0.000	0.48	0.0	68.3	SURCHARGED
12.003	SW-44	44.457	0.200	0.000	0.45	0.0	116.8	SURCHARGED
12.004	SW-45	44.455	0.279	0.000	0.49	0.0	124.4	SURCHARGED
6.009	SW-46	44.453	1.055	0.000	0.42	0.0	248.0	SURCHARGED
6.010	SW-47	44.450	1.965	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.608	-0.262	0.000	0.04	0.0	8.1	OK
19.001	SW-49	46.935	-0.248	0.000	0.07	0.0	15.3	OK
19.002	SW-50	45.221	-0.229	0.000	0.13	0.0	24.3	OK
19.003	SW-51	44.184	-0.216	0.000	0.17	0.0	28.8	OK
6.011	SW-52	42.300	-0.185	0.000	0.51	0.0	46.2	OK
6.012	SW-53	42.098	-0.264	0.000	0.19	0.0	51.2	OK
20.000	SW-54	48.131	-0.194	0.000	0.05	0.0	3.3	OK
20.001	SW-55	47.567	-0.190	0.000	0.06	0.0	6.1	OK
20.002	SW-56	46.332	-0.183	0.000	0.08	0.0	8.7	OK
20.003	SW-57	45.138	-0.177	0.000	0.10	0.0	11.8	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.484	-0.172	0.000	0.13	0.0	3.7	OK
21.002	SW-59	47.427	-0.177	0.000	0.10	0.0	10.8	OK
21.003	SW-60	45.849	-0.176	0.000	0.11	0.0	10.8	OK
22.000	SW-61	45.537	-0.188	0.000	0.07	0.0	4.2	OK
21.004	SW-62	44.857	-0.152	0.000	0.23	0.0	20.9	OK
23.000	SW-63	43.045	-0.330	0.000	0.03	0.0	4.3	OK
23.001	SW-64	42.910	-0.315	0.000	0.06	0.0	5.9	OK
23.002	SW-65	42.862	-0.313	0.000	0.05	0.0	7.0	OK
21.005	SW-66	42.812	-0.245	0.000	0.26	0.0	30.7	OK
20.004	SW-67	42.415	-0.260	0.000	0.21	0.0	44.3	OK
20.005	SW-68	42.111	-0.237	0.000	0.29	0.0	44.3	OK
20.006	SW-69	41.615	-0.260	0.000	0.21	0.0	46.9	OK
20.007	SW-70	41.161	-0.253	0.000	0.23	0.0	52.9	OK
20.008	SW-71	40.669	-0.250	0.000	0.24	0.0	52.9	OK
20.009	SW-72	40.436	-0.233	0.000	0.39	0.0	57.0	OK
20.010	SW-73	40.396	-0.214	0.000	0.37	0.0	58.1	OK
6.013	SW-74	40.357	-0.246	0.000	0.55	0.0	114.7	OK
6.014	SW-75	40.285	-0.265	0.000	0.49	0.0	115.5	OK
6.015	SW-76	40.136	-0.310	0.000	0.35	0.0	116.2	OK
6.016	SW-77	39.214	-0.311	0.000	0.35	0.0	116.6	OK
6.017	SW-78	38.008	-0.317	0.000	0.33	0.0	117.2	OK
6.018	SW-79	35.681	-0.344	0.000	0.26	0.0	118.0	OK
6.019	SW-80	34.967	0.242	0.000	0.34	0.0	119.4	SURCHARGED
6.020	SW-81	34.960	1.678	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.935	-0.147	0.000	0.26	0.0	30.7	OK
6.022	SW-83	31.883	-0.107	0.000	0.31	0.0	31.3	OK
6.023	SW-84	31.837	0.347	0.000	0.40	0.0	32.9	SURCHARGED
6.024	SW-85	31.782	0.631	0.000	0.72	0.0	33.5	SURCHARGED
6.025	SW-86	31.736	0.686	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.782	-0.174	0.000	0.12	0.0	9.6	OK
24.001	SW-88	33.294	-0.206	0.000	0.22	0.0	17.7	OK

Summary of Results for 360 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.087	-0.288	0.000	0.12	0.0	22.9	OK
24.003	SW-90	32.656	-0.244	0.000	0.27	0.0	30.6	OK
25.000	SW-91	34.055	-0.170	0.000	0.14	0.0	7.4	OK
25.001	SW-92	33.626	-0.150	0.000	0.24	0.0	10.6	OK
24.004	SW-93	32.517	-0.224	0.000	0.34	0.0	50.1	OK
24.005	SW-94	32.325	-0.192	0.000	0.48	0.0	51.5	OK
24.006	SW-95	32.230	-0.217	0.000	0.37	0.0	53.7	OK
24.007	SW-96	32.043	-0.202	0.000	0.44	0.0	55.3	OK
6.026	SW-97	31.704	0.446	0.000	0.44	0.0	63.2	SURCHARGED
26.000	SW-98	32.941	-0.195	0.000	0.04	0.0	1.8	OK
26.001	SW-98A	32.765	-0.197	0.000	0.04	0.0	3.7	OK
6.027	SW-98B	31.697	0.846	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.2	OK

Summary of Results for 720 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.450	-0.199	0.000	0.03	0.0	1.9	OK
2.001	SW-100	45.075	-0.184	0.000	0.08	0.0	3.8	OK
2.002	SW-101	44.060	-0.165	0.000	0.16	0.0	7.7	OK
2.003	SW-102	43.785	-0.156	0.000	0.21	0.0	9.3	OK
3.000	SW-103	43.538	-0.187	0.000	0.07	0.0	3.3	OK
2.004	SW-104	42.662	1.237	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.038	-0.187	0.000	0.07	0.0	3.3	OK
2.006	SW-106	37.748	-0.177	0.000	0.10	0.0	4.9	OK
4.000	SW-107	43.833	-0.192	0.000	0.05	0.0	2.5	OK
4.001	SW-108	43.615	-0.260	0.000	0.04	0.0	3.3	OK
4.002	SW-109	43.541	-0.238	0.000	0.09	0.0	9.8	OK
4.003	SW-110	43.154	-0.222	0.000	0.15	0.0	12.2	OK
4.004	SW-111	43.036	-0.240	0.000	0.09	0.0	14.3	OK
4.005	SW-112	42.231	-0.235	0.000	0.11	0.0	17.3	OK
5.000	SW-113	42.196	-0.204	0.000	0.02	0.0	1.5	OK
4.006	SW-114	41.179	-0.223	0.000	0.15	0.0	22.1	OK
4.007	SW-115	40.818	-0.218	0.000	0.17	0.0	24.3	OK
4.008	SW-116	38.082	-0.218	0.000	0.17	0.0	26.3	OK
4.009	SW-117	37.711	-0.196	0.000	0.26	0.0	26.3	OK
2.007	SW-118	36.608	-0.267	0.000	0.18	0.0	32.2	OK
2.008	SW-119	35.311	-0.264	0.000	0.19	0.0	33.4	OK
2.009	SW-120	34.013	-0.262	0.000	0.20	0.0	34.7	OK
2.010	SW-121	32.288	0.513	0.000	0.20	0.0	36.5	SURCHARGED
2.011	SW-122	32.283	1.115	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.545	-0.180	0.000	0.09	0.0	4.3	OK
6.001	SW-2	45.173	-0.246	0.000	0.08	0.0	5.6	OK
7.000	SW-3	46.033	-0.192	0.000	0.05	0.0	2.6	OK
6.002	SW-4	45.120	-0.212	0.000	0.19	0.0	12.9	OK
8.000	SW-5	46.404	-0.196	0.000	0.04	0.0	2.6	OK
6.003	SW-6	44.919	-0.262	0.000	0.20	0.0	20.1	OK
6.004	SW-7	44.820	-0.246	0.000	0.26	0.0	30.0	OK
6.005	SW-8	44.640	-0.277	0.000	0.23	0.0	31.9	OK
6.006	SW-9	44.639	-0.212	0.000	0.28	0.0	35.4	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.541	-0.184	0.000	0.08	0.0	6.5	OK
9.002	SW-11	47.124	-0.167	0.000	0.15	0.0	8.7	OK
9.003	SW-12	46.888	-0.232	0.000	0.12	0.0	13.7	OK
9.004	SW-13	46.328	-0.213	0.000	0.19	0.0	15.8	OK
10.000	SW-14	46.156	-0.179	0.000	0.09	0.0	3.6	OK
10.001	SW-15	45.565	-0.160	0.000	0.10	0.0	3.6	OK
9.005	SW-16	45.556	-0.182	0.000	0.33	0.0	20.9	OK
11.000	SW-17	48.866	-0.169	0.000	0.14	0.0	4.8	OK
11.001	SW-18	48.702	-0.187	0.000	0.07	0.0	7.0	OK
11.002	SW-19	46.690	-0.180	0.000	0.09	0.0	8.5	OK
9.006	SW-20	45.514	-0.310	0.000	0.19	0.0	32.7	OK
9.007	SW-21	45.433	-0.276	0.000	0.32	0.0	34.1	OK
6.007	SW-22	44.637	0.387	0.000	0.26	0.0	72.4	SURCHARGED
6.008	SW-23	44.634	0.684	0.000	0.20	0.0	73.9	SURCHARGED
12.000	SW-24	46.063	-0.237	0.000	0.10	0.0	8.8	OK
13.000	SW-25	46.052	-0.193	0.000	0.05	0.0	2.1	OK
13.001	SW-26	45.547	-0.178	0.000	0.10	0.0	3.4	OK
13.002	SW-27	45.471	-0.169	0.000	0.14	0.0	5.2	OK
12.001	SW-28	45.356	-0.198	0.000	0.25	0.0	15.7	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.934	-0.247	0.000	0.07	0.0	7.5	OK
14.002	SW-30	45.489	-0.224	0.000	0.14	0.0	9.1	OK

Summary of Results for 720 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.258	-0.195	0.000	0.27	0.0	26.4	OK
15.000	SW-32	45.839	-0.186	0.000	0.07	0.0	3.5	OK
16.000	SW-33A	45.615	-0.185	0.000	0.07	0.0	2.7	OK
16.001	SW-33	45.459	-0.186	0.000	0.07	0.0	2.7	OK
15.001	SW-34	44.868	-0.232	0.000	0.12	0.0	9.9	OK
15.002	SW-35	44.715	-0.236	0.000	0.10	0.0	11.0	OK
17.000	SW-36	45.372	-0.258	0.000	0.05	0.0	6.4	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.878	-0.226	0.000	0.14	0.0	10.4	OK
17.002	SW-38	44.795	-0.218	0.000	0.17	0.0	12.6	OK
15.003	SW-39	44.643	-0.146	0.000	0.25	0.0	25.7	OK
15.004	SW-40	44.642	-0.089	0.000	0.29	0.0	27.5	OK
15.005	SW-41	44.640	-0.026	0.000	0.18	0.0	28.4	OK
15.006	SW-42	44.638	0.126	0.000	0.18	0.0	36.4	SURCHARGED
15.007	SW-43	44.635	0.436	0.000	0.29	0.0	40.6	SURCHARGED
12.003	SW-44	44.634	0.376	0.000	0.26	0.0	69.1	SURCHARGED
12.004	SW-45	44.632	0.457	0.000	0.29	0.0	73.2	SURCHARGED
6.009	SW-46	44.631	1.233	0.000	0.25	0.0	146.5	SURCHARGED
6.010	SW-47	44.629	2.144	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.601	-0.269	0.000	0.02	0.0	4.8	OK
19.001	SW-49	46.922	-0.261	0.000	0.04	0.0	9.1	OK
19.002	SW-50	45.205	-0.245	0.000	0.08	0.0	14.5	OK
19.003	SW-51	44.164	-0.236	0.000	0.10	0.0	17.2	OK
6.011	SW-52	42.263	-0.222	0.000	0.35	0.0	31.6	OK
6.012	SW-53	42.076	-0.286	0.000	0.13	0.0	34.6	OK
20.000	SW-54	48.124	-0.201	0.000	0.03	0.0	1.9	OK
20.001	SW-55	47.559	-0.198	0.000	0.04	0.0	3.7	OK
20.002	SW-56	46.321	-0.194	0.000	0.05	0.0	5.2	OK
20.003	SW-57	45.126	-0.189	0.000	0.06	0.0	7.0	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.471	-0.184	0.000	0.08	0.0	2.2	OK
21.002	SW-59	47.415	-0.189	0.000	0.06	0.0	6.4	OK
21.003	SW-60	45.837	-0.188	0.000	0.07	0.0	6.4	OK
22.000	SW-61	45.528	-0.197	0.000	0.04	0.0	2.5	OK
21.004	SW-62	44.840	-0.169	0.000	0.14	0.0	12.5	OK
23.000	SW-63	43.036	-0.339	0.000	0.02	0.0	2.5	OK
23.001	SW-64	42.896	-0.329	0.000	0.04	0.0	3.5	OK
23.002	SW-65	42.845	-0.330	0.000	0.03	0.0	4.2	OK
21.005	SW-66	42.781	-0.276	0.000	0.16	0.0	18.3	OK
20.004	SW-67	42.387	-0.288	0.000	0.12	0.0	26.4	OK
20.005	SW-68	42.077	-0.271	0.000	0.17	0.0	26.4	OK
20.006	SW-69	41.587	-0.288	0.000	0.12	0.0	28.0	OK
20.007	SW-70	41.131	-0.283	0.000	0.14	0.0	31.6	OK
20.008	SW-71	40.639	-0.280	0.000	0.15	0.0	31.6	OK
20.009	SW-72	40.377	-0.292	0.000	0.23	0.0	34.0	OK
20.010	SW-73	40.333	-0.278	0.000	0.22	0.0	34.7	OK
6.013	SW-74	40.291	-0.311	0.000	0.35	0.0	72.4	OK
6.014	SW-75	40.224	-0.325	0.000	0.31	0.0	72.9	OK
6.015	SW-76	40.088	-0.358	0.000	0.22	0.0	73.4	OK
6.016	SW-77	39.166	-0.359	0.000	0.22	0.0	73.7	OK
6.017	SW-78	37.962	-0.363	0.000	0.21	0.0	74.0	OK
6.018	SW-79	35.642	-0.383	0.000	0.16	0.0	74.6	OK
6.019	SW-80	34.731	0.006	0.000	0.21	0.0	75.4	SURCHARGED
6.020	SW-81	34.724	1.442	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.934	-0.148	0.000	0.26	0.0	30.4	OK
6.022	SW-83	32.041	0.051	0.000	0.31	0.0	30.8	SURCHARGED
6.023	SW-84	31.995	0.505	0.000	0.39	0.0	31.7	SURCHARGED
6.024	SW-85	31.940	0.789	0.000	0.69	0.0	32.0	SURCHARGED
6.025	SW-86	31.894	0.844	0.000	0.48	0.0	30.0	SURCHARGED
24.000	SW-87	34.770	-0.186	0.000	0.07	0.0	5.7	OK
24.001	SW-88	33.271	-0.229	0.000	0.13	0.0	10.6	OK

Summary of Results for 720 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.067	-0.308	0.000	0.07	0.0	13.6	OK
24.003	SW-90	32.624	-0.276	0.000	0.16	0.0	18.3	OK
25.000	SW-91	34.043	-0.182	0.000	0.08	0.0	4.4	OK
25.001	SW-92	33.608	-0.168	0.000	0.15	0.0	6.3	OK
24.004	SW-93	32.481	-0.260	0.000	0.20	0.0	29.9	OK
24.005	SW-94	32.278	-0.239	0.000	0.29	0.0	30.7	OK
24.006	SW-95	32.191	-0.256	0.000	0.22	0.0	32.0	OK
24.007	SW-96	31.999	-0.246	0.000	0.26	0.0	32.9	OK
6.026	SW-97	31.861	0.604	0.000	0.35	0.0	49.4	SURCHARGED
26.000	SW-98	32.935	-0.201	0.000	0.03	0.0	1.0	OK
26.001	SW-98A	32.760	-0.202	0.000	0.02	0.0	2.2	OK
6.027	SW-98B	31.855	1.004	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.1	OK

Summary of Results for 1440 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.443	-0.206	0.000	0.02	0.0	1.1	OK
2.001	SW-100	45.065	-0.194	0.000	0.05	0.0	2.3	OK
2.002	SW-101	44.046	-0.179	0.000	0.09	0.0	4.6	OK
2.003	SW-102	43.768	-0.173	0.000	0.12	0.0	5.5	OK
3.000	SW-103	43.529	-0.196	0.000	0.04	0.0	2.0	OK
2.004	SW-104	42.612	1.187	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.034	-0.191	0.000	0.06	0.0	2.8	OK
2.006	SW-106	37.742	-0.183	0.000	0.08	0.0	3.7	OK
4.000	SW-107	43.826	-0.199	0.000	0.03	0.0	1.5	OK
4.001	SW-108	43.607	-0.268	0.000	0.03	0.0	2.0	OK
4.002	SW-109	43.525	-0.254	0.000	0.06	0.0	5.8	OK
4.003	SW-110	43.137	-0.239	0.000	0.09	0.0	7.3	OK
4.004	SW-111	43.020	-0.256	0.000	0.05	0.0	8.5	OK
4.005	SW-112	42.215	-0.252	0.000	0.06	0.0	10.3	OK
5.000	SW-113	42.188	-0.212	0.000	0.01	0.0	0.9	OK
4.006	SW-114	41.163	-0.240	0.000	0.09	0.0	13.1	OK
4.007	SW-115	40.799	-0.237	0.000	0.10	0.0	14.5	OK
4.008	SW-116	38.063	-0.237	0.000	0.10	0.0	15.6	OK
4.009	SW-117	37.686	-0.222	0.000	0.16	0.0	15.6	OK
2.007	SW-118	36.584	-0.291	0.000	0.11	0.0	19.9	OK
2.008	SW-119	35.286	-0.289	0.000	0.12	0.0	20.6	OK
2.009	SW-120	33.987	-0.288	0.000	0.12	0.0	21.5	OK
2.010	SW-121	32.218	0.443	0.000	0.12	0.0	22.5	SURCHARGED
2.011	SW-122	32.213	1.045	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.533	-0.192	0.000	0.05	0.0	2.5	OK
6.001	SW-2	45.160	-0.259	0.000	0.04	0.0	3.3	OK
7.000	SW-3	46.026	-0.199	0.000	0.03	0.0	1.6	OK
6.002	SW-4	45.099	-0.233	0.000	0.11	0.0	7.6	OK
8.000	SW-5	46.398	-0.202	0.000	0.02	0.0	1.5	OK
6.003	SW-6	44.892	-0.289	0.000	0.12	0.0	11.9	OK
6.004	SW-7	44.789	-0.277	0.000	0.15	0.0	17.8	OK
6.005	SW-8	44.709	-0.208	0.000	0.14	0.0	19.0	OK
6.006	SW-9	44.708	-0.143	0.000	0.17	0.0	21.0	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.531	-0.194	0.000	0.05	0.0	3.9	OK
9.002	SW-11	47.112	-0.179	0.000	0.09	0.0	5.2	OK
9.003	SW-12	46.872	-0.248	0.000	0.07	0.0	8.1	OK
9.004	SW-13	46.307	-0.234	0.000	0.11	0.0	9.4	OK
10.000	SW-14	46.144	-0.191	0.000	0.05	0.0	2.1	OK
10.001	SW-15	45.543	-0.182	0.000	0.06	0.0	2.1	OK
9.005	SW-16	45.528	-0.210	0.000	0.20	0.0	12.4	OK
11.000	SW-17	48.853	-0.182	0.000	0.08	0.0	2.9	OK
11.001	SW-18	48.693	-0.196	0.000	0.04	0.0	4.2	OK
11.002	SW-19	46.678	-0.192	0.000	0.05	0.0	5.1	OK
9.006	SW-20	45.477	-0.347	0.000	0.12	0.0	19.5	OK
9.007	SW-21	45.391	-0.318	0.000	0.19	0.0	20.2	OK
6.007	SW-22	44.707	0.457	0.000	0.16	0.0	43.0	SURCHARGED
6.008	SW-23	44.705	0.755	0.000	0.12	0.0	43.9	SURCHARGED
12.000	SW-24	46.047	-0.253	0.000	0.06	0.0	5.3	OK
13.000	SW-25	46.045	-0.200	0.000	0.03	0.0	1.2	OK
13.001	SW-26	45.535	-0.190	0.000	0.06	0.0	2.0	OK
13.002	SW-27	45.458	-0.182	0.000	0.08	0.0	3.1	OK
12.001	SW-28	45.331	-0.223	0.000	0.15	0.0	9.3	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.920	-0.260	0.000	0.04	0.0	4.5	OK
14.002	SW-30	45.472	-0.241	0.000	0.09	0.0	5.4	OK

Summary of Results for 1440 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.232	-0.220	0.000	0.16	0.0	15.7	OK
15.000	SW-32	45.829	-0.196	0.000	0.04	0.0	2.1	OK
16.000	SW-33A	45.605	-0.195	0.000	0.04	0.0	1.6	OK
16.001	SW-33	45.450	-0.196	0.000	0.04	0.0	1.6	OK
15.001	SW-34	44.851	-0.249	0.000	0.07	0.0	5.9	OK
15.002	SW-35	44.712	-0.239	0.000	0.06	0.0	6.6	OK
17.000	SW-36	45.364	-0.266	0.000	0.03	0.0	3.8	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.861	-0.243	0.000	0.08	0.0	6.2	OK
17.002	SW-38	44.776	-0.237	0.000	0.10	0.0	7.5	OK
15.003	SW-39	44.711	-0.077	0.000	0.15	0.0	15.3	OK
15.004	SW-40	44.710	-0.020	0.000	0.17	0.0	16.3	OK
15.005	SW-41	44.709	0.043	0.000	0.11	0.0	16.9	SURCHARGED
15.006	SW-42	44.708	0.196	0.000	0.10	0.0	21.6	SURCHARGED
15.007	SW-43	44.706	0.507	0.000	0.17	0.0	24.1	SURCHARGED
12.003	SW-44	44.705	0.447	0.000	0.16	0.0	41.0	SURCHARGED
12.004	SW-45	44.704	0.528	0.000	0.17	0.0	43.2	SURCHARGED
6.009	SW-46	44.702	1.304	0.000	0.15	0.0	86.7	SURCHARGED
6.010	SW-47	44.700	2.215	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.590	-0.280	0.000	0.01	0.0	2.9	OK
19.001	SW-49	46.915	-0.268	0.000	0.03	0.0	5.4	OK
19.002	SW-50	45.191	-0.259	0.000	0.05	0.0	8.6	OK
19.003	SW-51	44.148	-0.252	0.000	0.06	0.0	10.2	OK
6.011	SW-52	42.237	-0.248	0.000	0.25	0.0	22.8	OK
6.012	SW-53	42.064	-0.299	0.000	0.09	0.0	24.6	OK
20.000	SW-54	48.117	-0.208	0.000	0.02	0.0	1.2	OK
20.001	SW-55	47.555	-0.202	0.000	0.02	0.0	2.2	OK
20.002	SW-56	46.315	-0.200	0.000	0.03	0.0	3.1	OK
20.003	SW-57	45.118	-0.197	0.000	0.04	0.0	4.2	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.461	-0.194	0.000	0.05	0.0	1.3	OK
21.002	SW-59	47.406	-0.197	0.000	0.04	0.0	3.8	OK
21.003	SW-60	45.828	-0.197	0.000	0.04	0.0	3.8	OK
22.000	SW-61	45.523	-0.202	0.000	0.02	0.0	1.5	OK
21.004	SW-62	44.827	-0.182	0.000	0.08	0.0	7.4	OK
23.000	SW-63	43.021	-0.354	0.000	0.01	0.0	1.5	OK
23.001	SW-64	42.888	-0.337	0.000	0.02	0.0	2.1	OK
23.002	SW-65	42.835	-0.340	0.000	0.02	0.0	2.5	OK
21.005	SW-66	42.759	-0.298	0.000	0.09	0.0	10.9	OK
20.004	SW-67	42.366	-0.309	0.000	0.07	0.0	15.7	OK
20.005	SW-68	42.053	-0.295	0.000	0.10	0.0	15.7	OK
20.006	SW-69	41.567	-0.308	0.000	0.07	0.0	16.6	OK
20.007	SW-70	41.110	-0.304	0.000	0.08	0.0	18.7	OK
20.008	SW-71	40.618	-0.301	0.000	0.09	0.0	18.7	OK
20.009	SW-72	40.336	-0.333	0.000	0.14	0.0	20.2	OK
20.010	SW-73	40.290	-0.321	0.000	0.13	0.0	20.6	OK
6.013	SW-74	40.246	-0.356	0.000	0.23	0.0	47.1	OK
6.014	SW-75	40.184	-0.366	0.000	0.20	0.0	47.4	OK
6.015	SW-76	40.054	-0.393	0.000	0.15	0.0	47.7	OK
6.016	SW-77	39.131	-0.394	0.000	0.14	0.0	47.9	OK
6.017	SW-78	37.928	-0.397	0.000	0.14	0.0	48.1	OK
6.018	SW-79	35.614	-0.411	0.000	0.11	0.0	48.4	OK
6.019	SW-80	34.329	-0.396	0.000	0.14	0.0	48.9	OK
6.020	SW-81	34.199	0.917	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.934	-0.148	0.000	0.26	0.0	30.3	OK
6.022	SW-83	32.152	0.162	0.000	0.31	0.0	30.5	SURCHARGED
6.023	SW-84	32.106	0.616	0.000	0.38	0.0	31.0	SURCHARGED
6.024	SW-85	32.051	0.900	0.000	0.67	0.0	31.2	SURCHARGED
6.025	SW-86	32.005	0.954	0.000	0.47	0.0	29.2	SURCHARGED
24.000	SW-87	34.760	-0.196	0.000	0.04	0.0	3.4	OK
24.001	SW-88	33.255	-0.245	0.000	0.08	0.0	6.3	OK

Summary of Results for 1440 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.050	-0.325	0.000	0.04	0.0	8.1	OK
24.003	SW-90	32.602	-0.298	0.000	0.09	0.0	10.9	OK
25.000	SW-91	34.032	-0.193	0.000	0.05	0.0	2.6	OK
25.001	SW-92	33.595	-0.181	0.000	0.09	0.0	3.8	OK
24.004	SW-93	32.453	-0.288	0.000	0.12	0.0	17.8	OK
24.005	SW-94	32.245	-0.272	0.000	0.17	0.0	18.2	OK
24.006	SW-95	32.162	-0.285	0.000	0.13	0.0	19.0	OK
24.007	SW-96	31.974	-0.271	0.000	0.15	0.0	19.6	OK
6.026	SW-97	31.973	0.715	0.000	0.29	0.0	41.3	SURCHARGED
26.000	SW-98	32.928	-0.208	0.000	0.02	0.0	0.6	OK
26.001	SW-98A	32.751	-0.211	0.000	0.01	0.0	1.3	OK
6.027	SW-98B	31.966	1.115	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.299	-0.051	0.000	0.96	0.0	30.1	OK

Summary of Results for 2880 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
2.000	SW-99	45.435	-0.214	0.000	0.01	0.0	0.7	OK
2.001	SW-100	45.059	-0.200	0.000	0.03	0.0	1.3	OK
2.002	SW-101	44.034	-0.191	0.000	0.06	0.0	2.7	OK
2.003	SW-102	43.756	-0.185	0.000	0.07	0.0	3.3	OK
3.000	SW-103	43.524	-0.201	0.000	0.02	0.0	1.2	OK
2.004	SW-104	42.420	0.995	0.000	0.04	0.0	2.0	SURCHARGED
2.005	SW-105	39.032	-0.193	0.000	0.05	0.0	2.5	OK
2.006	SW-106	37.737	-0.188	0.000	0.06	0.0	3.0	OK
4.000	SW-107	43.820	-0.205	0.000	0.02	0.0	0.9	OK
4.001	SW-108	43.597	-0.279	0.000	0.02	0.0	1.2	OK
4.002	SW-109	43.515	-0.264	0.000	0.03	0.0	3.5	OK
4.003	SW-110	43.121	-0.255	0.000	0.05	0.0	4.3	OK
4.004	SW-111	43.010	-0.265	0.000	0.03	0.0	5.1	OK
4.005	SW-112	42.204	-0.263	0.000	0.04	0.0	6.1	OK
5.000	SW-113	42.183	-0.217	0.000	0.01	0.0	0.5	OK
4.006	SW-114	41.147	-0.256	0.000	0.05	0.0	7.8	OK
4.007	SW-115	40.783	-0.253	0.000	0.06	0.0	8.6	OK
4.008	SW-116	38.047	-0.253	0.000	0.06	0.0	9.3	OK
4.009	SW-117	37.668	-0.239	0.000	0.09	0.0	9.3	OK
2.007	SW-118	36.566	-0.309	0.000	0.07	0.0	12.7	OK
2.008	SW-119	35.268	-0.307	0.000	0.08	0.0	13.1	OK
2.009	SW-120	33.969	-0.306	0.000	0.08	0.0	13.6	OK
2.010	SW-121	32.045	0.270	0.000	0.08	0.0	14.2	SURCHARGED
2.011	SW-122	32.040	0.872	0.000	0.16	0.0	6.1	SURCHARGED
2.012	SW-123	30.734	-0.165	0.000	0.16	0.0	6.1	OK
6.000	SW-1	45.526	-0.199	0.000	0.03	0.0	1.5	OK
6.001	SW-2	45.151	-0.268	0.000	0.03	0.0	2.0	OK
7.000	SW-3	46.020	-0.205	0.000	0.02	0.0	0.9	OK
6.002	SW-4	45.083	-0.249	0.000	0.07	0.0	4.6	OK
8.000	SW-5	46.390	-0.210	0.000	0.01	0.0	0.9	OK
6.003	SW-6	44.871	-0.310	0.000	0.07	0.0	7.1	OK
6.004	SW-7	44.767	-0.299	0.000	0.09	0.0	10.6	OK
6.005	SW-8	44.566	-0.351	0.000	0.08	0.0	11.3	OK
6.006	SW-9	44.564	-0.287	0.000	0.10	0.0	12.6	OK
9.000	SW-10A	48.825	-0.225	0.000	0.00	0.0	0.0	OK
9.001	SW-10	48.525	-0.200	0.000	0.03	0.0	2.3	OK
9.002	SW-11	47.100	-0.191	0.000	0.05	0.0	3.1	OK
9.003	SW-12	46.859	-0.261	0.000	0.04	0.0	4.9	OK
9.004	SW-13	46.291	-0.250	0.000	0.07	0.0	5.6	OK
10.000	SW-14	46.136	-0.199	0.000	0.03	0.0	1.3	OK
10.001	SW-15	45.529	-0.196	0.000	0.04	0.0	1.3	OK
9.005	SW-16	45.506	-0.232	0.000	0.12	0.0	7.4	OK
11.000	SW-17	48.842	-0.193	0.000	0.05	0.0	1.7	OK
11.001	SW-18	48.687	-0.202	0.000	0.02	0.0	2.5	OK
11.002	SW-19	46.671	-0.199	0.000	0.03	0.0	3.0	OK
9.006	SW-20	45.452	-0.372	0.000	0.07	0.0	11.6	OK
9.007	SW-21	45.359	-0.350	0.000	0.11	0.0	12.1	OK
6.007	SW-22	44.563	0.313	0.000	0.09	0.0	25.7	SURCHARGED
6.008	SW-23	44.561	0.611	0.000	0.07	0.0	26.4	SURCHARGED
12.000	SW-24	46.036	-0.264	0.000	0.04	0.0	3.1	OK
13.000	SW-25	46.038	-0.207	0.000	0.02	0.0	0.7	OK
13.001	SW-26	45.527	-0.198	0.000	0.03	0.0	1.2	OK
13.002	SW-27	45.447	-0.193	0.000	0.05	0.0	1.9	OK
12.001	SW-28	45.314	-0.240	0.000	0.09	0.0	5.6	OK
14.000	SW-29A	46.000	-0.225	0.000	0.00	0.0	0.0	OK
14.001	SW-29	45.912	-0.268	0.000	0.03	0.0	2.7	OK
14.002	SW-30	45.457	-0.257	0.000	0.05	0.0	3.2	OK

Summary of Results for 2880 minute 100 year Winter (Storm)

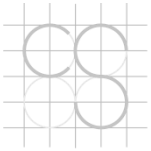
PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
12.002	SW-31	45.215	-0.238	0.000	0.10	0.0	9.4	OK
15.000	SW-32	45.824	-0.201	0.000	0.02	0.0	1.2	OK
16.000	SW-33A	45.599	-0.201	0.000	0.03	0.0	1.0	OK
16.001	SW-33	45.444	-0.201	0.000	0.02	0.0	1.0	OK
15.001	SW-34	44.839	-0.261	0.000	0.04	0.0	3.5	OK
15.002	SW-35	44.688	-0.263	0.000	0.04	0.0	3.9	OK
17.000	SW-36	45.355	-0.275	0.000	0.02	0.0	2.3	OK
18.000	SW-37A	45.352	-0.225	0.000	0.00	0.0	0.0	OK
17.001	SW-37	44.846	-0.258	0.000	0.05	0.0	3.7	OK
17.002	SW-38	44.760	-0.253	0.000	0.06	0.0	4.5	OK
15.003	SW-39	44.567	-0.222	0.000	0.09	0.0	9.1	OK
15.004	SW-40	44.566	-0.165	0.000	0.10	0.0	9.7	OK
15.005	SW-41	44.565	-0.101	0.000	0.07	0.0	10.1	OK
15.006	SW-42	44.564	0.052	0.000	0.06	0.0	12.9	SURCHARGED
15.007	SW-43	44.562	0.363	0.000	0.10	0.0	14.4	SURCHARGED
12.003	SW-44	44.561	0.304	0.000	0.09	0.0	24.6	SURCHARGED
12.004	SW-45	44.560	0.384	0.000	0.10	0.0	26.0	SURCHARGED
6.009	SW-46	44.559	1.161	0.000	0.09	0.0	52.4	SURCHARGED
6.010	SW-47	44.557	2.072	0.000	0.25	0.0	10.0	SURCHARGED
19.000	SW-48	48.582	-0.288	0.000	0.01	0.0	1.7	OK
19.001	SW-49	46.904	-0.279	0.000	0.01	0.0	3.2	OK
19.002	SW-50	45.183	-0.267	0.000	0.03	0.0	5.1	OK
19.003	SW-51	44.137	-0.263	0.000	0.04	0.0	6.1	OK
6.011	SW-52	42.222	-0.263	0.000	0.20	0.0	17.7	OK
6.012	SW-53	42.052	-0.310	0.000	0.07	0.0	18.7	OK
20.000	SW-54	48.110	-0.215	0.000	0.01	0.0	0.7	OK
20.001	SW-55	47.545	-0.212	0.000	0.01	0.0	1.3	OK
20.002	SW-56	46.308	-0.207	0.000	0.02	0.0	1.8	OK
20.003	SW-57	45.113	-0.202	0.000	0.02	0.0	2.5	OK
21.000	SW-58A	47.600	-0.225	0.000	0.00	0.0	0.0	OK
21.001	SW-58	47.455	-0.201	0.000	0.03	0.0	0.8	OK
21.002	SW-59	47.401	-0.202	0.000	0.02	0.0	2.3	OK
21.003	SW-60	45.823	-0.202	0.000	0.02	0.0	2.3	OK
22.000	SW-61	45.515	-0.210	0.000	0.01	0.0	0.9	OK
21.004	SW-62	44.816	-0.193	0.000	0.05	0.0	4.4	OK
23.000	SW-63	43.013	-0.362	0.000	0.01	0.0	0.9	OK
23.001	SW-64	42.873	-0.352	0.000	0.01	0.0	1.3	OK
23.002	SW-65	42.821	-0.354	0.000	0.01	0.0	1.5	OK
21.005	SW-66	42.739	-0.318	0.000	0.06	0.0	6.5	OK
20.004	SW-67	42.350	-0.325	0.000	0.04	0.0	9.4	OK
20.005	SW-68	42.033	-0.315	0.000	0.06	0.0	9.4	OK
20.006	SW-69	41.550	-0.325	0.000	0.04	0.0	9.9	OK
20.007	SW-70	41.092	-0.322	0.000	0.05	0.0	11.2	OK
20.008	SW-71	40.598	-0.320	0.000	0.05	0.0	11.2	OK
20.009	SW-72	40.309	-0.360	0.000	0.08	0.0	12.1	OK
20.010	SW-73	40.259	-0.352	0.000	0.08	0.0	12.3	OK
6.013	SW-74	40.215	-0.388	0.000	0.15	0.0	32.1	OK
6.014	SW-75	40.153	-0.396	0.000	0.14	0.0	32.3	OK
6.015	SW-76	40.031	-0.415	0.000	0.10	0.0	32.5	OK
6.016	SW-77	39.109	-0.416	0.000	0.10	0.0	32.6	OK
6.017	SW-78	37.907	-0.418	0.000	0.09	0.0	32.7	OK
6.018	SW-79	35.592	-0.433	0.000	0.07	0.0	32.9	OK
6.019	SW-80	34.307	-0.418	0.000	0.09	0.0	33.2	OK
6.020	SW-81	33.404	0.122	0.000	0.58	0.0	30.0	SURCHARGED
6.021	SW-82	32.934	-0.148	0.000	0.26	0.0	30.1	OK
6.022	SW-83	31.884	-0.106	0.000	0.30	0.0	30.3	OK
6.023	SW-84	31.840	0.350	0.000	0.37	0.0	30.6	SURCHARGED
6.024	SW-85	31.793	0.642	0.000	0.66	0.0	30.7	SURCHARGED
6.025	SW-86	31.755	0.705	0.000	0.44	0.0	27.1	SURCHARGED
24.000	SW-87	34.755	-0.201	0.000	0.02	0.0	2.0	OK
24.001	SW-88	33.241	-0.259	0.000	0.05	0.0	3.7	OK

Summary of Results for 2880 minute 100 year Winter (Storm)

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
24.002	SW-89	33.040	-0.335	0.000	0.03	0.0	4.8	OK
24.003	SW-90	32.582	-0.318	0.000	0.06	0.0	6.5	OK
25.000	SW-91	34.025	-0.200	0.000	0.03	0.0	1.6	OK
25.001	SW-92	33.584	-0.192	0.000	0.05	0.0	2.2	OK
24.004	SW-93	32.432	-0.309	0.000	0.07	0.0	10.6	OK
24.005	SW-94	32.222	-0.295	0.000	0.10	0.0	10.9	OK
24.006	SW-95	32.142	-0.305	0.000	0.08	0.0	11.4	OK
24.007	SW-96	31.946	-0.299	0.000	0.09	0.0	11.7	OK
6.026	SW-97	31.729	0.471	0.000	0.26	0.0	36.9	SURCHARGED
26.000	SW-98	32.921	-0.215	0.000	0.01	0.0	0.4	OK
26.001	SW-98A	32.745	-0.217	0.000	0.01	0.0	0.8	OK
6.027	SW-98B	31.722	0.871	0.000	0.94	0.0	30.1	SURCHARGED
6.028	SW-98C	30.391	0.000	0.000	1.10	0.0	30.1	OK
6.029	SW-98D	30.300	-0.050	0.000	0.96	0.0	30.1	OK

Appendix C:

IGSL's Infiltration Test



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PROPOSED HOUSING DEVELOPMENT
ACADEMY STREET
NAVAN CO. MEATH

CRONIN SUTTON
CONSULTING ENGINEERS

CONTENTS

APPENDICES

e. BRE Digest 365 Soakaway

A total of three percolation tests were scheduled 0ver the site area.

Infiltration testing was performed in accordance with BRE Digest 365 'Soakaway Design'. To obtain a measure of the infiltration rate of the sub-soils, water is poured into the test pit, and records taken of the fall in water level against time. This operation is generally performed over two cycles of soakage and dispersion following initial soakage.

The infiltration rate is the volume of water dispersed per unit exposed area per unit of time, and is generally expressed as metres/minute or metres/second. In these calculations the exposed area is the sum of the base area and the average internal area of the pit sides over the test duration.

Records for each trial pit and test are presented in Appendix V. The stratification and water table in each test pit is noted and a record of fall in water level with time is made.

Designs are based on the slowest infiltration rate, which is generally calculated from the final cycle. The infiltration rate (f) is calculated and the results for the individual tests are shown below.

Test No.	**Soil Type**	**Infiltration Rate (f)**
STP 01	Gravelly CLAY / SILT	0.00
STP 02	Clayey gravelly SAND	0.00049 metres/minute
STP 03	Gravelly CLAY	0.00

Tests 01 and 03 were failures and very low permeability was noted in test 02. The results would be regarded as typical for the glacial till or boulder clay of the general area.

III Testing

***(a) In-Situ* :**

Standard penetration tests were carried out at approximate 1.00 metre intervals in the geotechnical boreholes to measure relative in-situ soil strength. N values are noted in the right hand column of the boring records, representing the blow count required to drive the standard sampler 300mm into the soil, following initial seating blows. Where full test penetration was not achieved the blow count for a specific penetration is recorded, or refusal is indicated where appropriate

The results of the tests are summarised as follows:

Depth	**Stratum**	**N Values**	**Comment**
1.00	Gravelly Silt/Clay	4 to 23	Soft to Stiff
2.00	Clay / Gravel	14 to 45	Firm to Stiff
3.00	Black Boulder Clay	31 to 47	Stiff to Hard
4.00	Black Boulder Clay	38 to 63	Hard

At the base of the boreholes refusal of SPT apparatus was noted and results are presented as blows for specific penetration and refusal.

Appendix V BRE Digest 365 Tests

Soakaway Design f -value from field tests (F2C) IGSL

Contract: Academy Street, Navan Contract No. 20570
Test No. STP01
Client CS Consulting
Date: 21/11/2017

Summary of ground conditions

from	to	Description	Ground water
0.00	0.20	TOPSOIL	Dry
0.20	0.80	Soft brown very clayey SILT	
0.80	1.65	Firm brown sandy gravelly very clayey SILT with cobbles	
1.65	2.00	Firm brown sandy gravelly very clayey SILT with cobbles and boulders	

Notes:

Field Data

Depth to Water (m)	Elapsed Time (min)
0.45	0.00
0.45	1.00
0.45	2.00
0.45	3.00
0.45	4.00
0.45	5.00
0.45	6.00
0.45	7.00
0.45	8.00
0.45	12.00
0.45	15.00
0.45	20.00
0.45	30.00
0.45	40.00
0.45	50.00
0.45	60.00
0.45	70.00
0.45	80.00
0.45	90.00

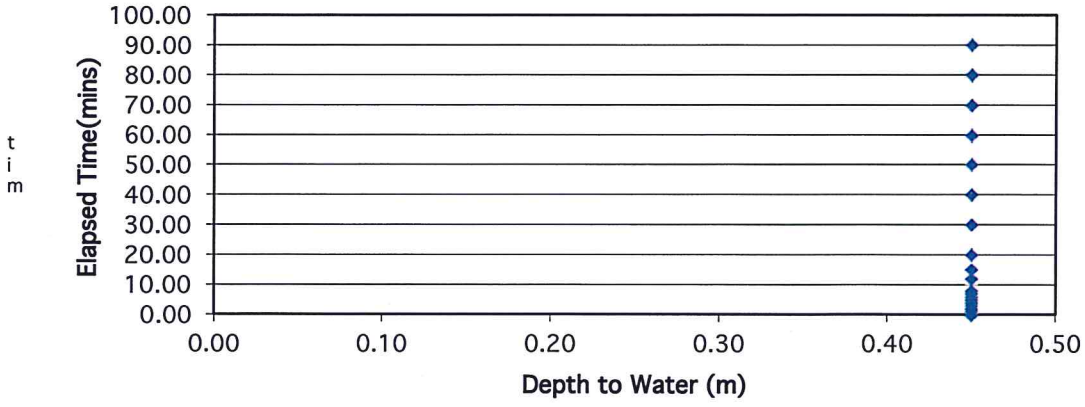
Field Test

Depth of Pit (D)	2.00	m
Width of Pit (B)	0.35	m
Length of Pit (L)	1.50	m
Initial depth to Water =	0.45	m
Final depth to water =	0.45	m
Elapsed time (mins)=	90.00	
Top of permeable soil		m
Base of permeable soil		m
Base area=	0.525	m2
*Av. side area of permeable stratum over test period=	5.735	m2
Total Exposed area =	6.26	m2

Infiltration rate (f) = Volume of water used/unit exposed area / unit time

f= 0 m/min or 0 m/sec

Depth of water vs Elapsed Time (mins)



Soakaway Design f -value from field tests (F2C) IGSL

Contract: Academy Street, Navan Contract No. 20570
Test No. STP02
Client CS Consulting
Date: 21/11/2017

Summary of ground conditions

from	to	Description	Ground water
0.00	0.30	TOPSOIL	Dry
0.30	0.70	Stiff brown sandy silty gravelly CLAY with cobbles	
0.70	1.70	Soft brown sandy gravelly very silty CLAY with cobbles	
1.70	1.90	Brown silty clayey very gravelly SAND with cobbles	

Notes:

Field Data

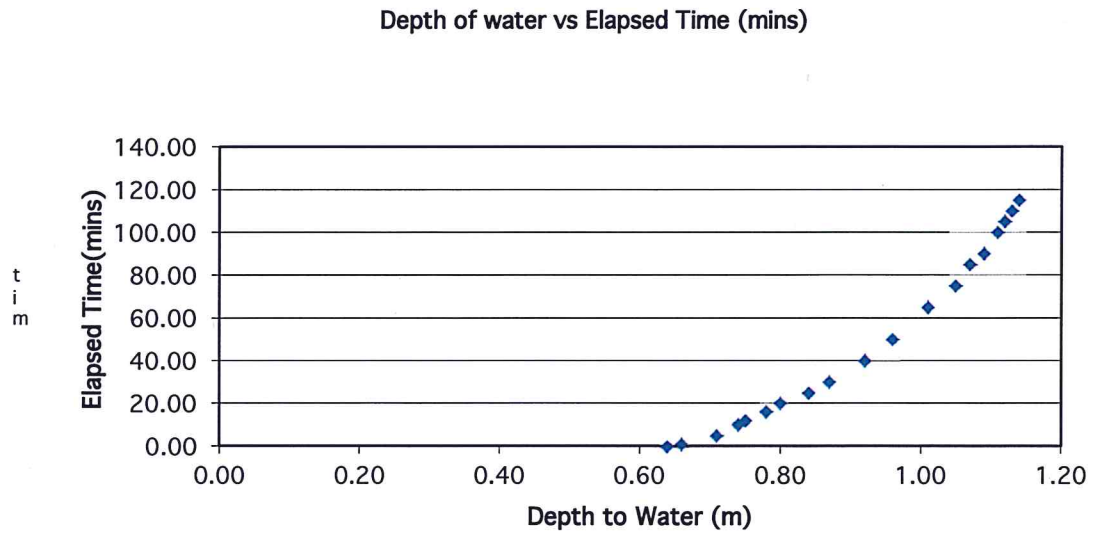
Depth to Water (m)	Elapsed Time (min)
0.64	0.00
0.66	1.00
0.71	5.00
0.74	10.00
0.75	12.00
0.78	16.00
0.80	20.00
0.84	25.00
0.87	30.00
0.92	40.00
0.96	50.00
1.01	65.00
1.05	75.00
1.07	85.00
1.09	90.00
1.11	100.00
1.12	105.00
1.13	110.00
1.14	115.00

Field Test

Depth of Pit (D)	2.00	m
Width of Pit (B)	0.35	m
Length of Pit (L)	1.50	m
Initial depth to Water =	0.64	m
Final depth to water =	1.14	m
Elapsed time (mins)=	115.00	
Top of permeable soil		m
Base of permeable soil		m
Base area=	0.525	m2
*Av. side area of permeable stratum over test period=	4.107	m2
Total Exposed area =	4.632	m2

Infiltration rate (f) = Volume of water used/unit exposed area / unit time

f= 0.00049 m/min or 8.2132E-06 m/sec



Soakaway Design f -value from field tests (F2C) IGSL

Contract: Academy Street, Navan Contract No. 20570
Test No. STP03
Client CS Consulting
Date: 27/11/2017

Summary of ground conditions

from	to	Description	Ground water
0.00	0.30	TOPSOIL	Dry
0.30	2.00	Firm brown sandy silty gravelly CLAY with cobbles and boulders	

Notes:

Field Data

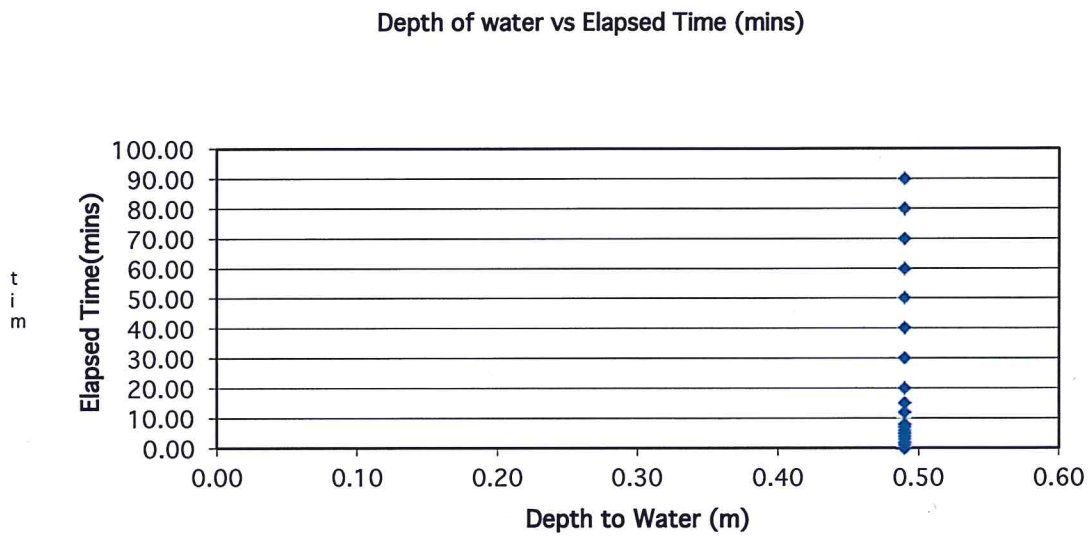
Depth to Water (m)	Elapsed Time (min)
0.49	0.00
0.49	1.00
0.49	2.00
0.49	3.00
0.49	4.00
0.49	5.00
0.49	6.00
0.49	7.00
0.49	8.00
0.49	12.00
0.49	15.00
0.49	20.00
0.49	30.00
0.49	40.00
0.49	50.00
0.49	60.00
0.49	70.00
0.49	80.00
0.49	90.00

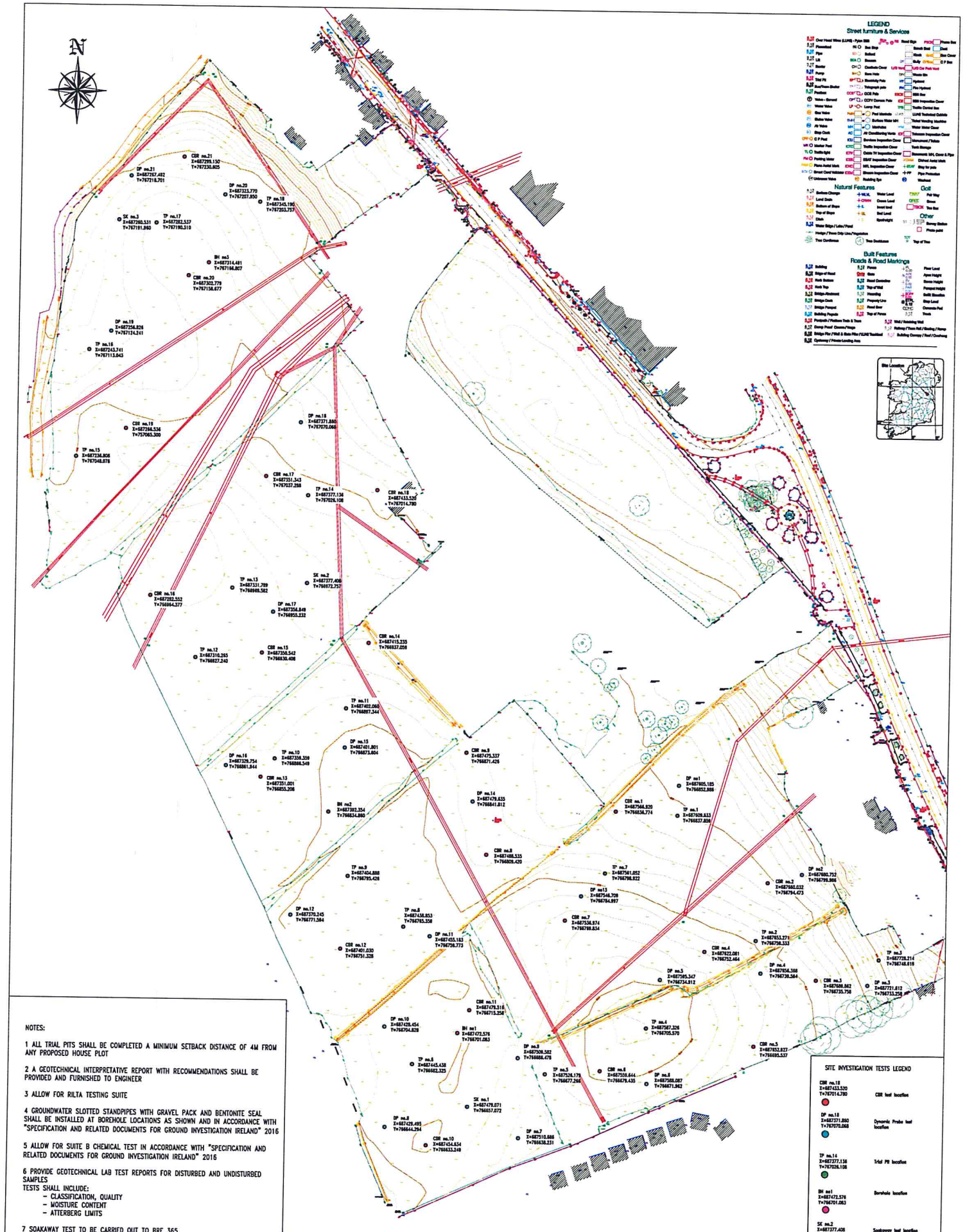
Field Test

Depth of Pit (D)	2.00	m
Width of Pit (B)	0.35	m
Length of Pit (L)	1.50	m
Initial depth to Water =	0.49	m
Final depth to water =	0.49	m
Elapsed time (mins)=	90.00	
Top of permeable soil		m
Base of permeable soil		m
Base area=	0.525	m2
*Av. side area of permeable stratum over test period=	5.587	m2
Total Exposed area =	6.112	m2

Infiltration rate (f) = Volume of water used/unit exposed area / unit time

f= 0 m/min or 0 m/sec





NOTES:

1 ALL TRIAL PITS SHALL BE COMPLETED A MINIMUM SETBACK DISTANCE OF 4M FROM ANY PROPOSED HOUSE PLOT

2 A GEOTECHNICAL INTERPRETATIVE REPORT WITH RECOMMENDATIONS SHALL BE PROVIDED AND FURNISHED TO ENGINEER

3 ALLOW FOR RILTA TESTING SUITE

4 GROUNDWATER SLOTTED STANDPIPES WITH GRAVEL PACK AND BENTONITE SEAL SHALL BE INSTALLED AT BOREHOLE LOCATIONS AS SHOWN AND IN ACCORDANCE WITH "SPECIFICATION AND RELATED DOCUMENTS FOR GROUND INVESTIGATION IRELAND" 2016

5 ALLOW FOR SUITE B CHEMICAL TEST IN ACCORDANCE WITH "SPECIFICATION AND RELATED DOCUMENTS FOR GROUND INVESTIGATION IRELAND" 2016

6 PROVIDE GEOTECHNICAL LAB TEST REPORTS FOR DISTURBED AND UNDISTURBED SAMPLES
TESTS SHALL INCLUDE:
- CLASSIFICATION, QUALITY
- MOISTURE CONTENT
- ATTERBERG LIMITS

7 SOAKAWAY TEST TO BE CARRIED OUT TO BRE 365

NOTES
1. For setting out refer to Architect's drawings.
2. This drawing to be read in conjunction with all other Architectural and Engineering drawings and all other relevant drawings and Specifications.
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Rev. No.	Date	REVISION NOTE	Des. By	Chkd. By

Architect	NDBA Architects
Project	Academy Street, Navan Co. Meath
Title	Site Investigation Test Locations
Des by AJ	Chkd by NB
Apvd by NB	Dwg. No. D061-SK019
Date 19.10.2017	Scale 1/1000@A1
Revision	

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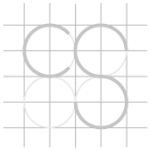
Quality Management LS. EN ISO 9001:2008
Environment LS. EN ISO 14001:2004
Energy Assets & Safety LS. EN ISO 50001:2011
OHSAS 18001:2007



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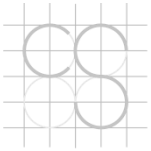
Appendix D:

Irish Water Confirmation of Feasibility & Design Acceptance Letter



CS CONSULTING
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DUBLIN - LONDON - LIMERICK

Owen Sullivan
CS Consulting Engineers
19-22 Dame Street,
Dublin 2

Letter Ref: CUSTO181756

Uisce Eireann
Bosca OP 860
Oifig Sheachadta
na Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 860
South City
Delivery Office
Cork City

www.water.ie

19/08/2019

Dear Sir/Madam,

Re: CUSTO181756 pre-connection enquiry – Subject to contract | Contract denied
Water and wastewater connection for a 550 unit residential development on lands at Academy Street, Navan, Co Meath.

Irish Water has reviewed your pre-connection enquiry in relation to water and wastewater connections at lands at Academy Street, Navan, Co. Meath (the **Premises**). Based upon the details you have provided with your pre-connection enquiry and on the capacity currently available as assessed by Irish Water, we wish to advise you that, subject to a valid connection agreement being put in place and the conditions listed below, your proposed connection to the Irish Water network can be facilitated.

Strategic Housing Development
Irish Water notes that the scale of this development dictates that it is subject to the Strategic Housing Development planning process. Therefore:

A. In advance of submitting your full application to An Bord Pleanala for assessment, you must have reviewed this development with Irish Water and received a Statement of Design Acceptance in relation to the layout of water and wastewater services.
B. You are advised that this correspondence does not constitute an offer in whole or in part to provide a connection to any Irish Water infrastructure and is provided subject to a connection agreement being signed and appropriate connection fee paid at a later date.

Water: In order to supply this development approximately 1.5km of 200mm water main is to be upsized to 300mm. Irish Water may want to upsize this main further. This may be subject to change.

Wastewater: In order to connect this development to Irish Water's wastewater network a network extension is required. A new 300mm gravity foul sewer, length approximately 470m southwards along the Dublin Road and discharge to the existing Dublin Road pump station. This may be subject to change.

Irish Water does not currently have any plans to carry out the works required to provide the necessary upgrades and capacity. Should you wish to have such upgrade works progressed, Irish Water will require you to provide a

contribution of a relevant portion of the costs for the required upgrades, please contact Irish Water to discuss this further.

Note: Please submit the master plan for this site showing how you propose to service the site internally.

A connection agreement can be applied for by completing the connection application form available at **www.water.ie/connections**. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Energy Regulation.

Should you wish to have any of the above progressed by Irish Water or if you have any further questions, please contact Pat O'Neill from the design team on 018925250 or email patoneil@water.ie For further information, visit **www.water.ie/connections**

Yours sincerely,

Maria O'Dwyer

Connections and Developer Services

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 448,
South City
Delivery Office,
Cork City.

www.water.ie

Cronin & Sutton Consulting
19-22 Dame St
Dublin 2
D02 E267

19 November 2019

Re: Design Submission for Limekilnhill, Belmount, Academy St, Navan (the "Development") (the "Design Submission") / Connection Reference No: 0130547863

Dear Gessica Silva,

Many thanks for your recent Design Submission.

We have reviewed your proposal for the connection(s) at the Development. Based on the information provided, which included the documents outlined in Appendix A to this letter, Irish Water has no objection to your proposals.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Irish Water infrastructure. Before you can connect to our network you must sign a connection agreement with Irish Water. This can be applied for by completing the connection application form at www.water.ie/connections. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities (CRU)(https://www.cru.ie/document_group/irish-waters-water-charges-plan-2018/).

You the Customer (including any designers/contractors or other related parties appointed by you) is entirely responsible for the design and construction of all water and/or wastewater infrastructure within the Development which is necessary to facilitate connection(s) from the boundary of the Development to Irish Water's network(s) (the "**Self-Lay Works**"), as reflected in your Design Submission. Acceptance of the Design Submission by Irish Water does not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.

If you have any further questions, please contact your Irish Water representative:
Name: Alvaro Soriano Garcia
Phone: 022 54613
Email: agarcia@water.ie

Yours sincerely,

Maria O'Dwyer
Connections and Developer Services

Appendix A

Document Title & Revision

- D061-012 Drainage Layout 1 of 4
- D061-013 Drainage Layout 2 of 4
- D061-014 Drainage Layout 3 of 4
- D061-015 Drainage Layout 4 of 4
- D061-022 Watermain Layout 1 of 4
- D061-023 Watermain Layout 2 of 4
- D061-024 Watermain Layout 3 of 4
- D061-025 Watermain Layout 4 of 4
- D061-028 Road Layout 1 of 4
- D061-029 Road Layout 2 of 4
- D061-030 Road Layout 3 of 4
- D061-031 Road Layout 4 of 4
- D061-057 Foul Long Sections-Sheet 1 Of 5
- D061-058 Foul Long Sections-Sheet 2 Of 5
- D061-059 Foul Long Sections-Sheet 3 Of 5
- D061-060 Foul Long Sections-Sheet 4 Of 5
- D061-061 Foul Long Sections-Sheet 5 Of 5

Standard Details/Code of Practice Exemption:

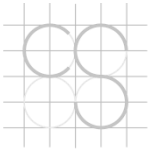
- D061-016 Drainage Details 1 of 3
- D061-017 Drainage Details 2 of 3
- D061-026 Watermain Details 1 of 2
- D061-027 Watermain Details 2 of 2
- D061-068 Backdrop manhole details

*For further information, visit **www.water.ie/connections***

Notwithstanding any matters listed above, the Customer (including any appointed designers/contractors, etc.) is entirely responsible for the design and construction of the Self-Lay Works. Acceptance of the Design Submission by Irish Water will not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.

Appendix E:

Foul Water Calculation



CS CONSULTING
GROUP
DUBLIN - LONDON - LIMERICK

FOUL SEWERAGE DESIGN

Design Criteria for Foul - Main

Pipe Sizes STANDARD Manhole Sizes STANDARD

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	0
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	0.000
Flow Per Person (l/per/day)	150.00	Maximum Backdrop Height (m)	0.000
Persons per House	3.00	Min Design Depth for Optimisation (m)	1.200
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	200

Designed with Level Inverts

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F1.000	25.277	0.320	79.0	0.000	0	0.0	1.500	o	150
F2.000	53.997	0.684	78.9	0.000	0	0.0	1.500	o	150
F2.001	8.535	0.108	79.0	0.000	0	0.0	1.500	o	150
F1.001	54.266	0.694	78.2	0.000	0	0.0	1.500	o	225
F3.000	27.982	0.187	149.6	0.000	0	0.0	1.500	o	150
F1.002	34.090	0.170	200.5	0.000	0	0.0	1.500	o	225
F1.003	8.237	0.041	200.0	0.000	0	0.0	1.500	o	225
F4.000	19.265	0.193	99.8	0.000	0	0.0	1.500	o	150
F1.004	57.849	0.289	200.0	0.000	0	0.0	1.500	o	225
F5.000	24.525	0.312	78.6	0.000	0	0.0	1.500	o	150
F1.005	25.708	0.129	200.0	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.000	46.375	0.000	0.0	0	0.0	0	0.00	0.99	17.4	0.0
F2.000	46.835	0.000	0.0	0	0.0	0	0.00	0.99	17.4	0.0
F2.001	46.151	0.000	0.0	0	0.0	0	0.00	0.99	17.4	0.0
F1.001	46.043	0.000	0.0	0	0.0	0	0.00	1.30	51.6	0.0
F3.000	46.375	0.000	0.0	0	0.0	0	0.00	0.72	12.6	0.0
F1.002	45.349	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.003	45.179	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F4.000	46.300	0.000	0.0	0	0.0	0	0.00	0.88	15.5	0.0
F1.004	45.138	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F5.000	45.935	0.000	0.0	0	0.0	0	0.00	0.99	17.5	0.0
F1.005	44.849	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F1.006	25.809	0.129	200.0	0.000	0	0.0	1.500	o	225
F6.000	22.984	0.301	76.4	0.000	0	0.0	1.500	o	150
F7.000	28.388	0.710	40.0	0.000	0	0.0	1.500	o	150
F6.001	52.053	0.521	100.0	0.000	0	0.0	1.500	o	150
F6.002	15.861	0.159	99.8	0.000	0	0.0	1.500	o	225
F6.003	47.461	0.593	80.0	0.000	0	0.0	1.500	o	225
F6.004	16.374	0.205	80.0	0.000	0	0.0	1.500	o	225
F8.000	27.441	0.343	80.0	0.000	0	0.0	1.500	o	150
F8.001	11.024	0.138	79.9	0.000	0	0.0	1.500	o	225
F6.005	14.250	0.204	70.0	0.000	0	0.0	1.500	o	225
F9.000	21.278	0.355	59.9	0.000	0	0.0	1.500	o	150
F6.006	33.034	0.165	200.0	0.000	0	0.0	1.500	o	225
F6.007	18.576	0.093	200.0	0.000	0	0.0	1.500	o	225
F1.007	29.946	0.150	200.0	0.000	0	0.0	1.500	o	225
F1.008	37.771	0.189	200.0	0.000	0	0.0	1.500	o	225
F10.000	22.024	0.110	200.2	0.000	0	0.0	1.500	o	225
F10.001	47.832	0.239	200.1	0.000	0	0.0	1.500	o	225
F10.002	57.633	0.288	200.0	0.000	0	0.0	1.500	o	225
F10.003	15.250	0.076	200.7	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.006	44.720	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F6.000	48.758	0.000	0.0	0	0.0	0	0.00	1.00	17.7	0.0
F7.000	48.845	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F6.001	47.500	0.000	0.0	0	0.0	0	0.00	0.88	15.5	0.0
F6.002	46.979	0.000	0.0	0	0.0	0	0.00	1.15	45.7	0.0
F6.003	46.820	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F6.004	46.227	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F8.000	46.000	0.000	0.0	0	0.0	0	0.00	0.98	17.3	0.0
F8.001	45.657	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F6.005	45.519	0.000	0.0	0	0.0	0	0.00	1.37	54.6	0.0
F9.000	46.700	0.000	0.0	0	0.0	0	0.00	1.13	20.0	0.0
F6.006	45.315	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F6.007	45.150	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.007	44.591	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.008	44.441	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.000	45.623	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.001	45.513	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.002	45.274	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.003	44.986	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F10.004	24.050	0.121	199.0	0.000	0	0.0	1.500	o	225
F11.000	21.189	0.106	199.9	0.000	0	0.0	1.500	o	225
F12.000	17.503	0.219	79.9	0.000	0	0.0	1.500	o	150
F11.001	13.871	0.069	201.0	0.000	0	0.0	1.500	o	225
F11.002	34.948	0.175	199.7	0.000	0	0.0	1.500	o	225
F13.000	21.510	0.108	199.2	0.000	0	0.0	1.500	o	225
F11.003	16.059	0.080	200.7	0.000	0	0.0	1.500	o	225
F11.004	13.610	0.068	200.0	0.000	0	0.0	1.500	o	225
F10.005	10.120	0.076	132.5	0.000	0	0.0	1.500	o	225
F10.006	22.808	0.114	200.0	0.000	0	0.0	1.500	o	225
F10.007	25.753	0.129	200.0	0.000	0	0.0	1.500	o	225
F10.008	65.695	0.328	200.0	0.000	0	0.0	1.500	o	225
F10.009	40.058	0.200	200.0	0.000	0	0.0	1.500	o	225
F14.000	24.339	0.304	80.1	0.000	0	0.0	1.500	o	150
F14.001	57.509	0.288	199.7	0.000	0	0.0	1.500	o	225
F15.000	23.806	0.149	159.8	0.000	0	0.0	1.500	o	225
F14.002	23.872	0.123	194.1	0.000	0	0.0	1.500	o	225
F14.003	46.080	0.461	100.0	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F10.004	44.910	0.000	0.0	0	0.0	0	0.00	0.81	32.3	0.0
F11.000	45.531	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F12.000	45.619	0.000	0.0	0	0.0	0	0.00	0.98	17.3	0.0
F11.001	45.400	0.000	0.0	0	0.0	0	0.00	0.81	32.1	0.0
F11.002	45.331	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F13.000	45.440	0.000	0.0	0	0.0	0	0.00	0.81	32.3	0.0
F11.003	45.156	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F11.004	45.076	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.005	44.789	0.000	0.0	0	0.0	0	0.00	1.00	39.6	0.0
F10.006	44.713	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.007	44.599	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.008	44.470	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.009	44.141	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F14.000	46.347	0.000	0.0	0	0.0	0	0.00	0.98	17.3	0.0
F14.001	46.043	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F15.000	45.945	0.000	0.0	0	0.0	0	0.00	0.91	36.1	0.0
F14.002	45.755	0.000	0.0	0	0.0	0	0.00	0.82	32.7	0.0
F14.003	45.632	0.000	0.0	0	0.0	0	0.00	1.15	45.7	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F10.010	41.790	0.209	200.0	0.000	0	0.0	1.500	o	225
F10.011	36.823	0.184	200.0	0.000	0	0.0	1.500	o	225
F1.009	25.231	0.126	199.6	0.000	0	0.0	1.500	o	225
F1.010	19.322	0.099	195.8	0.000	0	0.0	1.500	o	225
F16.000	39.409	0.657	60.0	0.000	0	0.0	1.500	o	150
F16.001	38.838	0.971	40.0	0.000	0	0.0	1.500	o	150
F16.002	11.321	0.189	59.9	0.000	0	0.0	1.500	o	225
F16.003	44.948	0.743	60.5	0.000	0	0.0	1.500	o	225
F1.011	56.993	0.570	100.0	0.000	0	0.0	1.500	o	225
F17.000	29.524	0.738	40.0	0.000	0	0.0	1.500	o	150
F17.001	28.054	0.701	40.0	0.000	0	0.0	1.500	o	150
F17.002	18.372	0.459	40.0	0.000	0	0.0	1.500	o	150
F17.003	23.076	0.577	40.0	0.000	0	0.0	1.500	o	150
F18.000	26.557	0.443	60.0	0.000	0	0.0	1.500	o	225
F18.001	28.585	0.476	60.0	0.000	0	0.0	1.500	o	225
F18.002	26.019	0.650	40.0	0.000	0	0.0	1.500	o	225
F19.000	27.328	0.455	60.0	0.000	0	0.0	1.500	o	225
F18.003	12.806	0.320	40.0	0.000	0	0.0	1.500	o	225
F20.000	32.268	0.161	200.0	0.000	0	0.0	1.500	o	225
F20.001	12.384	0.062	200.0	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F10.010	43.941	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F10.011	43.732	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.009	43.548	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.010	43.422	0.000	0.0	0	0.0	0	0.00	0.82	32.6	0.0
F16.000	47.700	0.000	0.0	0	0.0	0	0.00	1.13	20.0	0.0
F16.001	46.000	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F16.002	44.500	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F16.003	44.311	0.000	0.0	0	0.0	0	0.00	1.48	58.7	0.0
F1.011	43.323	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F17.000	46.800	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F17.001	46.062	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F17.002	45.361	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F17.003	44.901	0.000	0.0	0	0.0	0	0.00	1.39	24.5	0.0
F18.000	47.425	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F18.001	46.500	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F18.002	46.024	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F19.000	45.555	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F18.003	45.100	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F20.000	42.450	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F20.001	42.289	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F20.002	21.400	0.107	200.0	0.000	0	0.0	1.500	o	225
F18.004	18.652	0.093	200.0	0.000	0	0.0	1.500	o	225
F17.004	21.586	0.108	200.0	0.000	0	0.0	1.500	o	225
F17.005	8.137	0.041	200.0	0.000	0	0.0	1.500	o	225
F17.006	23.677	0.118	200.0	0.000	0	0.0	1.500	o	225
F17.007	27.790	0.139	200.0	0.000	0	0.0	1.500	o	225
F17.008	24.984	0.125	200.0	0.000	0	0.0	1.500	o	225
F17.009	17.001	0.085	200.0	0.000	0	0.0	1.500	o	225
F17.010	17.333	0.087	200.0	0.000	0	0.0	1.500	o	225
F1.012	22.173	0.111	199.8	0.000	0	0.0	1.500	o	225
F1.013	31.074	0.388	80.0	0.000	0	0.0	1.500	o	225
F1.014	14.094	0.181	77.9	0.000	0	0.0	1.500	o	225
F1.015	14.676	0.190	77.2	0.000	0	0.0	1.500	o	225
F1.016	15.150	0.197	76.9	0.000	0	0.0	1.500	o	225
F1.017	28.612	0.519	55.1	0.000	0	0.0	1.500	o	225
F1.018	18.524	0.239	77.5	0.000	0	0.0	1.500	o	225
F1.019	19.385	0.323	60.0	0.000	0	0.0	1.500	o	225
F1.020	22.830	0.269	84.9	0.000	0	0.0	1.500	o	225
F1.021	11.971	0.209	57.3	0.000	0	0.0	1.500	o	225
F21.000	39.561	0.510	77.6	0.000	0	0.0	1.500	o	225
F21.001	25.414	0.328	77.5	0.000	0	0.0	1.500	o	225
F22.000	37.067	0.371	100.0	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F20.002	42.227	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F18.004	42.120	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.004	42.026	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.005	41.919	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.006	41.878	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.007	41.759	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.008	41.621	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.009	41.496	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F17.010	41.411	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.012	41.000	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F1.013	40.889	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F1.014	40.000	0.000	0.0	0	0.0	0	0.00	1.30	51.7	0.0
F1.015	39.000	0.000	0.0	0	0.0	0	0.00	1.31	52.0	0.0
F1.016	37.000	0.000	0.0	0	0.0	0	0.00	1.31	52.1	0.0
F1.017	36.000	0.000	0.0	0	0.0	0	0.00	1.55	61.5	0.0
F1.018	34.000	0.000	0.0	0	0.0	0	0.00	1.30	51.9	0.0
F1.019	33.761	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F1.020	32.100	0.000	0.0	0	0.0	0	0.00	1.25	49.6	0.0
F1.021	31.831	0.000	0.0	0	0.0	0	0.00	1.52	60.4	0.0
F21.000	34.000	0.000	0.0	0	0.0	0	0.00	1.30	51.8	0.0
F21.001	33.490	0.000	0.0	0	0.0	0	0.00	1.30	51.9	0.0
F22.000	32.644	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F21.002	51.690	0.258	200.0	0.000	0	0.0	1.500	o	225
F21.003	36.012	0.180	200.0	0.000	0	0.0	1.500	o	225
F23.000	49.280	0.493	100.0	0.000	0	0.0	1.500	o	225
F21.004	27.848	0.139	200.0	0.000	0	0.0	1.500	o	225
F21.005	33.381	0.170	196.7	0.000	0	0.0	1.500	o	225
F1.022	20.686	0.207	100.0	0.000	0	0.0	1.500	o	225
F1.023	30.460	0.203	150.0	0.000	0	0.0	1.500	o	225
F1.024	24.425	0.163	150.0	0.000	0	0.0	1.500	o	225
F24.000	20.784	0.260	79.9	0.000	0	0.0	1.500	o	225
F24.001	38.478	0.481	80.0	0.000	0	0.0	1.500	o	225
F24.002	28.528	0.713	40.0	0.000	0	0.0	1.500	o	225
F24.003	11.762	0.294	40.0	0.000	0	0.0	1.500	o	225
F25.000	65.259	0.653	100.0	0.000	0	0.0	1.500	o	225
F24.004	58.275	0.971	60.0	0.000	0	0.0	1.500	o	225
F24.005	40.517	0.675	60.0	0.000	0	0.0	1.500	o	225
F24.006	22.167	0.554	40.0	0.000	0	0.0	1.500	o	225
F26.000	24.315	0.243	100.0	0.000	0	0.0	1.500	o	225
F26.001	14.357	0.144	100.0	0.000	0	0.0	1.500	o	225
F26.002	39.645	0.396	100.0	0.000	0	0.0	1.500	o	225
F26.003	7.164	0.072	100.0	0.000	0	0.0	1.500	o	225
F26.004	34.136	0.569	60.0	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F21.002	32.273	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F21.003	32.015	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F23.000	34.000	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F21.004	31.835	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F21.005	31.696	0.000	0.0	0	0.0	0	0.00	0.82	32.5	0.0
F1.022	31.526	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F1.023	31.319	0.000	0.0	0	0.0	0	0.00	0.94	37.2	0.0
F1.024	31.116	0.000	0.0	0	0.0	0	0.00	0.94	37.2	0.0
F24.000	45.200	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F24.001	44.940	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F24.002	44.459	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F24.003	43.746	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F25.000	44.000	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F24.004	41.500	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F24.005	39.200	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F24.006	37.654	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F26.000	44.000	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F26.001	43.757	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F26.002	43.613	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F26.003	43.217	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F26.004	43.145	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
F26.005	26.150	0.436	60.0	0.000	0	0.0	1.500	o	225
F26.006	14.249	0.140	101.5	0.000	0	0.0	1.500	o	225
F26.007	14.987	0.250	60.0	0.000	0	0.0	1.500	o	225
F26.008	19.505	0.328	59.5	0.000	0	0.0	1.500	o	225
F26.009	17.028	0.426	40.0	0.000	0	0.0	1.500	o	225
F24.007	25.681	0.257	100.0	0.000	0	0.0	1.500	o	225
F24.008	25.437	0.318	80.0	0.000	0	0.0	1.500	o	225
F24.009	27.713	0.346	80.0	0.000	0	0.0	1.500	o	225
F24.010	63.617	0.635	100.2	0.000	0	0.0	1.500	o	225
F24.011	5.916	0.030	200.0	0.000	0	0.0	1.500	o	225
F24.012	41.679	0.208	200.4	0.000	0	0.0	1.500	o	225

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F26.005	42.576	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F26.006	42.140	0.000	0.0	0	0.0	0	0.00	1.14	45.3	0.0
F26.007	42.000	0.000	0.0	0	0.0	0	0.00	1.48	59.0	0.0
F26.008	41.750	0.000	0.0	0	0.0	0	0.00	1.49	59.2	0.0
F26.009	37.600	0.000	0.0	0	0.0	0	0.00	1.82	72.3	0.0
F24.007	36.500	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F24.008	35.400	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F24.009	34.000	0.000	0.0	0	0.0	0	0.00	1.28	51.1	0.0
F24.010	32.000	0.000	0.0	0	0.0	0	0.00	1.15	45.6	0.0
F24.011	31.365	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0
F24.012	31.336	0.000	0.0	0	0.0	0	0.00	0.81	32.2	0.0

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
FFW-01	47.800	1.425	Open Manhole	1200	F1.000	46.375	150				
FFW-02	48.260	1.425	Open Manhole	1200	F2.000	46.835	150				
FFW-03	47.500	1.349	Open Manhole	1200	F2.001	46.151	150	F2.000	46.151	150	
FFW-04	47.570	1.527	Open Manhole	1200	F1.001	46.043	225	F1.000	46.055	150	
								F2.001	46.043	150	
FFW-05	47.800	1.425	Open Manhole	1200	F3.000	46.375	150				
FFW-06	48.100	2.751	Open Manhole	1200	F1.002	45.349	225	F1.001	45.349	225	
								F3.000	46.188	150	764
FFW-07	47.873	2.694	Open Manhole	1200	F1.003	45.179	225	F1.002	45.179	225	
FFW-08	47.726	1.426	Open Manhole	1200	F4.000	46.300	150				
FFW-09	47.850	2.712	Open Manhole	1200	F1.004	45.138	225	F1.003	45.138	225	
								F4.000	46.107	150	894
FFW-10	47.360	1.425	Open Manhole	1200	F5.000	45.935	150				
FFW-11	47.660	2.811	Open Manhole	1200	F1.005	44.849	225	F1.004	44.849	225	
								F5.000	45.623	150	699
FFW-12	47.560	2.840	Open Manhole	1200	F1.006	44.720	225	F1.005	44.720	225	
FFW-13	50.183	1.425	Open Manhole	1200	F6.000	48.758	150				
FFW-14	50.270	1.425	Open Manhole	1200	F7.000	48.845	150				
FFW-15	50.150	2.650	Open Manhole	1200	F6.001	47.500	150	F6.000	48.457	150	957
								F7.000	48.135	150	635
FFW-16	48.645	1.666	Open Manhole	1050	F6.002	46.979	225	F6.001	46.979	150	
FFW-17	48.320	1.500	Open Manhole	1200	F6.003	46.820	225	F6.002	46.820	225	
FFW-18	47.675	1.448	Open Manhole	1050	F6.004	46.227	225	F6.003	46.227	225	
FFW-19	47.425	1.425	Open Manhole	1200	F8.000	46.000	150				
FFW-20	47.325	1.668	Open Manhole	1200	F8.001	45.657	225	F8.000	45.657	150	
FFW-21	47.450	1.931	Open Manhole	1200	F6.005	45.519	225	F6.004	46.023	225	504
								F8.001	45.519	225	
FFW-22	48.510	1.810	Open Manhole	1200	F9.000	46.700	150				
FFW-23	47.830	2.515	Open Manhole	1200	F6.006	45.315	225	F6.005	45.315	225	
								F9.000	46.345	150	955
FFW-24	48.160	3.010	Open Manhole	1200	F6.007	45.150	225	F6.006	45.150	225	
FFW-25	47.920	3.329	Open Manhole	1200	F1.007	44.591	225	F1.006	44.591	225	
								F6.007	45.057	225	466
FFW-26	46.875	2.434	Open Manhole	1200	F1.008	44.441	225	F1.007	44.441	225	
FFW-27	47.048	1.425	Open Manhole	1200	F10.000	45.623	225				
FFW-28	47.300	1.787	Open Manhole	1200	F10.001	45.513	225	F10.000	45.513	225	
FFW-29	47.770	2.496	Open Manhole	1200	F10.002	45.274	225	F10.001	45.274	225	
FFW-30	46.750	1.764	Open Manhole	1200	F10.003	44.986	225	F10.002	44.986	225	
FFW-31	46.720	1.810	Open Manhole	1200	F10.004	44.910	225	F10.003	44.910	225	
FFW-32	47.048	1.517	Open Manhole	1200	F11.000	45.531	225				
FFW-33	46.950	1.331	Open Manhole	1200	F12.000	45.619	150				
FFW-34	46.850	1.450	Open Manhole	1200	F11.001	45.400	225	F11.000	45.425	225	25
								F12.000	45.400	150	
FFW-35	46.790	1.459	Open Manhole	1200	F11.002	45.331	225	F11.001	45.331	225	
FFW-36	46.865	1.425	Open Manhole	1200	F13.000	45.440	225				
FFW-37	47.000	1.844	Open Manhole	1200	F11.003	45.156	225	F11.002	45.156	225	
								F13.000	45.332	225	176

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
FFW-38	46.994	1.918	Open Manhole	1200	F11.004	45.076	225	F11.003	45.076	225	

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
FFW-39	46.875	2.086	Open Manhole	1200	F10.005	44.789	225	F10.004	44.789	225	
								F11.004	45.008	225	219
FFW-40	46.670	1.957	Open Manhole	1200	F10.006	44.713	225	F10.005	44.713	225	
FFW-41	46.472	1.873	Open Manhole	1200	F10.007	44.599	225	F10.006	44.599	225	
FFW-42	46.000	1.530	Open Manhole	1200	F10.008	44.470	225	F10.007	44.470	225	
FFW-43	46.350	2.209	Open Manhole	1200	F10.009	44.141	225	F10.008	44.141	225	
FFW-44	47.772	1.425	Open Manhole	1200	F14.000	46.347	150				
FFW-45	47.520	1.477	Open Manhole	1200	F14.001	46.043	225	F14.000	46.043	150	
FFW-46	47.370	1.425	Open Manhole	1200	F15.000	45.945	225				
FFW-47	47.625	1.870	Open Manhole	1200	F14.002	45.755	225	F14.001	45.755	225	
								F15.000	45.796	225	41
FFW-48	47.809	2.177	Open Manhole	1200	F14.003	45.632	225	F14.002	45.632	225	
FFW-49	46.680	2.739	Open Manhole	1200	F10.010	43.941	225	F10.009	43.941	225	
								F14.003	45.171	225	1230
FFW-50	46.250	2.518	Open Manhole	1200	F10.011	43.732	225	F10.010	43.732	225	
FFW-51	45.742	2.194	Open Manhole	1200	F1.009	43.548	225	F1.008	44.252	225	704
								F10.011	43.548	225	
FFW-52	45.392	1.970	Open Manhole	1200	F1.010	43.422	225	F1.009	43.422	225	
FFW-53	50.000	2.300	Open Manhole	1200	F16.000	47.700	150				
FFW-54	48.500	2.500	Open Manhole	1200	F16.001	46.000	150	F16.000	47.043	150	1043
FFW-55	46.625	2.125	Open Manhole	1200	F16.002	44.500	225	F16.001	45.029	150	454
FFW-56	46.082	1.771	Open Manhole	1200	F16.003	44.311	225	F16.002	44.311	225	
FFW-57	45.100	1.777	Open Manhole	1200	F1.011	43.323	225	F1.010	43.323	225	
								F16.003	43.568	225	245
FFW-58	49.800	3.000	Open Manhole	1200	F17.000	46.800	150				
FFW-59	49.075	3.013	Open Manhole	1200	F17.001	46.062	150	F17.000	46.062	150	
FFW-60	47.900	2.539	Open Manhole	1200	F17.002	45.361	150	F17.001	45.361	150	
FFW-61	46.920	2.019	Open Manhole	1200	F17.003	44.901	150	F17.002	44.901	150	
FFW-62	48.850	1.425	Open Manhole	1200	F18.000	47.425	225				
FFW-63	49.100	2.600	Open Manhole	1200	F18.001	46.500	225	F18.000	46.982	225	482
FFW-64	48.000	1.976	Open Manhole	1200	F18.002	46.024	225	F18.001	46.024	225	
FFW-65	46.980	1.425	Open Manhole	1200	F19.000	45.555	225				
FFW-66	46.800	1.700	Open Manhole	1200	F18.003	45.100	225	F18.002	45.373	225	274
								F19.000	45.100	225	
FFW-67	43.875	1.425	Open Manhole	1200	F20.000	42.450	225				
FFW-68	45.048	2.759	Open Manhole	1200	F20.001	42.289	225	F20.000	42.289	225	
FFW-69	45.500	3.273	Open Manhole	1200	F20.002	42.227	225	F20.001	42.227	225	
FFW-70	46.200	4.080	Open Manhole	1200	F18.004	42.120	225	F18.003	44.779	225	2660
								F20.002	42.120	225	
FFW-71	45.825	3.799	Open Manhole	1200	F17.004	42.026	225	F17.003	44.324	150	2223
								F18.004	42.026	225	
FFW-72	44.725	2.806	Open Manhole	1200	F17.005	41.919	225	F17.004	41.919	225	
FFW-73	44.250	2.372	Open Manhole	1200	F17.006	41.878	225	F17.005	41.878	225	
FFW-74	43.437	1.678	Open Manhole	1200	F17.007	41.759	225	F17.006	41.759	225	
FFW-75	43.500	1.879	Open Manhole	1200	F17.008	41.621	225	F17.007	41.621	225	
FFW-76	43.050	1.554	Open Manhole	1200	F17.009	41.496	225	F17.008	41.496	225	
FFW-77	43.700	2.289	Open Manhole	1200	F17.010	41.411	225	F17.009	41.411	225	

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
FFW-78	44.225	3.225	Open Manhole	1200	F1.012	41.000	225	F1.011	42.753	225	1753

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								F17.010	41.324	225	324
FFW-79	44.050	3.161	Open Manhole	1200	F1.013	40.889	225	F1.012	40.889	225	
FFW-80	42.850	2.850	Open Manhole	1200	F1.014	40.000	225	F1.013	40.501	225	501
FFW-81	41.725	2.725	Open Manhole	1200	F1.015	39.000	225	F1.014	39.819	225	819
FFW-82	40.500	3.500	Open Manhole	1200	F1.016	37.000	225	F1.015	38.810	225	1810
FFW-83	39.250	3.250	Open Manhole	1200	F1.017	36.000	225	F1.016	36.803	225	803
FFW-84	36.950	2.950	Open Manhole	1200	F1.018	34.000	225	F1.017	35.481	225	1481
FFW-85	35.825	2.064	Open Manhole	1200	F1.019	33.761	225	F1.018	33.761	225	
FFW-86	34.875	2.775	Open Manhole	1200	F1.020	32.100	225	F1.019	33.438	225	1338
FFW-87	33.750	1.919	Open Manhole	1200	F1.021	31.831	225	F1.020	31.831	225	
FFW-88	36.081	2.081	Open Manhole	1200	F21.000	34.000	225				
FFW-89	35.134	1.644	Open Manhole	1200	F21.001	33.490	225	F21.000	33.490	225	
FFW-90	34.069	1.425	Open Manhole	1200	F22.000	32.644	225				
FFW-91	34.575	2.302	Open Manhole	1200	F21.002	32.273	225	F21.001	33.162	225	889
								F22.000	32.273	225	
FFW-92	34.984	2.969	Open Manhole	1200	F21.003	32.015	225	F21.002	32.015	225	
FFW-93	35.720	1.720	Open Manhole	1200	F23.000	34.000	225				
FFW-94	35.020	3.185	Open Manhole	1200	F21.004	31.835	225	F21.003	31.835	225	
								F23.000	33.507	225	1672
FFW-95	34.350	2.654	Open Manhole	1200	F21.005	31.696	225	F21.004	31.696	225	
FFW-96	33.175	1.649	Open Manhole	1050	F1.022	31.526	225	F1.021	31.622	225	96
								F21.005	31.526	225	
FFW-97	32.800	1.481	Open Manhole	1200	F1.023	31.319	225	F1.022	31.319	225	
FFW-97A	32.600	1.484	Open Manhole	1050	F1.024	31.116	225	F1.023	31.116	225	
FFW-97B	32.600	1.647	Open Manhole	0		OUTFALL		F1.024	30.953	225	
FFW-98	46.850	1.650	Open Manhole	1200	F24.000	45.200	225				
FFW-99	47.100	2.160	Open Manhole	1200	F24.001	44.940	225	F24.000	44.940	225	
FFW-100	46.772	2.313	Open Manhole	1200	F24.002	44.459	225	F24.001	44.459	225	
FFW-101	45.550	1.804	Open Manhole	1200	F24.003	43.746	225	F24.002	43.746	225	
FFW-102	46.160	2.160	Open Manhole	1200	F25.000	44.000	225				
FFW-103	45.000	3.500	Open Manhole	1200	F24.004	41.500	225	F24.003	43.452	225	1952
								F25.000	43.347	225	1847
FFW-104	42.100	2.900	Open Manhole	1200	F24.005	39.200	225	F24.004	40.529	225	1329
FFW-105	40.100	2.446	Open Manhole	1200	F24.006	37.654	225	F24.005	38.525	225	871
FFW-106	45.922	1.922	Open Manhole	1200	F26.000	44.000	225				
FFW-107	45.425	1.668	Open Manhole	1200	F26.001	43.757	225	F26.000	43.757	225	
FFW-108	44.922	1.309	Open Manhole	1200	F26.002	43.613	225	F26.001	43.613	225	
FFW-109	44.602	1.385	Open Manhole	1200	F26.003	43.217	225	F26.002	43.217	225	
FFW-110	44.522	1.377	Open Manhole	1200	F26.004	43.145	225	F26.003	43.145	225	
FFW-111	44.088	1.512	Open Manhole	1200	F26.005	42.576	225	F26.004	42.576	225	
FFW-112	43.587	1.447	Open Manhole	1050	F26.006	42.140	225	F26.005	42.140	225	
FFW-113	43.420	1.420	Open Manhole	1050	F26.007	42.000	225	F26.006	42.000	225	
FFW-114	43.100	1.350	Open Manhole	1050	F26.008	41.750	225	F26.007	41.750	225	
FFW-115	42.800	5.200	Open Manhole	1200	F26.009	37.600	225	F26.008	41.422	225	3822
FFW-116	38.977	2.477	Open Manhole	1200	F24.007	36.500	225	F24.006	37.100	225	600
								F26.009	37.174	225	674
FFW-117	37.727	2.327	Open Manhole	1200	F24.008	35.400	225	F24.007	36.243	225	843

Manhole Schedules for Foul - Main

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
FFW-118	36.375	2.375	Open Manhole	1200	F24.009	34.000	225	F24.008	35.082	225	1082
FFW-119	34.980	2.980	Open Manhole	1200	F24.010	32.000	225	F24.009	33.654	225	1654
FFW-120	32.396	1.031	Open Manhole	1200	F24.011	31.365	225	F24.010	31.365	225	
FFW-121	32.370	1.034	Open Manhole	1050	F24.012	31.336	225	F24.011	31.336	225	
FEX.MFMH	32.460	1.332	Open Manhole	0		OUTFALL		F24.012	31.128	225	

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	o	150	FFW-01	47.800	46.375	1.275	Open Manhole	1200
F2.000	o	150	FFW-02	48.260	46.835	1.275	Open Manhole	1200
F2.001	o	150	FFW-03	47.500	46.151	1.199	Open Manhole	1200
F1.001	o	225	FFW-04	47.570	46.043	1.302	Open Manhole	1200
F3.000	o	150	FFW-05	47.800	46.375	1.275	Open Manhole	1200
F1.002	o	225	FFW-06	48.100	45.349	2.526	Open Manhole	1200
F1.003	o	225	FFW-07	47.873	45.179	2.469	Open Manhole	1200
F4.000	o	150	FFW-08	47.726	46.300	1.276	Open Manhole	1200
F1.004	o	225	FFW-09	47.850	45.138	2.487	Open Manhole	1200
F5.000	o	150	FFW-10	47.360	45.935	1.275	Open Manhole	1200
F1.005	o	225	FFW-11	47.660	44.849	2.586	Open Manhole	1200
F1.006	o	225	FFW-12	47.560	44.720	2.615	Open Manhole	1200
F6.000	o	150	FFW-13	50.183	48.758	1.275	Open Manhole	1200
F7.000	o	150	FFW-14	50.270	48.845	1.275	Open Manhole	1200
F6.001	o	150	FFW-15	50.150	47.500	2.500	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	25.277	79.0	FFW-04	47.570	46.055	1.365	Open Manhole	1200
F2.000	53.997	78.9	FFW-03	47.500	46.151	1.199	Open Manhole	1200
F2.001	8.535	79.0	FFW-04	47.570	46.043	1.377	Open Manhole	1200
F1.001	54.266	78.2	FFW-06	48.100	45.349	2.526	Open Manhole	1200
F3.000	27.982	149.6	FFW-06	48.100	46.188	1.762	Open Manhole	1200
F1.002	34.090	200.5	FFW-07	47.873	45.179	2.469	Open Manhole	1200
F1.003	8.237	200.0	FFW-09	47.850	45.138	2.487	Open Manhole	1200
F4.000	19.265	99.8	FFW-09	47.850	46.107	1.593	Open Manhole	1200
F1.004	57.849	200.0	FFW-11	47.660	44.849	2.586	Open Manhole	1200
F5.000	24.525	78.6	FFW-11	47.660	45.623	1.887	Open Manhole	1200
F1.005	25.708	200.0	FFW-12	47.560	44.720	2.615	Open Manhole	1200
F1.006	25.809	200.0	FFW-25	47.920	44.591	3.104	Open Manhole	1200
F6.000	22.984	76.4	FFW-15	50.150	48.457	1.543	Open Manhole	1200
F7.000	28.388	40.0	FFW-15	50.150	48.135	1.865	Open Manhole	1200
F6.001	52.053	100.0	FFW-16	48.645	46.979	1.516	Open Manhole	1050

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F6.002	o	225	FFW-16	48.645	46.979	1.441	Open Manhole	1050
F6.003	o	225	FFW-17	48.320	46.820	1.275	Open Manhole	1200
F6.004	o	225	FFW-18	47.675	46.227	1.223	Open Manhole	1050
F8.000	o	150	FFW-19	47.425	46.000	1.275	Open Manhole	1200
F8.001	o	225	FFW-20	47.325	45.657	1.443	Open Manhole	1200
F6.005	o	225	FFW-21	47.450	45.519	1.706	Open Manhole	1200
F9.000	o	150	FFW-22	48.510	46.700	1.660	Open Manhole	1200
F6.006	o	225	FFW-23	47.830	45.315	2.290	Open Manhole	1200
F6.007	o	225	FFW-24	48.160	45.150	2.785	Open Manhole	1200
F1.007	o	225	FFW-25	47.920	44.591	3.104	Open Manhole	1200
F1.008	o	225	FFW-26	46.875	44.441	2.209	Open Manhole	1200
F10.000	o	225	FFW-27	47.048	45.623	1.200	Open Manhole	1200
F10.001	o	225	FFW-28	47.300	45.513	1.562	Open Manhole	1200
F10.002	o	225	FFW-29	47.770	45.274	2.271	Open Manhole	1200
F10.003	o	225	FFW-30	46.750	44.986	1.539	Open Manhole	1200
F10.004	o	225	FFW-31	46.720	44.910	1.585	Open Manhole	1200
F11.000	o	225	FFW-32	47.048	45.531	1.292	Open Manhole	1200
F12.000	o	150	FFW-33	46.950	45.619	1.181	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F6.002	15.861	99.8	FFW-17	48.320	46.820	1.275	Open Manhole	1200
F6.003	47.461	80.0	FFW-18	47.675	46.227	1.223	Open Manhole	1050
F6.004	16.374	80.0	FFW-21	47.450	46.023	1.202	Open Manhole	1200
F8.000	27.441	80.0	FFW-20	47.325	45.657	1.518	Open Manhole	1200
F8.001	11.024	79.9	FFW-21	47.450	45.519	1.706	Open Manhole	1200
F6.005	14.250	70.0	FFW-23	47.830	45.315	2.290	Open Manhole	1200
F9.000	21.278	59.9	FFW-23	47.830	46.345	1.335	Open Manhole	1200
F6.006	33.034	200.0	FFW-24	48.160	45.150	2.785	Open Manhole	1200
F6.007	18.576	200.0	FFW-25	47.920	45.057	2.638	Open Manhole	1200
F1.007	29.946	200.0	FFW-26	46.875	44.441	2.209	Open Manhole	1200
F1.008	37.771	200.0	FFW-51	45.742	44.252	1.265	Open Manhole	1200
F10.000	22.024	200.2	FFW-28	47.300	45.513	1.562	Open Manhole	1200
F10.001	47.832	200.1	FFW-29	47.770	45.274	2.271	Open Manhole	1200
F10.002	57.633	200.0	FFW-30	46.750	44.986	1.539	Open Manhole	1200
F10.003	15.250	200.7	FFW-31	46.720	44.910	1.585	Open Manhole	1200
F10.004	24.050	199.0	FFW-39	46.875	44.789	1.861	Open Manhole	1200
F11.000	21.189	199.9	FFW-34	46.850	45.425	1.200	Open Manhole	1200
F12.000	17.503	79.9	FFW-34	46.850	45.400	1.300	Open Manhole	1200

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F11.001	o	225	FFW-34	46.850	45.400	1.225	Open Manhole	1200
F11.002	o	225	FFW-35	46.790	45.331	1.234	Open Manhole	1200
F13.000	o	225	FFW-36	46.865	45.440	1.200	Open Manhole	1200
F11.003	o	225	FFW-37	47.000	45.156	1.619	Open Manhole	1200
F11.004	o	225	FFW-38	46.994	45.076	1.693	Open Manhole	1200
F10.005	o	225	FFW-39	46.875	44.789	1.861	Open Manhole	1200
F10.006	o	225	FFW-40	46.670	44.713	1.732	Open Manhole	1200
F10.007	o	225	FFW-41	46.472	44.599	1.648	Open Manhole	1200
F10.008	o	225	FFW-42	46.000	44.470	1.305	Open Manhole	1200
F10.009	o	225	FFW-43	46.350	44.141	1.984	Open Manhole	1200
F14.000	o	150	FFW-44	47.772	46.347	1.275	Open Manhole	1200
F14.001	o	225	FFW-45	47.520	46.043	1.252	Open Manhole	1200
F15.000	o	225	FFW-46	47.370	45.945	1.200	Open Manhole	1200
F14.002	o	225	FFW-47	47.625	45.755	1.645	Open Manhole	1200
F14.003	o	225	FFW-48	47.809	45.632	1.952	Open Manhole	1200
F10.010	o	225	FFW-49	46.680	43.941	2.514	Open Manhole	1200
F10.011	o	225	FFW-50	46.250	43.732	2.293	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F11.001	13.871	201.0	FFW-35	46.790	45.331	1.234	Open Manhole	1200
F11.002	34.948	199.7	FFW-37	47.000	45.156	1.619	Open Manhole	1200
F13.000	21.510	199.2	FFW-37	47.000	45.332	1.443	Open Manhole	1200
F11.003	16.059	200.7	FFW-38	46.994	45.076	1.693	Open Manhole	1200
F11.004	13.610	200.0	FFW-39	46.875	45.008	1.642	Open Manhole	1200
F10.005	10.120	132.5	FFW-40	46.670	44.713	1.732	Open Manhole	1200
F10.006	22.808	200.0	FFW-41	46.472	44.599	1.648	Open Manhole	1200
F10.007	25.753	200.0	FFW-42	46.000	44.470	1.305	Open Manhole	1200
F10.008	65.695	200.0	FFW-43	46.350	44.141	1.984	Open Manhole	1200
F10.009	40.058	200.0	FFW-49	46.680	43.941	2.514	Open Manhole	1200
F14.000	24.339	80.1	FFW-45	47.520	46.043	1.327	Open Manhole	1200
F14.001	57.509	199.7	FFW-47	47.625	45.755	1.645	Open Manhole	1200
F15.000	23.806	159.8	FFW-47	47.625	45.796	1.604	Open Manhole	1200
F14.002	23.872	194.1	FFW-48	47.809	45.632	1.952	Open Manhole	1200
F14.003	46.080	100.0	FFW-49	46.680	45.171	1.284	Open Manhole	1200
F10.010	41.790	200.0	FFW-50	46.250	43.732	2.293	Open Manhole	1200
F10.011	36.823	200.0	FFW-51	45.742	43.548	1.969	Open Manhole	1200

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.009	o	225	FFW-51	45.742	43.548	1.969	Open Manhole	1200
F1.010	o	225	FFW-52	45.392	43.422	1.745	Open Manhole	1200
F16.000	o	150	FFW-53	50.000	47.700	2.150	Open Manhole	1200
F16.001	o	150	FFW-54	48.500	46.000	2.350	Open Manhole	1200
F16.002	o	225	FFW-55	46.625	44.500	1.900	Open Manhole	1200
F16.003	o	225	FFW-56	46.082	44.311	1.546	Open Manhole	1200
F1.011	o	225	FFW-57	45.100	43.323	1.552	Open Manhole	1200
F17.000	o	150	FFW-58	49.800	46.800	2.850	Open Manhole	1200
F17.001	o	150	FFW-59	49.075	46.062	2.863	Open Manhole	1200
F17.002	o	150	FFW-60	47.900	45.361	2.389	Open Manhole	1200
F17.003	o	150	FFW-61	46.920	44.901	1.869	Open Manhole	1200
F18.000	o	225	FFW-62	48.850	47.425	1.200	Open Manhole	1200
F18.001	o	225	FFW-63	49.100	46.500	2.375	Open Manhole	1200
F18.002	o	225	FFW-64	48.000	46.024	1.751	Open Manhole	1200
F19.000	o	225	FFW-65	46.980	45.555	1.200	Open Manhole	1200
F18.003	o	225	FFW-66	46.800	45.100	1.475	Open Manhole	1200
F20.000	o	225	FFW-67	43.875	42.450	1.200	Open Manhole	1200
F20.001	o	225	FFW-68	45.048	42.289	2.534	Open Manhole	1200
F20.002	o	225	FFW-69	45.500	42.227	3.048	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.009	25.231	199.6	FFW-52	45.392	43.422	1.745	Open Manhole	1200
F1.010	19.322	195.8	FFW-57	45.100	43.323	1.552	Open Manhole	1200
F16.000	39.409	60.0	FFW-54	48.500	47.043	1.307	Open Manhole	1200
F16.001	38.838	40.0	FFW-55	46.625	45.029	1.446	Open Manhole	1200
F16.002	11.321	59.9	FFW-56	46.082	44.311	1.546	Open Manhole	1200
F16.003	44.948	60.5	FFW-57	45.100	43.568	1.307	Open Manhole	1200
F1.011	56.993	100.0	FFW-78	44.225	42.753	1.247	Open Manhole	1200
F17.000	29.524	40.0	FFW-59	49.075	46.062	2.863	Open Manhole	1200
F17.001	28.054	40.0	FFW-60	47.900	45.361	2.389	Open Manhole	1200
F17.002	18.372	40.0	FFW-61	46.920	44.901	1.869	Open Manhole	1200
F17.003	23.076	40.0	FFW-71	45.825	44.324	1.351	Open Manhole	1200
F18.000	26.557	60.0	FFW-63	49.100	46.982	1.893	Open Manhole	1200
F18.001	28.585	60.0	FFW-64	48.000	46.024	1.751	Open Manhole	1200
F18.002	26.019	40.0	FFW-66	46.800	45.373	1.202	Open Manhole	1200
F19.000	27.328	60.0	FFW-66	46.800	45.100	1.475	Open Manhole	1200
F18.003	12.806	40.0	FFW-70	46.200	44.779	1.196	Open Manhole	1200
F20.000	32.268	200.0	FFW-68	45.048	42.289	2.534	Open Manhole	1200
F20.001	12.384	200.0	FFW-69	45.500	42.227	3.048	Open Manhole	1200
F20.002	21.400	200.0	FFW-70	46.200	42.120	3.855	Open Manhole	1200

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F18.004	o	225	FFW-70	46.200	42.120	3.855	Open Manhole	1200
F17.004	o	225	FFW-71	45.825	42.026	3.574	Open Manhole	1200
F17.005	o	225	FFW-72	44.725	41.919	2.581	Open Manhole	1200
F17.006	o	225	FFW-73	44.250	41.878	2.147	Open Manhole	1200
F17.007	o	225	FFW-74	43.437	41.759	1.453	Open Manhole	1200
F17.008	o	225	FFW-75	43.500	41.621	1.654	Open Manhole	1200
F17.009	o	225	FFW-76	43.050	41.496	1.329	Open Manhole	1200
F17.010	o	225	FFW-77	43.700	41.411	2.064	Open Manhole	1200
F1.012	o	225	FFW-78	44.225	41.000	3.000	Open Manhole	1200
F1.013	o	225	FFW-79	44.050	40.889	2.936	Open Manhole	1200
F1.014	o	225	FFW-80	42.850	40.000	2.625	Open Manhole	1200
F1.015	o	225	FFW-81	41.725	39.000	2.500	Open Manhole	1200
F1.016	o	225	FFW-82	40.500	37.000	3.275	Open Manhole	1200
F1.017	o	225	FFW-83	39.250	36.000	3.025	Open Manhole	1200
F1.018	o	225	FFW-84	36.950	34.000	2.725	Open Manhole	1200
F1.019	o	225	FFW-85	35.825	33.761	1.839	Open Manhole	1200
F1.020	o	225	FFW-86	34.875	32.100	2.550	Open Manhole	1200
F1.021	o	225	FFW-87	33.750	31.831	1.694	Open Manhole	1200
F21.000	o	225	FFW-88	36.081	34.000	1.856	Open Manhole	1200
F21.001	o	225	FFW-89	35.134	33.490	1.419	Open Manhole	1200
F22.000	o	225	FFW-90	34.069	32.644	1.200	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F18.004	18.652	200.0	FFW-71	45.825	42.026	3.574	Open Manhole	1200
F17.004	21.586	200.0	FFW-72	44.725	41.919	2.581	Open Manhole	1200
F17.005	8.137	200.0	FFW-73	44.250	41.878	2.147	Open Manhole	1200
F17.006	23.677	200.0	FFW-74	43.437	41.759	1.453	Open Manhole	1200
F17.007	27.790	200.0	FFW-75	43.500	41.621	1.654	Open Manhole	1200
F17.008	24.984	200.0	FFW-76	43.050	41.496	1.329	Open Manhole	1200
F17.009	17.001	200.0	FFW-77	43.700	41.411	2.064	Open Manhole	1200
F17.010	17.333	200.0	FFW-78	44.225	41.324	2.676	Open Manhole	1200
F1.012	22.173	199.8	FFW-79	44.050	40.889	2.936	Open Manhole	1200
F1.013	31.074	80.0	FFW-80	42.850	40.501	2.124	Open Manhole	1200
F1.014	14.094	77.9	FFW-81	41.725	39.819	1.681	Open Manhole	1200
F1.015	14.676	77.2	FFW-82	40.500	38.810	1.465	Open Manhole	1200
F1.016	15.150	76.9	FFW-83	39.250	36.803	2.222	Open Manhole	1200
F1.017	28.612	55.1	FFW-84	36.950	35.481	1.244	Open Manhole	1200
F1.018	18.524	77.5	FFW-85	35.825	33.761	1.839	Open Manhole	1200
F1.019	19.385	60.0	FFW-86	34.875	33.438	1.212	Open Manhole	1200
F1.020	22.830	84.9	FFW-87	33.750	31.831	1.694	Open Manhole	1200
F1.021	11.971	57.3	FFW-96	33.175	31.622	1.328	Open Manhole	1050
F21.000	39.561	77.6	FFW-89	35.134	33.490	1.419	Open Manhole	1200
F21.001	25.414	77.5	FFW-91	34.575	33.162	1.188	Open Manhole	1200
F22.000	37.067	100.0	FFW-91	34.575	32.273	2.077	Open Manhole	1200

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F21.002	o	225	FFW-91	34.575	32.273	2.077	Open Manhole	1200
F21.003	o	225	FFW-92	34.984	32.015	2.744	Open Manhole	1200
F23.000	o	225	FFW-93	35.720	34.000	1.495	Open Manhole	1200
F21.004	o	225	FFW-94	35.020	31.835	2.960	Open Manhole	1200
F21.005	o	225	FFW-95	34.350	31.696	2.429	Open Manhole	1200
F1.022	o	225	FFW-96	33.175	31.526	1.424	Open Manhole	1050
F1.023	o	225	FFW-97	32.800	31.319	1.256	Open Manhole	1200
F1.024	o	225	FFW-97A	32.600	31.116	1.259	Open Manhole	1050
F24.000	o	225	FFW-98	46.850	45.200	1.425	Open Manhole	1200
F24.001	o	225	FFW-99	47.100	44.940	1.935	Open Manhole	1200
F24.002	o	225	FFW-100	46.772	44.459	2.088	Open Manhole	1200
F24.003	o	225	FFW-101	45.550	43.746	1.579	Open Manhole	1200
F25.000	o	225	FFW-102	46.160	44.000	1.935	Open Manhole	1200
F24.004	o	225	FFW-103	45.000	41.500	3.275	Open Manhole	1200
F24.005	o	225	FFW-104	42.100	39.200	2.675	Open Manhole	1200
F24.006	o	225	FFW-105	40.100	37.654	2.221	Open Manhole	1200
F26.000	o	225	FFW-106	45.922	44.000	1.697	Open Manhole	1200
F26.001	o	225	FFW-107	45.425	43.757	1.443	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F21.002	51.690	200.0	FFW-92	34.984	32.015	2.744	Open Manhole	1200
F21.003	36.012	200.0	FFW-94	35.020	31.835	2.960	Open Manhole	1200
F23.000	49.280	100.0	FFW-94	35.020	33.507	1.288	Open Manhole	1200
F21.004	27.848	200.0	FFW-95	34.350	31.696	2.429	Open Manhole	1200
F21.005	33.381	196.7	FFW-96	33.175	31.526	1.424	Open Manhole	1050
F1.022	20.686	100.0	FFW-97	32.800	31.319	1.256	Open Manhole	1200
F1.023	30.460	150.0	FFW-97A	32.600	31.116	1.259	Open Manhole	1050
F1.024	24.425	150.0	FFW-97B	32.600	30.953	1.422	Open Manhole	0
F24.000	20.784	79.9	FFW-99	47.100	44.940	1.935	Open Manhole	1200
F24.001	38.478	80.0	FFW-100	46.772	44.459	2.088	Open Manhole	1200
F24.002	28.528	40.0	FFW-101	45.550	43.746	1.579	Open Manhole	1200
F24.003	11.762	40.0	FFW-103	45.000	43.452	1.323	Open Manhole	1200
F25.000	65.259	100.0	FFW-103	45.000	43.347	1.428	Open Manhole	1200
F24.004	58.275	60.0	FFW-104	42.100	40.529	1.346	Open Manhole	1200
F24.005	40.517	60.0	FFW-105	40.100	38.525	1.350	Open Manhole	1200
F24.006	22.167	40.0	FFW-116	38.977	37.100	1.652	Open Manhole	1200
F26.000	24.315	100.0	FFW-107	45.425	43.757	1.443	Open Manhole	1200
F26.001	14.357	100.0	FFW-108	44.922	43.613	1.084	Open Manhole	1200

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F26.002	o	225	FFW-108	44.922	43.613	1.084	Open Manhole	1200
F26.003	o	225	FFW-109	44.602	43.217	1.160	Open Manhole	1200
F26.004	o	225	FFW-110	44.522	43.145	1.152	Open Manhole	1200
F26.005	o	225	FFW-111	44.088	42.576	1.287	Open Manhole	1200
F26.006	o	225	FFW-112	43.587	42.140	1.222	Open Manhole	1050
F26.007	o	225	FFW-113	43.420	42.000	1.195	Open Manhole	1050
F26.008	o	225	FFW-114	43.100	41.750	1.125	Open Manhole	1050
F26.009	o	225	FFW-115	42.800	37.600	4.975	Open Manhole	1200
F24.007	o	225	FFW-116	38.977	36.500	2.252	Open Manhole	1200
F24.008	o	225	FFW-117	37.727	35.400	2.102	Open Manhole	1200
F24.009	o	225	FFW-118	36.375	34.000	2.150	Open Manhole	1200
F24.010	o	225	FFW-119	34.980	32.000	2.755	Open Manhole	1200
F24.011	o	225	FFW-120	32.396	31.365	0.806	Open Manhole	1200
F24.012	o	225	FFW-121	32.370	31.336	0.809	Open Manhole	1050

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F26.002	39.645	100.0	FFW-109	44.602	43.217	1.160	Open Manhole	1200
F26.003	7.164	100.0	FFW-110	44.522	43.145	1.152	Open Manhole	1200
F26.004	34.136	60.0	FFW-111	44.088	42.576	1.287	Open Manhole	1200
F26.005	26.150	60.0	FFW-112	43.587	42.140	1.222	Open Manhole	1050
F26.006	14.249	101.5	FFW-113	43.420	42.000	1.195	Open Manhole	1050
F26.007	14.987	60.0	FFW-114	43.100	41.750	1.125	Open Manhole	1050
F26.008	19.505	59.5	FFW-115	42.800	41.422	1.153	Open Manhole	1200
F26.009	17.028	40.0	FFW-116	38.977	37.174	1.578	Open Manhole	1200
F24.007	25.681	100.0	FFW-117	37.727	36.243	1.259	Open Manhole	1200
F24.008	25.437	80.0	FFW-118	36.375	35.082	1.068	Open Manhole	1200
F24.009	27.713	80.0	FFW-119	34.980	33.654	1.101	Open Manhole	1200
F24.010	63.617	100.2	FFW-120	32.396	31.365	0.806	Open Manhole	1200
F24.011	5.916	200.0	FFW-121	32.370	31.336	0.809	Open Manhole	1050
F24.012	41.679	200.4	FEX.MFMH	32.460	31.128	1.107	Open Manhole	0

Surcharged Outfall Details for Foul - Main

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
F1.024	FFW-97B	32.600	30.953	30.800	0	0

Input Hydrograph Type: User Defined

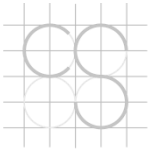
No Input Hydrograph data used for analysis due to offset specified.

Surcharged Outfall Details for Foul - Main

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
F24.012	FEX.MFMH	32.460	31.128	31.270	0	0

Input Hydrograph Type: User Defined

No Input Hydrograph data used for analysis due to offset specified.



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