



SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT
THE HAYMARKET PRECINCT

FLOODING AND STORMWATER

FOR SSDA2 5752-2012



DARLING HARBOUR LIVE

SICEEP – THE HAYMARKET

FLOODING AND STORMWATER FOR SS DA2

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CONTENTS

1	Introduction	3
2	Overview of Proposed Development.....	3
3	Background	4
4	Site Description	4
5	Planning Approvals Strategy	5
6	Flooding, Stormwater Drainage & Water Sensitive Urban Design.....	7

1 INTRODUCTION

This report supports a State Significant Development Application (SSDA2 5752-2012) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The Application seeks approval for the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (referred to as The Haymarket) as part of the Sydney international convention, exhibition and entertainment precinct SICEEP Project at Darling Harbour.

The project will develop The Haymarket into one of Sydney's most innovative residential and working districts. Through the delivery of the overall Project, Darling Harbour will also become home to Australia's largest convention and exhibition facilities, Sydney's largest red carpet entertainment venue, and a hotel complex of up to 900 rooms.

The SICEEP Project importantly forms a critical element of the NSW Government's aspiration to "make NSW number one again".

2 OVERVIEW OF PROPOSED DEVELOPMENT

The proposal relates to a staged development application and seeks to establish concept plan details for The Haymarket, located within the southern part of the SICEEP Site.

The Haymarket will include student housing, public car parking, a commercial office building, and four mixed use development blocks (retail/commercial/residential podium with residential towers above) centred around a new public square to be named Haymarket Square.

More specifically concept approval is sought for the following:

- Demolition of existing site improvements, including the existing Sydney entertainment Centre (SEC), Entertainment car park, and part of the pedestrian footbridge connected to the Entertainment car park and associated tree removal;
- North-west block – construction of a part public car park and part commercial/office building;
- North-east block – construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- South-east block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- South-west block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- North block – construction of a low rise mixed use building comprising retail, commercial and residential;
- Student housing – construction of two buildings providing for student accommodation;
- Public domain improvements including a new square, water features, new pedestrian streets and laneways, streetscape embellishments, and associated landscaping. (It is intended that a Stage 2 DA seeking approval for parts of the part of the public domain (The Boulevard and Haymarket Square) will be lodged with the first residential stage);

3 BACKGROUND

The existing convention, exhibition and entertainment centre facilities at Darling Harbour were constructed in the 1980s and have provided an excellent service for Sydney and NSW.

The facilities however have limitations in their ability to service the contemporary exhibition and convention industry which has led to a loss in events being held in Sydney.

The NSW Government considers that a precinct-wide renewal and expansion is necessary and is accordingly committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of the Sydney international convention, exhibition and entertainment precinct.

Following an extensive and rigorous Expressions of Interest and Request for Proposals process, Darling Harbour Live (formerly known as 'Destination Sydney' - a consortium comprising AEG Ogden, Lend Lease, Capella Capital and Spotless) was announced by the NSW Government in December 2012 as the preferred proponent to transform Darling Harbour and create the new Sydney international convention, exhibition and entertainment precinct.

Key features of the Darling Harbour Live Preferred Master Plan include:

- Delivering world-class convention, exhibition and entertainment facilities, including:
 - Up to 40,000m² exhibition space;
 - Over 8,000m² of meeting rooms space, across 40 rooms;
 - Overall convention space capacity for more than 12,000 people;
 - A ballroom capable of accommodating 2,000 people; and
 - A premium, red-carpet entertainment facility with a capacity of 8,000 persons.
- Providing up to 900 hotel rooms in a hotel complex at the northern end of the precinct.
- A vibrant and authentic new neighbourhood at the southern end of the precinct, called 'The Haymarket', home to an IQ Hub focused on the creative industries and high-tech businesses, apartments, student accommodation, shops, cafes and restaurants.
- Renewed and upgraded public domain, including an outdoor event space for up to 25,000 people at an expanded Tumbalong Park.
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

4 SITE DESCRIPTION

The SICEEP Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south.

The SICEEP Site has been divided into three distinct redevelopment areas (from north to south) – Bayside, Darling Central and The Haymarket. The Application Site area relates to The Haymarket as shown in Figure 1.



Figure 1: SICEEP Site Location

5 PLANNING APPROVALS STRATEGY

In response to separate contractual agreements with the NSW Government and staging requirements Lend Lease (Haymarket) Pty Ltd is proposing to submit a number of separate development applications for key elements of the overall Project.

This staged development application involves the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (The Haymarket) within the southern part of the SICEEP Site. Detailed development applications will accordingly follow seeking approval for specific aspects of The Haymarket in accordance with the approved staged development application.

Separate development applications will be lodged for the PPP component of the SICEEP Project (comprising the convention centre, exhibition centre, entertainment facility and associated public domain upgrades) and Hotel complex.

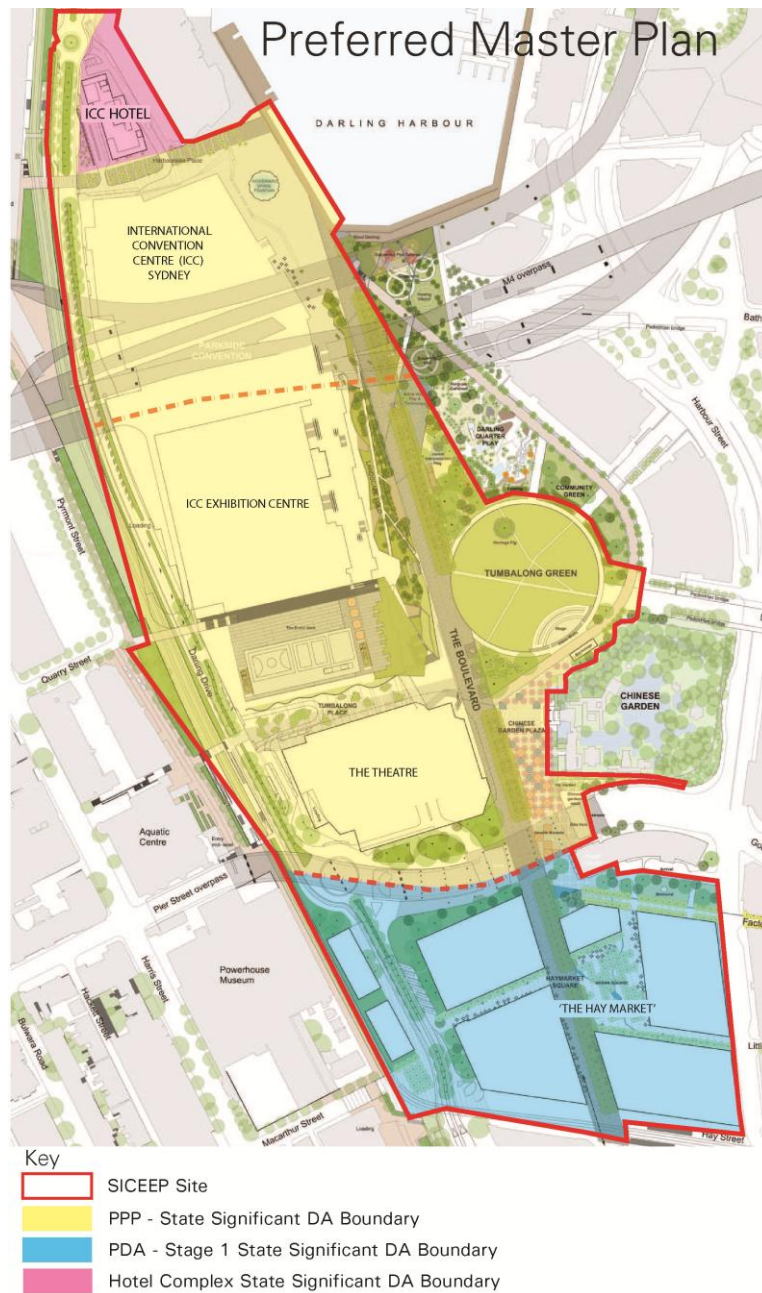


Figure 2: Preferred Masterplan

6 FLOODING, STORMWATER DRAINAGE & WATER SENSITIVE URBAN DESIGN

Please refer to the Flooding & Stormwater report in Appendix A. The Flood Study, Drainage Management Plan and the Water Sensitive Urban Design plan within that report have been prepared for a separate SICEEP Public Private Partnership (PPP) Stage 2 planning application. The Water Sensitive Urban design component of the Flooding & Stormwater report (Appendix A) focuses on the PPP precinct within SICEEP whilst also assessing The Haymarket at a conceptual level.

The Water Sensitive Urban Design (WSUD) component of the Site Wide Flooding & Stormwater report in Appendix A reflects design analysis, assessment and commitments for the PPP component of SICEEP only and is based on a level of design resolution for the PPP commensurate with a Stage 2 Development Application.

While The Haymarket will encompass principles of WSUD Design, this Stage 1 Development Application for The Haymarket does not seek approval for specific design, design criteria and commensurate WSUD works.

As noted in the Flooding & Stormwater report in Appendix A, the WSUD for The Haymarket will be the subject of further detailed assessment and design development which will be design developed and lodged at the Stage 2 development application phase.

APPENDIX A

FLOODING AND STORMWATER REPORT



SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT
FLOODING & STORMWATER



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DARLING HARBOUR LIVE

SICEEP

FLOODING & STORMWATER

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Report No DN00341

Date 18 March 2013

This report has been prepared for Darling Harbour Live in accordance with the terms and conditions of appointment for Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) dated 25/01/2013. Hyder Consulting Pty Ltd (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	4
2 OVERVIEW OF PROPOSED DEVELOPMENT	5
2.1 Site Description	5
2.2 Topography	5
2.3 History and Heritage	5
2.4 Proposed Development	6
2.5 Planning Approvals Strategy	9
2.6 Director General's Requirements	11
2.7 Infrastructure NSW Project Brief Requirements	11
3 FLOOD STUDY	13
3.1 Methodology	13
3.2 Hydrological Analysis	13
3.3 Site Flow Regimes.....	14
3.4 Potential Flood Impacts	20
3.5 Discussion and Comments	20
3.6 Conclusions.....	23
3.7 Recommendations.....	23
4 STORMWATER DRAINAGE DESIGN	24
4.1 Methodology	24
4.2 Results and Comments	24
5 WATER QUALITY ANALYSIS & WATER SENSITIVE URBAN DESIGN (WSUD)	26
5.1 Modelling Catchment And Setup	26
5.2 Modelling Scenarios	28
5.3 'Proposed Development 'Practical' Treatment Model Considerations	28
5.4 Water Quality Treatment Targets	30
5.5 Meteorological Data.....	31
5.6 Soil / Groundwater Parameters And Pollutant Loading Rates	32
5.7 Music Models & Assumptions.....	35
5.8 Stormwater Management Concept.....	39
5.9 Pollutant Load Estimates.....	52
5.10 Conclusions & Recommendations.....	56
6 References	58

TABLES

Table 2-1	Director General's Requirements
Table 2-2	Infrastructure NSW Project Brief Requirements
Table 3-1	DRAINS Model Parameters
Table 3-2	Sydney Harbour Design Still Water Levels
Table 3-3	Sydney Harbour Water Levels Coincident with Catchment Runoff
Table 5-1	Rainfall data used in the SICEEP Music model
Table 5-2	Monthly potential evapotranspiration (PET) values for Sydney
Table 5-3	Adopted soil and groundwater properties for the site
Table 5-4	Adopted pollutant event mean concentrations for impervious areas
Table 5-5	Pervious and impervious areas in the six SICEEP subcatchments
Table 5-6	Tank properties and tributary roof areas
Table 5-7	Daily Usage Pattern of Toilets and Urinals
Table 5-8	Daily water demand to be serviced by the rainwater tanks
Table 5-9	Reliability rating of the rainwater tanks
Table 5-10	Proposed and desired bioretention systems (<i>Part 1 of 2</i>)
Table 5-11	Proposed and desired bioretention systems (<i>Part 2 of 2</i>)
Table 5-12	Estimated mean annual pollutant loads for the PPP, PDA & SICEEP sites
Table 5-13	Estimated mean annual pollutant loads and reductions for the Bayside subcatchment
Table 5-14	Estimated mean annual pollutant loads and reductions for the North Exhibition subcatchment
Table 5-15	Estimated mean annual pollutant loads and reductions for the South Exhibition subcatchment
Table 5-16	Estimated mean annual pollutant loads and reductions for The Theatre subcatchment
Table 5-17	Estimated mean annual pollutant loads and reductions for the Tumbalong Park subcatchment
Table 5-18	Estimated mean annual pollutant loads and reductions for the entire PDA development
Table 5-19	Estimated mean annual pollutant loads and reductions for the PPP development
Table 5-20	Estimated mean annual pollutant loads and reductions for the entire SICEEP development

FIGURES

Figure A	Darling Harbour Catchments
Figure 2-1	Project Redevelopment Area
Figure 2-2	Preferred Project Master Plan
Figure 3-1	Sydney Water Closed Conduit Systems
Figure 5-1	Subcatchments comprising the SICEEP PPP and PDA sites .
Figure 5-2	Rainfall and potential evapotranspiration data used in MUSIC for the 1957-1966 period.
Figure 5-3	MUSIC model layout for Bayside subcatchment
Figure 5-4	MUSIC model layout for North Exhibition subcatchment
Figure 5-5	MUSIC model layout for South Exhibition subcatchment
Figure 5-6	MUSIC model layout for The Theatre subcatchment
Figure 5-7	MUSIC model layout for Tumbalong Park subcatchment
Figure 5-8	MUSIC model layout for PDA subcatchment
Figure 5-9	Locations of the treatment devices for the proposed Stormwater Quality Management Strategy ('Practical' Scenario).
Figure 5-10	A typical configuration of a SICEEP rainwater tank
Figure 5-11	A typical section of The Boulevard showing drainage and the proposed WSUD strategy utilising (a) Bifurcated Tree Pits and (b) Combined Tree Pit.
Figure 5-12	A typical Enviropod pit insert assembly

APPENDICES

- Appendix A: Proposed Development Concept Layout
- Appendix B: DRAINS Model Proposed Development Inputs & Outputs
- Appendix C: TUFLOW Model Inputs & Outputs
- Appendix D: Sydney Water Closed Conduit Systems
- Appendix E: Sydney Harbour Design Levels and Sea Level Rise
- Appendix F: Rainfall, Cockle Bay Water Level and Catchment Runoff Coincidence
- Appendix G: Existing Conditions Flood Assessment
- Appendix H: MUSIC Modelling & WSUD

DESIGN DRAWINGS

GLOSSARY

AEP	Annual Exceedance Probability
ALS	Aerial Laser Scanning
ANZECC	Australian and New Zealand Environment and Conservation Council
ARI	Average Recurrence Interval
ARR	Australian Rainfall & Runoff
BOM	Bureau of Meteorology
CoS	City of Sydney
CRC	Cooperative Research Centre
DA	Development Application
DCP	Development Control Plan
DEM	Digital Elevation Model
DECC	Department of Environment and Climate Change
DGR	Director-General's Requirements
DRAINS	Stormwater Drainage System design and analysis program
ESD	Ecologically Sustainable Development
GPT	Gross Pollutant Trap
ha	Hectare
ICC	International Convention Centre
IFD	Intensity-Duration-Frequency
MFEC	Multi-Function Entertainment Centre
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
OEH	Office of Environment and Heritage
OSD	On Site Detention
PDA	Private Development Area
PPP	Public Private Partnership
PMF	Probable Maximum Flood
RMS	Roads and Maritime Services
SHFA	Sydney Harbour Foreshore Authority
SICEEP	Sydney International Convention, Exhibition and Entertainment Precinct
SQID	Stormwater Quality Improvement Devices
TN	Total Nitrogen
TP	Total Phosphorus
TSS	Total Suspended Solids
TUFLOW	Two Dimensional Unsteady Flow (flood simulation software)
WAE	Work-As-Executed
WSUD	Water Sensitive Urban Design

Executive Summary

This flooding and stormwater report, prepared by Hyder Consulting Pty Ltd, is a consolidated assessment of the whole of precinct for SICEEP, which includes the PPP, The Haymarket and ICC Hotels.

The assessment:

- has been carried out in accordance with the Director General's requirements and the INSW project brief as summarised in Tables 2-1 and 2-2 of this report; and
- provides the analysis methodology, findings and recommendations for flooding and stormwater management.

FLOOD STUDY (Section 3)

The SICEEP site is at the downstream of several large stormwater catchments totalling approximately 190 ha, as outlined in Figure A.

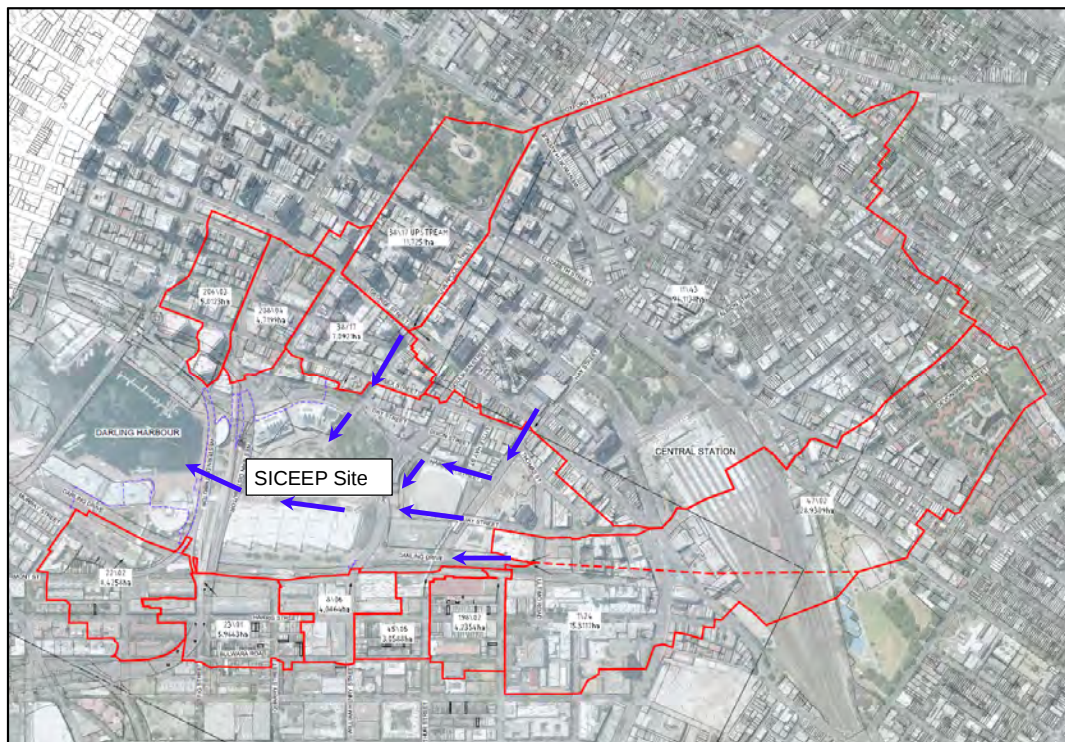


Figure A: Darling Harbour Catchments

There are a number of large Sydney Water underground culvert systems that convey the Darling Harbour catchment runoff through the site and into Darling harbour. However these underground systems do not convey all runoff up to the 100 year ARI flood event and as a result there are a number of significant overland flow paths that run through the site.

The general flood assessment and design approach for the proposed development has been to retain the existing Sydney Water box culvert systems, and mitigate the potential flood impact of the 'Preferred Master Plan' (outlined in Appendix A) on overland flows by amplifying the underground culvert system. The culvert amplification option presented in this report is considered an efficient use of the existing Sydney Water culverts to mitigate potential flood impacts of the 'Preferred Master Plan'.

To demonstrate no adverse flood impacts as a result of the proposed development, a flood assessment has also been carried out for existing conditions. Existing condition, proposed development condition and flood impact figures are all included in Appendix C, and demonstrate conformance to the Director General's requirements and the INSW project brief.

The flood mapping figures are considered adequate for the setting of concept design planning levels, the development of flood emergency response planning, and assessing hydraulic loadings for structural design.

In conclusion to the flood section, it is recommended that alternative flood mitigation measures should be investigated to facilitate future design stages (Section 3.5.5) then several design risks are identified (Section 3.5.6).

STORMWATER DRAINAGE DESIGN (Section 4)

A concept design of the proposed minor (underground conduit) drainage system is outlined for the SICEEP project area in the design drawings that accompany this report. Features of the design include:

- retaining all existing box culvert systems throughout the existing precinct.
- re-use of existing stormwater drainage systems and existing local drainage pipe connections into the existing box culverts where possible. However, where necessary, providing additional/larger stormwater systems and connections.
- provision of open space surface drainage systems with a focus on public safety, giving careful consideration to inlet type and location, and options of porous pavement areas.
- consideration of existing and future overland flow paths throughout the Precinct (as identified in the Section 3 flood study).
- subsoil drainage, as required under pavement areas to ensure appropriate drainage to all areas of subgrade, sub-base and base areas.

Assessment of the proposed stormwater performance has been incorporated into the flood modelling. As such the results are provided in the Appendix C flood mapping, which show significant reduction in proposed flood levels and hazard condition compared to existing conditions.

That said, it is noted that for 20 year ARI conditions along Darling Drive, there are number of local areas where surface water may be improved upon in future design stages as discussed in Section 4.2.

WATER QUALITY ANALYSIS AND WATER SENSITIVE URBAN DESIGN (Section 5)

The catchment considered in the water quality analysis is the entire SICEEP PPP site which has an area of approximately 13 ha. MUSIC modelling set up and catchment definition is described in Section 5.1.

MUSIC modelling was undertaken to estimate the stormwater runoff pollutant loads within the PPP for the following scenarios:

- Existing Conditions
- Proposed development without treatment (Baseline Scenario)
- Proposed development with treatment (Treated Scenario - Practical)
- Proposed development with treatment (Treated Scenario - Desirable)

For the purpose of this report, the “Practical” scenario was explored within the report.

Taken altogether, the MUSIC modelling for the Proposed Development ‘Practical’ Treated Scenario has demonstrated that the proposed water quality management strategy in the PPP subcatchments will result in achieving the required pollutant reduction levels for Gross Pollutants and Total Nitrogen. With such reductions, pollutant levels in this scenario are lower than the pollutant levels obtained from the Existing and Base Scenario models.

There is 100% retention of Gross Pollutants and 52% retention of Total Nitrogen from the entire SICEEP PPP site; both of which are higher than the 90% and 45% reduction targets set by City of Sydney Council for Gross Pollutants and TN respectively. Taken individually, with 44% reduction achieved, only the Bayside subcatchment is marginally less than the 45% required reduction in TN.

The MUSIC modelling for the Proposed development ‘Practical’ Treated Scenario has also demonstrated that the proposed water quality management strategy in the PPP subcatchments will result in lower levels of TSS and TP compared to values resulting from the Existing and Base Scenarios. The reduction levels for the entire PPP catchment for TSS and TP are very close to meeting targets set by Council for TSS and TP respectively.

1 INTRODUCTION

This report supports State Significant Development Applications (5752-2012) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This report has also been prepared to address the Director-General's Requirements (DGRs) that have been issued for this project, with regard to stormwater, flooding and stormwater quality management (WSUD).

The application seeks approval for construction of the Public Private Partnership (PPP) component of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) project at Darling Harbour.

An additional application also seeks approval for the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (referred to as The Haymarket) as part of the Sydney international convention, exhibition and entertainment precinct (SICEEP) Project at Darling Harbour. The project will develop The Haymarket into one of Sydney's most innovative residential and working districts.

Through the delivery of the overall project, Darling Harbour will become home to Australia's largest convention and exhibition facilities, Sydney's largest red carpet entertainment venue, and a hotel complex of up to 900 rooms.

The SICEEP Project importantly forms a critical element of the NSW Government's aspiration to "make NSW number one again".

This report by Hyder Consulting Pty Ltd presents a concept which identifies in relation to the overall SICEEP project:

- Flood flow regimes (discussed in Section 3);
- Stormwater system design (discussed in Section 4); and
- Management of water sensitive urban runoff (discussed in Section 5).

2 OVERVIEW OF PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION

The SICEEP Site is located within the Darling Harbour precinct. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside Shopping Centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south.

2.2 TOPOGRAPHY

Darling Harbour is located in the central portion of the Sydney Basin. Darling Harbour is located at Cockle Bay in an area of low undulating topography on the Sydney Harbour Foreshore. Both the Parramatta River and Lane Cove River flow into the Harbour at this point.

Today Darling Harbour is the result of European land management activities including Harbour reclamation. It is situated along a central valley that has been formed by infilling a significant part of the original Cockle Bay. The valley is open and flat, and runs on a north-south axis from Cockle Bay to Tumbalong Park. Ridges rise to the east towards the Sydney CBD and to the west towards Pyrmont from the valley floor (JBA 2007 Part 3A Concept Plan and Environmental Assessment Report (Submitted to Department of Planning on behalf of Sydney Harbour Foreshore Authority).

Ground levels at the SICEEP site are generally between 2.2m and 5.0m AHD. The lowest lying area within the site includes an area under Pier Street, with high areas located along the western boundary of the site. The light rail corridor runs along an elevated area, along the western boundary of the site.

The topography of the SICEEP site is highly urbanised, with the majority of the area comprising of impervious urbanised areas.

2.3 HISTORY AND HERITAGE

Before the arrival of European settlers the original inhabitants, who were the Gadigal people, who lived in the area around Sydney Cove referred to what is now known as Darling Harbour as Tumbalong (place where seafood is found). When Sydney was founded in 1788, the Bay was called Long Cove, due to the unusual length of the bay.

In 1826 the Bay was again renamed. This time becoming Darling Harbour, in honour of Governor Ralph Darling, who was Sydney's Governor, at the time.

Commissioned by Governor Macquarie in 1812, Darling Harbour developed from a bustling market wharf to what became a major industrial and goods-handling precinct. Initially long jetties were constructed into the tidal waters until land reclamation began to change the shape of the shoreline. By 1836 the town of Sydney had extended to the waterfront at Darling Harbour where warehouses and stores were constructed. The railway at Darling Harbour was opened in 1855 on the western side of Darling Harbour. Goods yards were included with the rail line making Darling Harbour the centre of Sydney's freight network. Industrial expansion continued on the eastern side of Darling Harbour with the construction of foundries, wharves, warehouses, bond stores and ship yards.

However, by the mid 1970's the area had become neglected with abandoned warehouses, wharves and train lines.

In 1984, the NSW State Government, under Labor Premier Neville Wran, announced the redevelopment of the area, from its previous industrial uses to better serve the public and tourist industry. In 1988, Darling Harbour re-opened during Australia's Bicentennial Celebrations.

2.4 PROPOSED DEVELOPMENT

The existing convention, exhibition and entertainment centre facilities at Darling Harbour, constructed in the 1980s, have provided an excellent service for Sydney and NSW.

The facilities however have limitations in their ability to service the contemporary exhibition and convention industry which has led to a loss in events being held in Sydney.

The NSW Government considers that a precinct-wide renewal and expansion is necessary and is accordingly committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of the SICEEP Project.

Following an extensive and rigorous Expressions of Interest and Request for Proposals process, Darling Harbour Live (formerly known as 'Destination Sydney' - a consortium comprising AEG Ogden, Lend Lease, Capella Capital and Spotless) was announced by the NSW Government in December 2012 as the preferred proponent to transform Darling Harbour and create the new Sydney International Convention, Exhibition and Entertainment Precinct.

Key features of the Darling Harbour Live Preferred Master Plan include:

- Delivering world-class convention, exhibition and entertainment facilities, including:
 - Up to 40,000m² exhibition space;
 - Over 8,000m² of meeting rooms space, across 40 rooms;
 - Overall convention space capacity for more than 12,000 people;
 - A ballroom capable of accommodating 2,000 people; and
 - A premium, red-carpet entertainment facility with a capacity of 8,000 persons.
- Providing up to 900 hotel rooms in a hotel complex at the northern end of the Precinct.
- A vibrant and authentic new neighborhood at the southern end of the precinct, called 'The Haymarket', home to an IQ Hub focused on the creative industries and high-tech businesses, apartments, student accommodation, shops, cafes and restaurants.
- Renewed and upgraded public domain, including an outdoor event space for up to 25,000 people at an expanded Tumbalong Park.
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

The SICEEP Site has been divided into three distinct redevelopment areas (from north to south) – Bayside, Darling Central and The Haymarket. The PPP Application Site area is located within Bayside and Darling Central as shown in Figure 2-1.



Figure 2-1 Project Redevelopment Area

2.4.1 PRIVATE PUBLIC PARTNERSHIP (PPP)

The proposed development involves construction of the PPP component of the SICEEP Project, comprising new, integrated and world-class convention, exhibition and entertainment facilities with associated retail and public domain upgrades.

The application more specifically seeks approval for the following development:

- Demolition of existing improvements on the site, including existing Sydney Convention Centre (part) and Sydney Exhibition Centre;
- Associated tree removal and replanting;
- Construction of a new, integrated and world-class Convention, Exhibition and Entertainment Centre;
- Public domain improvements, including:
 - reinvigorating and expanding Tumbalong Park;
 - provision (part) of a new active north-south pedestrian connection (known as the Boulevard);
 - provision of new east-west connections, including Harbourside Place and Tumbalong Place;
 - Provision of a pedestrian bridge link from Quarry Street;
 - Retention of the tidal cascade water feature;
 - Reconfiguration and upgrade of Darling Drive (part);
 - Provision of a new square adjoining the Chinese Garden;
 - Provision of a new open space 'event deck' (connected with the Exhibition Centre);
 - Integrated art, play zones, water play and recreation areas;
 - Provision of retail kiosks;
- Provision of ground level parking within the Exhibition and Entertainment Centre facilities;
- Ground and elevated loading docks (accessed off Darling Drive) for Convention, Exhibition and Entertainment Centre facilities;
- Two vehicle drop off points off Darling Drive;
- Provision of signage; and
- Extension and augmentation of physical infrastructure / utilities as required.

2.4.2 PRIVATE DEVELOPMENT AREA (PDA) – THE HAYMARKET

The PDA proposal relates to a staged development application and seeks to establish concept proposal details for The Haymarket, located within the southern part of the SICEEP Site.

The Haymarket will indicatively include student housing, public car parking, a commercial office building, and four mixed use development blocks (retail/commercial/residential podium with residential towers above) centred around a new public square to be named Haymarket Square.

More specifically approval is sought for the following:

- Demolition of existing site improvements, including the existing Sydney entertainment Centre (SEC), Entertainment car park, and part of the pedestrian footbridge connected to the Entertainment car park and associated tree removal;

- North-west block – construction of a part public car park and part commercial/office building;
- North-east block – construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- South-east block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- South-west block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential);
- North block – construction of a low rise mixed use building comprising retail, commercial and residential;
- Student housing – construction of two buildings providing for student accommodation;
- Public domain improvements including a new square, water features, new pedestrian streets and laneways, streetscape embellishments, and associated landscaping. (It is intended that a Stage 2 DA seeking approval for parts of the part of the public domain (The Boulevard and Haymarket Square) will be lodged with the first residential stage);

2.5 PLANNING APPROVALS STRATEGY

In response to separate contractual agreements with the NSW Government and staging requirements, Darling Harbour Live is proposing to submit a number of separate development applications for key elements of the PPP Project.

This Application involves the PPP component of the SICEEP Project, comprising the convention centre, exhibition centre, entertainment facility, and associated public domain upgrades.

In response to separate contractual agreements with the NSW Government and staging requirements Lend Lease (Haymarket) Pty Ltd is proposing to submit a number of separate development applications for key elements of the PDA Project.

This staged development application involves the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (The Haymarket) within the southern part of the SICEEP Site. Detailed development applications will accordingly follow seeking approval for specific aspects of The Haymarket in accordance with the approved staged development application.

A separate development application will also be submitted for the Hotel Complex. Figure 2-2 outlines the currently preferred master plan.

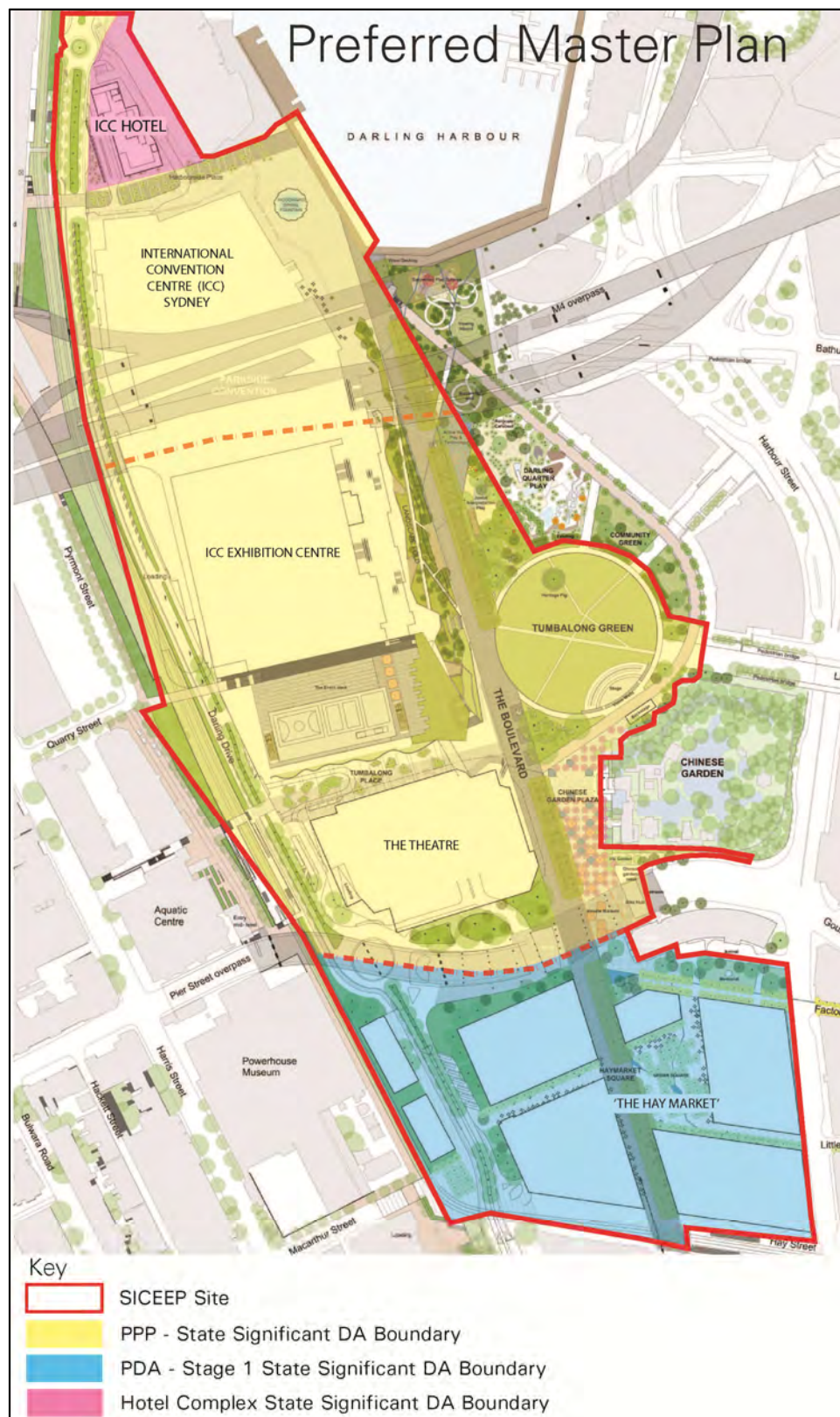


Figure 2-2 Preferred Project Master Plan

2.6 DIRECTOR GENERAL'S REQUIREMENTS

Table 2-1 Director General's Requirements

DGR Reference	Key Assessment Requirement	Report Section Reference
4 – Public Domain and Urban Design	Address Water Sensitive Urban Design (WSUD) opportunities within the public domain and landscaping.	Section 5
5 – Ecologically Sustainable Design (ESD)	Provide an integrated Water Management Plan including alternative water supply, proposed end uses of potable and non-potable water, water sensitive urban design and water conservation measures.	Section 5 ESD Report for other key requirements.
9 – Drainage, Flooding, climate change and Sea Level Rise	Provide a drainage concept for the site incorporating water sensitive urban design	Section 3, 4 and 5
9 – Drainage, Flooding, climate change and Sea Level Rise	Address the likely groundwater, flooding and sea level rise risks on the site and measures to ameliorate any impacts	Section 3 Groundwater risk to the site is not addressed as part of this Report.
14 – Water Quality	Address water quality impacts during construction including details of the source, volume, frequency and on-going monitoring methods	Section 4
14 – Water Quality	Provide mitigation and management measures to minimise soil and stormwater impacts to the surrounding area.	Section 3, 4 and 5

2.7 INFRASTRUCTURE NSW PROJECT BRIEF REQUIREMENTS

Table 2-2 Infrastructure NSW Project Brief Requirements

Project Brief	Key Requirement	Report Section Reference
2.11.2 (b) Drainage Design Parameters	The Project Company must design and construct the minor (piped) and major (overland) drainage systems to convey all the SICEEP precinct stormwater, including accommodation of roof drainage outlets and upstream catchments, through the precinct. The minor and major systems must be designed to convey the 5% and 1% Annual Exceedance Probability (AEP) rainfall events respectively, subject to the limitations of the existing drainage systems, which the project systems discharge into.	Section 3 and 4
2.11.2 (c) Drainage Design Parameters	The Project Company must ensure all stormwater pipes within the Public Realm areas are rubber ring jointed reinforced concrete pipes with a minimum diameter of 375mm.	Section 4
2.11.3 (a) Overland Flow	The Project Company must design and implement an overland flow path through the precinct in accordance with the NSW Floodplain Development Manual. As a minimum the Project Company shall improve upon the existing overland flow conditions through the site, but ensure they are no worse than existing conditions.	Section 3

Project Brief	Key Requirement	Report Section Reference
2.11.4 (a - d) Flood Levels	a) The Project Company must undertake a Flood Risk Assessment in accordance with the procedures set out in NSW Floodplain Development Manual (2005) – Appendix C. b) The Project Company must design and construct the project works to comply with the requirements of the Flood Risk Assessment. This assessment must be undertaken in conjunction with that described in Section 2.11.5 of the Project Brief, and be submitted for review in accordance with the Project Deed. c) The Project Company must ensure that no part of the project works result in adverse flooding or risk of flooding for any external property or third party facility d) The Project Company must identify and apply flood planning levels for the facilities in accordance with the flooding and risk assessment, as described in Section 2.11.4 of the Project Brief and the guidelines specified in Section 2.11.2 of the Project Brief. Notwithstanding these requirements, the Project Company must ensure that the following minimum flood planning levels are applied to the Facilities: ▪ Habitable building floor level - 1% AEP + 0.5m. Where habitable floor levels are below the 1% AEP flood level, 500mm freeboard shall be applied above the 1% AEP flood level at all points of entry. Existing ground floor levels of the Convention Centre and the Exhibition Centre car park are to remain. ▪ Underground car park - 1% AEP + 0.5m. Where this cannot be practicably achieved, determination of appropriate levels shall be subject to a risk based assessment. ▪ Installations containing infrastructure control equipment - 1% AEP + 0.5m ▪ Other floor levels - 1% AEP and subject to a risk based assessment	Section 3
2.11.5 (a) Climate Change and Sea Level Rise	In accordance with requirements for planning approval, the Project Company must undertake a risk assessment of the impacts of sea level rise and climate change on the Precinct, in accordance with the guidelines specified in Section 2.11.2 of the Project brief, and submit the risk assessment report for review in accordance with the Project Deed.	Section 3
2.11.6 (a) Subsoil Drainage	The Project company must provide subsoil drainage, as required under pavement areas to ensure appropriate drainage to all areas of sub-grade, sub-base and base areas.	Section 4
2.11.7 (a) Water Quality	The Project company must provide for meeting the following performance criteria for water quality for all water falling within the areas of the Public Realm and the Facilities: ▪ Litter and Vegetation larger than 5mm - 90% reduction on the baseline annual pollutant load ▪ Total Suspended Solids - 85% reduction on the baseline annual pollutant load ▪ Total Phosphorus - 65% reduction on the baseline annual pollutant load ▪ Total Nitrogen - 45% reduction on the baseline annual pollutant load	Section 5

3 FLOOD STUDY

This flood study of the proposed development, carried out by Hyder Consulting, is a consolidated assessment incorporating The Haymarket, PPP and ICC Hotel developments within the SICEEP project area.

The flood study is a comprehensive technical investigation of flood behaviour of the project area (under proposed concept development conditions) that follows the processes set out in the 'Floodplain Development Manual: the management of flood liable land' (April 2005) prepared by the NSW Government, and in compliance with the Director General requirements. In particular, the flood study:

- Quantifies flows, water levels and hydraulic hazard categories to facilitate the setting of flood planning levels by the Project Company (Lend Lease) in accordance with those set by the project brief (INSW); and
- Identifies overland flow paths, underground conduit systems, and waterway works necessary to mitigate potential adverse flood impacts that may otherwise result from the proposed development.

3.1 METHODOLOGY

The first step in the flood assessment process has been to identify and retain (where possible) major overland flow paths and underground drainage systems that currently exist through the site. This process has been facilitated by:

- Sydney Water 'work-as-execute' drawings of the substantial storm water systems which convey flows under the site and into Sydney Harbour; and
- City of Sydney Council drainage asset information.

With this information, and the project 'Preferred Master Plan', Hyder has developed a catchment rainfall runoff model using DRAINS software to quantify proposed development flows, which have subsequently served as inputs into a site specific TUFLOW 2D dynamic software model. The TUFLOW model fully integrates surface and sub-surface stormwater systems, so as to quantify conduit flows and surface flood levels, depths, velocities and extents for proposed development conditions.

The process and findings of the Hyder hydrological analysis and site flow regimes assessment are described as follows.

3.2 HYDROLOGICAL ANALYSIS

3.2.1 ASSESSMENT METHODOLOGY

DRAINS software has been used to quantify rainfall runoff for the SICEEP site (under its concept design condition) and its upstream catchment. The DRAINS model has been built using the following information:

- Aerial photography and aerial laser scanning (ALS) data provided by The City of Sydney Council, covering the entire site and its upstream catchment areas;
- Ground survey and digital elevation model (DEM) provided by Rygate and Company Pty Ltd, of the site and immediately adjacent areas;
- Site and catchment inspections during the project period;

- Intensity-frequency-duration (IFD) design rainfall data from the Bureau of Meteorology for the site catchment;
- Sydney Water 'work-as-execute' drawings of their storm water systems which convey flows under the site and into Sydney Harbour; and
- City of Sydney Council drainage asset information.

Catchment drawings and its associated sub-areas are included in Appendix B. Overall the catchment covers an area of approximately 210 ha (inclusive of the SICEEP site area) which is predominantly urbanised and impervious with approximately 20% of the catchment pervious vegetated areas.

The DRAINS model adopts the ILSAX module run under standard mode with parameters which are summarised in Table 3-1. The DRAINS model was run for various storm durations, from 5 minutes to 3 hours, for the 5 year, 20 year and 100 year ARIs, and 15 minute to 2 hours for the probable maximum flood (PMF), and +15% rainfall intensities to represent climate change.

Table 3-1 DRAINS Model Parameters

Model Parameter	Adopted Value
Soil Type – Normal	3
Paved (Impervious) Area Depression Storage	1mm
Supplementary Area Depression Storage	1mm
Grassed Area Depression Storage	5mm
Antecedent Moisture Condition	3.0
Conduit and surface flow travel times	Based on ARR guidelines

In addition to the catchment sub-areas, the DRAINS model includes stormwater pit and conduit systems which have also been replicated in the TUFLOW modelling of the SICEEP site. A summary of the model input data for re-development site conditions is included in Appendix B.

3.2.2 MODEL RESULTS

Drains model outputs for proposed development conditions is included in Appendix B. The output hydrographs from each sub-catchment area (for the various storm events) have been put into the TUFLOW model to quantify site flow regimes for both underground conduit systems and overland.

3.3 SITE FLOW REGIMES

3.3.1 MODEL SETUP

A site specific TUFLOW 2D dynamic model was developed to quantify conduit flows, flood levels, depths, velocities and extents through the SICEEP site under the proposed development condition.

Figure 3-1 highlights the layout of the existing Sydney Water closed conduit systems under the Darling Harbour area. Some of these systems date back to 1928 and 1936, and have been extensively amplified in subsequent years to accommodate land reclamation and development. The most recent amplification was carried out in the mid to late-1980s to accommodate Darling Harbour development at that time.

There is some concern that broader upstream catchment drainage conduit systems may limit flows entering the amplified Sydney Water systems. As such the TUFLOW model extents extend upstream to include smaller, potentially 'restrictive' trunk drainage systems of the broader catchment, and the inclusion of numerous subareas and pit and pipe systems downstream (through the SICEEP site) to adequately determine the underground conduit flows through the site.

The TUFLOW model incorporates:

- A digital elevation model (DEM) developed from land survey data and aerial laser scanning (ALS). There is uncertainty over the accuracy of the DEM with an explanation provided in Appendix C.
- Overland flow path terrain roughness's of:
 - $n = 0.02$ for road corridors and open paved areas,
 - $n = 0.035$ for grassed,
 - $n = 0.05$ for landscaped areas.
- Some blocked out areas to represent rows of columns or trees.
- Stormwater inlets and conduit systems based on City of Sydney Council drainage asset information (outlined in the Appendix B catchment figures) and Sydney Water 'work-as-execute' drawings (Refer to Appendix B).
- Conduit 'Mannings n ' roughness values of:
 - $n = 0.011$ for concrete pipes,
 - $n = 0.010$ for PVC pipes,
 - $n = 0.020$ for 1928 box culverts,
 - $n = 0.018$ for 1936 box culverts,
 - $n = 0.015$ for 1980s box culverts.
- Runoff hydrographs generated from the DRAINS modelling.
- Inflow locations for the major lumped catchments (external to the site) are indicated on the Appendix C TUFLOW figures. Smaller flows from within site sub-catchment areas (identified in the Appendix C catchment figures) have been included in the TUFLOW models however the locations are not explicitly indicated. The TUFLOW models are available on request for this purpose.
- An amplification option of the Sydney Water culvert system. The culvert amplification option includes a new concrete box culvert which;
 - starts as an off-take from the existing W3.m x H2.0m culvert at the eastern side Harbour Street at its intersection with Hay Street;
 - has approximately 16m² of grated inlet and associated kerb inlets, within the proposed parking bay on the western side of Harbour Street near its intersection with Hay Street;
 - extends westward, under the proposed colonnade parallel to Hay Street, to the proposed Boulevard, then northward under the Boulevard, then just before Pier Street it cuts under the proposed north eastern corner of the proposed Office and Public Parking area (cutting through the existing 'Lackey Street-Hay Street W3.4m x H2.2m culvert, 30P'), before linking and discharging into the existing culvert systems just south of Pier Street.

In addition, the TUFLOW modelling includes various system blockages and downstream boundary conditions which are discussed as follows.

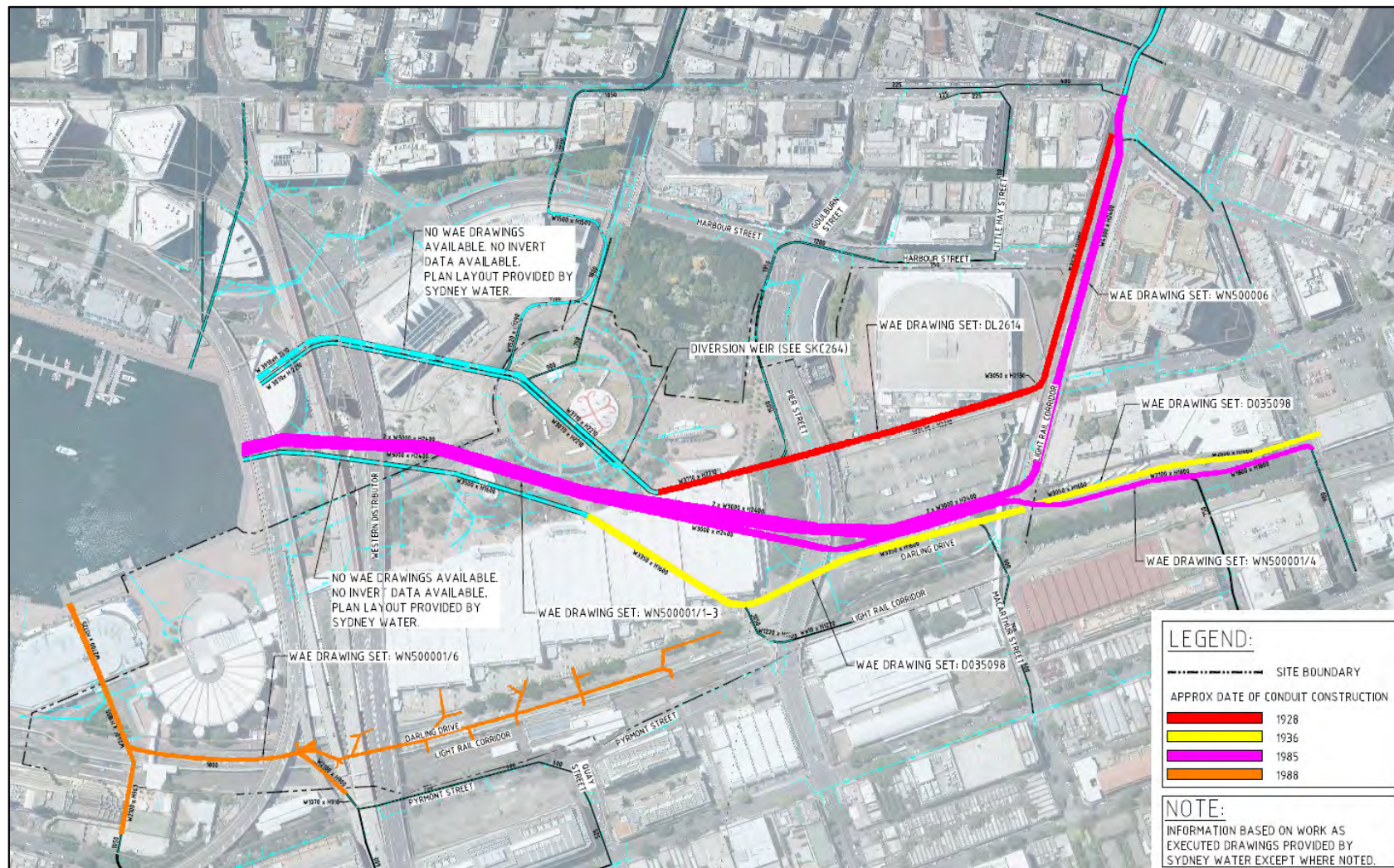


Figure 3-3 Existing Sydney Water Closed Conduit Systems

System Blockages

Conduit Blockage

Careful consideration has been given to the potential for blockage of the large closed conduit box culvert systems which convey flows under the SICEEP site.

The culverts, being the extension of fully closed conduit systems (with standard stormwater street pit inlets or direct building hydraulic connections) would be unlikely to block from upstream debris. At a meeting with City of Sydney Council (on 17 January 2013 and follow-up email on 18 January) Council concurred, adding that their 'Sydney Development Control Plan 2012 Section 3.7.5(4) (c)', which calls for 50% blockage of culverts and bridges, refers only to structures over open waterways and not to the Darling Harbour Sydney Water box culvert systems under the SICEEP site.

With respect to potential blockage of the culverts from downstream sediment washed into the systems from Cockle Bay, Hyder has obtained bathymetry levels of Cockle Bay from the Roads and Maritime Services NSW. Based on soundings taken between 1995 and 2011, sea bed levels in the vicinity of the culvert outlets are no higher than -5.5mAHD (see Appendix D). The invert of the lowest culvert outlet is no lower than approximately -1.6mAHD, almost four metres above the expected formal sea bed. As such, heavy sea bed material, with the potential to resist mobilization and flushing out from the culverts by catchment runoff flows, is unlikely.

The dilapidation condition of the various Sydney Water systems is also a factor particularly with respect to the older 1928 (SWC 30P) and 1936 (SWC 30A) structures. A Sydney Water report 'Stormwater Planning Asset Management, City Area SWC 30, Closed Conduit Inspection Report' (August 2003) provides significant information regarding the box culverts. The report covers inspection findings for the culvert systems constructed in 1927 and 1938 (however, not the three culvert systems constructed in the 1980s). Hyder has prepared a plan layout figure (see Appendix D) which indicates areas of siltation (and non-siltation) within the culverts and an internal weir structure. The internal weir is located on SWC 30P (under the upstream of Tumbalong Park). Its height has been estimated as 1.2m, and diverts flows into the parallel western culvert amplification (of the 1980s).

Sydney Water has also advised that major structural defects of the 1928 (SWC 30P) system under Hay Street were identified in 2003. This system is a sandstone arch structure (approximate W3.05m x H1.98m) which was failing and had collapsed block work. Subsequently some 170m length was repaired with works completed in 2008. The repairs included internal lining and external reinforced concrete to carry overburden loading.

Based on the above noted information, no blockage (due to siltation) has been applied to the Sydney culvert systems under the SICEEP site.

Inlet Pit Blockage

In discussion with City of Sydney Council, on-grade stormwater pits are assumed to have 30% blockage, and sag pits 50% blocked.

At the upstream limits to the TUFLOW (and DRAINS) modelling of the conduit systems, the Council data base of stormwater assets (see Appendix B) indicates that even with the 30% and 50% blockage assumptions there are sufficient inlet pits, such that the underground stormwater conduit systems will not be limited by surface inlet capacities (but conduit size) and therefore the modelled upstream capacities assume 'unlimited' surface inlet capacity.

Overland Blockage

Based on the Preferred Project Master Plan it has been assumed that there are no fences, gate or other obstructions along the modelled overland flow paths apart from some stands of trees and building columns, which have been represented in the TUFLOW modelling by reduced grid area and the introduction of hydraulic loss effects.

Downstream Boundary Conditions

Sydney Harbour

The various stormwater drainage systems through the SICEEP site discharge into Cockle Bay in Sydney Harbour. The adopted Cockle Bay 'design still water levels' for present day and future planning horizons have been based on the DECC (2008) "Fort Denison: Sea Level Rise Vulnerability Study" with details included in Appendix E and summarised in Table 3-2. This Table 3-2 also includes predicted sea level rise benchmarks (for the year 2100) in accordance with the 'NSW Sea Level Rise Policy Statement' (2009).

Table 3-2 Sydney Harbour Design Still Water Levels

ARI (years)	Design Still Water Level (mAHD)	
	2008	2100
5	1.32	2.22
20	1.38	2.28
100	1.44	2.34
PMF *	1.8	2.7

*Approximate only (see Appendix E)

Coincidence of Cockle Bay and Catchment Runoff

While Table 3-2 outlines the peak Sydney Harbour design levels, further consideration has been given to the coincidence with catchment runoff. On this matter Australian Rainfall & Runoff Revision Project 18 'Interaction of Coastal Processes And Severe Weather Events' (June 2012, p46), advises that for small catchments, including many urban stormwater catchments with rapid response times, the dependence between rainfall and storm surge is likely to be relatively low.

Since the catchment impacting on the SICEEP has a rapid response time of only 25 minutes, Hyder has investigated such independence for the Darling Harbour catchment by examining 99 years (1914-2012) of continuously recorded Sydney Harbour water levels (from Fort Denison), and 155 years (1858 to 2012) of rainfall data from the Observatory Hill recorder. Plots which superimpose catchment rainfall runoff and Sydney Harbour water levels for the most significant events are included in Appendix F.

The plots indicate the independent nature of the rainfall runoff and storm surge (as advised by the ARR June 2012 Project 18), and the independence of rainfall runoff with tidal fluctuation. Interestingly, of the twenty maximum recorded rainfall events since 1914 eleven events are coincident with Sydney Harbour water levels ranging between 0.05mAHD and 1.25mAHD, and nine events coincidence with Sydney Harbour water levels ranging between 0.00mAHD and -0.40mAHD, with the average coincident water level 0.2mAHD.

Also, of the fifteen maximum recorded Sydney Harbour water levels, the highest recorded level of 1.475mAHD (on 25 May 1974) had a maximum recorded surge component of 0.6m yet was not associated with major event rainfall. In fact none of the fifteen worst Sydney Harbour water levels are associated major event rainfall.

Based on the independence between rainfall and storm surge found by ARR Project 18 (June 2012) for small urban stormwater catchments with rapid response times, and the 'snap shot' review of historic events carried out by Hyder, it may be reasonable to adopt a coincident Sydney Harbour water level of 0.2mAHD (being the average coincident water level for the twenty maximum recorded rainfall events), however due to uncertainties Hyder has adopted a more conservative fixed coincident water level of 0.9mAHD with all catchment rainfall runoff conditions, which allows for an additional 0.7m surge component. As such Table 3-3 summarises the adopted coincidence Sydney Harbour Water Levels Coincident with Catchment Runoff for current and climate change conditions.

Table 3-3 Sydney Harbour Water Levels Coincident with Catchment Runoff

ARI (years)	Design Still Water Level (mAHD)	
	Current Conditions	2100
5	0.90	1.80
20	0.90	1.80
100	0.90	1.80
PMF	1.3 *	2.2

*An addition of 0.4m compared to the 100 year 0.9mAHD level, i.e. the same as the incremental increase in still water levels (see Table 3-2).

3.3.2 SENSITIVITY ASSESSMENTS

In addition to the analysis of 5 year, 20 year, 100 year and PMF flow regimes, the following sensitivity assessments have been carried out.

Sydney Harbour Coincident Water Level

The 100 year ARI event was run with the coincident water level in Sydney Harbour increased from 0.9mAHD to 1.435mAHD.

Climate Change

The 20 year, 100 year and PMF events were run with increased (2100) Sydney Harbour water levels as per Table 3-3, and associated rainfall increases of 15%, which is an upper limit estimate based on the NSW Department of Environment and Climate Change (DECC) 'Flood Risk Management Guideline – Practical Consideration of Climate Change' (October 2007) Table 1 for Sydney Metropolitan Catchments.

No Culvert Amplification Option

The 100 year ARI and '100 year with climate change' events were run with no culvert amplification.

3.3.3 MODEL RESULTS

TUFLOW model flow regimes figures for proposed development conditions are included in Appendix C. The modelling has indicated that for 5 year, 20 year and 100 year ARI conditions, 25 minute and 60 minute duration rainfall events generate peak catchment flows through the site. Further discussion and comments are provided in Section 3.5.

3.4 POTENTIAL FLOOD IMPACTS

So as to assess potential flood impacts of the proposed SICEEP development on existing flow regimes, the DRAINS and TUFLOW models used to represent proposed developed condition flow regimes were adjusted to represent existing conditions, then the proposed development condition and existing conditions flow regimes compared.

The existing conditions DRAINS and TUFLOW modelling is discussed in Appendix G. TUFLOW flow regime existing conditions and flood impact figures are included in Appendix C.

3.5 DISCUSSION AND COMMENTS

3.5.1 NO CLIMATE CHANGE

Under no climate conditions the proposed development figures indicate that:

- Maximum overland flows within the site would be along the Boulevard, being up to 0.5m³/s and 3.9m³/s in the 20 year and 100 year respectively. Furthermore, the hydraulic hazard throughout the site would be low hazard up to the 100 year ARI, except locally over the existing large inlet pit under Pier Street (within the SHFA workshop).
- The proposed culvert amplification option effectively captures and conveys sufficient overland flows that would otherwise be impeded by the proposed development and result in adverse flood impacts on neighbouring property.
- There are significant areas where flood levels are reduced by 20mm to 50mm (in comparison to existing conditions), although with a few very local increases of typically less than 10mm, which are considered to within the tolerance of model accuracy.
- For the sensitivity run of;
 - no culvert amplification, 100 year ARI flood levels in Hay Street, Harbour Street and Pier Street, adjacent to the SICEEP development, would increase by up to 100mm (in comparison to existing conditions).
 - the Sydney Harbour water level 100 year ARI event, increasing the coincident water level from 0.9mAHD to 1.435m AHD resulted in flood level increases within the SICEEP site of up to 0.2m to the south of Pier Street, and 0.1m north of Pier Street.

3.5.2 WITH CLIMATE CHANGE

Under climate conditions the proposed development figures indicate that:

- 100 year ARI flood levels (in comparison to existing conditions with climate change) would increase by up to approximately 0.2m along the southern Hay Street site boundary, with a maximum increase within the site of up to 0.4m under Pier Street.
- the maximum overland flows within the site would be along the Boulevard (south of the Chinese Gardens), being up to 4.4m³/s and 12.9m³/s in the 20 year and 100 year

respectively. Along the Boulevard to the north of the Chinese the overland flows reduce to 0.7m³/s and 4.4m³/s in the 20 year and 100 year respectively.

- hydraulic hazard throughout the site would be low hazard up to the 20 year climate change, except locally over the existing large inlet pit under Pier Street (within the SHFA workshop). Under 100 year climate change flood condition there would be high hydraulic hazard along the Boulevard upstream of Pier Street, similar to what would be experienced if the existing development remained.
- the proposed culvert amplification option effectively captures and conveys sufficient overland flows that would otherwise be impeded by the proposed development and result in adverse flood impacts on neighbouring property.
- there are significant areas where flood levels are reduced by 20mm to 50mm (in comparison to existing conditions with climate change), although with a few very local increases of typically less than 10mm, which are considered to within the tolerance of model accuracy.
- For the sensitivity run of;
 - no culvert amplification, 100 year ARI flood levels in Hay Street and Harbour Street, adjacent to the SICEEP development, would increase by up to 100mm (in comparison to existing conditions with climate change).

3.5.3 FLOOD PLANNING LEVELS

The flood mapping in this report is considered adequate for the Project Company to complete flood risk assessment and set concept design planning levels.

The INSW Project Brief clause 2.11.4 (d) specifies Flood Planning Levels as 1% AEP plus 0.5m. The 1% AEP flood levels vary across the precinct as indicated by the contours on Drawing WP-FL-0123 as included in Appendix C. As such the flood planning levels, in accordance with the INSW Project brief, also vary across the site and can be assessed from the flood contours.

As an example, the 1% AEP flood level on the Boulevard north of Pier Street is approximately RL 2.8 (3.2 with potential climate change) and the flood planning level based on the INSW Project Brief is RL 3.3 (3.7 with potential climate change) whilst the northern end of the Boulevard adjacent Cockle Bay the flood level is RL 2.4 (2.4 with potential climate change) and thus the flood planning level is RL 2.9 (2.9 with potential climate change).

The INSW Project Brief also notes that the existing ground floor levels of the Convention Centre and Exhibition Centre car park are to remain, subject to compliance with the flood risk assessment in accordance with the Floodplain Development Manual (2005), and that where floor levels higher than flood planning levels cannot be practically achieved, determination of appropriate levels (and mitigation) shall be subject to a risk based assessment. This flood risk assessment is not included in this report and, if required, will be carried out at detail design stage.

Final flood regimes and mapping design are subject to up to date ground survey and detailed internal survey of culvert systems. Once available, a comparison of the survey information to that made available to Hyder for this current flood study will be necessary. Should the comparative geometry reveal significant variation then it may be necessary to refine the current flood study.

3.5.4 EVACUATION AND REFUGE

Flood Emergency Response

Under Probable Maximum Flood (PMF) conditions much of the site would be high hazard with flood depths in some locations exceeding 2 metres. Being a small urban catchment there would be no adequate warning of extreme flooding for the site. With no response time for very short duration storms that would potentially produce significant flows in this area, the only realistic safe option in extreme flood events is for persons to seek refuge and remain within the proposed building above the defined PMF flood levels. With respect to evacuation, since hazardous flows would subside with the storm duration, evacuation would not be impeded.

Structural Stability

During the PMF the flood emergency response is to be for refuge within the proposed buildings. Therefore the buildings are to be structurally stable during the PMF event.

The flood mapping in this report is considered adequate for the Project Company to determine hydraulic flood loadings for concept building design.

Final flood regimes and mapping design are subject to up to date ground survey and detailed internal survey of culvert systems. Once available, a comparison of the survey information to that made available to Hyder for this current flood study will be necessary. Should the comparative geometry reveal significant variation then it may be necessary to refine the current flood study.

3.5.5 DESIGN CONSIDERATIONS

While the current concept design includes for an amplification option of the Sydney Water closed conduit systems, future project design stages will, as necessary, investigate options of:

- reducing development scheme building footprints, which if found not to adversely impact existing flood conditions, may reduce the size and/or extent of the proposed conduit amplification option;
- alternative conduit amplifications within SICEEP. Sydney Water and the SICEEP stake holders may agree on an alternative amplification alignment or, the inclusion of additional amplification systems which may accommodate more extensive ground level development (extending into existing overland flow paths).
- alternative conduit amplifications external to SICEEP. Sydney Water and the SICEEP stake holders may agree on an alternative amplification alignment outside of the SICEEP project site or, the inclusion of additional amplification systems which may accommodate more extensive ground level development (extending into existing overland flow paths).
- a combination of the above.

Furthermore, to affirm the accuracy of the flood flow regimes defined in this study it will also be necessary to carry out detailed ground survey, and internal survey of culvert systems and compare the survey information to the current study by Hyder which has used Sydney Water 'work as executed' drawing information.

Should the comparative geometry reveal significant variation then it may be necessary to refine the current flood study so as to enable the appropriate setting of flood planning levels. As an example, detailed drawings of the proposed rectification of the Hay street (1928) sandstone culvert were provided to Hyder by Sydney Water immediately prior to issue of this report, and as such is not included in the flood modelling.

3.6 CONCLUSIONS

The flood mapping in this report is considered adequate for the Project Company to set concept design planning levels.

The TUFLOW model results indicate that the impact of the proposed development, with the modelled culvert amplification option, would result in negligible flood impacts. There are however several associated risks with respect to the flood analysis and findings.

- The survey provided may not adequately define the DEM surface levels incorporated into the TUFLOW model. This may require amendments to the flood study once detailed survey is made available.
- Any proposed conduit amplification will require approval from Sydney Water and CoS.

3.7 RECOMMENDATIONS

A comparison of detailed survey information to that made available to Hyder for this current flood study will be necessary. Should the comparative geometry reveal significant variation then it may be necessary to refine the current flood study.

All overland flow paths are to remain unobstructed and ground levels are to be consistent with the proposed flood modelling.

A formal floodplain risk management plan with respect to evacuation and refuge is to be developed.

Buildings and structures are to be designed for hydraulic loadings up to the PMF event.

4 STORMWATER DRAINAGE DESIGN

In compliance with the project brief requirements (Infrastructure NSW) the minor (conduit) and major (overland) drainage systems are to convey the 5% (20 year) and 1% (100 year) Annual Exceedance Probability (AEP) rainfall events respectively, subject to the limitations of the existing drainage systems.

A concept design of the proposed minor (underground conduit) drainage system is outlined for the SICEEP project area in the design drawings that accompany this report (see Design Drawings listed at the end of this report).

4.1 METHODOLOGY

The concept drainage design has been developed with the use of the same DRAINS and TUFLOW models developed for the flood study (discussed above).

Features of the stormwater design for the SICEEP site include:

- Retaining all existing box culvert systems throughout the existing precinct.
- Re-use of existing stormwater drainage systems where possible.
- Wherever possible, retaining of existing local drainage pipe connections into the existing box culverts. However, where assessed as necessary, providing additional/larger connections in a manner approved by the asset holder (Sydney Water).
- Where necessary, providing new/additional stormwater systems to manage the proposed building structure and open space drainage.
- Provision of open space surface drainage systems with a focus on public safety, giving careful consideration to inlet type and location, and options of porous pavement areas.
- Consideration of existing and future overland flow paths throughout the Precinct.
- Subsoil drainage, as required under pavement areas to ensure appropriate drainage to all areas of subgrade, sub-base and base areas.

4.2 RESULTS AND COMMENTS

4.2.1 NO CLIMATE CHANGE

Under no climate conditions the TUFLOW figures (included in Appendix C) indicate that the proposed flood levels and hazard conditions have been significantly reduced in comparison to existing conditions. That said, it is noted that for 20 year ARI conditions along Darling Drive, there are number of local areas where surface water may be improved upon in future design stages, in particular at its:

- Northern end
- Sag just north of Tumbalong Place
- Roundabout and
- Intersection with Hay Street.

Upsizing and/or reconfiguring the local drainage systems within Darling Drive (north of Pier Street) may be possible so as overcome sheet flows over the carriageways in these areas since the existing box culverts (which are being connected into) have more than 20 year capacity.

However, further improvements to the Hay Street local drainage performance is less likely due to the flood impacts from the external upstream catchment flows and the existing Sydney Water culverts having limited capacity.

4.2.2 WITH CLIMATE CHANGE

Under the assessed climate conditions, the TUFLOW figures indicate that the proposed flood levels and hazard conditions have also been significantly reduced in comparison to existing conditions (with climate change). That said, upsizing and/or reconfiguring the local drainage systems within Darling Drive and other SICEEP site areas is unlikely to improve drainage performance due to the flood impacts from the external upstream catchment flows and the existing Sydney Water culverts having reduced capacity as a result of increased water levels in Sydney Harbour.

4.2.3 SUB-SURFACE DRAINAGE SYSTEM WORKS

Sub-surface drainage systems are to be designed during the design development stage. The main areas within the site that require sub-surface drainage are Tumbalong Park and the Boulevard.

4.2.4 STORMWATER DETENTION & RETENTION

Flood detention storage has not been considered in this proposal due to the proximity to Cockle Bay. However, a number of rainwater tanks and other water quality treatment measures are to be incorporated in the development. While these devices have not been formally modelled in the stormwater network, will in themselves reduce peak discharges and flow volumes.

4.2.5 INTERIM TREATMENT MEASURES

All construction works are to be in accordance with the Landcom "Managing Urban Stormwater: Soils and Construction Volume 1, 4th Edition (March 2004). Temporary sediment and erosion control measures are to be put in place to protect Cockle Bay and neighbouring areas from contaminants conveyed from the SICEEP site during construction.

Structural construction erosion and sedimentation controls for the construction works may include, but not be limited to the following:

- Hay bales.
- Silt fences.
- Inlet filters.
- Stabilised site access and truck washdown areas.

An indicative erosion and sedimentation control drawing is provided in the design drawings. These will be refined during detailed design stages and will be specific to the construction staging of the project.

5 WATER QUALITY ANALYSIS & WATER SENSITIVE URBAN DESIGN (WSUD)

The water quality analysis for this study was undertaken using the industry standard software model MUSIC (Model for Urban Stormwater Improvement Conceptualisation) Version 5.1 (Build 16). This water quality modelling software was first released in July 2002, and was developed by the Cooperative Research Centre (CRC) for Catchment Hydrology (CRC for Catchment Hydrology, 2005), which is based at Monash University in Melbourne, Australia.

The model provides a number of features relevant for the SICEEP PPP development:

- It is capable to model the potential nutrient reduction benefits of gross pollutant traps, grassed swales, bioretention systems, and it incorporates mechanisms to model stormwater reuse as a treatment technique.
- It provides mechanisms to evaluate the attainment of water quality objectives.

5.1 MODELLING CATCHMENT AND SETUP

The catchment considered in the water quality analysis is the entire SICEEP PPP site which has an area of approximately 13 ha. This site includes the Darling Drive road corridor, the land being occupied by Entertainment Centre car park, the existing Sydney Convention and Exhibition Centre, and the western section of Tumbalong Park.

The Haymarket and ICC Hotel development schemes are excluded from the current investigation. Separate modelling of these precincts with respect of Water Quality Analysis and Water Sensitive Urban Design will need to be undertaken at their development application phase.

To facilitate MUSIC modelling, the SICEEP PPP site was split into the following five subcatchments:

- Bayside
- North Exhibition
- South Exhibition
- The Theatre
- Tumbalong Park

Overpass structures such as Pier Street and the Western Distributor that are within the site boundary have not been included within the MUSIC models. The open area in the eastern section of the Bayside catchment is also excluded in the analysis. Only areas within the SICEEP PPP site where redevelopment works are expected were assessed in this study. The boundaries of these five subcatchments are as shown in yellow Figure 5 1.

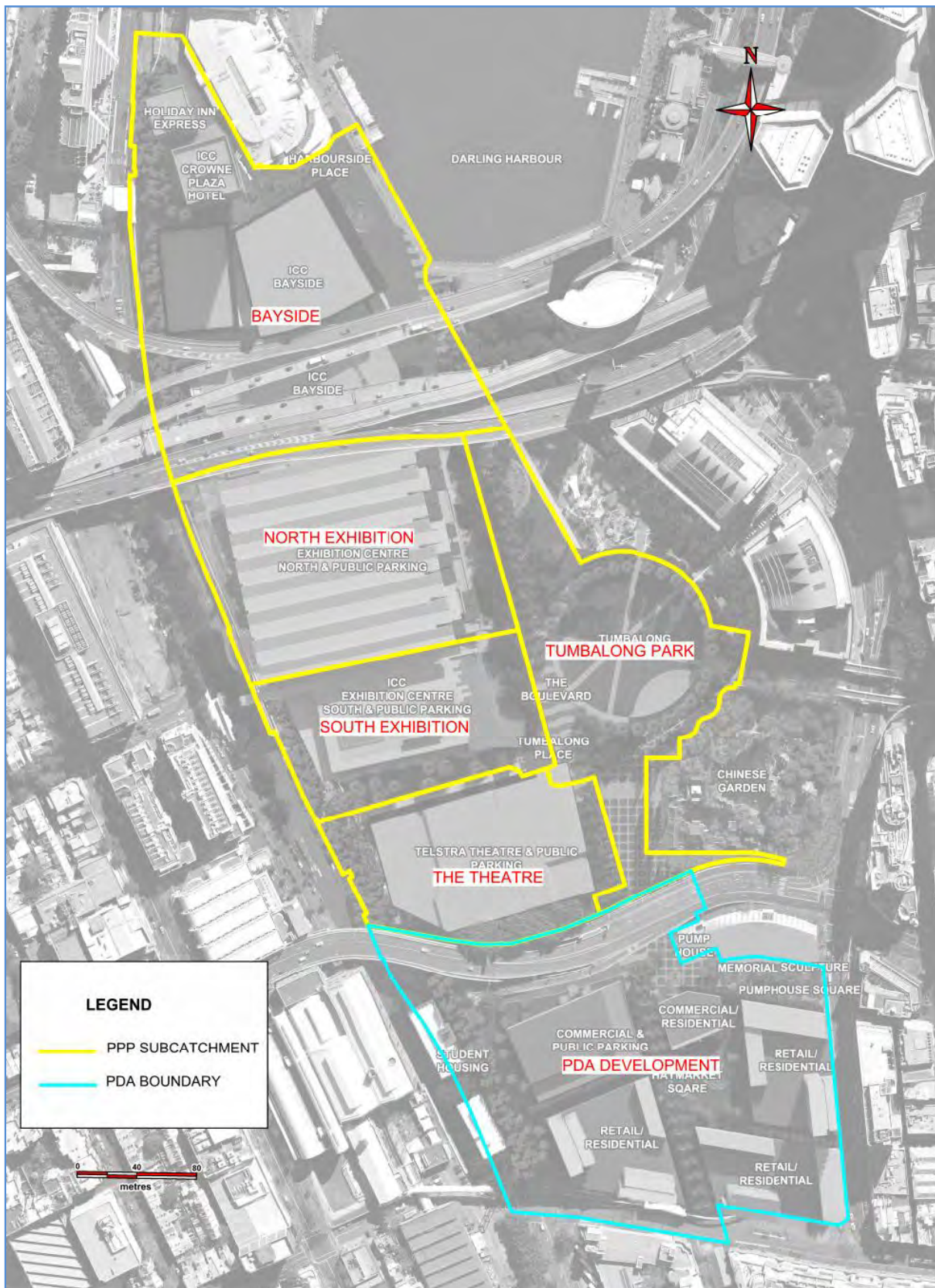


Figure 5-4 Subcatchments comprising the SICEEP PPP development

5.2 MODELLING SCENARIOS

MUSIC modelling was undertaken to estimate the stormwater runoff pollutant loads within the PPP site for the following scenarios:

- Existing Conditions
- Proposed development without treatment (Baseline Scenario)
- Proposed development with treatment (Treated Scenario - Practical)
- Proposed development with treatment (Treated Scenario - Desirable)

The first two models enable the determination of the changes in the annual pollutant loads, attributed to the proposed SICEEP PPP development. An increase in developed areas will result in increases in the loadings of the stormwater runoff pollutants within the development and vice versa

The 'Practical' Treated Scenario model was developed to demonstrate how a stormwater quality management strategy for the SICEEP PPP development, taking into consideration the various site opportunities and constraints, would result in reductions in the overall proposed development stormwater runoff pollutant loads and concentrations, that will be discharged from the proposed development. The resultant pollutant loads leaving the SICEEP PPP site are significantly lower than the levels produced from the site under currently 'untreated' existing conditions. Considerations that led into the development of the 'Practical' model are discussed in the next section below.

The 'Desirable' Treated Scenario model explores and identifies all opportunities, which will be explored during the design development stage, within the SICEEP PPP development site, for the location and provision of WSUD treatment features, which would be required to achieve if not exceed stormwater runoff treatment targets (see Section 5.4). By providing all treatment possibilities, the discharges from the SICEEP PPP site will comply with the relevant water quality treatment objectives. We note, however, that some of the proposed treatment measures may not be achievable due to constraints set by the site conditions. The discharges from The Haymarket and ICC Hotel development schemes will be subject to future modelling at the Stage 2 DA phase.

The 'Practical' Treated Scenario is discussed within the main body of this report. The MUSIC models for the Existing, Baseline and 'Desirable' Treated Scenarios, their description and their outputs, are presented in Appendix H.

5.3 'PROPOSED DEVELOPMENT 'PRACTICAL' TREATMENT MODEL CONSIDERATIONS

A significant proportion of the existing PPP site comprises of building footprints. In general, these building footprint areas are to be retained as part of the proposed development, allowing for reconfigurations to each footprint.

The proposed development Landscape Master Plan will also generally retain the ratio of hard and soft landscape areas, within the PPP public realm area of Darling Harbour. These areas are made up of impervious surfaces, with high pedestrian footfall (e.g. The Boulevard) and pervious surfaces such as Tumbalong Park. The other main area within the development site consists of impervious road areas, such as Darling Drive. The Haymarket and ICC Hotel public realm schemes are only indicative at this stage. Further modelling of these precincts with respect of Water Quality Analysis and water Sensitive Urban Design will need to be undertaken at the detailed development application scheme phase.

As the SICEEP development site is located within a highly urban environment, the potential for soft landscape treatment facilities is rather limited. The performance of any WSUD elements on any WSUD elements will be dependent on the maintenance regime. Given these constraints, certain WSUD proposals have not been considered in this report.

For these reasons the 'Practical' Treated model was developed. This model was developed following a review of practical constraints, such as the proposed Master Plan, existing levels, design levels, future maintenance and operation, and safety. The MUSIC model for this scenario represents a WSUD concept strategy, which is practical, harmonises the proposed development Master Plan and design constraints, and provides betterment to the existing surface water treatment capability (if any) of the site.

The MUSIC model retains the desired water quality and reuse to the roof catchments and rationalises the provision of bioretention areas and proprietary devices, particularly along Darling Drive.

The proposed Master Plan for the PPP Public Realm restricts the use of soft landscaping WSUD features, due to future use and needs of the PPP Public Realm. The proposed Boulevard will replace the existing primary pedestrian link through the development. This Boulevard is proposed as a 20m wide corridor, which will also act as the main stormwater overland flow path through the Public Realm section of the development. The pedestrian trafficable area of the Boulevard will also permit access for SHFA maintenance vehicles and provide a central spine access route for fire tenders.

The WSUD strategy intends to maximise the potential for stormwater treatment, within the landscaped corridor of the PPP Boulevard, which is to allow for the planting of trees. The WSUD strategy will also exploit the large pervious area of Tumbalong Park as a vegetated buffer for the retention of gross pollutants from adjoining impervious footpaths.

The use of proprietary devices such as centralised gross pollutant traps (GPT) within the PPP Public Realm area is constrained by the invert levels of the existing stormwater network and proposed design levels. Furthermore, the tailwater levels within Darling Harbour are relatively high when compared to the invert levels of the existing stormwater infrastructure, which results in partial submergence of the existing stormwater infrastructure, during daily high tides.

The flood models for the existing and proposed development also indicate potential for overland flows, during severe storm events. These flows could potentially be increased by the installation of proprietary devices to stormwater pits, if proper regular maintenance is not undertaken to prevent blockages, which would limit the design inlet capacity of the stormwater pits.

There are little to no soft landscape areas proposed for the redesign and reconfiguration of Darling Drive, as the overall width of Darling Drive has been reduced. However, the redesign of Darling Drive results in a reduction of the extent of the carriageways, trafficable by vehicles. This will have a beneficial impact on the level of pollutants (e.g. hydrocarbons and heavy metals) currently produced in this area of the SICEEP PPP development site.

The capacity of stormwater pits to operate properly is dependent on regular maintenance of any proprietary device fitted to them. Along a public highway it is critical that stormwater pits operate to prevent surface water ponding or sheeting.

The configuration of the existing stormwater network and catchment plan along Darling Drive would require either the provision of a series of bioretention strips along the median or a number of proprietary stormwater treatment devices. Future maintenance operations of these WSUD options will be considered during design development. However, pit inserts are proposed for all stormwater pits along Darling Drive to at the least capture gross pollutants that could end up in the stormwater system.

The proposed WSUD strategy also recognises the need to capitalise on any opportunities within the Darling Drive catchment area, and proposes the use of water quality devices i.e. StormFilter systems (see Appendix H) at locations along Darling Drive where maintenance of said systems are possible.

It is possible that alternative proprietary devices (i.e. centralised gross pollutant traps), could also provide a similar level of water quality treatment as that provided by the pit inserts. For the purpose of this report, the “practical” model has assumed the use of pit inserts. These pit inserts may be substituted during design development by landscape features or alternative devices such as centralised GPTs. Further modelling will be undertaken during the design development stage.

5.4 WATER QUALITY TREATMENT TARGETS

In terms of water quality, the following statutory requirements formed as the basis in developing the Stormwater Quality Management Strategy for the proposed SICEEP PPP development.

5.4.1 DIRECTOR-GENERAL'S REQUIREMENTS

The Director-General Requirements(DGR) relevant to Water Management is listed under Ecologically Sustainable Development (ESD), which is Item 5 of the general requirements in Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (NSW Government, 2000).

The DGR specifies the provision of “an Integrated Water Management Plan including alternative water supply, proposed end uses of potable and non-potable water, water sensitive urban design and water conservation measures.”

The above requirement is based primarily on the recommendation of Sydney Water. Merit was also given to the recommendation of the City of Sydney Council, which said that the proposed SICEEP PPP development should “address Water Sensitive Urban (WSUD) opportunities within the public domain and landscaping.”

This Report has identified and presented WSUD opportunities for both scenarios, namely: with (i.e. Practical) and without (i.e. Desirable) consideration of the design constraints discussed in Section 5.3.

5.4.2 CITY OF SYDNEY COUNCIL DCP 2012

Section 3 of the City of Sydney Council's 2012 Development Control Plan (DCP) (City of Sydney Council, 2012) stipulates that for developments greater than 1,000 m² a stormwater quality assessment must be undertaken to demonstrate the following:

Stormwater Quality

The development should achieve the proposed development pollutant load standards indicated below:

- The baseline annual pollutant load for litter and vegetation larger than 5mm is reduced by 90%.
- The baseline annual pollutant load for Total Suspended Solids (TSS) is reduced by 85%.
- The baseline annual pollutant load for Total Phosphorous (TP) is reduced by 65%.
- The baseline annual pollutant load for Total Nitrogen (TN) is reduced by 45%.

Water Harvesting and Reuse

The development will need to incorporate measures into the design of the development that will ensure harvested water is fit for reuse. These measures are to clean the water to exclude contaminants such as litter, sediment and oil.

5.4.3 WATER SENSITIVE URBAN DESIGN (WSUD)

Water Sensitive Urban Design aims to minimise the hydrological impacts of urban development and maximise the multiple use benefits of a stormwater system.

Australian Runoff Quality (Engineer's Australia, 2006) identifies the objectives of WSUD to include:

- Reducing potable water demand through water efficient appliances, rainwater and grey water reuse
- Minimising wastewater generation and treatment of wastewater to a standard suitable for effluent reuse opportunities and/or release to receiving waters
- Treating urban stormwater to meet water quality objectives for reuse and/or discharge to surface waters
- Preserving the natural hydrological regime of catchments

Australian Runoff Quality also identifies WSUD as the adoption of the following planning and design approaches that integrate the following opportunities into the built form of cities and towns:

- Detention, rather than rapid conveyance of stormwater
- Capture and use of stormwater as an alternative source of water to conserve potable water
- Use of vegetation for filtering purposes
- Protection of water-related environmental, recreational and cultural values
- Localised water harvesting for various uses

5.5 METEOROLOGICAL DATA

5.5.1 RAINFALL DATA

The nearest rainfall station to the site with a reasonable period of 6 minute rainfall data is Sydney Observatory Hill (Station 066062) which is about 1.8 km north of the site. In MUSIC, rainfall data is available for this station from 1913 to 2010. However, for water quality modelling purposes, only rainfall data for the 1957-1966 period was used. The mean annual rainfall during this 10 year period is 1288 mm which is about the same as the long term mean annual rainfall of 1215 mm which was calculated from the 1859 to 2012 rainfall data sourced from the Bureau of Meteorology (BOM) website. During this decade, there occurred 1 La Niña (wet) year, 3 El Niño (dry) years and 6 Neutral years. Based on these observations, this decade can be considered as average in terms of rainfall. Rainfall data used in the MUSIC model is summarised in Table 5-1 and graphed in Figure 5-2.

Table 5-4 Rainfall data used in the SICEEP Music model

Station No.	Location	Years of Record	Type of Data	Comment
066062	Sydney Observatory Hill	1957-1966	6 minute	1 La Niña year 3 El Niño years 6 Neutral years

5.5.2 EVAPOTRANSPIRATION DATA

Monthly average potential evapotranspiration (PET) data was used in the MUSIC model. These PET values for Sydney are shown in Table 5-2 and plotted in Figure 5-2.

Table 5-5 Monthly potential evapotranspiration (PET) values for Sydney

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PET (mm)	180	135	128	85	58	43	43	58	88	127	152	163

5.6 SOIL / GROUNDWATER PARAMETERS AND POLLUTANT LOADING RATES

In the absence of site specific data, the soil / groundwater parameters used in the MUSIC model were obtained from the Draft NSW MUSIC Modelling Guidelines (BMT-WBM, 2010). The soil and groundwater parameters are summarised in Table 5-3.

The pollutant loading rates adopted for SICEEP PPP site for TSS, TP and TN are based on the recommended parameters provided by the Cooperative Research Centre for Catchment Hydrology (CRC, 2004). The adopted parameters are generally consistent with the values specified in Council's WSUD & Infrastructure Report (GHD, 2012). The recommended event mean concentration values for TSS, TP and TN for both dry and wet weather are summarised in Table 5-4.

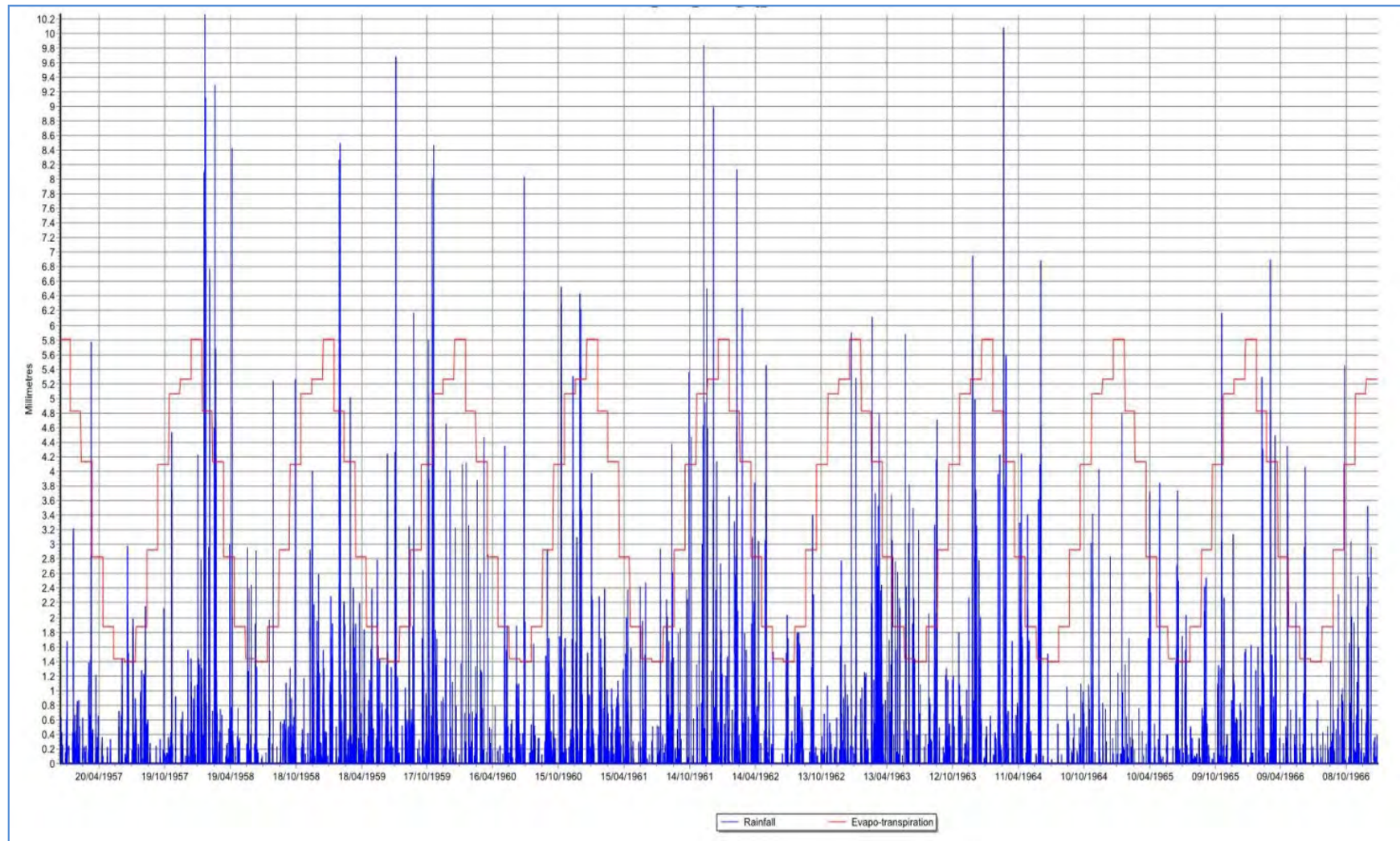


Figure 5-2 Rainfall and potential evapotranspiration data used in MUSIC for the 1957-1966 period

Table 5-6 Adopted soil and groundwater properties for the site

Parameter	Units	Urban
Impervious Areas		
Rainfall Threshold – Roads, Paved	mm	1.50
Rainfall Threshold – Roofs	mm	0.30
Rainfall Threshold – General Urban	mm	1.00
Pervious Areas		
Soil Storage Capacity	mm	170
Initial Storage	% of Storage Capacity	30
Field Capacity	mm	70
Infiltration Capacity Coefficient – a	-	210
Infiltration Capacity Coefficient – b	-	4.7
Groundwater Properties		
Initial Depth	mm	10
Daily Recharge Rate	%	50
Daily Baseflow Rate	%	5
Daily Deep Seepage Rate	%	0

Table 5-7 Adopted pollutant event mean concentrations for impervious areas

Pollutant	Pollutant Concentration (mg/L)							
	Roads / Carparks		Roofs		General Urban		General Pervious	
	Wet Weather	Dry Weather	Wet Weather	Dry Weather	Wet Weather	Dry Weather	Wet Weather	Dry Weather
TSS	270	-	20	-	140	16	90	14
TP	0.5	-	0.13	-	0.25	0.14	0.22	0.06
TN	2.2	-	2	-	2	1.3	2	0.9

5.7 MUSIC MODELS & ASSUMPTIONS

Consistent with the break-up of the SICEEP PPP development discussed in Section 5.1, five separate MUSIC models were developed to represent the 'Practical' stormwater quality management strategy proposed for each subcatchment.

The layouts of the MUSIC models developed for the five subcatchments are shown in Figures 5-3 to 5-7.

In all the MUSIC models, dashed arrows are used to represent Secondary Links that allow the splitting of flows from an upstream source. In the context of the treatment trains applied in the models, the Secondary Link signifies excess flows bypassing the first treatment device and discharging into the second treatment device. For example, during major storm events, high flows that are beyond the filtration capacity of a bioretention system will discharge into an overflow stormwater pit.

5.7.1 ASSUMPTIONS

The following assumptions were taken into consideration in developing the MUSIC models:

- Urbanised areas will generally discharge to the water quality elements prior to discharge from the site. Exceptions to this are the Flyovers and Bayside frontage that will bypass the treatment devices.
- All pervious areas are 100% pervious.
- All impervious areas are 100% impervious.
- All roof areas drain into rainwater tanks.

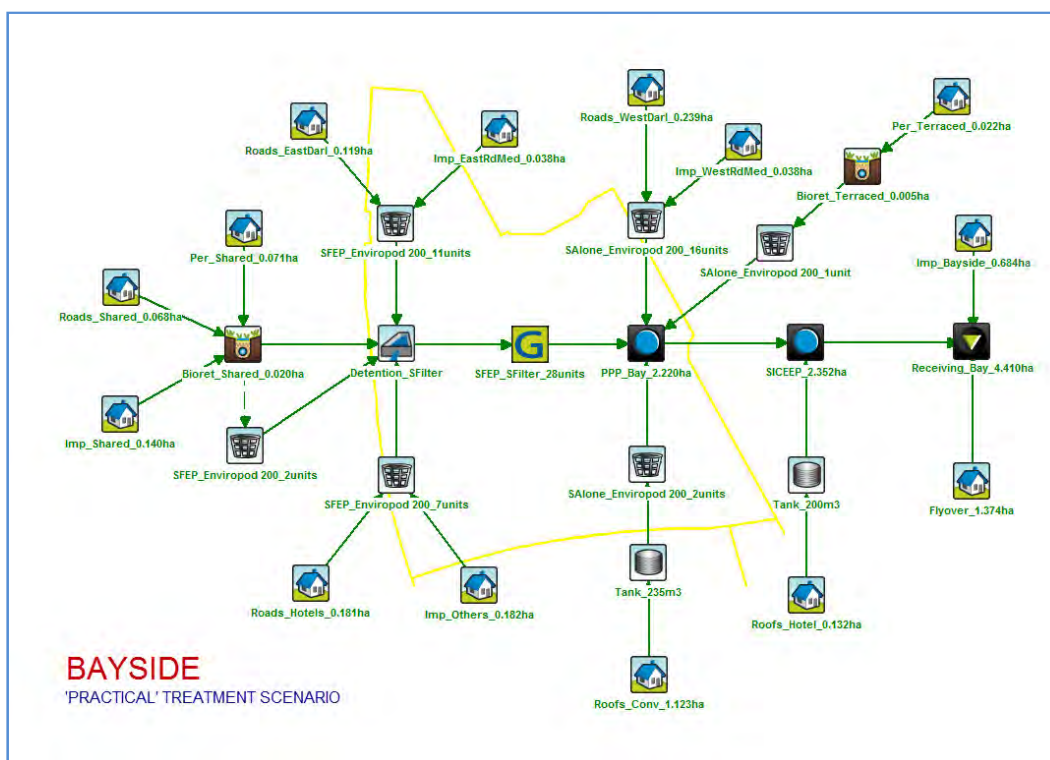


Figure 5-3 MUSIC model layout for the Bayside subcatchment

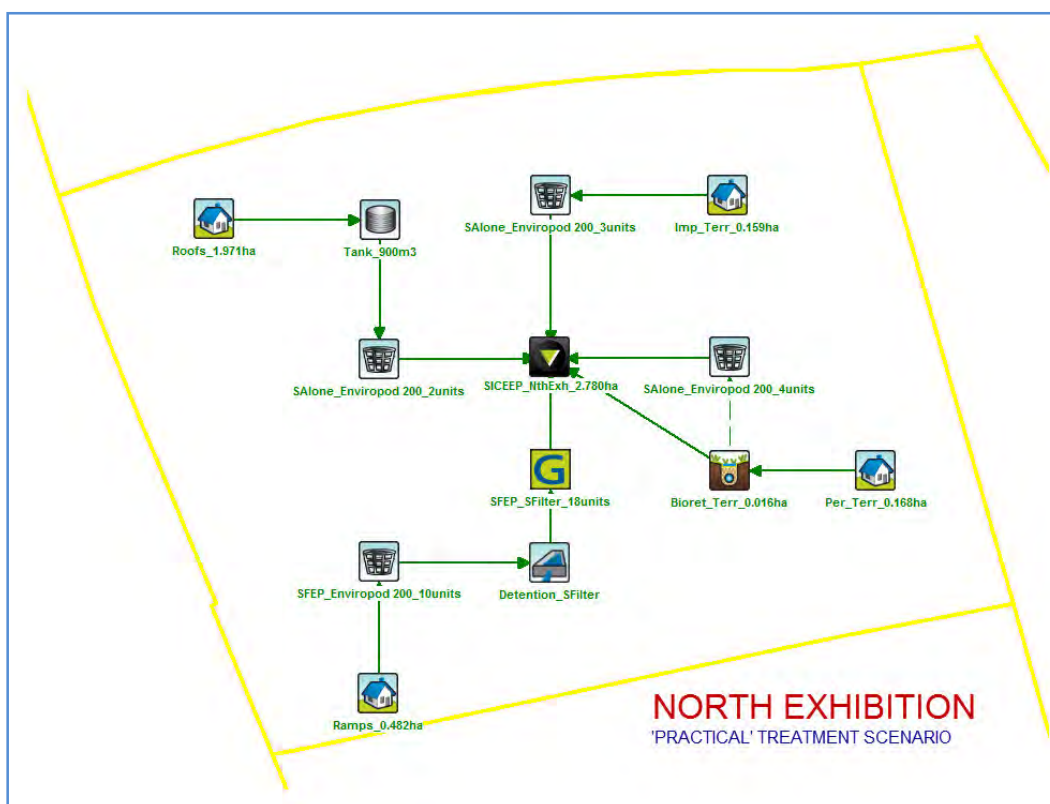


Figure 5-4 MUSIC model layout for North Exhibition subcatchment

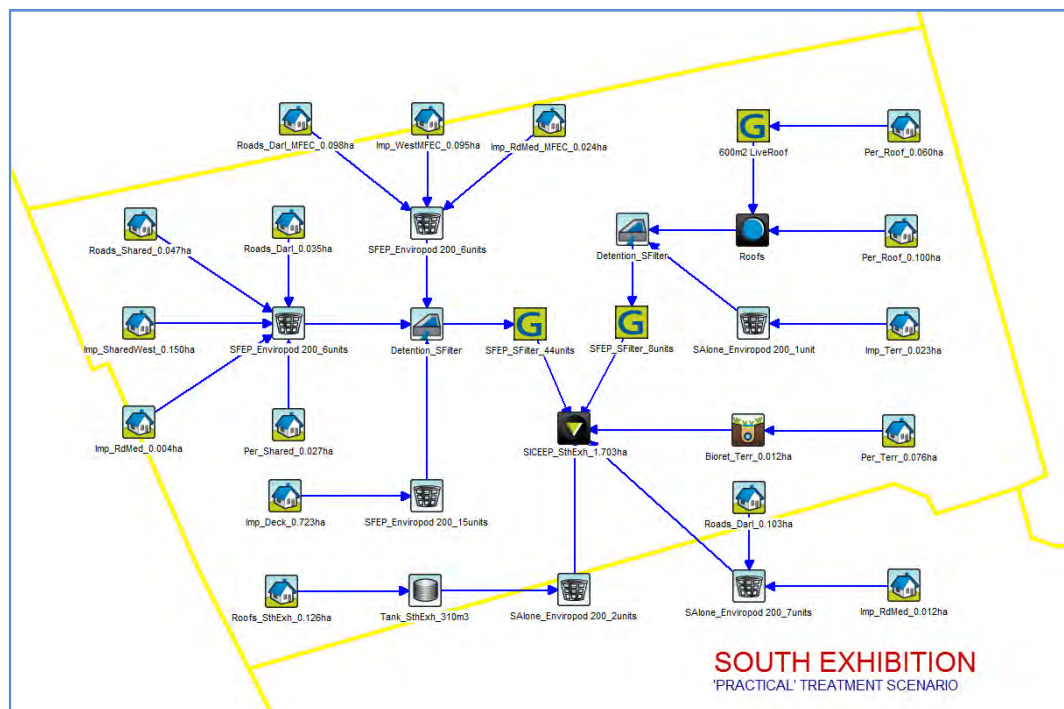


Figure 5-5 MUSIC model layout for South Exhibition subcatchment

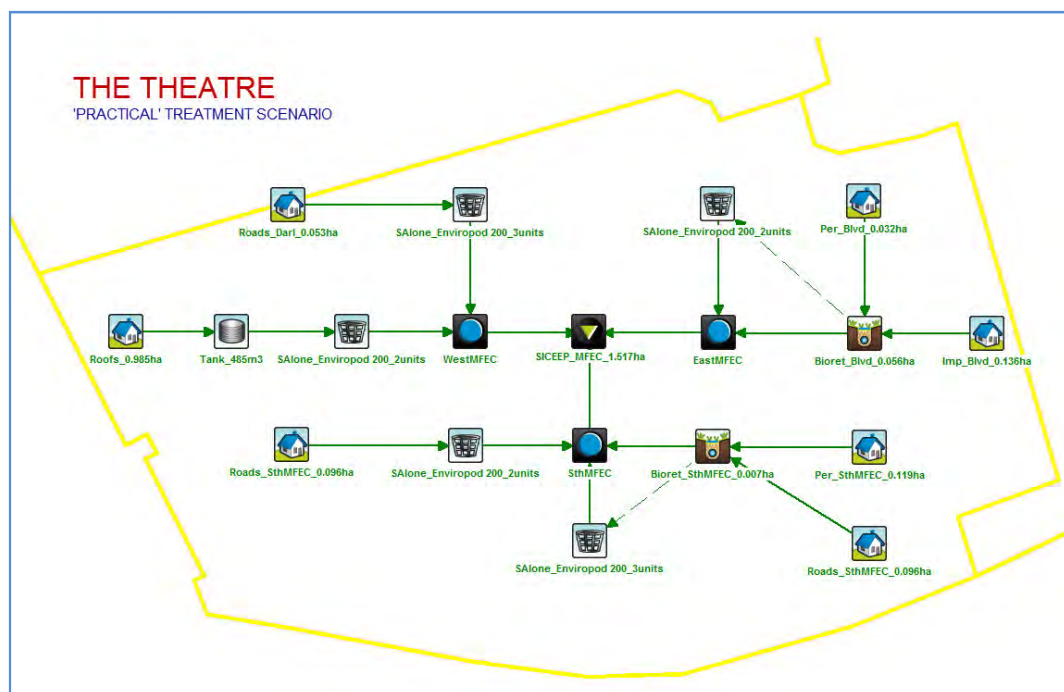


Figure 5-6 MUSIC model layout for The Theatre subcatchment

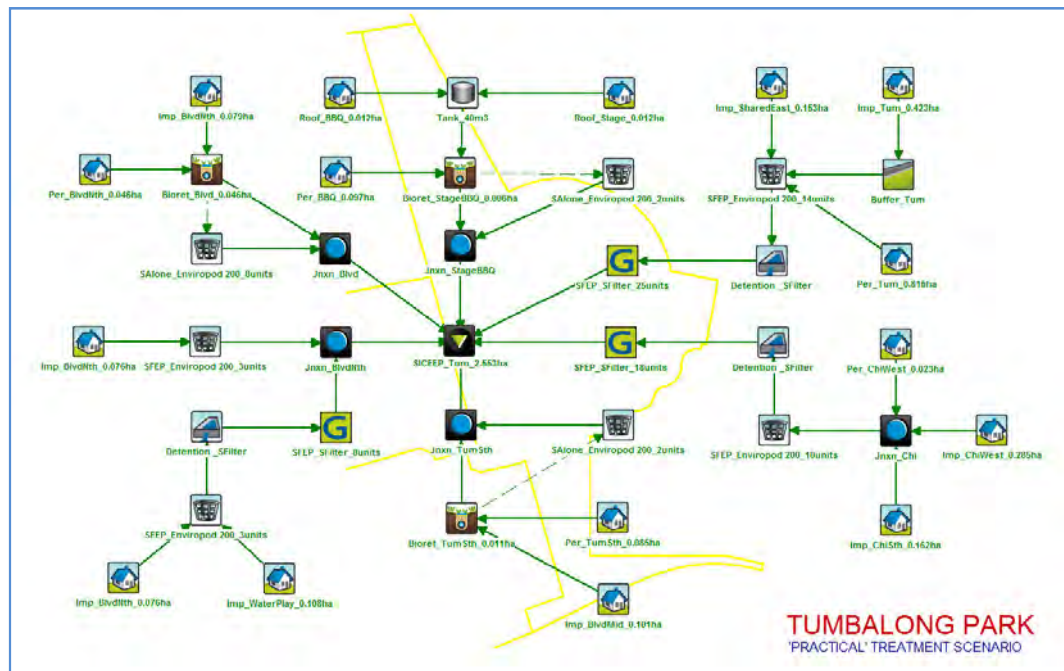


Figure 5-7 MUSIC model layout for Tumbalong Park subcatchment

5.7.2 PERCENTAGE IMPERVIOUSNESS

Areas for the SICEEP PPP pervious and impervious components (i.e. roofs, roads / car parks, pavements) were determined using the available architectural and landscape plans, prepared for the DA. Pervious areas include the following elements of the SICEEP development, based on the landscape plans:

- Terraced landscape gardens
- Shared zone landscaping
- Tumbalong Park and adjoining landscaped areas
- The Boulevard tree pits
- Vegetated roofs and Green roofs
- All vegetated and non-hardstand areas

Impervious areas include the following components of the proposed development:

- Roads and medians
- Flyovers (bypassing)
- Loading ramps
- Roofs The Boulevard
- Event Deck
- Footpaths, stairs and pedestrian bridges
- All hardstand and paved areas

Table 5-8 Pervious and impervious areas in the six SICEEP subcatchments

Subcatchment	Area (ha)	Component Areas (ha)		% Impervious
		Pervious	Impervious	
Bayside	4.410	0.168	4.242	96%
North Exhibition	2.780	0.168	2.612	94%
South Exhibition	1.639	0.279	1.360	83%
The Theatre	1.734	0.175	1.559	90%
Tumbalong Park	2.409	1.208	1.201	50%
Entire PPP SICEEP Site	12.972	1.998	10.974	85%

Impervious areas for the entire SICEEP PPP development total approximately 11 ha, making the post-developed site about 85% impervious, which is 4% less than the existing site's imperviousness. The pervious and impervious component areas for the five subcatchments are given in Table 5-5. A more detailed breakdown of the impervious areas in each subcatchment is given in Appendix H. The general reduction of the SICEEP PPP site's imperviousness is a result of providing more landscaped areas within the Public Realm and landscaped roofs on the ICC Exhibition building. With imperviousness reduced, resultant annual pollutant loads produced within the SICEEP PPP site will be less than current levels even without introducing any treatment scheme i.e. under Existing Conditions.

5.8 STORMWATER MANAGEMENT CONCEPT

It is envisaged that the SICEEP PPP development, when completed, will be a showcase of how the management of the urban water cycle can be seamlessly integrated with urban planning and design. The PPP Public Realm, for instance, will attract huge numbers of locals, tourists and convention guests. It will demonstrate how the adoption of Water Sensitive Urban Design (WSUD) principles not only serves to reduce pollutant export but also enhances the urban landscape. Discussions were held between Hyder and Hassell (the landscape architect) to identify the various WSUD opportunities that are feasible and consistent with the elements of SICEEP's proposed landscape.

In addition to working with the various opportunities and constraints inherent in the proposed development, the Stormwater Management Strategy proposed for the SICEEP PPP development was prepared with consideration of the statutory requirements and guidelines listed in Section 5-4 of this report.

The stormwater management strategy proposed for the site focuses on minimising the impacts of the development on the total water cycle, and maximising the environmental, social and economic benefits achievable by utilising responsible and sustainable stormwater management practices.

The WSUD devices and concepts selected for SICEEP were either applied as a single treatment or as part of a treatment train. The "treatment train" approach is proposed where various types of pollutants are removed by a number of devices acting in series.

5.8.1 SALIENT FEATURES OF 'PRACTICAL' STORMWATER QUALITY MANAGEMENT STRATEGY

The stormwater management strategy proposed for the SICEEP PPP development utilises the latest technology for water quality management; is functional; delivers the required technical performance; avoids environmental degradation and pressure on downstream ecosystems and infrastructure; and provides for a sustainable solution for stormwater management within the site. In particular, the key features of the proposed strategy are as follows:

Social

- Integration of bioretention systems with the overall landscape strategy
- Enhanced visual amenity
- Provision of aesthetic soft design forms, where possible, that enhance urban and environmental amenity

Environmental

- Limited downstream discharge peaks and velocities
- Provision of rainwater tanks, gross pollutant traps and bioretention systems to achieve water quality
- Revegetation of streetscapes and landscaped areas

Economic

- Minimisation of land-take consistent with the achievement of environmental and social objectives
- Proposed water quality improvement measures that keep recurrent maintenance tasks and costs to a minimum

The types and locations of the treatment devices included in the stormwater management strategy for the PPP site are shown in Figure 5-9 and shown in more detail in Figure H.1 included in Appendix H. The 'Practical' Stormwater Quality Management Strategy proposed for the SICEEP PPP development will consist of the following elements.

Table 5-9 Tank properties and tributary roof areas

Tank	Tributary Roof Area (ha)	Tank Properties			
		Cross-Sectional Area (m ²)	Tank Height (m)	Tank Volume (m ³)	Area per m ³ of Storage (m ²)
Bayside	1.123	100	2.33	235	47.8
North Exhibition	1.600	344	2.33	800	20.0
South Exhibition	0.497	132	2.33	310	16.0
The Theatre	0.985	208	2.33	485	20.3
Public Amenities	0.024	16	2.5	40	6.0

5.8.2 RAINWATER TANKS

Rain falling on roofs of the SICEEP PPP buildings will be collected and stored in rainwater tanks. Hydraulics of the buildings and the grounds within the PPP site will be configured to allow this rainwater to be available for non-potable uses including toilet flushing and irrigation of landscaped areas. These numbers will be confirmed with the building hydraulic engineers at a future stage of the project.

The use of rainwater is in line with an essential sustainability objective of the DGR which is to conserve mains water. In addition to water savings, rainwater tanks also help reduce runoff volumes from the SICEEP PPP development during small storms and associated stormwater pollutants that would discharge into Darling Harbour.

There are four rainwater tanks situated within the SICEEP PPP buildings. The ICC Exhibition Centre building has two tanks, while the ICC Bayside and The Theatre buildings have one tank each. We note that rain falling on the Event Deck of the ICC Exhibition building will not be harvested but will instead bypass the tanks. Runoff from the Event Deck is expected to be of poorer quality than roof runoff. Two additional smaller tanks (total volume = 40 m³) will also be provided for the PPP Public Amenities (i.e. Toilets and Barbecue Facilities) and Stage Facilities, located north and east of Tumbalong Green.

The tributary roof areas and properties of the various rainwater tanks are summarised in Table 5-6. The locations of these tanks are indicated in Figure 5-9.

Stormwater Reuse

Except for the first flush flows, rainwater harvested from the roofs of the SICEEP PPP development will be directed to tanks located within or adjoining the buildings. From these tanks, water is conveyed either by gravity or pressure to service the following uses within the development:

- Toilet flushing
- Irrigation

Water from the rainwater tanks will be used for flushing toilets and urinals within PPP buildings and PPP public utilities in the PPP Public Realm. Sinks will be connected to mains water only.

We note that the use of recycled rainwater for flushing takes precedence over irrigation. Watering of landscaped areas using rainwater will only occur when there is adequate volume available in the tanks.

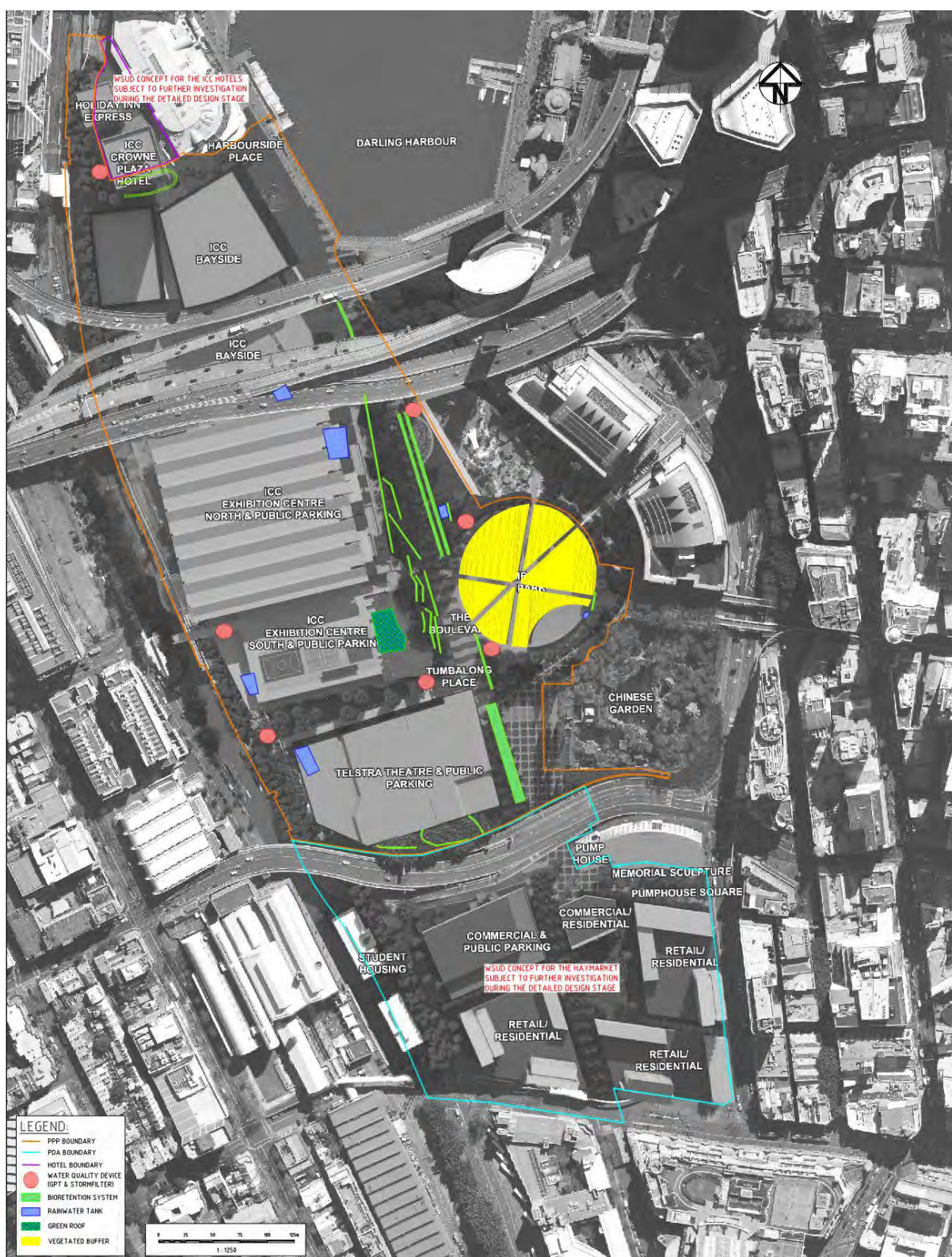


Figure 5-8 Locations of the treatment devices for the proposed Stormwater Quality Management Strategy ('Practical' Scenario) for the PPP development

Areas requiring irrigation were identified based on the latest architectural and landscaping plans. The main landscaped areas within the PPP and The Haymarket site that will be serviced by the rainwater tanks include the following:

- Boulevard Trees
- Terraced Landscape Areas (ICC Exhibition)
- Tumbalong Green and adjoining areas
- Vegetated Roofs and Green Walls (ICC Exhibition)
- Shared Zones (PPP site)
- Landscaped Areas south of The Theatre
- Chinese Garden Forecourt
- Vegetated Roof of the ICC Exhibition south building

PPP Daily Water Demand Volume

The number of urinals and toilets were estimated from the latest architectural drawings. In cases where the urinals and toilets are not indicated in the drawing, their numbers were estimated on a pro-rata basis.

In estimating the daily water demand for each subcatchment, the following assumptions were considered (NOTE: Assumptions to be confirmed during detail design):

- Assumed depth of irrigation is 25 mm per week.
- Toilets and urinals will be used once per hour for 8 hours during daytime and 4 hours during night time.

Considering all PPP buildings will be provided with water efficient toilets and urinals, the following water usage rates were applied in estimating the volume of water for flushing purposes:

- Toilet flushing : 10 L per flush
- Urinal flushing: 4 L per flush

The pattern of toilet and urinal use during a typical week, in terms of percentage of amenities used, is as shown in Table 5-7.

The estimated daily target volumes of water required for toilet flushing and irrigation that need to be met by the tanks are summarised in Table 5-8.

Table 5-10 Daily Usage Pattern of Toilets and Urinals

Building	Percentage of Use - Toilets and Urinals (%)						
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
ICC Convention	70%	80%	100%	100%	100%	60%	10%
ICC Exhibition	60%	80%	100%	100%	100%	100%	40%
The Theatre	50%	50%	60%	60%	100%	100%	50%
Public Amenities & Stage	100%	100%	100%	100%	100%	100%	100%

We note that the above assumptions are considered acceptable in practice and will be confirmed with the building hydraulic engineers in the detailed design stage.

Table 5-11 Daily water demand to be serviced by the rainwater tanks

Tank	Daily Demand Volume (m ³)		
	Flushing	Irrigation	Total
Bayside	21	5	26
North Exhibition	27	38	65
South Exhibition	10	9	19
The Theatre	13	24	37
Public Amenities & Stage	2	0	2
Overall Total	73	76	149

Tank Configuration

The PPP rainwater tanks will be supplemented by mains water during dry periods or days of no rainfall. The PPP tanks will be provided with a floating switch mechanism that activates mains water to top up when the critical level in the tank is reached. Activation of the mains water occurs when the volume of stored water in the tank reduces to 10% of the total tank volume.

A first-flush diverter will be installed for all tanks. The diverter ensures that the initial (often dirty) quantity of rain water collected from the roofs is diverted away from the tank. In this study, we have assumed the first 1 mm of rain to bypass the tank.

A screen will be provided at the inlet to prevent the ingress of debris and vermin into the tank. An overflow pipe will allow excess flows to discharge, and take with them accumulated sediments at the pump out take area.

A typical configuration of the building tanks is shown in Figure 5-10.

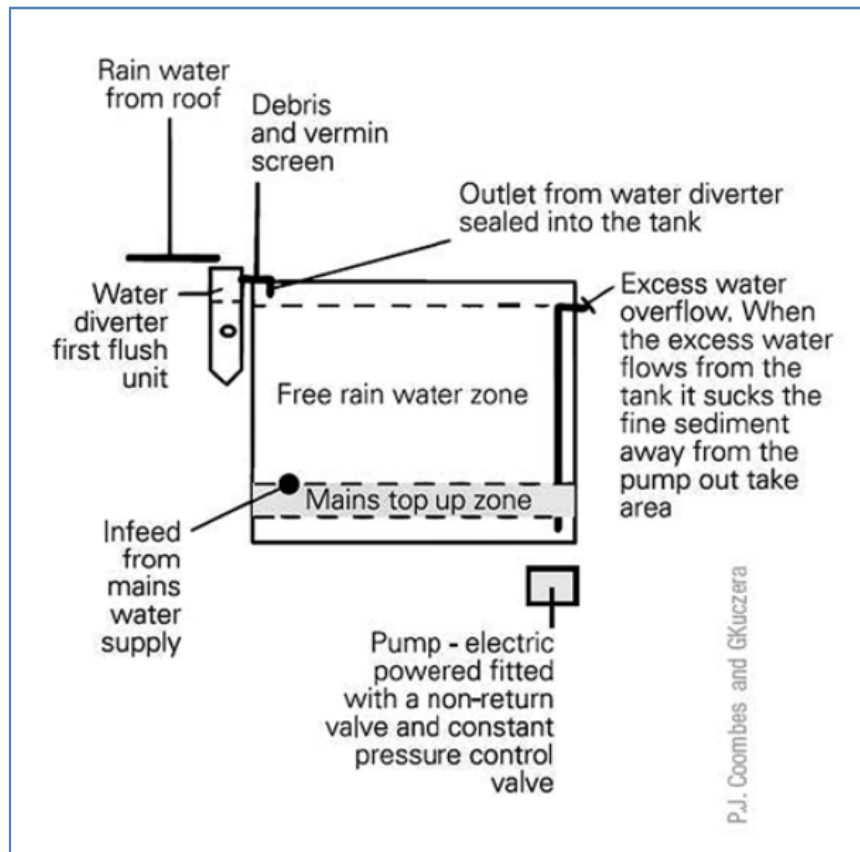


Figure 5-9 A typical configuration of a SICEEP PPP rainwater tank
(Source: Coomes and Kuzcera, 2001)

Tanks in the MUSIC model

The configuration of the roofs and related drainage systems for all PPP buildings has not been finalised, at the time of compiling this report. However, the cross-sectional areas and locations of the PPP building tanks were indicated in the architectural plans. The storage volumes of the tanks were estimated from the given cross-sectional area and the likely floor-to-ceiling height.

Rainwater tanks were included in the MUSIC model taking into consideration the following assumptions:

- All roof areas drain into rainwater tanks. Downpipes and related piped connections ensure no portions of the roofs bypass the tanks.
- A portion of the North Exhibition Building roof will drain into the rainwater tank of the South Exhibition Building
- Depth of the tank above the overflow pipe is 0.2 m.
- Overflow pipe diameter is 150 mm for the big tanks and 75 mm for the smaller tanks.
- Height of the water tank is approximately 2.3 m.
- Daily water demand is constant for each tank.

Tank Reliability

The reliability of a reuse tank is a measure of how many days in a typical year will water be available to service the toilet flushing and irrigation needs of the building and landscaped areas respectively. A spreadsheet was developed for this study to calculate the reliability of all tanks. The calculations were based on the following assumptions:

- All tributary roofs leading to the tanks have a "capture efficiency" value of 0.85. Capture efficiency allows for losses due to gutter overflows, splashing of rain and other losses (e.g. system leaks, minimal evaporation) that occur. The value of 0.85 indicates that 85% of the non-absorbed rainfall is captured.
- A portion of the rain falling on the roofs is absorbed by the roofing material. A "catchment absorption" value of 0.1 mm applies to all roofs.
- First flush volume is taken as the first 1 mm non-absorbed rainfall multiplied by the tributary roof area. This volume gets diverted from the tank.

The results of the tank reliability analysis are summarised in Table 5-9. A sample calculator spreadsheet for tank reliability is included in Appendix H.

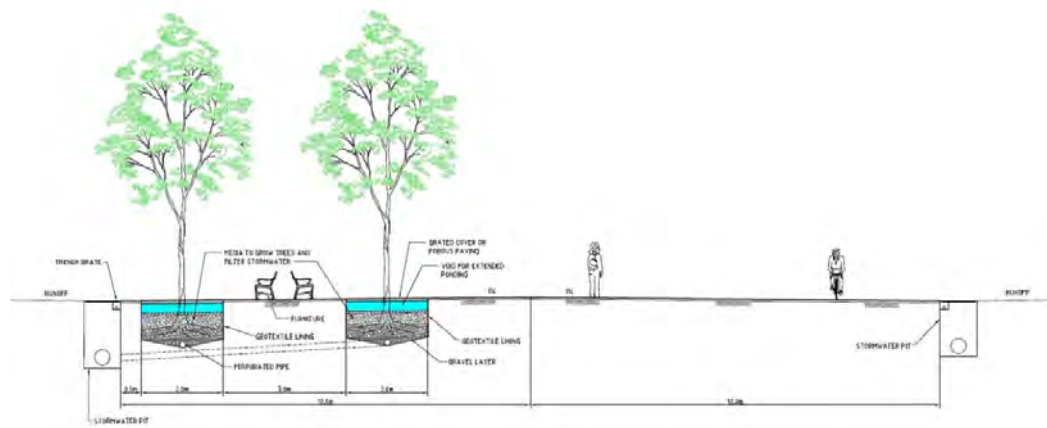
Table 5-12 Reliability rating of the rainwater tanks

Tank	Days in a year when Tank Water is available	Days in a year when Tank Water is not available	Days in a year when Tank overflows	Volume of Mains Water saved in a year (m ³)	Reliability (%)
Bayside	168	198	26	4193	46%
North Exhibition	120	245	12	7826	33%
South Exhibition	136	229	10	2592	37%
The Theatre	131	234	12	4843	36%
Public Amenities & Stage	58	307	1	116	16%

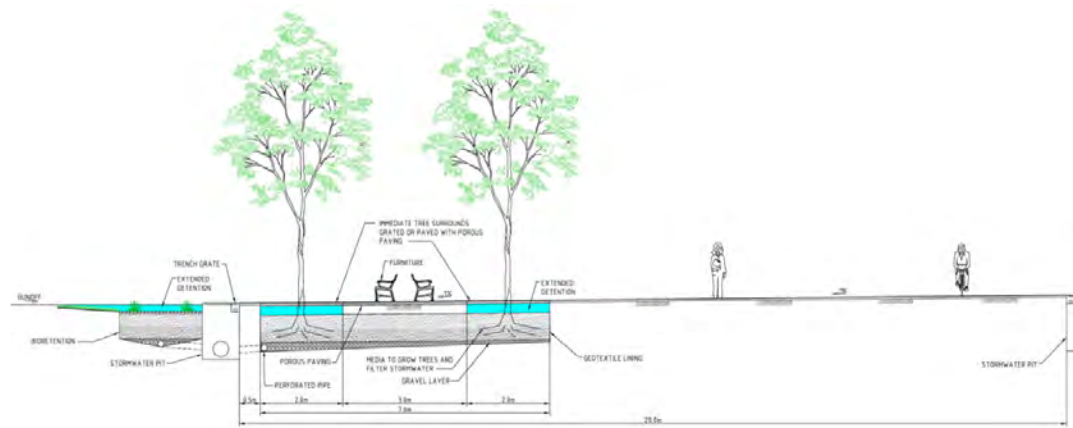
5.8.3 BIORETENTION SYSTEMS

A stormwater bioretention system is a widely accepted WSUD concept that improves the quality of stormwater by filtering water through a biologically influenced media. A typical bioretention system consists of a vegetated surface overlaying a porous filter medium with a drainage pipe at the bottom. Stormwater directed into the bioretention system flows through dense vegetation, and temporarily ponds on the surface, before slowly filtering down through the filter media. Depending on the design, treated flows are either infiltrated to underlying soils, or collected in the underdrain system for conveyance to downstream drainage systems.

All bioretention systems will be constructed as either second generation raingardens or vegetated swale systems. The raingarden and swale system capture and treat stormwater flows from the adjoining urban catchment (e.g. roads, pervious or paved surfaces), before they enter the SICEEP PPP development proprietary stormwater drainage system. The vegetated top layer filters sediment and gross pollutants (including plastics, bottles and wrappers) before water gets filtered through a series of layered media (e.g. soil, sand). Together with the plants' root system, the layered media treats the flows to remove nitrogen, phosphorus, sediment, grease and oils before it enters the stormwater system.



(a) Bifurcated Tree Pits



(b) Combined Tree Pit

Figure 5-10 A typical section of The Boulevard showing drainage and the proposed WSUD strategy utilising (a) Bifurcated Tree Pits and (b) Combined Tree Pit

Bioretention systems in a variety of shapes and sizes are considered for the PPP development. Bioretention strips will be constructed along the edges of landscaped areas situated in the Shared Zones and at the front of The Theatre. They can also be incorporated behind retaining walls of the Terraced Landscape that front the ICC Exhibition building.

Table 5-13 Generic (example) bioretention systems (Part 1 of 2)

Bioretention System	Example Application Photo	Proposed Locations
Bioretention Swale (no trees) – for ‘Desirable’ Treatment Scenario	 Source: www.wsud.org	Darling Drive PPP medians (subject to RMS approval)
Bioretention Swale (with trees) – for ‘Desirable’ Treatment Scenario	 Source: www.wsud.org	Darling Drive PPP medians (subject to RMS approval)
Raingarden – Roundabout – for ‘Desirable’ Treatment Scenario	 Source: www.wsud.org	Darling Drive PPP north roundabout (subject to RMS approval)
Raingarden – Landscaped areas	 Source: www.apwa.net	PPP landscaped areas

Table 5-14 Generic (example) bioretention systems (Part 2 of 2)

Bioretention System	Example Application Photo	Proposed Locations
Tree Pits	 Source: www.wsud.org	The PPP Boulevard (pit as continuous strip)
Bioretention Strip	 Source: wsud.melbournewater.com.au	Landscaping immediately south of Tumbalong oval, Terraced Landscaping
Green Roof	 Source: www.wsud.org	South Exhibition building,

Another good opportunity to incorporate WSUD principles would be the immediate surrounds of the two rows of trees along the Boulevard. The soil or media around the trees can be used as bioretention tree pits, either bifurcated or contiguous (see Figure 5-11), to treat runoff coming from the Boulevard as well as from adjoining areas.

For the 'Desirable' Treatment Scenario, 'median' strips along Darling Drive, whether located alongside or in-between carriageways may be used as bioretention swales where the road design allows it. Figure H.5 of Appendix H shows two options of how the drainage from Darling Drive could be managed and treated using the bioretention strips. We note that these options will require approval from the Roads & Maritime Service (RMS) and the future maintenance authority. The current proposed Darling Drive road design would require modifications to adapt to these WSUD strategies.

All bioretention systems will be designed and appropriately sized to achieve the nutrient reduction targets for the associated development site catchment areas (see Section 5-4). A summary of the general description and location of these bioretention systems is given in Tables 5-10 and 5-11. The properties of these various bioretention systems are summarised in Appendix H.

5.8.4 VEGETATED BUFFER

Grassed sections of Tumbalong Park that adjoin impervious areas will serve as buffer strips that manage and treat the diffuse runoff from upstream. As a stormwater quality source control these buffer strips will retain coarse to medium sized suspended solids and bed loads. They can be used as pre-treatment to secondary or tertiary treatment systems in the treatment train.

5.8.5 PIT INSERTS

Pit inserts, also known as litter baskets, are one of two potential Stormwater Quality Improvement Devices (SQID) proposed for this development and could be provided in stormwater pits within the SICEEP PPP site, where they can be appropriately provided. A pit insert, which is considered as an at-source primary treatment solution, is an efficient and cost-effective pre-screening primary treatment system that captures and retains solid pollutants at drainage entry points. These pit inserts, consisting of a capture basket and a filter mesh liner, are usually fitted below the road invert or surface of the pit and hence are visually unobtrusive (see Figure 5-12).

For highly urbanised and public areas such as the SICEEP PPP development, stormwater discharging into pits is expected to be heavily laden with sediments and gross pollutants. Pit inserts used for the SICEEP PPP development would need to have a by-pass overflow mechanism to allow flows to eliminate the risk of ponding and flooding. The by-pass mechanism should also ensure that the already-captured pollutants are not remobilised.

Pit inserts can be customised to fit almost any stormwater inlet pit and the mesh liner opening could vary depending on the targeted capture of solids, sediment and attached pollutants. Mesh liners are either made of plastic or stainless steel fabric. Steel mesh liners are more expensive but have a longer design life, relative to plastic liners. Plastic mesh liners burn when in contact with cigarette butts and have the tendency to be sucked out during vacuum cleaning (personal communication with Parramatta City Council).



Figure 5-11 A typical Enviropod pit insert assembly (Source: Stormwater360)

Cleaning of the pit inserts is undertaken either manually or using a small vacuum truck. The cleaning frequency depends on the catchment type, size and expected pollutant loading. As a guide, a litter basket that services a 0.3 ha residential catchment and probably less for a highly urbanised catchment such as SICEEP will typically need cleaning approximately four times annually (personal communication with Stormwater 360).

Stormwater 360's Enviropod pit inserts were used in the MUSIC model all throughout the site as a primary treatment. Enviropods are usually used in tandem with the StormFilter system as part of the StormFilter and Enviropod (SFEP) treatment train. Treatment efficiencies of the Enviropod, when used in the SFEP system, in reducing gross pollutants, TSS, TN and TP are 100%, 54%, 21% and 30% respectively. These values are a result of a three-year field testing conducted in Kuranda Queensland that was funded by the Queensland Department of main Roads and peer reviewed by the Queensland University of Technology. Additional discussion about this field testing and its results are included in Appendix H.

Pit inserts may be substituted during design development by landscape features or alternative devices such as centralised GPTs. Further modelling will be undertaken during the design development stage, to investigate alternative solutions.

5.8.6 FILTER CARTRIDGE SYSTEMS

A filter cartridge system is a best management practice designed to remove a range of target pollutants including fine solids, soluble heavy metals, oils and total nutrients. Apart from meeting stringent regulatory requirements, these systems are usually installed below ground allowing savings in land space and hence increase development yield.

Filter systems can be configured to suit flat sites and sites with shallow groundwater levels. We note that the SICEEP PPP site is close to the Darling Harbour and salty groundwater could potentially inundate the system during high tide events.

An example filter cartridge system is the StormFilter product which is included in Appendix H.

5.8.7 GREEN ROOF SYSTEMS

A green roof is typically a modular a pre-vegetated engineered bioretention system that is easily installed onto the roofing membrane in a similar manner to readymade lawn products. These systems are prepared at local nurseries using localised plant stock for a few months prior to installation. This means that only strong, mature plants are installed onto the roof top. The system can also potentially be utilised for the sloping roofs of the entrance of the ICC Exhibition south building. An example green roof system is LiveRoof which is discussed in Appendix H.

5.9 POLLUTANT LOAD ESTIMATES

5.9.1 EXISTING AND BASE SCENARIOS

Table 5-15 Summary of estimated mean annual pollutant loads for the PPP, PDA & SICEEP sites

Criteria	Mean Annual Loads (kg/yr)			
	Gross Pollutants	TSS	TP	TN
Existing Conditions				
PPP Site	2690	15800	31.8	264
Proposed development Conditions (Without Treatment)				
PPP Site	2540	15900	31.6	256

Total annual pollutant load estimates were derived using MUSIC for the entire PPP site for both the Existing and Proposed development (Without Treatment) Conditions. The mean annual pollutant loads resulting from both the Existing and untreated Proposed development scenarios are similar with the latter scenario having equal or less mean annual loads in Gross Pollutants, TP and TN. The estimated annual pollutant loads for the PPP site under Existing and Proposed Development conditions are presented in Table 5-12.

5.9.2 PROPOSED DEVELOPMENT 'PRACTICAL' TREATMENT SCENARIO

Total annual pollutant load estimates were derived using MUSIC for the five PPP subcatchments incorporating the proposed water quality treatment systems under the Practical scenario. The estimated annual pollutant loads and reductions for these subcatchments are presented in Table 5-13 to Table 5-17. Likewise, the aggregated annual pollutant loads and reductions for the entire PPP development are summarised in Table 5-18.

Table 5-16 Summary of estimated mean annual pollutant loads and reductions for the Bayside subcatchment (Reporting Node in MUSIC model: SICEEP_Bay_2.220ha)

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	614	3600	7.46	57.5
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	552.6	3060.0	4.8	25.9
Total Residual Load to Darling Harbour (kg/yr)	0.00	798.00	3.59	32.30
Total Reduction Achieved (kg/yr)	614.0	2802.0	3.9	25.2
Total Reduction Achieved (%)	100%	78%	52%	44%

Table 5-17 Summary of estimated mean annual pollutant loads and reductions for the North Exhibition subcatchment (Reporting Node in MUSIC model: SICEEP_NthExh_2.780ha)

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	781	2920	7.64	72
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	702.9	2482.0	5.0	32.4
Total Residual Load to Darling Harbour (kg/yr)	0.00	549.00	2.97	31.20
Total Reduction Achieved (kg/yr)	781.0	2371.0	4.7	40.8
Total Reduction Achieved (%)	100%	81%	61%	57%

Table 5-18 Summary of estimated mean annual pollutant loads and reductions for the South Exhibition subcatchment (Reporting Node in MUSIC model: SICEEP_SthExh_1.703ha)

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	387	3370	5.75	38.5
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	348.3	2864.5	3.7	17.3
Total Residual Load to Darling Harbour (kg/yr)	0.00	580.00	2.35	20.80
Total Reduction Achieved (kg/yr)	387.0	2790.0	3.4	17.7
Total Reduction Achieved (%)	100%	83%	59%	46%

Table 5-19 Summary of estimated mean annual pollutant loads and reductions for The Theatre subcatchment (Reporting Node in MUSIC model: SICEEP_Thea_1.517ha)

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	406	1620	4.04	37.9
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	365.4	1377.0	2.6	17.1
Total Residual Load to Darling Harbour (kg/yr)	0.00	337.00	1.61	14.20
Total Reduction Achieved (kg/yr)	406.0	1283.0	2.4	23.7
Total Reduction Achieved (%)	100%	79%	60%	63%

Table 5-20 Summary of estimated mean annual pollutant loads and reductions for the Tumbalong Park subcatchment (Reporting Node in MUSIC model: SICEEP_Tum_2.553ha)

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	394	3350	5.71	45.1
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	354.6	2847.5	3.7	20.3
Total Residual Load to Darling Harbour (kg/yr)	0.00	413.00	2.07	22.50
Total Reduction Achieved (kg/yr)	394.0	2937.0	3.6	22.6
Total Reduction Achieved (%)	100%	88%	64%	50%

Table 5-18 Summary of estimated mean annual pollutant loads and reductions for the PPP development

Criteria	Pollutant			
	Gross Pollutants	TSS	TP	TN
Total Development Source Loads (kg/yr)	2582	14860	30.6	251
Minimum Reduction Required (%)	90%	85%	65%	45%
Minimum Reduction Required (kg/yr)	2323.8	12631.0	19.9	113.0
Total Residual Load to Darling Harbour (kg/yr)	0.00	2677.00	12.59	121.00
Total Reduction Achieved (kg/yr)	2582.0	12183.0	18.0	130.0
Total Reduction Achieved (%)	100%	82%	59%	52%

5.9.3 PROPOSED DEVELOPMENT 'DESIRABLE' TREATMENT SCENARIO

The MUSIC models for the five subcatchments that incorporated the 'desirable' treatment approach predicted the mean annual pollutant loads that will be discharged from the respective subcatchments. The estimated annual pollutant loads and reductions for these subcatchments are presented in Appendix H.

Taken altogether, the MUSIC modelling for the Proposed Development 'Desirable' Treated Scenario has demonstrated that the 'full blown' water quality management strategy in the PPP site will result in achieving the required pollutant reduction levels for all pollutants.

5.10 CONCLUSIONS & RECOMMENDATIONS

5.10.1 EXISTING AND BASE SCENARIOS

Results of the MUSIC modelling for the Existing and Base Scenarios show that pollutant loadings in the latter scenario are slightly less than the former scenario. This is a result of the overall slight reduction in imperviousness of the proposed development due to the introduction of more landscaped areas and a landscaped roof.

5.10.2 PROPOSED DEVELOPMENT 'PRACTICAL' TREATMENT SCENARIO

PPP Development

Taken altogether, the MUSIC modelling for the Proposed Development 'Practical' Treated Scenario has demonstrated that the proposed water quality management strategy in the PPP subcatchments will result in achieving the required pollutant reduction levels for Gross Pollutants and Total Nitrogen. With such reductions, pollutant levels in this scenario are lower than the pollutant levels obtained from the Existing and Base Scenario models. There is 100% retention of Gross Pollutants and 52% retention of Total Nitrogen from the entire SICEEP PPP site; both of which are higher than the 90% and 45% reduction targets set by City of Sydney Council for Gross Pollutants and TN respectively. Taken individually, with 44% reduction achieved, only the Bayside subcatchment is marginally less than the 45% required reduction in TN.

The MUSIC modelling for the Proposed development 'Practical' Treated Scenario has also demonstrated that the proposed water quality management strategy in the PPP subcatchments will result in lower levels of TSS and TP compared to values resulting from the Existing and Base Scenarios. The reduction levels for the entire PPP catchment for TSS and TP are very close to meeting targets set by Council for TSS and TP respectively.

Collectively, the performance of the proposed water quality management strategy for the proposed PPP development obtained from the MUSIC model, as summarised in Table 5-19 shows that:

- In order to achieve the objective of a 90% reduction in Gross Pollutants from the proposed PPP development, the minimum Gross Pollutants reduction is 2,324 kg/yr. The MUSIC modelling predicts that Gross Pollutants are reduced by 2,582 kg/yr. The water quality management strategy therefore achieves the target reduction for Gross Pollutants.

- In order to achieve the objective of an 85% reduction in TSS from the proposed PPP development, the minimum TSS reduction is 12,631 kg/yr. The MUSIC modelling predicts that TSS is reduced by 12,183 kg/yr. The water quality management strategy therefore achieves a large proportion (96.4%) of the target reduction for TSS.
- In order to achieve the objective of a 65% reduction in TP from the proposed PPP development, the minimum TP reduction is 20 kg/yr. The MUSIC modelling predicts that TP is reduced by 18 kg/yr. The water quality management strategy therefore achieves a large proportion (90%) of the target reduction for TP.
- In order to achieve the objective of a 45% reduction in TN from the proposed PPP development, the minimum TN reduction is 113 kg/yr. The MUSIC modelling predicts that TN is reduced by 130 kg/yr. The water quality management strategy therefore achieves the target reduction for TN.

The combination of rainwater tanks, bioretention systems, green roofs, and proprietary devices (i.e. Enviropods and StormFilters), as elements of the Stormwater Quality Management Strategy for the proposed SICEEP PPP development, will exceed the pollution reduction targets for Gross Pollutants and TN specified in the Director General's Requirements and the City of Sydney Council's 2012 DCP. The Strategy however did not achieve the required reduction targets for TSS and TP.

5.10.3 PROPOSED DEVELOPMENT 'DESIRABLE' TREATMENT SCENARIO

The MUSIC modelling for the Proposed Development 'Desirable' Treated Scenario has demonstrated that the 'full blown' water quality management strategy in the PPP site will result in achieving the required pollutant reduction levels for all pollutants. A number of the treatment devices however would not be practicable in consideration of the current design requirements and configurations. This treatment scenario will be subject to reassessment in the future when necessary.

5.10.4 RECOMMENDATIONS

The water quality analysis demonstrates the Practical stormwater quality management concept proposed for SICEEP PPP development achieves significant reduction in annual pollutant loads compared to the Existing Scenario. Furthermore, the Practical Scenario generally complies with the set pollutant reduction targets.

This report would recommend that a similar level of treatment is adopted for the PPP development.

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APPENDIX A

PROPOSED DEVELOPMENT CONCEPT LAYOUT

REFERENCE MAP

0 30 60 90 120 150m

1 : 1500

1. DO NOT SCALE FROM DRAWINGS. WORK TO WRITTEN DIMENSIONS ONLY.
2. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
3. ALL COORDINATES TO MGA, ALL LEVELS TO AHD.
4. ALL DIMENSIONS, COORDINATES AND LEVELS TO BE VERIFIED ON SITE BEFORE PROCEEDING WITH WORK. HYDER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
5. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.
6. PRECINCT BOUNDARIES ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE.

[illegible]

ARCHITECT
LEVEL 2, 88 CUMBERLAND STREET,
SYDNEY NSW 2000

SICEEP
DARLING HARBOUR
PRIVATE PUBLIC PARTNERSHIP (PPP)

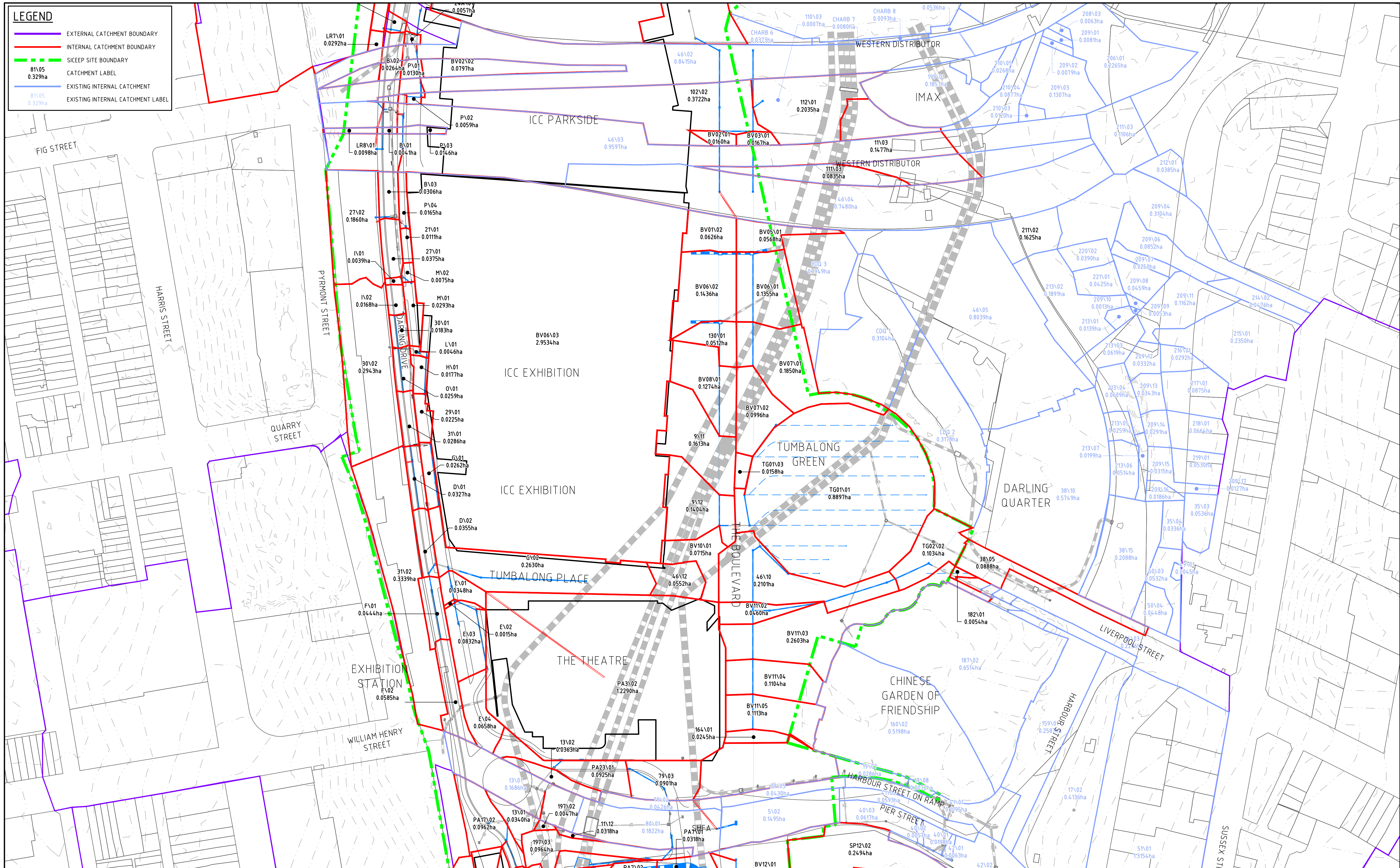
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AA004399

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SKC298	

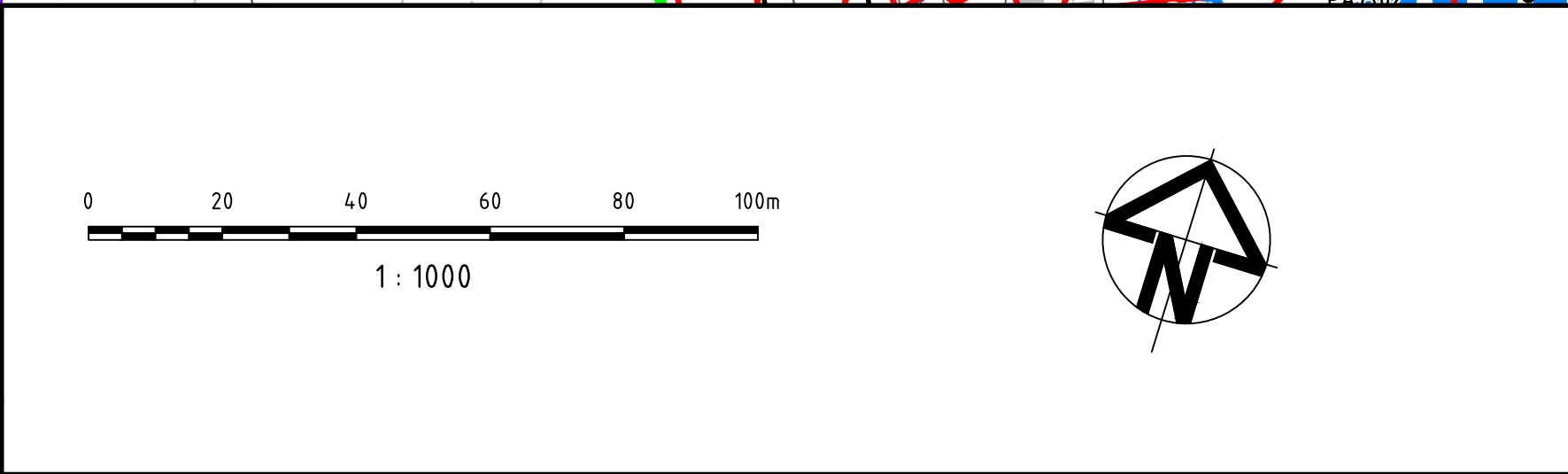
APPENDIX B

DRAINS MODEL PROPOSED DEVELOPMENT
INPUTS & OUTPUTS

Proposed Catchment Plans



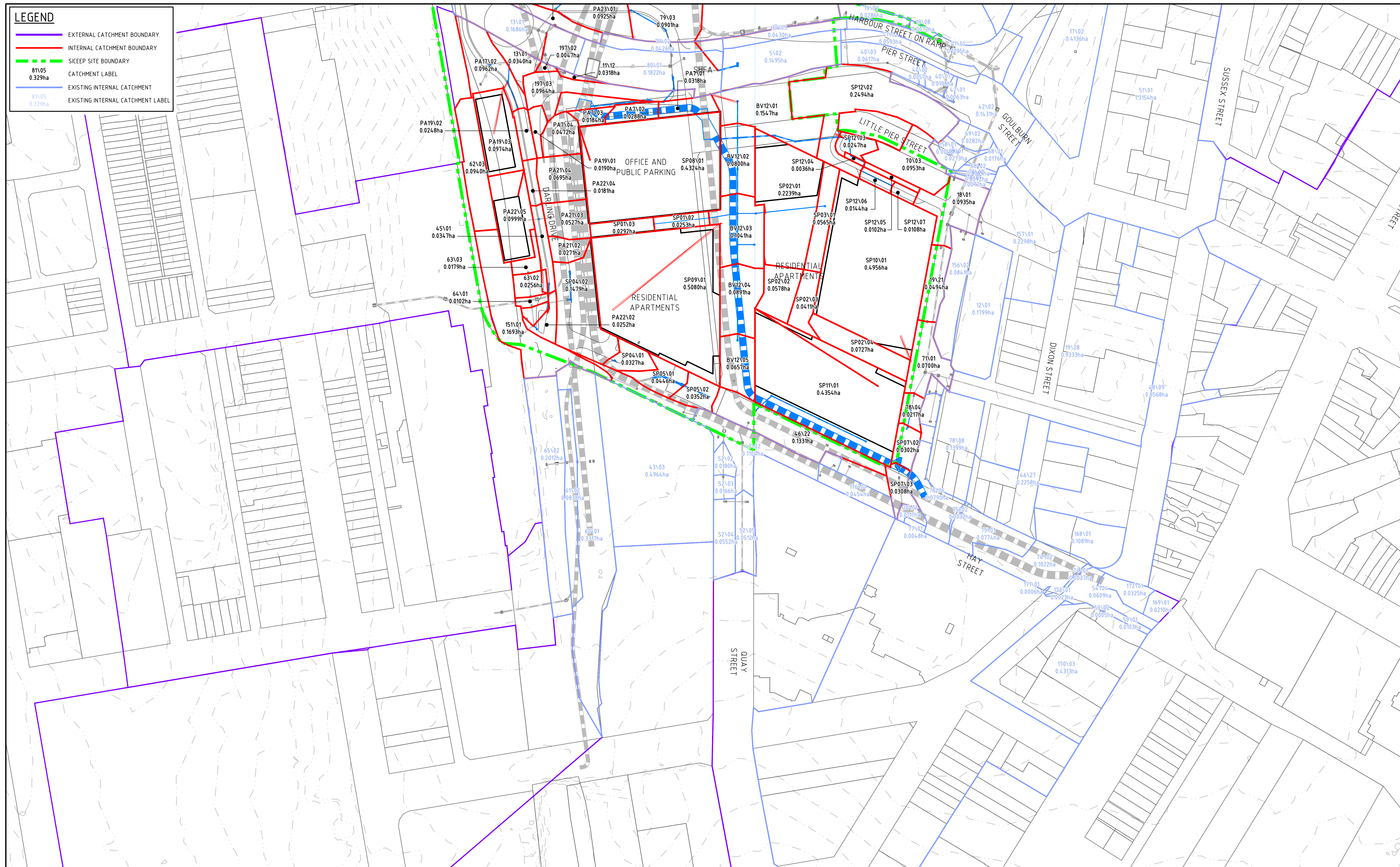
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Issue	Description	Date



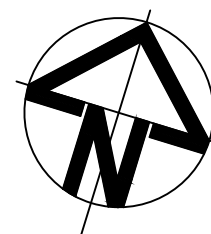
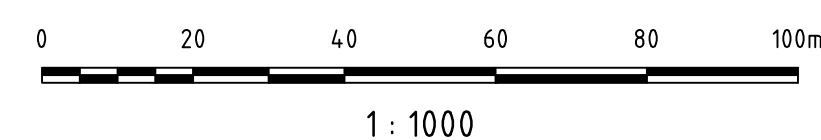
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Height Datum	AHD	Checked P.SLOAN
Grid		Approved C.MCCLELLAND
Filename:		

Project	SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT	
Title	PROPOSED INTERNAL CATCHMENT PLAN SHEET 2	

HYDER CONSULTING PTY LTD ABN 76 104 485 289 Level 5, 141 Walker St North Sydney NSW 2060 Australia Tel: +61 (0)2 8907 9000 Fax: +61 (0)2 8907 9001 www.hyderconsulting.com © Copyright reserved		
Drawing No.	Project No.	Issue
SKC294	AA004399	P1



P1	ISSUE FOR INFORMATION	xx/02/13
Issue	Description	Date



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Grid		Approved	
Filename:			

Project	SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT
Title	PROPOSED INTERNAL CATCHMENT PLAN SHEET 3

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Drawing No. SKC295	Project No. AA004399	Issue P1

Proposed DRAINS Model Inputs

DRAINS File Path:	F:\AA004399\D-Calcs\A-Civil\A-Stormwater\A-DRAINS
DRAINS Version:	DRAINS Version 2012.12 - 10 October 2012
Modeller's Name:	Chris McClelland
Description:	Proposed Development

PIT / NODE DETAILS		Version 11		Ponding	Pressure	Surface	Max Pond	Base	Blocking	x	y	Bolt-down	id	Part Full
Name	Type	Family	Size	Volume	Change	Elev (m)	Depth (m)	Inflow	Factor			lid		Shock Loss
				(cu.m)	Coeff. Ku			(cu.m/s)						
1\24	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	4.265		0	0	333714.210	6249566.20	No	1	1 x Ku
1\23	OnGrade	Existing City of S	Junction Pit		0.0	4.421		0	0.3	333715.810	6249567.02	No	2	1 x Ku
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1\21	OnGrade	Existing City of S	Junction Pit		0.0	4.09		0	0.3	333692.170	6249625.50	No	4	1 x Ku
1\20	OnGrade	Existing City of S	Junction Pit		0.0	3.991		0	0.3	333688.948	6249634.58	No	5	1 x Ku
1\19	OnGrade	Existing City of S	Junction Pit		0.3	3.697		0	0.3	333681.290	6249665.28	No	6	1 x Ku
1\18	OnGrade	Existing City of S	Junction Pit		0.0	3.456		0	0.3	333674.900	6249690.86	No	7	1 x Ku
1\17	OnGrade	Existing City of S	Junction Pit		0.0	3.383		0	0.3	333672.340	6249698.48	No	8	1 x Ku
1\16	OnGrade	Existing City of S	Junction Pit		0.1	3.161		0	0.3	333657.677	6249732.65	No	9	1 x Ku
1\15	OnGrade	Existing City of S	Junction Pit		0.0	3.24		0	0.3	333648.670	6249753.62	No	10	1 x Ku
1\14	OnGrade	Existing City of S	Junction Pit		0.0	3.221		0	0.3	333644.680	6249770.84	No	11	1 x Ku
1\13	OnGrade	Existing City of S	Junction Pit		0.9	3.223		0	0.3	333644.183	6249780.73	No	12	1 x Ku
1\12	OnGrade	Existing City of S	Junction Pit		0.0	3.095		0	0.3	333643.830	6249797.04	No	13	1 x Ku
1\11	OnGrade	Existing City of S	Junction Pit		0.1	3.321		0	0.3	333639.817	6249814.31	No	14	1 x Ku
1\10	OnGrade	Existing City of S	Junction Pit		0.0	3.976		0	0.3	333607.780	6249888.71	No	15	1 x Ku
1\09	OnGrade	Existing City of S	Junction Pit		0.0	3.644		0	0.3	333591.468	6249926.61	No	16	1 x Ku
1\08	OnGrade	Existing City of S	Junction Pit		0.0	2.759		0	0.3	333587.598	6249950.86	No	17	1 x Ku
1\07	OnGrade	Existing City of S	Junction Pit		0.0	4.051		0	0.3	333590.240	6249980.15	No	18	1 x Ku
1\06	OnGrade	Existing City of S	Junction Pit		0.0	5.228		0	0.3	333605.170	6250145.44	No	19	1 x Ku
1\05	OnGrade	Existing City of S	Junction Pit		0.0	2.677		0	0.3	333610.820	6250179.67	No	20	1 x Ku
1\04	OnGrade	Existing City of S	Junction Pit		0.0	3.594		0	0.3	333625.773	6250270.32	No	21	1 x Ku
1\03	OnGrade	Existing City of S	Junction Pit		0.0	3.203		0	0.3	333626.397	6250280.69	No	22	1 x Ku
1\02	OnGrade	Existing City of S	Junction Pit		0.0	2.51		0	0.3	333617.600	6250393.69	No	23	1 x Ku
1\01	Node					0.78		0		333606.138	6250424.238		24	
5\03	OnGrade	Existing City of S	Junction Pit		4.0	3.269		0	0.3	333714.000	6249992.71	No	25	1 x Ku
5\02	OnGrade	Existing City of S	1.00m x 1.00m Grate		3.3	2.23		0	0.3	333696.560	6249982.90	No	26	1 x Ku
5\01	OnGrade	Existing City of S	Junction Pit		1.3	2.105		0	0.3	333672.470	6249969.27	No	27	1 x Ku
46\17	OnGrade	Existing City of S	Junction Pit		0.1	10		0	0.3	333663.108	6249965.89	No	211	1 x Ku
46\16	OnGrade	Existing City of S	Junction Pit		0.0	10		0	0.3	333658.690	6249976.39	No	212	1 x Ku
46\15	OnGrade	Existing City of S	Junction Pit		0.3	2.699		0	0.3	333651.698	6249994.28	No	213	1 x Ku
46\14	OnGrade	Existing City of S	Junction Pit		0.1	2.593		0	0.3	333647.058	6250006.17	No	214	1 x Ku
46\13	OnGrade	Existing City of S	Junction Pit		0.0	2.53		0	0.3	333640.228	6250023.65	No	215	1 x Ku
46\12	OnGrade	Existing City of S	Junction Pit		0.0	5.692		0	0.3	333616.250	6250085.05	No	216	1 x Ku
46\11	OnGrade	Existing City of S	Junction Pit		0.0	5.452		0	0.3	333617.138	6250094.45	No	217	1 x Ku
46\10	OnGrade	Existing City of S	Junction Pit		1.5	2.665		0	0.3	333633.048	6250117.35	No	218	1 x Ku
46\09	OnGrade	Existing City of S	Junction Pit		0.1	3.759		0	0.3	333646.048	6250136.93	No	219	1 x Ku
46\08	OnGrade	Existing City of S	Junction Pit		0.1	3.578		0	0.3	333650.312	6250143.36	No	220	1 x Ku
46\07	OnGrade	Existing City of S	Junction Pit		0.1	2.691		0	0.3	333681.588	6250190.48	No	221	1 x Ku
46\06	OnGrade	Existing City of S	Junction Pit		0.3	3.135		0	0.3	333690.950	6250204.59	No	222	1 x Ku
46\05	OnGrade	Existing City of S	Junction Pit		0.5	3.846		0	0.3	333695.398	6250218.46	No	223	1 x Ku
46\04A	OnGrade	Existing City of S	Junction Pit		0.1	3.846		0	0.3	333697.573	6250246.35	No	472066755	1 x Ku
46\04	OnGrade	Existing City of S	Junction Pit		0.1	2.8		0	0.3	333706.310	6250358.45	No	224	1 x Ku
46\03	OnGrade	Existing City of S	Junction Pit		0.1	2.893		0	0.3	333699.750	6250381.66	No	225	1 x Ku
46\02	OnGrade	Existing City of S	Junction Pit		0.1	2.8		0	0.3	333666.297	6250417.72	No	226	1 x Ku
46\01	Node					1.213		0		333645.660	6250440.017		227	
7\03	OnGrade	Existing City of S	Junction Pit		4.0	4.853		0	0.3	333506.620	6249988.49	No	30	1 x Ku
7\02	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		2.3	5.11		0	0.3	333507.280	6249984.58	No	31	1 x Ku
7\01	OnGrade	Existing City of S	Junction Pit		2.3	5.067		0	0.3	333506.150	6249983.07	No	32	1 x Ku
8\04	OnGrade	Existing City of S	Junction Pit		0.1	4.867		0	0.3	333508.050	6249980.07	No	35	1 x Ku
8\03	OnGrade	Existing City of S	Junction Pit		0.0	5.063		0	0.3	333509.048	6249983.56	No	36	1 x Ku
8\02	OnGrade	Existing City of S	Junction Pit		0.0	3.732		0	0.3	333513.150	6249993.27	No	37	1 x Ku
8\01	OnGrade	Existing City of S	Junction Pit		0.0	3.767		0	0.3	333530.210	6250003.62	No	38	1 x Ku
9\16	OnGrade	Existing City of S	Junction Pit		0.3	4.131		0	0.3	333534.280	6250007.91	No	48	1 x Ku
9\15	OnGrade	Existing City of S	Junction Pit		0.0	5.783		0	0.3	333536.698	6250027.40	No	49	1 x Ku
9\14	OnGrade	Existing City of S	Junction Pit		0.0	10		0	0.3	333586.028	6250128.30	No	50	1 x Ku
9\13	OnGrade	Existing City of S	Junction Pit		0.0	5.706		0	0.3	333589.848	6250141.35	No	51	1 x Ku
9\12	OnGrade	Existing City of S	Junction Pit		0.0	5.494		0	0.3	333591.878	6250146.54	No	52	1 x Ku
9\11	OnGrade	Existing City of S	Junction Pit		0.1	3.855		0	0.3	333601.608	6250200.44	No	53	1 x Ku
9\10	OnGrade	Existing City of S	Junction Pit		0.0	2.731		0	0.3	333609.850	6250246.13	No	54	1 x Ku
9\09	OnGrade	Existing City of S	Junction Pit		0.0	2.453		0	0.3	333610.978	6250256.09	No	55	1 x Ku
9\08	OnGrade	Existing City of S	Junction Pit		0.1	2.458		0	0.3	333611.038	6250260.29	No	56	1 x Ku
9\07	OnGrade	Existing City of S	Junction Pit		0.3	2.462		0	0.3	333611.158	6250268.77	No	57	1 x Ku
9\06	OnGrade	Existing City of S	Junction Pit		0.3	3.358		0	0.3	333611.588	6250298.20	No	58	1 x Ku
9\05	OnGrade	Existing City of S	Junction Pit		0.0	3.043		0	0.3	333612.378	6250352.54	No	59	1 x Ku
9\04	OnGrade	Existing City of S	Junction Pit		0.1	3.366		0	0.3	333612.548	6250364.32	No	60	1 x Ku
9\03	OnGrade	Existing City of S	Junction Pit		0.0	3.298		0	0.3	333612.628	6250369.74	No	61	1 x Ku
9\02	OnGrade	Existing City of S	Junction Pit		0.0	2.466		0	0.3	333610.810	6250394.54	No	62	1 x Ku
9\01	Node					1.211		0		333601.100	6250423.168		63	
8\06	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	4.958		0	0	333511.138	6249964.01	No	33	1 x Ku
8\05	OnGrade	Existing City of S	Junction Pit		0.1	4.817		0	0.3	333508.198	6249971.81	No	34	1 x Ku
11\43	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	4.264		0	0	333999.368	6249749.08	No	68	1 x Ku
11\42	Sag	Existing City of S	Junction Pit	5	0.1	3.875	0.1	0	0.5	333986.808	6249751.02	No	69	1 x Ku
11\41	Sag	Existing City of S	Junction Pit	5	0.1	3.762	0.2	0	0.5	333980.138	6249752.05	No	70	1 x Ku
11\40	Sag	Existing City of S	Junction Pit	5	0.1	3.713	0.3	0	0.5	333976.138	6249752.67	No	71	1 x Ku
11\39	Sag	Existing City of S	Junction Pit	5	1.2	3.553	0.5	0	0.5	333967.310	6249755.56	No	72	1 x Ku
11\38	Sag	Existing City of S	Junction Pit	5	0.1	3.539	0.5	0	0.5	333954.410	6249754.67	No	73	1 x Ku
11\37	Sag	Existing City of S												

19I08	OnGrade	Existing City of S	Junction Pit		0.1	2.438		0	0.3	333768.824	6250024.43	No	147	1 x Ku
19I07	OnGrade	Existing City of S	Junction Pit		0.3	2.766		0	0.3	333750.734	6250023.60	No	148	1 x Ku
19I06	OnGrade	Existing City of S	Junction Pit		0.1	2.4		0	0.3	333733.333	6250019.29	No	149	1 x Ku
19I05	OnGrade	Existing City of S	Junction Pit		0.1	2.403		0	0.3	333717.884	6250012.13	No	150	1 x Ku
19I04	OnGrade	Existing City of S	Junction Pit		0.1	2.309		0	0.3	333706.384	6250006.81	No	151	1 x Ku
19I03	OnGrade	Existing City of S	Junction Pit		0.1	2.532		0	0.3	333687.034	6249997.84	No	152	1 x Ku
19I02	OnGrade	Existing City of S	Junction Pit		0.0	2.505		0	0.3	333679.864	6249994.53	No	153	1 x Ku
19I01	OnGrade	Existing City of S	Junction Pit		0.1	2.424		0	0.3	333669.604	6249989.63	No	154	1 x Ku
13I02	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		4.0	3.032		0	0.3	333576.774	6249966.48	No	112	1 x Ku
13I01	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	2.893		0	0	333573.034	6249960.93	No	113	1 x Ku
10I01	OnGrade	Existing City of S	Junction Pit		2.6	3.129		0	0.3	333568.124	6249960.87	No	67	1 x Ku
9I18	OnGrade	Existing City of S	0.80m x 0.80m Grate		0.1	3.524		0	0.3	333561.084	6249961.90	No	46	1 x Ku
9I17	OnGrade	Existing City of S	Junction Pit		0.0	3.862		0	0.3	333538.284	6249998.06	No	47	1 x Ku
15I04	OnGrade	Existing City of S	Junction Pit		0.0	4.917		0	0.3	333538.684	6249929.58	No	116	1 x Ku
15I03	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		0.1	3.356		0	0.3	333547.784	6249933.98	No	117	1 x Ku
15I02	OnGrade	Existing City of S	Junction Pit		0.0	3.642		0	0.3	333557.364	6249938.90	No	118	1 x Ku
15I01	OnGrade	Existing City of S	Junction Pit		0.0	3.528		0	0.3	333566.084	6249942.16	No	119	1 x Ku
9I19	OnGrade	Existing City of S	Junction Pit		0.1	3.245		0	0.3	333568.854	6249949.59	No	45	1 x Ku
16I03	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	4.401		0	0	333910.054	6249681.89	No	120	1 x Ku
16I02	Sag	Existing City of S	Junction Pit	5	0.1	3.727	0.3	0	0.5	333945.514	6249736.22	No	121	1 x Ku
16I01	Sag	Existing City of S	Junction Pit	5	0.0	3.621	0.4	0	0.5	333945.704	6249745.55	No	122	1 x Ku
17I02	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	2.982		0	0	333846.054	6249996.22	No	123	1 x Ku
17I01	OnGrade	Existing City of S	Junction Pit		1.9	2.678		0	0.3	333835.264	6249993.11	No	124	1 x Ku
18I02	OnGrade	Existing City of S	0.90m x 0.50m Grate		4.0	2.298		0	0.3	333819.414	6249949.33	No	125	1 x Ku
18I01	OnGrade	Existing City of S	0.90m x 0.50m Grate		1.6	2.279		0	0.3	333819.334	6249950.67	No	126	1 x Ku
70I01	OnGrade	Existing City of S	Junction Pit		2.3	2.283		0	0.3	333819.354	6249953.87	No	298	1 x Ku
19I28	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	5.246		0	0	333971.564	6249851.80	No	127	1 x Ku
19I27	OnGrade	Existing City of S	Junction Pit		0.5	4.804		0	0.3	333960.784	6249842.37	No	128	1 x Ku
35I04	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	5.027		0	0.3	333873.684	6250213.55	No	155	1 x Ku
35I03	OnGrade	Existing City of S	Junction Pit		2.3	5.255		0	0.3	333870.154	6250204.40	No	156	1 x Ku
35I02	OnGrade	Existing City of S	Junction Pit		2.0	4.844		0	0.3	333861.154	6250205.64	No	157	1 x Ku
35I01	OnGrade	Existing City of S	Junction Pit		0.5	4.365		0	0.3	333844.834	6250204.37	No	158	1 x Ku
38I14	OnGrade	Existing City of S	Junction Pit		0.1	4.273		0	0.3	333840.204	6250202.07	No	165	1 x Ku
38I13	OnGrade	Existing City of S	Junction Pit		0.0	4.092		0	0.3	333836.174	6250202.73	No	166	1 x Ku
38I12	OnGrade	Existing City of S	Junction Pit		0.1	3.968		0	0.3	333833.754	6250203.08	No	167	1 x Ku
38I11	OnGrade	Existing City of S	Junction Pit		0.1	10		0	0.3	333829.764	6250199.36	No	168	1 x Ku
38I10	OnGrade	Existing City of S	1.0m Lintel 1.00m x 0.50m Grate		0.1	3.859		0	0.3	333828.074	6250165.72	No	169	1 x Ku
38I09	OnGrade	Existing City of S	Junction Pit		0.1	4.085		0	0.3	333823.684	6250160.53	No	170	1 x Ku
38I08	OnGrade	Existing City of S	Junction Pit		0.0	4.189		0	0.3	333813.694	6250154.39	No	171	1 x Ku
38I07	OnGrade	Existing City of S	Junction Pit		0.0	4.309		0	0.3	333807.514	6250153.18	No	172	1 x Ku
38I06	OnGrade	Existing City of S	Junction Pit		0.0	4.891		0	0.3	333798.544	6250154.67	No	173	1 x Ku
38I05	OnGrade	Existing City of S	Junction Pit		0.0	4.816		0	0.3	333772.834	6250160.69	No	174	1 x Ku
38I04	OnGrade	Existing City of S	Junction Pit		0.0	4.345		0	0.3	333760.744	6250174.18	No	175	1 x Ku
38I03	OnGrade	Existing City of S	Junction Pit		0.0	4.13		0	0.3	333755.554	6250201.64	No	176	1 x Ku
38I02	OnGrade	Existing City of S	Junction Pit		0.0	3.751		0	0.3	333742.544	6250213.75	No	177	1 x Ku
38I01	OnGrade	Existing City of S	Junction Pit		0.1	3.871		0	0.3	333705.844	6250218.02	No	178	1 x Ku
36I03	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		4.0	3.872		0	0.3	333816.054	6250149.74	No	159	1 x Ku
36I02	OnGrade	Existing City of S	Junction Pit		1.0	4.679		0	0.3	333742.544	6250161.97	No	160	1 x Ku
36I01	OnGrade	Existing City of S	Junction Pit		2.0	4.664		0	0.3	333713.344	6250165.71	No	161	1 x Ku
38I17	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	6.524		0	0	333897.924	6250196.24	No	162	1 x Ku
38I16	OnGrade	Existing City of S	Junction Pit		0.1	5.459		0	0.3	333880.364	6250197.31	No	163	1 x Ku
38I15	OnGrade	Existing City of S	Junction Pit		0.1	4.442		0	0.3	333844.784	6250201.52	No	164	1 x Ku
39I05	OnGrade	Existing City of S	0.90m x 0.50m Grate		4.0	5.56		0	0.3	333734.924	6250012.97	No	179	1 x Ku
39I04	OnGrade	Existing City of S	0.90m x 0.50m Grate		2.3	5.539		0	0.3	333742.364	6249994.35	No	180	1 x Ku
39I03	OnGrade	Existing City of S	Junction Pit		0.1	3.776		0	0.3	333763.684	6250001.80	No	181	1 x Ku
39I02	Sag	Existing City of S	Junction Pit	5	1.2	2.369	0.1	0	0.5	333799.314	6249998.64	No	182	1 x Ku
39I01	Sag	Existing City of S	Junction Pit	5	0.1	2.39	0.1	0	0.5	333794.984	6250014.31	No	183	1 x Ku
40I03	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	2.364	0.1	0	0.5	333784.334	6249995.24	No	184	1 x Ku
40I02	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	0.0	2.285	0.2	0	0.5	333788.044	6249994.64	No	185	1 x Ku
40I01	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	2.3	2.234	0.3	0	0.5	333794.584	6249993.61	No	186	1 x Ku
41I02	Sag	Existing City of S	0.90m x 0.50m Grate	5	4.0	2.408	0.1	0	0.5	333796.894	6250013.12	No	187	1 x Ku
41I01	Sag	Existing City of S	1.8m Lintel 1.80m x 0.50m Grate	5	0.2	2.312	0.1	0	0.5	333797.284	6250018.62	No	188	1 x Ku
42I02	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	2.281	0.2	0	0.5	333806.264	6249991.62	No	189	1 x Ku
42I01	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	2.3	2.246	0.3	0	0.5	333799.874	6249992.68	No	190	1 x Ku
43I03	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	2.656		0	0.3	333717.714	6249775.52	No	191	1 x Ku
43I02	OnGrade	Existing City of S	0.50m x 0.50m Grate		2.3	2.615		0	0.3	333717.984	6249777.59	No	192	1 x Ku
43I01	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		2.3	2.639		0	0.3	333712.064	6249776.98	No	193	1 x Ku
44I02	OnGrade	Existing City of S	Junction Pit		4.0	3.827		0	0.3	333769.934	6249700.66	No	194	1 x Ku
44I01	OnGrade	Existing City of S	Junction Pit		2.5	2.813		0	0.3	333748.474	6249770.40	No	195	1 x Ku
45I05	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	8.581		0	0	333524.664	6249783.89	No	196	1 x Ku
45I04	OnGrade	Existing City of S	Junction Pit		0.0	6.234		0	0.3	333563.154	6249798.28	No	197	1 x Ku
45I03	OnGrade	Existing City of S	Junction Pit		0.0	6.248		0	0.3	333583.164	6249797.57	No	198	1 x Ku
45I02	OnGrade	Existing City of S	Junction Pit		0.1	3.468		0	0.3	333613.064	6249816.31	No	199	1 x Ku
45I01	OnGrade	Existing City of S	Junction Pit		0.0	3.667		0	0.3	333617.684	6249819.20	No	200	1 x Ku
9I23	OnGrade	Existing City of S	Junction Pit		0.3	3.345		0	0.3	333623.164	6249831.76	No	41	1 x Ku
9I22	OnGrade	Existing City of S	Junction Pit		0.1	3.492		0	0.3	333610.034	6249862.89	No	42	1 x Ku
9I21	OnGrade	Existing City of S	Junction Pit		0.0	3.619		0	0.3	333584.064	6249924.45	No	43	1 x Ku
9I20	OnGrade	Existing City of S	Junction Pit		0.0	3.504		0	0.3	333581.024	6249930.28	No	44	1 x Ku
46I27	OnGrade	Dummy Pits	Unlimited Entry Pit		1.2	3.509		0	0	333948.044	6249758.08	No	201	1 x Ku
46I26	OnGrade	Existing City of S	Junction Pit		0.0	3.723		0	0.3	333894.784	6249765.26	No	202	1 x Ku
46I25	OnGrade	Existing City of S	Junction Pit		0.1	3.623		0	0.3	333882.804	6249767.15	No	203	1 x Ku
46I24	OnGrade	Existing City of S	Junction Pit		0.1	3.251		0	0.3	333790.594	6249781.70	No	204	1 x Ku
46I23	OnGrade	Existing City of S	Junction Pit		0.0	3.21		0	0.3	333784.754	6249782.63	No	205	1 x Ku
46I22	OnGrade	Existing City of S	Junction Pit		0.1	2.824		0	0.3	333747.314	6249788.14	No	206	1 x Ku
46I21	OnGrade	Existing City of S	Junction Pit		0.0	2.771		0	0.3	333736.584	6249795.76	No	207	1 x Ku
46I20	OnGrade	Existing City of S	Junction Pit		0.0	2.677		0	0.3	333733.264	6249802.70	No	208	1 x Ku
46I19	OnGrade	Existing City of S	Junction Pit		0.0	2.735		0	0.3	333724.944	6249819.07	No	209	1 x Ku
46I18	Sag	Existing City of S	Junction Pit	5	0.1	3.068	0.2	0	0.5	333678.364	6249929.66	No	210	1 x Ku
47I02	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	3.648		0	0	333693.694	6249657.25	No	228	1 x Ku
47I01	OnGrade	Existing City of S	Junction Pit		0.1	3.005		0	0.3	333663.084	6249736.77	No	229	1 x Ku
48I09	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	9.685		0	0	333963.224	6249943.79	No	230	1 x Ku
48I08	OnGrade	Existing City of S	Junction Pit		0.5	8.814		0	0.3	333965.214	6249926.36	No	231	1 x Ku
48I07	OnGrade	Existing City of S	Junction Pit		0.5	5.343		0	0.3	333974.954	6249855.05	No	232	1 x Ku
48I06	OnGrade	Existing City of S	Junction Pit		0.5	5.166		0	0.3	333976.154	6249852.17	No	233	

71101	OnGrade	Existing City of S	1.00m x 1.00m Grate		1.0	2.919		0	0.3	333828.83	6249867.45	No	301	1 x Ku
7304	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate + Gatic	5	4.0	3.634	0.3	0	0.5	333984.60	6249768.69	No	304	1 x Ku
7303	Sag	Existing City of S	0.50m x 0.50m Grate	5	2.0	3.762	0.2	0	0.5	333987.56	6249762.43	No	305	1 x Ku
7302	Sag	Existing City of S	Junction Pit	5	2.3	3.774	0.2	0	0.5	333989.39	6249761.42	No	306	1 x Ku
7301	Sag	Existing City of S	Junction Pit	5	2.0	3.874	0.1	0	0.5	333988.25	6249756.86	No	307	1 x Ku
7402	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	3.265	0.7	0	0.5	333953.04	6249757.91	No	308	1 x Ku
7401	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	2.3	3.328	0.6	0	0.5	333954.13	6249757.75	No	309	1 x Ku
7502	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		4.0	3.596		0	0.3	333880.68	6249774.54	No	310	1 x Ku
7501	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate + Gatic		2.3	3.662		0	0.3	333883.52	6249774.26	No	311	1 x Ku
7602	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		4.0	3.396		0	0.3	333839.09	6249777.58	No	312	1 x Ku
7601	OnGrade	Existing City of S	0.50m x 0.50m Grate		5.2	3.564		0	0.3	333845.56	6249762.97	No	313	1 x Ku
7701	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	3.669		0	0.3	333849.66	6249757.52	No	314	1 x Ku
7808	OnGrade	Existing City of S	0.35m x 0.35m Grate		4.0	3.426		0	0.3	333854.02	6249781.35	No	315	1 x Ku
7807	OnGrade	Existing City of S	0.35m x 0.35m Grate		1.5	3.377		0	0.3	333853.48	6249786.75	No	316	1 x Ku
7806	OnGrade	Existing City of S	0.35m x 0.35m Grate		1.4	3.267		0	0.3	333851.96	6249799.16	No	317	1 x Ku
7805	OnGrade	Existing City of S	0.35m x 0.35m Grate		1.4	3.219		0	0.3	333851.38	6249804.86	No	318	1 x Ku
7804	OnGrade	Existing City of S	0.35m x 0.35m Grate		1.0	3.207		0	0.3	333850.29	6249814.47	No	319	1 x Ku
7803	OnGrade	Existing City of S	0.35m x 0.35m Grate		1.0	3.191		0	0.3	333848.94	6249826.19	No	320	1 x Ku
7802	OnGrade	Existing City of S	0.35m x 0.35m Grate		2.3	3.184		0	0.3	333848.52	6249829.80	No	321	1 x Ku
7801	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate + Gatic		2.3	3.15		0	0.3	333845.57	6249829.80	No	322	1 x Ku
80101	OnGrade	Existing City of S	0.90m x 0.50m Grate		4.0	2.296		0	0.3	333652.00	6249970.20	No	326	1 x Ku
7901	Sag	Existing City of S	Junction Pit	5	1.9	2.21	0.3	0	0.5	333645.59	6249963.62	No	325	1 x Ku
8901	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	6.576		0	0.3	333795.33	6250140.95	No	347	1 x Ku
182107	OnGrade	Existing City of S	0.30m x 0.30m Grate		2.0	5.765		0	0.3	333783.72	6250142.84	No	525	1 x Ku
182106	OnGrade	Existing City of S	0.30m x 0.30m Grate		1.6	5.244		0	0.3	333776.75	6250143.93	No	526	1 x Ku
182105	OnGrade	Existing City of S	0.30m x 0.30m Grate		1.6	4.862		0	0.3	333761.22	6250146.51	No	527	1 x Ku
N1804	Node					4		0		333745.53	6250149.08		-262240896	
90102	OnGrade	Existing City of S	Junction Pit		0.5	4.681		0	0.3	333800.83	6250155.64	No	348	1 x Ku
90101	Node					4.088		0		333810.68	6250154.01		349	
111103	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	2.892		0	0.3	333632.92	6250352.76	No	412	1 x Ku
111102	OnGrade	Existing City of S	Junction Pit		2.0	2.839		0	0.3	333630.97	6250366.04	No	413	1 x Ku
111101	OnGrade	Existing City of S	Junction Pit		2.0	2.787		0	0.3	333629.68	6250378.35	No	414	1 x Ku
112101	OnGrade	Existing City of S	Trench Grate		4.0	2.84		0	0.3	333630.16	6250365.22	No	415	1 x Ku
113102	OnGrade	Existing City of S	Junction Pit		0.5	2.704		0	0.3	333667.23	6250380.94	No	416	1 x Ku
113101	OnGrade	Existing City of S	Junction Pit		1.8	2.752		0	0.3	333650.34	6250376.85	No	417	1 x Ku
12901	OnGrade	Existing City of S	0.80m x 0.80m Grate		4.0	2.242		0	0.3	333701.00	6249971.82	No	429	1 x Ku
151102	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	2.763		0	0.3	333681.85	6249782.42	No	480	1 x Ku
151101	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		2.0	2.88		0	0.3	333665.86	6249784.09	No	481	1 x Ku
152101	OnGrade	Existing City of S	1.8m Lintel 0.90m x 0.50m Grate + Gatic		4.0	2.829		0	0.3	333663.42	6249794.61	No	482	1 x Ku
17901	OnGrade	Existing City of S	1.8m Lintel 1.00m x 0.40m Grate + Gatic		3.1	2.785		0	0.3	333666.18	6249794.37	No	519	1 x Ku
153103	OnGrade	Dummy Pits	Unlimited Entry Pit		0.5	2.803		0	0.3	333698.81	6249792.60	No	483	1 x Ku
153102	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate + Gatic		4.0	2.767		0	0.3	333696.27	6249790.40	No	484	1 x Ku
153101	Sag	Existing City of S	1.8m Lintel 2.00m x 0.40m Grate - HaySt Sag	5	1.4	2.635	0.2	0	0.3	333689.31	6249791.51	No	485	1 x Ku
15401	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		0.6	2.876		0	0.3	333750.09	6249790.29	No	488	1 x Ku
155102	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	3.123		0	0.3	333817.67	6249909.71	No	489	1 x Ku
155101	OnGrade	Existing City of S	1.00m x 0.90m Grate + Gatic		1.0	2.824		0	0.3	333823.91	6249910.04	No	490	1 x Ku
156102	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate + Gatic		4.0	2.461		0	0.3	333835.16	6249921.82	No	491	1 x Ku
156101	OnGrade	Existing City of S	Junction Pit		2.0	2.564		0	0.3	333833.77	6249932.62	No	492	1 x Ku
157101	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	2.786		0	0	333841.26	6249930.82	No	493	1 x Ku
15801	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		4.0	2.298		0	0.3	333813.58	6249962.60	No	494	1 x Ku
159101	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	2.769		0	0	333823.22	6250038.14	No	495	1 x Ku
160102	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	10		0	0	333745.49	6250033.07	No	496	1 x Ku
160101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	2.499		0	0.3	333750.75	6250025.58	No	497	1 x Ku
161101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	2.498		0	0.3	333732.59	6250022.12	No	498	1 x Ku
162101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	2.461		0	0.3	333717.92	6250014.55	No	499	1 x Ku
163101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	2.348		0	0.3	333706.49	6250008.45	No	500	1 x Ku
16401	OnGrade	Existing City of S	0.80m x 0.80m Grate		4.0	2.548		0	0.3	333687.87	6249999.44	No	501	1 x Ku
165101	OnGrade	Existing City of S	Junction Pit		0.1	2.714		0	0.3	333825.90	6250017.71	No	502	1 x Ku
166101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	2.465		0	0.3	333769.20	6250026.34	No	503	1 x Ku
167101	OnGrade	Existing City of S	Junction Pit		4.0	9.267		0	0.3	333952.37	6249931.97	No	504	1 x Ku
168101	Sag	Dummy Pits	Unlimited Entry Pit	5	0.0	3.64	0.4	0	0	333977.05	6249775.17	No	505	1 x Ku
169101	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	3.822	0.1	0	0.5	333995.90	6249755.62	No	506	1 x Ku
170103	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	4.209		0	0	333914.65	6249685.86	No	507	1 x Ku
171101	Sag	Existing City of S	0.50m x 0.50m Grate	5	4.0	3.822	0.3	0	0.5	333939.32	6249742.96	No	510	1 x Ku
172101	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	3.523	0.5	0	0.5	333967.93	6249759.23	No	511	1 x Ku
173101	Sag	Existing City of S	0.8m Lintel Only	5	0.5	3.743	0.3	0	0.5	333950.09	6249744.70	No	512	1 x Ku
174101	OnGrade	Existing City of S	1.00m x 1.00m Grate		4.0	3.269		0	0.3	333810.90	6249775.61	No	513	1 x Ku
175101	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	3.192		0	0.3	333802.23	6249773.48	No	514	1 x Ku
176101	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	3.221		0	0.3	333796.13	6249765.74	No	515	1 x Ku
177101	OnGrade	Existing City of S	0.90m x 0.50m Grate + Gatic		4.0	3.242		0	0.3	333794.96	6249783.44	No	516	1 x Ku
17801	OnGrade	Existing City of S	Junction Pit		0.5	2.78		0	0.3	333748.30	6249782.31	No	517	1 x Ku
179102	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	3.275		0	0	333677.16	6249796.84	No	518	1 x Ku
180102	OnGrade	Existing City of S	0.50m x 0.50m Grate		4.0	2.467		0	0.3	333748.21	6249956.88	No	520	1 x Ku
180101	OnGrade	Existing City of S	0.90m x 0.50m Grate		4.0	2.431		0	0.3	333740.70	6249952.74	No	521	1 x Ku
181101	OnGrade	Existing City of S	0.80m x 0.80m Grate		4.0	2.51		0	0.3	333635.26	6250022.10	No	522	1 x Ku
182109	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	6.815		0	0.3	333794.88	6250137.42	No	523	1 x Ku
182108	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.3	5.911		0	0.3	333783.21	6250139.31	No	524	1 x Ku
186102	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	4.591		0	0.3	333738.76	6250147.47	No	536	1 x Ku
186101	OnGrade	Existing City of S	Junction Pit		0.5	4.709		0	0.3	333742.25	6250160.25	No	537	1 x Ku
187102	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	3.371		0	0.3	333714.68	6250096.45	No	538	1 x Ku
187101	OnGrade	Existing City of S	Junction Pit		2.3	3.402		0	0.3	333706.05	6250103.69	No	539	1 x Ku
189101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.0	4.522		0	0.3	333545.55	6249920.48	No	541	1 x Ku
190101	OnGrade	Existing City of S	0.30m x 0.30m Grate		0.5	4.393		0	0.3	333604.92	6249806.06	No	542	1 x Ku
191101	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	4.536		0	0.3	333602.27	6249813.60	No	543	1 x Ku
192101	OnGrade	Existing City of S	1.0m Lintel 1.00m x 0.50m Grate		4.0	4.039		0	0.3	333589.47	6249942.47	No	544	1 x Ku
197102	OnGrade	Existing City of S	Junction Pit		1.0	3.298		0	0.3	333578.35	6249944.17	No	553	1 x Ku
197101	OnGrade	Existing City of S	Junction Pit		4.0	3.223		0	0.3	333575.60	6249948.62	No	554	1 x Ku
193101	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	5.366		0	0.3	333498.17	6249967.72	No	545	1 x Ku
197104	OnGrade	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate		1.5	4.295		0	0.3	333586.91	6249929.40	No	551	1 x Ku
197103	OnGrade	Existing City of S	1.0m Lintel 1.00m x 0.50m Grate		1.4	3.713		0	0.3	333580.77				

132-01	OnGrade	Existing City of S	Junction Pit		0.5	3.055		0	0.3	333393.854	6250510.66	No	3017793	1 x Ku
N5971	Node							0		333524.494	6250467.895		5455165	
3-11	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	2.567	0.19	0	0.5	333390.394	6250309.15	No	3017735	1 x Ku
3-10	OnGrade	Existing City of S	0.90m x 0.40m Grate		2.1	2.764		0	0.3	333392.034	6250302.84	No	3017736	1 x Ku
29-02	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	1.6	2.606	0.23	0	0.5	333458.794	6250134.41	No	3017760	1 x Ku
29-02 A	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	2.5	2.606	0.23	0	0.5	333452.21	6250131.19	No	-216450646	1 x Ku
111A101	OnGrade	Existing City of S	Trench Grate		4.5	2.716		0	0.3	333625.284	6250399.41	No	78534326	1 x Ku
N1000	Node							0		333672.204	6250425.816		78534362	
Dummy 1	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	10		0	0	333662.184	6250415.34	No	78534364	1 x Ku
Dummy 3	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	10		0	0	333716.624	6250359.90	No	78534372	1 x Ku
Dummy 2	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	10		0	0	333706.194	6250383.60	No	78534387	1 x Ku
N1012	Node							0		333726.984	6250370.798		78534396	
N1013	Node							0		333716.644	6250394.217		78534397	
200104	OnGrade	Existing City of S	Junction Pit		4.0	2.674		0	0	333457.644	6250457.59	No	78534398	1 x Ku
200V03	OnGrade	Existing City of S	Junction Pit		0.5	2.678		0	0	333463.334	6250468.51	No	78534399	1 x Ku
200V02	OnGrade	Existing City of S	Junction Pit		1.6	2.54		0	0	333476.974	6250482.17	No	78534400	1 x Ku
200V01	Node					0.026		0		333497.904	6250503.157		78534401	
201V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	2.354		0	0	333479.654	6250469.22	No	78534402	1 x Ku
202V02	OnGrade	Existing City of S	0.30m x 0.30m Grate		4.0	2.66		0	0	333450.214	6250458.04	No	78534403	1 x Ku
202V01	OnGrade	Existing City of S	0.80m x 0.80m Grate		2.3	2.572		0	0	333455.654	6250470.80	No	78534404	1 x Ku
204V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	2.872		0	0	333467.904	6250447.98	No	78534405	1 x Ku
204V01	OnGrade	Existing City of S	Junction Pit		2.3	2.539		0	0	333470.604	6250456.59	No	78534406	1 x Ku
205V04	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	5.8		0	0	333484.554	6250394.90	No	78534407	1 x Ku
205V03	OnGrade	Existing City of S	Junction Pit		0.5	2.558		0	0	333506.564	6250407.54	No	78534408	1 x Ku
205V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.5	2.273		0	0	333505.864	6250423.94	No	78534409	1 x Ku
205V01	Node					0.109		0		333517.054	6250467.911		78534410	
206V03	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	1.953		0	0	333763.944	6250476.50	No	78534411	1 x Ku
206V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.0	2.26		0	0	333746.584	6250474.44	No	78534412	1 x Ku
206V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.0	3.197		0	0	333709.874	6250469.86	No	78534413	1 x Ku
208V02	OnGrade	Existing City of S	Junction Pit		0.1	2.798		0	0	333701.274	6250468.78	No	78534418	1 x Ku
208V01	Node					1.119		0		333669.684	6250475.169		78534419	
207V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	3.164		0	0	333709.624	6250492.59	No	78534414	1 x Ku
207V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.0	2.517		0	0	333707.344	6250484.30	No	78534415	1 x Ku
208V04	OnGrade	Dummy Pits	Unlimited Entry Pit		0.0	2.425		0	0	333796.034	6250453.56	No	78534416	1 x Ku
208V03	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	2.791		0	0	333729.924	6250463.28	No	78534417	1 x Ku
209V17	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.5	5.088		0	0	333864.904	6250234.38	No	78534420	1 x Ku
209V16	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.3	4.686		0	0	333854.924	6250232.08	No	78534421	1 x Ku
209V15	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.7	4.622		0	0	333848.534	6250249.76	No	78534422	1 x Ku
209V14	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.6	4.515		0	0	333839.124	6250268.71	No	78534423	1 x Ku
209V13	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.6	4.316		0	0	333827.614	6250287.18	No	78534424	1 x Ku
209V12	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.5	4.133		0	0	333823.764	6250305.56	No	78534425	1 x Ku
209V11	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.5	3.993		0	0	333822.334	6250314.62	No	78534426	1 x Ku
209V10	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.9	3.921		0	0	333811.334	6250323.31	No	78534427	1 x Ku
209V09	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	3.941		0	0	333807.024	6250329.10	No	78534428	1 x Ku
209V08	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	3.933		0	0	333793.154	6250347.87	No	78534429	1 x Ku
209V07	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.5	3.58		0	0	333792.724	6250356.25	No	78534430	1 x Ku
209V06	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.0	2.947		0	0	333791.054	6250378.12	No	78534431	1 x Ku
209V05	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.5	2.634		0	0	333776.064	6250382.47	No	78534432	1 x Ku
209V04	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.5	1.523		0	0	333752.314	6250395.90	No	78534433	1 x Ku
209V03	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.6	1.97		0	0	333742.094	6250417.76	No	78534434	1 x Ku
209V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	2.341		0	0	333735.934	6250451.05	No	78534435	1 x Ku
209V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	2.457		0	0	333734.484	6250455.15	No	78534436	1 x Ku
210V05	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	2.9		0	0	333695.184	6250423.66	No	78534437	1 x Ku
210V04	OnGrade	Existing City of S	1.0m Lintel 1.00m x 0.50m Grate		2.3	2.575		0	0	333700.774	6250412.10	No	78534438	1 x Ku
210V03	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.0	2.711		0	0	333727.694	6250415.04	No	78534439	1 x Ku
210V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.0	2.794		0	0	333734.424	6250408.73	No	78534440	1 x Ku
210V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.0	2.053		0	0	333739.184	6250417.12	No	78534441	1 x Ku
211V03	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.5	1.342		0	0	333757.244	6250408.32	No	78534442	1 x Ku
211V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.6	1.283		0	0	333759.874	6250403.46	No	78534443	1 x Ku
211V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.3	1.406		0	0	333761.784	6250399.99	No	78534444	1 x Ku
212V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	3.336		0	0	333789.324	6250399.33	No	78534445	1 x Ku
213V07	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.5	4.157		0	0	333834.694	6250253.49	No	78534446	1 x Ku
213V06	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.3	4.345		0	0	333827.874	6250248.31	No	78534447	1 x Ku
213V05	OnGrade	Existing City of S	1.00m x 0.94m Grate		1.0	3.796		0	0	333820.254	6250263.00	No	78534448	1 x Ku
213V04	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	3.688		0	0	333809.644	6250278.78	No	78534449	1 x Ku
213V03	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	3.691		0	0	333800.394	6250289.10	No	78534450	1 x Ku
213V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.3	3.849		0	0	333788.234	6250296.83	No	78534451	1 x Ku
213V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	4.218		0	0	333800.854	6250315.92	No	78534452	1 x Ku
214V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	5.927		0	0	333849.314	6250349.40	No	78534453	1 x Ku
214V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		0.1	5.484		0	0	333842.654	6250344.71	No	78534454	1 x Ku
215V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	4.271		0	0	333829.164	6250312.89	No	78534455	1 x Ku
216V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	4.496		0	0	333833.924	6250306.85	No	78534456	1 x Ku
217V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	4.816		0	0	333839.794	6250293.24	No	78534457	1 x Ku
218V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	5.027		0	0	333849.434	6250273.04	No	78534458	1 x Ku
219V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	5.104		0	0	333858.164	6250253.09	No	78534459	1 x Ku
220V02	OnGrade	Existing City of S	1.00m x 0.94m Grate		4.0	4.003		0	0	333769.524	6250346.78	No	78534460	1 x Ku
220V01	OnGrade	Existing City of S	Junction Pit		2.0	3.589		0	0	333790.804	6250357.89	No	78534461	1 x Ku
221V01	OnGrade	Existing City of S	1.00m x 0.94m Grate		2.0	4.164		0	0	333783.684	6250323.32	No	78534462	1 x Ku
O 200V02	Node					2.54		0		333481.974	6250487.176		78534463	
O 201V01	Node					2.354		0		333484.654	6250474.223		78534464	
O 205V03	Node					2.558		0		333511.564	6250412.540		78534465	
O 205V02	Node					2.273		0		333510.864	6250428.946		78534466	
O 208V02	Node					2.798		0		333706.274	6250473.786		78534467	
O 210V05	Node					2.9		0		333700.184	6250428.661		78534468	
N1085	Node							0		333454.554	6250552.811		78534644	
N1086	Node							0		333462.094	6250567.664		78534646	
N1092	Node							0		333499.884	6250525.901		78534664	
N1094	Node							0		333493.044	6250510.329		78534666	
N1095	Node							0		333560.894	6250457.022		78534671	
N1096	Node							0		333530.974	6250474.673		78534672	
N1097	Node							0		333537.644	6250489.310		78534692	
N1099	Node							0		333581.414	6250451.120		78534694	

BV04 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.280		0	0	333575.70	6250373.68	No	-253977401	1 x Ku
BV05 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.405		0	0	333585.58	6250322.62	No	-253977400	1 x Ku
BV06 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	6.518		0	0	333562.36	6250278.93	No	-253977399	1 x Ku
BV06 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	2.422		0	0	333577.50	6250284.10	No	-253977398	1 x Ku
BV06 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.3	2.422		0	0	333595.66	6250289.68	No	-253977397	1 x Ku
96 01	OnGrade	Existing City of S	Junction Pit		0.5	2.457		0	0.3	333602.62	6250292.95	No	376	1 x Ku
BV07 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.452		0	0	333614.77	6250227.69	No	-253977396	1 x Ku
BV07 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.2	2.440		0	0	333607.42	6250251.59	No	-253977395	1 x Ku
BV08 01	OnGrade	Interallotment Pits	Interallotment Pit 900x900		4.5	9.150		0	0	333573.74	6250241.23	No	-253977394	1 x Ku
130 01	OnGrade	Existing City of S	Junction Pit		2.0	5.643		0	0.3	333578.30	6250233.29	No	432	1 x Ku
BV09 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.471		0	0	333608.27	6250183.85	No	-253977393	1 x Ku
BV09 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.452		0	0	333596.51	6250222.08	No	-253977392	1 x Ku
BV10 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.487		0	0	333618.13	6250151.77	No	-253977391	1 x Ku
BV10 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.5	2.505		0	0	333623.29	6250135.01	No	-253977390	1 x Ku
134-01	OnGrade	Existing City of S	Junction Pit		2.0	2.538		0	0.3	333628.22	6250136.56	No	19916396	1 x Ku
BV11 06	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.551		0	0	333675.66	6250029.59	No	-253977389	1 x Ku
BV11 05	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.2	2.541		0	0	333669.78	6250048.71	No	-253977388	1 x Ku
BV11 04	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	2.532		0	0	333663.90	6250067.82	No	-253977387	1 x Ku
BV11 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.3	2.522		0	0	333658.03	6250086.94	No	-253977386	1 x Ku
BV11 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.5	2.516		0	0	333654.34	6250098.96	No	-253977385	1 x Ku
BV11 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.2	2.502		0	0	333645.68	6250127.16	No	-253977384	1 x Ku
81 01	OnGrade	Existing City of S	0.30m x 0.30m Grate		2.0	2.574		0	0.3	333655.47	6250114.22	No	332	1 x Ku
BV12 05	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.472		0	0	333727.35	6249829.05	No	-253977383	1 x Ku
BV12 04	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.2	2.452		0	0	333715.60	6249867.29	No	-253977382	1 x Ku
BV12 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	2.432		0	0	333703.84	6249905.52	No	-253977381	1 x Ku
BV12 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.4	2.358		0	0	333692.08	6249943.75	No	-253977380	1 x Ku
BV12 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 1200x1200		1.0	2.251		0	0	333688.60	6249955.10	No	-253977379	1 x Ku
PA17 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	3.366		0	0	333560.11	6249927.34	No	-253977378	1 x Ku
PA17 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.8	3.175		0	0	333572.14	6249940.70	No	-253977377	1 x Ku
PA19 03	OnGrade	Interallotment Pits	Interallotment Pit 600x600		4.5	4.280		0	0	333560.90	6249897.15	No	-253977376	1 x Ku
PA19 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.6	3.478		0	0	333570.11	6249914.82	No	-253977375	1 x Ku
PA19 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.2	3.437		0	0	333582.50	6249920.69	No	-253977374	1 x Ku
PA21 04	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	3.470		0	0	333607.16	6249870.43	No	-253977373	1 x Ku
PA21 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	3.344		0	0	333616.12	6249853.29	No	-253977372	1 x Ku
PA21 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	3.307		0	0	333626.48	6249840.00	No	-253977371	1 x Ku
PA21 01	Node					3.269		0		333631.83	6249827.844		-253977370	
PA22 05	OnGrade	Interallotment Pits	Interallotment Pit 600x600		4.5	3.994		0	0	333584.58	6249867.27	No	-253977369	1 x Ku
PA22 04	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.2	3.637		0	0	333596.31	6249865.06	No	-253977368	1 x Ku
PA22 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	3.409		0	0	333612.80	6249830.26	No	-253977367	1 x Ku
PA22 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.3	3.360		0	0	333620.30	6249808.47	No	-253977366	1 x Ku
PA22 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.5	3.187		0	0	333626.55	6249782.87	No	-253977365	1 x Ku
9 25	OnGrade	Existing City of S	Junction Pit		0.5	3.063		0	0.3	333639.72	6249792.49	No	39	1 x Ku
PA23 01	OnGrade	Standard Pits	1.8m Intel		4.5	2.215		0	0	333613.98	6249986.77	No	-253977363	1 x Ku
PA23 02	OnGrade	Existing City of S	Junction Pit		0.8	2.139		0	0	333628.75	6249987.19	No	-253977364	1 x Ku
79 03	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	4.0	2.191	0.2	0	0.5	333642.53	6249974.57	No	323	1 x Ku
79 02	Sag	Existing City of S	0.9m Lintel 0.90m x 0.50m Grate	5	1.7	2.191	0.1	0	0.5	333644.55	6249969.57	No	324	1 x Ku
PA3 02	OnGrade	Interallotment Pits	Interallotment Pit 600x600		4.5	3.039		0	0	333585.89	6250033.02	No	-253977362	1 x Ku
PA3 01	Node					3.453		0		333582.99	6250071.817		-253977361	
PA7 04	OnGrade	Standard Pits	1.8m Intel		4.5	2.684		0	0	333604.45	6249918.51	No	-253977360	1 x Ku
PA7 03	OnGrade	Standard Pits	1.8m Intel		0.5	2.203		0	0	333622.45	6249932.22	No	-253977359	1 x Ku
PA7 02	Sag	Standard Pits	2.4m Intel sag	1	1.2	2.007	0	0	0	333640.11	6249939.80	No	-253977358	1 x Ku
PA7 01	Sag	Standard Pits	2.4m Intel sag	1	2.5	1.983	0.012	0	0	333647.03	6249962.86	No	-253977357	1 x Ku
SP01 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	3.378		0	0	333663.41	6249874.83	No	-253977356	1 x Ku
SP01 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.5	3.574		0	0	333692.49	6249887.39	No	-253977355	1 x Ku
SP01 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.3	2.539		0	0	333698.20	6249889.86	No	-253977354	1 x Ku
SP02 04	OnGrade	Interallotment Pits	Interallotment Pit 600x600		4.5	10.000		0	0	333772.11	6249853.99	No	-253977353	1 x Ku
SP02 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.5	3.327		0	0	333752.68	6249875.18	No	-253977352	1 x Ku
SP02 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.5	2.715		0	0	333730.91	6249871.41	No	-253977351	1 x Ku
SP02 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.8	3.118		0	0	333722.33	6249899.32	No	-253977350	1 x Ku
SP03 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	3.600		0	0	333749.49	6249910.98	No	-253977349	1 x Ku
SP04 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.929		0	0	333666.29	6249799.29	No	-253977348	1 x Ku
SP04 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 900x900		2.5	2.665		0	0	333689.92	6249796.11	No	-253977347	1 x Ku
SP05 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.532		0	0	333726.46	6249791.20	No	-253977346	1 x Ku
SP05 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.8	2.608		0	0	333708.19	6249793.66	No	-253977345	1 x Ku
SP07 03	OnGrade	Standard Pits	1.8m Intel		4.5	3.409		0	0	333835.12	6249785.31	No	-253977341	1 x Ku
SP07 02	OnGrade	Standard Pits	1.8m Intel		1.2	3.250		0	0	333832.50	6249808.06	No	-253977340	1 x Ku
SP07 01	OnGrade	Standard Pits	1.8m Intel		2.5	2.905		0	0	333833.44	6249826.32	No	-253977339	1 x Ku
SP08 01	OnGrade	Interallotment Pits	Interallotment Pit 600x600		4.5	2.197		0	0	333617.99	6249898.74	No	-253977338	1 x Ku
SP09 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.446		0	0	333655.30	6249821.09	No	-253977337	1 x Ku
SP10 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	3.309		0	0	333816.66	6249855.24	No	-253977336	1 x Ku
SP11 01	OnGrade	Dummy Pits	Unlimited Entry Pit		4.5	3.284		0	0	333813.04	6249823.96	No	-253977335	1 x Ku
SP12 07	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.431		0	0	333786.86	6249935.59	No	-253977334	1 x Ku
SP12 06	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.5	2.332		0	0	333767.26	6249938.59	No	-253977333	1 x Ku
SP12 05	OnGrade	Standard Pits	1.8m Intel		2.5	2.332		0	0	333768.09	6249944.03	No	-253977332	1 x Ku
SP12 04	OnGrade	Standard Pits	1.8m Intel		1.5	2.268		0	0	333755.58	6249945.94	No	-253977331	1 x Ku
SP12 03	Sag	Standard Pits	2.4m Intel sag	1	1.5	2.136	0	0	0	333752.27	6249953.58	No	-253977330	1 x Ku
SP12 02	Sag	Standard Pits	2.4m Intel sag	1	1.5	2.136	0	0	0	333746.83	6249954.41	No	-253977329	1 x Ku
SP12 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.6	2.484		0	0	333726.51	6249943.52	No	-253977328	1 x Ku
TG01 04	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		4.5	2.491		0	0	333631.77	6250155.96	No	-253977327	1 x Ku
TG01 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.6	2.475		0	0	333629.84	6250178.22	No	-253977326	1 x Ku
TG01 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		1.5	2.587		0	0	333645.72	6250217.37	No	-253977325	1 x Ku
TG01 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.4	3.390		0	0	333685.44	6250219.16	No	-253977324	1 x Ku
TG02 04	OnGrade	Existing City of S	Junction Pit		0.5	4.663		0	0	333745.48	6250149.07	No	-253977323	1 x Ku
TG02 03	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		2.2	4.650		0	0	333743.72	6250149.57	No	-253977322	1 x Ku
TG02 02	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.3	4.163		0	0	333728.58	6250135.13	No	-253977321	1 x Ku
TG02 01	OnGrade	Surface Inlet Pits	Surface Inlet Pit 600x600		0.6	3.242		0	0	333693.22	6250110.90	No	-253977320	1 x Ku
O BV02 02	Node					2.253		0		333548.65	6250399.019		-253977319	
O BV03 02	Node					2.253		0		333566.90	6250404.632		-253977318	
O PA19 01	Node					3.437		0						

DETENTION BASIN DETAILS														
Name	Elev	Surf. Area	Init Vol. (cu.m)	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type	x	y	HED	Crest RL	Crest Length
SUB-CATCHMENT DETAILS														
Name	Pit or Node	Total Area	Paved Area	Grass Area	Supp Area	Paved Time	Grass Time	Supp Time	Paved Length	Grass Length	Supp Length	Paved Slope(%)	Grass Slope	Supp Slope
		(ha)		%	%	(min)	(min)	(min)	(m)	(m)	(m)	%	%	%
C 1\24	1\24	15.3120	100.0	0.0	0.0	10.7	10.7	0						
C 5\02	5\02	0.1495	100.0	0.0	0.0	3	3	0						
C 46\12	46\12	0.0552	100.0	0.0	0.0	5	5	0						
C 46\10	46\10	0.2101	100.0	0.0	0.0	3	3	0						
C 46\05	46\05	0.8040	100.0	0.0	0.0	3	3	0						
C 7\02	7\02	0.0529	100.0	0.0	0.0	1	1	0						
C 9\12	9\12	0.1404	100.0	0.0	0.0	3	3	0						
C 9\11	9\11	0.1613	100.0	0.0	0.0	3	3	0						
C 8\06	8\06	4.0865	90.0	10.0	0.0	5	5	0						
C 11\43	11\43	96.1138	100.0	0.0	0.0	20.1	20.1	0						
C 11\12	11\12	0.0318	90.0	10.0	0.0	5	10	0						
C 11\03	11\03	0.1477	100.0	0.0	0.0	5	5	0						
C 12\01	12\01	0.1799	100.0	0.0	0.0	3	3	0						
C 19\21	19\21	0.0494	100.0	0.0	0.0	5	5	0						
C 13\02	13\02	0.0363	100.0	0.0	0.0	1	1	0						
C 13\01	13\01	0.0340	100.0	0.0	0.0	3	3	0						
C 16\03	16\03	2.4172	100.0	0.0	0.0	5	5	0						
C 17\02	17\02	0.4136	100.0	0.0	0.0	3	3	0						
C 18\01	18\01	0.1009	100.0	0.0	0.0	1	1	0						
C 19\28	19\28	0.9333	100.0	0.0	0.0	4	4	0						
C 35\04	35\04	0.0336	100.0	0.0	0.0	1	1	0						
C 35\03	35\03	0.0536	100.0	0.0	0.0	1	1	0						
C 38\10	38\10	0.6444	100.0	0.0	0.0	4	4	0						
C 38\05	38\05	0.0888	100.0	0.0	0.0	5	5	0						
C 38\03	38\03	0.2205	100.0	0.0	0.0	3	3	0						
C 36\03	36\03	0.2236	100.0	0.0	0.0	3	3	0						
C 38\17	38\17	7.0920	100.0	0.0	0.0	9.5	9.5	0						
C 38\15	38\15	0.2088	100.0	0.0	0.0	3	3	0						
C 39\05	39\05	0.0430	100.0	0.0	0.0	1	1	0						
C 40\03	40\03	0.0617	100.0	0.0	0.0	1	1	0						
C 40\02	40\02	0.0057	100.0	0.0	0.0	1	1	0						
C 40\01	40\01	0.0198	100.0	0.0	0.0	1	1	0						
C 41\02	41\02	0.0593	100.0	0.0	0.0	1	1	0						
C 41\01	41\01	0.1095	100.0	0.0	0.0	3	3	0						
C 42\02	42\02	0.1431	100.0	0.0	0.0	3	3	0						
C 42\01	42\01	0.0063	100.0	0.0	0.0	1	1	0						
C 43\03	43\03	0.4964	100.0	0.0	0.0	3	3	0						
C 43\02	43\02	0.1104	100.0	0.0	0.0	3	3	0						
C 43\01	43\01	0.0368	100.0	0.0	0.0	1	1	0						
C 44\02	44\02	1.6650	100.0	0.0	0.0	5	5	0						
C 45\05	45\05	3.0588	100.0	0.0	0.0	5	5	0						
C 45\01	45\01	0.0347	100.0	0.0	0.0	5	5	0						
C 46\27	46\27	0.2258	100.0	0.0	0.0	3	3	0						
C 46\22	46\22	0.1331	100.0	0.0	0.0	5	5	0						
C 47\02	47\02	28.9309	100.0	0.0	0.0	14.4	14.4	0						
C 48\09	48\09	0.8568	100.0	0.0	0.0	4	4	0						
C 49\01	49\01	0.0045	0.0	100.0	0.0	1	1	0						
C 50\04	50\04	0.0448	0.0	100.0	0.0	1	1	0						
C 50\03	50\03	0.0532	0.0	100.0	0.0	1	1	0						
C 51\01	51\01	1.3154	100.0	0.0	0.0	5	5	0						
C 52\05	52\05	0.0512	100.0	0.0	0.0	1	1	0						
C 52\04	52\04	0.0552	100.0	0.0	0.0	1	1	0						
C 52\03	52\03	0.0166	100.0	0.0	0.0	1	1	0						
C 52\02	52\02	0.0180	100.0	0.0	0.0	1	1	0						
C 54\04	54\04	0.0609	100.0	0.0	0.0	1	1	0						
C 59\02	59\02	0.0005	100.0	0.0	0.0	1	1	0						
C 59\01	59\01	0.0103	100.0	0.0	0.0	1	1	0						
C 60\01	60\01	0.3317	100.0	0.0	0.0	3	3	0						
C 61\02	61\02	0.0838	100.0	0.0	0.0	1	1	0						
C 62\03	62\03	0.0940	100.0	0.0	0.0	1	1	0						
C 63\03	63\03	0.0179	100.0	0.0	0.0	1	1	0						
C 63\02	63\02	0.0256	100.0	0.0	0.0	1	1	0						
C 64\02	64\02	0.0116	100.0	0.0	0.0	1	1	0						
C 64\01	64\01	0.0102	100.0	0.0	0.0	1	1	0						
C 65\02	65\02	0.2012	100.0	0.0	0.0	3	3	0						
C 68\02	68\02	0.0065	100.0	0.0	0.0	1	1	0						
C 68\01	68\01	0.0176	100.0	0.0	0.0	1	1	0						
C 69\02	69\02	0.0282	100.0	0.0	0.0	1	1	0						
C 69\01	69\01	0.0273	100.0	0.0	0.0	1	1	0						
C 70\03	70\03	0.0953	50.0	50.0	0.0	3	3	0						
C 70\02	70\02	0.0092	100.0	0.0	0.0	1	1	0						
C 71\01	71\01	0.0700	100.0	0.0	0.0	1	1	0						
C 74\02	74\02	0.1022	100.0	0.0	0.0	3	3	0						
C 74\01	74\01	0.0037	100.0	0.0	0.0	1	1	0						
C 75\02	75\02	0.0032	100.0	0.0	0.0	1	1	0						
C 75\01	75\01	0.0774	100.0	0.0	0.0	1	1	0						
C 76\01	76\01	0.0117	100.0	0.0	0.0	1	1	0						
C 77\01	77\01	0.0048	100.0	0.0	0.0	1	1	0						
C 78\08	78\08	0.1399	100.0	0.0	0.0	3	3	0						
C 78\06	78\06	0.0790	100.0	0.0	0.0	1	1	0						
C 78\05	78\05	0.0074	100.0	0.0	0.0	1	1	0						
C 78\04	78\04	0.0217	100.0	0.0	0.0	1	1	0						
C 78\02	78\02	0.0075	100.0	0.0	0.0	1	1	0						
C 78\01	78\01	0.0178	100.0	0.0	0.0	1	1	0						
C 80\01	80\01	0.1822	100.0	0.0	0.0	3	3	0						
C 89\01	89\01	0.0424	100.0	0.0	0.0	1	1	0						
C 182\07	182\07	0.0061	100.0	0.0	0.0	1	1	0						
C 182\06	182\06	0.0045	100.0	0.0	0.0	1	1	0						
C 182\05	182\05	0.0087	100.0	0.0	0.0	1	1	0						
C 111\03	111\03	0.0835	100.0	0.0	0.0	1	1	0						
C 112\01	112\01	0.2035	100.0	0.0	0.0	5	5	0						
C 151\01	151\01	0.1693	100.0	0.0	0.0	3	3	0						
C 156\02	156\02	0.0841	100.0	0.0	0.0	1	1	0						
C 157\01	157\01	0.2298	100.0	0.0	0.0	3	3	0						
C 158\01	158\01	0.0043	100.0	0.0	0.0	1	1	0						
C 159\01	159\01	0.2587	100.0	0.0	0.0	3	3	0						
C 160\02	160\02	0.5198	50.0	50.0	0.0	4	4	0						
C 160\01	160\01	0.0286	100.0	0.0	0.0	1	1	0						
C 164\01	164\01	0.0245	100.0	0.0	0.0	1	1	0						
C 166\01	166\01	0.0072	100.0	0.0	0.0	1	1	0						
C 168\01	168\01	0.1089	100.0	0.0	0.0	3	3	0						
C 169\01	169\01	0.0210	100.0	0.0	0.0	1	1	0						
C 170\03	170\03	0.4313	100.0	0.0	0.0	3	3	0						
C 171\01	171\01	0.0006	100.0	0.0	0.0	1	1	0						
C 172\01	172\01	0.0325	100.0	0.0	0.0	1	1	0						
C 173\01	173\01	0.0023	100.0	0.0	0.0	1	1	0						
C 174\01	174\01	0.0290	100.0	0.0	0.0	1	1	0						
C 175\01	175\01	0.0088	100.0	0.0	0.0	1	1	0						
C 176\01	176\01	0.0454	100.0	0.0	0.0	1	1	0						
C 182\09	182\09	0.0092	100.0	0.0	0.0	1	1	0						
C 182\08	182\08	0.0065	100.0	0.0	0.0	1	1	0						
C 187\02	187\02	0.6514	50.0	50.0	0.0	4	4	0						
C 197\02	197\02	0.0047	100.0	0.0	0.0	1	1	0						
C 197\03	197\03	0.0964	100.0											

C 208\04	208\04	4.7199	100.0	0.0	0.0	5	5	0							
C 208\03	208\03	0.0063	100.0	0.0	0.0	1	1	0							
C 209\17	209\17	0.0127	100.0	0.0	0.0	1	1	0							
C 209\16	209\16	0.0186	100.0	0.0	0.0	1	1	0							
C 209\15	209\15	0.0315	100.0	0.0	0.0	1	1	0							
C 209\14	209\14	0.0291	100.0	0.0	0.0	1	1	0							
C 209\13	209\13	0.0343	100.0	0.0	0.0	1	1	0							
C 209\12	209\12	0.0332	100.0	0.0	0.0	1	1	0							
C 209\11	209\11	0.1162	100.0	0.0	0.0	3	3	0							
C 209\10	209\10	0.0013	100.0	0.0	0.0	1	1	0							
C 209\09	209\09	0.0053	100.0	0.0	0.0	1	1	0							
C 209\08	209\08	0.0459	100.0	0.0	0.0	1	1	0							
C 209\07	209\07	0.0250	100.0	0.0	0.0	1	1	0							
C 209\06	209\06	0.0852	100.0	0.0	0.0	1	1	0							
C 209\04	209\04	0.3104	100.0	0.0	0.0	3	3	0							
C 209\03	209\03	0.1307	100.0	0.0	0.0	3	3	0							
C 209\02	209\02	0.0079	100.0	0.0	0.0	1	1	0							
C 209\01	209\01	0.0081	100.0	0.0	0.0	1	1	0							
C 210\05	210\05	0.0268	100.0	0.0	0.0	1	1	0							
C 210\04	210\04	0.0877	100.0	0.0	0.0	1	1	0							
C 210\03	210\03	0.0120	100.0	0.0	0.0	1	1	0							
C 211\03	211\03	0.1106	100.0	0.0	0.0	3	3	0							
C 211\02	211\02	0.1625	100.0	0.0	0.0	3	3	0							
C 212\01	212\01	0.0385	100.0	0.0	0.0	1	1	0							
C 213\07	213\07	0.0199	100.0	0.0	0.0	1	1	0							
C 213\06	213\06	0.0514	100.0	0.0	0.0	1	1	0							
C 213\05	213\05	0.0259	100.0	0.0	0.0	1	1	0							
C 213\04	213\04	0.0609	100.0	0.0	0.0	1	1	0							
C 213\03	213\03	0.0619	100.0	0.0	0.0	1	1	0							
C 213\02	213\02	0.1891	100.0	0.0	0.0	3	3	0							
C 213\01	213\01	0.0139	100.0	0.0	0.0	1	1	0							
C 214\02	214\02	0.0476	100.0	0.0	0.0	1	1	0							
C 215\01	215\01	0.2350	100.0	0.0	0.0	3	3	0							
C 216\01	216\01	0.0292	100.0	0.0	0.0	1	1	0							
C 217\01	217\01	0.0876	100.0	0.0	0.0	1	1	0							
C 218\01	218\01	0.0664	100.0	0.0	0.0	1	1	0							
C 219\01	219\01	0.0530	100.0	0.0	0.0	1	1	0							
C 220\02	220\02	0.0390	100.0	0.0	0.0	1	1	0							
C 221\01	221\01	0.0425	100.0	0.0	0.0	1	1	0							
C Harb 6	N1102	0.0373	100.0	0.0	0.0	1	1	0							
C Harb 7	N1104	0.0080	100.0	0.0	0.0	1	1	0							
C Harb 8	N1106	0.0092	100.0	0.0	0.0	1	1	0							
C Harb 9	N1108	0.0536	100.0	0.0	0.0	1	1	0							
C Harb 10	N1110	0.2080	100.0	0.0	0.0	3	3	0							
C DQ 1	Dummy DQ 1	0.3103	100.0	0.0	0.0	3	3	0							
C DQ 2	Dummy DQ 2	0.3178	100.0	0.0	0.0	3	3	0							
Cat468	Pit1483	11.7250	60.0	40.0	0.0	9.3	11.4	0							
C DQ 3	Pit1563	0.0642	100.0	0.0	0.0	1	1	0							
C BV01\02	BV01\02	0.0626	100.0	0.0	0.0	1	2	0							
C 102\02	102\02	0.3722	100.0	0.0	0.0	3	5	0							
C BV02\02	BV02\02	0.0797	100.0	0.0	0.0	1	2	0							
C BV02\01	BV02\01	0.0160	100.0	0.0	0.0	1	2	0							
C BV03\01	BV03\01	0.0167	100.0	0.0	0.0	1	2	0							
C BV05\01	BV05\01	0.0568	100.0	0.0	0.0	1	2	0							
C BV06\03	BV06\03	2.9534	100.0	0.0	0.0	1	2	0							
C BV06\02	BV06\02	0.1436	100.0	0.0	0.0	1	2	0							
C BV06\01	BV06\01	0.1355	100.0	0.0	0.0	1	2	0							
C BV07\02	BV07\02	0.0996	100.0	0.0	0.0	1	2	0							
C BV07\01	BV07\01	0.1850	100.0	0.0	0.0	1	2	0							
C BV08\01	BV08\01	0.1274	100.0	0.0	0.0	1	2	0							
C 130\01	130\01	0.0512	100.0	0.0	0.0	1	2	0							
C BV10\01	BV10\01	0.0715	100.0	0.0	0.0	1	2	0							
C BV11\05	BV11\05	0.1113	100.0	0.0	0.0	1	2	0							
C BV11\04	BV11\04	0.1104	100.0	0.0	0.0	1	2	0							
C BV11\03	BV11\03	0.2603	100.0	0.0	0.0	1	2	0							
C BV11\02	BV11\02	0.0461	100.0	0.0	0.0	1	2	0							
C BV12\05	BV12\05	0.0657	100.0	0.0	0.0	1	2	0							
C BV12\04	BV12\04	0.0891	100.0	0.0	0.0	1	2	0							
C BV12\03	BV12\03	0.1041	100.0	0.0	0.0	1	2	0							
C BV12\02	BV12\02	0.0800	100.0	0.0	0.0	1	2	0							
C BV12\01	BV12\01	0.1547	100.0	0.0	0.0	1	2	0							
C PA17\02	PA17\02	0.0962	100.0	0.0	0.0	1	2	0							
C PA19\03	PA19\03	0.0974	100.0	0.0	0.0	1	2	0							
C PA19\02	PA19\02	0.0248	100.0	0.0	0.0	1	2	0							
C PA19\01	PA19\01	0.0190	100.0	0.0	0.0	1	2	0							
C PA21\04	PA21\04	0.0695	100.0	0.0	0.0	1	2	0							
C PA21\03	PA21\03	0.0527	100.0	0.0	0.0	1	2	0							
C PA21\02	PA21\02	0.0271	100.0	0.0	0.0	1	2	0							
C PA22\05	PA22\05	0.0999	100.0	0.0	0.0	1	2	0							
C PA22\04	PA22\04	0.0181	100.0	0.0	0.0	1	2	0							
C PA22\02	PA22\02	0.0252	100.0	0.0	0.0	1	2	0							
C PA23\01	PA23\01	0.0925	100.0	0.0	0.0	1	2	0							
C 79\03	79\03	0.0901	90.0	10.0	0.0	3	3	0							
C 79\02	79\02	0.0426	100.0	0.0	0.0	1	1	0							
C PA3\02	PA3\02	1.2290	100.0	0.0	0.0	1	2	0							
C PA7\04	PA7\04	0.0472	100.0	0.0	0.0	1	2	0							
C PA7\03	PA7\03	0.0184	100.0	0.0	0.0	1	2	0							
C PA7\02	PA7\02	0.0288	100.0	0.0	0.0	1	2	0							
C PA7\01	PA7\01	0.0318	100.0	0.0	0.0	1	2	0							
C SP01\03	SP01\03	0.0292	100.0	0.0	0.0	1	2	0							
C SP01\02	SP01\02	0.0253	100.0	0.0	0.0	1	2	0							
C SP02\04	SP02\04	0.0727	100.0	0.0	0.0	1	2	0							
C SP02\03	SP02\03	0.0411	100.0	0.0	0.0	1	2	0							
C SP02\02	SP02\02	0.0475	100.0	0.0	0.0	1	2	0							
C SP02\01	SP02\01	0.2239	100.0	0.0	0.0	1	2	0							
C SP03\01	SP03\01	0.0565	100.0	0.0	0.0	1	2	0							
C SP04\02	SP04\02	0.1479	100.0	0.0	0.0	1	2	0							
C SP04\01	SP04\01	0.0327	100.0	0.0	0.0	1	2	0							
C SP05\02	SP05\02	0.0352	100.0	0.0	0.0	1	2	0							
C SP05\01	SP05\01	0.0446	100.0	0.0	0.0	1	2	0							
C SP07\03	SP07\03	0.0308	100.0	0.0	0.0	1	2	0							
C SP07\02	SP07\02	0.0302	100.0	0.0	0.0	1	2	0							
C SP08\01	SP08\01	0.4324	100.0	0.0	0.0	1	2	0							
C SP09\01	SP09\01	0.5080	100.0	0.0	0.0	1	2	0							
C SP10\01	SP10\01	0.4956	100.0	0.0	0.0	3	3	0							
C SP11\01	SP11\01	0.4354	100.0	0.0	0.0	3	3	0							
C SP12\07	SP12\07	0.0108	100.0	0.0	0.0	1	2	0							
C SP12\06	SP12\06	0.0144	100.0	0.0	0.0	1	2	0							
C SP12\05	SP12\05	0.0102	100.0	0.0	0.0	1	2	0							
C SP12\04	SP12\04	0.0036	100.0	0.0	0.0	1	2	0							
C SP12\03	SP12\03	0.0247	100.0	0.0	0.0	1	2	0							
C SP12\02	SP12\02	0.2494	100.0	0.0	0.0	1	2	0							
C TG01\03	TG01\03	0.0158	100.0	0.0	0.0	1	2	0							
C TG01\01	TG01\01	0.8897													

C M02	M02	0.0075	100.0		0.0	0.0	1	2	0							
C M01	M01	0.0293	100.0		0.0	0.0	1	2	0							
C O01	O01	0.0259	100.0		0.0	0.0	1	2	0							
C P04	P04	0.0165	100.0		0.0	0.0	1	2	0							
C P03	P03	0.0146	100.0		0.0	0.0	1	2	0							
C P02	P02	0.0059	100.0		0.0	0.0	1	2	0							
C P01	P01	0.0130	100.0		0.0	0.0	1	2	0							
C 24A-01	24A-01 A	0.0057	100.0		0.0	0.0	1	2	0							
C R02	R02	0.0317	100.0		0.0	0.0	1	2	0							
C R01	R01	0.0258	100.0		0.0	0.0	1	2	0							
C S03	S03	0.0454	100.0		0.0	0.0	1	2	0							
C S02	S02	0.2109	100.0		0.0	0.0	1	2	0							
C S01	S01	0.1209	100.0		0.0	0.0	1	2	0							
PIPE DETAILS																
Name	From	To	Length		U/S IL	D/S IL	Slope	Type		Dia	I.D.	Rough	Pipe Is	No. Pipes	Chg From	At Chg
			(m)		(m)	(m)	(%)			(mm)	(mm)					
P 1\24	1\24	1\23	6.4		0.120	0.120	0.00	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\24	0
P 1\23	1\23	1\22	6.4		0.120	0.110	0.16	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\23	0
P 1\22	1\22	1\21	59.49		0.110	0.010	0.17	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\22	0
P 1\21	1\21	1\20	9.649		0.010	0.000	0.10	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\21	0
P 1\20	1\20	1\19	31.638		0.000	-0.049	0.15	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\20	0
P 1\19	1\19	1\18	26.37		-0.049	-0.090	0.16	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\19	0
P 1\18	1\18	1\17	8.046		-0.090	-0.100	0.12	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\18	0
P 1\17	1\17	1\16	37.189		-0.100	-0.162	0.17	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\17	0
P 1\16	1\16	1\15	22.82		-0.162	-0.200	0.17	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\16	0
P 1\15	1\15	1\14	17.763		-0.200	-0.230	0.17	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\15	0
P 1\14	1\14	1\13	9.903		-0.230	-0.230	0.00	Box Culverts		2.1W x 1.8H		0.3	Existing	1	1\14	0
P 1\13	1\13	1\12	16.315		-0.849	-0.870	0.13	Box Culverts		3W x 2.4H		0.3	Existing	1	1\13	0
P 1\12	1\12	1\11	17.827		-0.870	-0.890	0.11	Box Culverts		3W x 2.4H		0.3	Existing	1	1\12	0
P 1\11	1\11	1\10	80.999		-0.890	-1.000	0.14	Box Culverts		3W x 2.4H		0.3	Existing	1	1\11	0
P 1\10	1\10	1\09	41.262		-1.000	-1.050	0.12	Box Culverts		3W x 2.4H		0.3	Existing	1	1\10	0
P 1\09	1\09	1\08	24.819		-1.050	-1.060	0.04	Box Culverts		3W x 2.4H		0.3	Existing	1	1\09	0
P 1\08	1\08	1\07	29.4		-1.080	-1.120	0.14	Box Culverts		3W x 2.4H		0.3	Existing	1	1\08	0
P 1\07	1\07	1\06	165.963		-1.120	-1.330	0.13	Box Culverts		3W x 2.4H		0.3	Existing	1	1\07	0
P 1\06	1\06	1\05	34.693		-1.330	-1.380	0.14	Box Culverts		3W x 2.4H		0.3	Existing	1	1\06	0
P 1\05	1\05	1\04	91.882		-1.380	-1.490	0.12	Box Culverts		3W x 2.4H		0.3	Existing	1	1\05	0
P 1\04	1\04	1\03	10.41		-1.490	-1.510	0.19	Box Culverts		3W x 2.4H		0.3	Existing	1	1\04	0
P 1\03	1\03	1\02	113.333		-1.510	-1.620	0.10	Box Culverts		3W x 2.4H		0.3	Existing	1	1\03	0
P 1\02	1\02	1\01	32.628		-1.620	-1.620	0.00	Box Culverts		3W x 2.4H		0.3	Existing	1	1\02	0
P 5\03	5\03	5\02	20.01		1.220	0.890	1.65	RCP Class 2		375	375	0.3	Existing	1	5\03	0
P 5\02	5\02	5\01	27.679		0.860	0.310	1.99	RCP Class 2		375	375	0.3	Existing	1	5\02	0
P 5\01	5\01	46\17	9.95		0.220	0.120	1.01	RCP Class 2		600	600	0.3	Existing	1	5\01	0
P 46\17	46\17	46\16	11.384		-0.867	-0.877	0.09	Box Culverts		3.71W x 2.175H		1.5	Existing	1	46\17	0
P 46\16	46\16	46\15	19.209		-0.877	-0.897	0.10	Box Culverts		3.71W x 2.21H		1.5	Existing	1	46\16	0
P 46\15	46\15	46\14	12.763		-0.897	-0.910	0.10	Box Culverts		3.71W x 2.21H		1.5	Existing	1	46\15	0
P 46\14	46\14	46\13	18.766		-0.910	-0.929	0.10	Box Culverts		3.71W x 2.175H		1.5	Existing	1	46\14	0
P 46\13	46\13	46\12	65.916		-0.929	-0.997	0.10	Box Culverts		3.71W x 2.175H		1.5	Existing	1	46\13	0
P 46\12	46\12	46\11	11.5		-0.997	-0.997	0.00	Box Culverts		3.71W x 2.21H		1.5	Existing	1	46\12	0
P 46\11	46\11	46\10	27.884		-0.997	-0.997	0.00	Box Culverts		3.71W x 2.21H		1.5	Existing	1	46\11	0
P 46\10	46\10	46\09	23.507		-0.997	-0.997	0.00	Box Culverts		3.06W x 2.2H		1.5	Existing	1	46\10	0
P 46\09	46\09	46\08	11.5		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\09	0
P 46\08	46\08	46\07	56.548		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\08	0
P 46\07	46\07	46\06	16.942		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\07	0
P 46\06	46\06	46\05	14.561		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\06	0
P 46\05	46\05	46\04A	27.974		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\05	0
P 46\04A	46\04A	46\04	112.444		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\04A	0
P 46\04	46\04	46\03	24.117		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\04	0
P 46\03	46\03	46\02	49.194		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\03	0
P 46\02	46\02	46\01	30.375		-0.997	-0.997	0.00	Box Culverts		2.9W x 2.22H		1.5	Existing	2	46\02	0
P 7\03	7\03	7\02	3.968		2.600	2.490	2.77	RCP Class 2		300	300	0.3	Existing	1	7\03	0
P 7\02	7\02	7\01	1.886		2.490	2.480	0.53	RCP Class 2		375	375	0.3	Existing	1	7\02	0
P 7\01	7\01	8\04	3.546		1.340	1.000	9.59	RCP Class 2		375	375	0.3	Existing	1	7\01	0
P 8\04	8\04	8\03	3.629		0.550	0.500	1.38	Box Culverts		1.2W x 1.5H		0.3	Existing	1	8\04	0
P 8\03	8\03	8\02	10.536		0.480	0.380	0.95	RCP Class 2		1050	1070	0.3	Existing	1	8\03	0
P 8\02	8\02	8\01	19.954		0.360	0.160	1.00	RCP Class 2		1050	1070	0.3	Existing	1	8\02	0
P 8\01	8\01	9\16	5.921		0.150	0.000	2.53	RCP Class 2		1050	1070	0.3	Existing	1	8\01	0
P 9\16	9\16	9\15	20.007		-0.199	-0.225	0.13	Box Culverts		3.35W x 1.6H		1	Existing	1	9\16	0
P 9\15	9\15	9\14	112.31		-0.225	-0.371	0.13	Box Culverts		3.35W x 1.6H		1	Existing	1	9\15	0
P 9\14	9\14	9\13	13.594		-0.371	-0.389	0.13	Box Culverts		3.35W x 1.6H		1	Existing	1	9\14	0
P 9\13	9\13	9\12	11.2		-0.389	-0.389	0.00	Box Culverts		3.35W x 1.6H		1	Existing	1	9\13	0
P 9\12	9\12	9\11	54.774		-0.389	-0.389	0.00	Box Culverts		3.525W x 1.6H		1	Existing	1	9\12	0
P 9\11	9\11	9\10	46.423		-0.389	-0.389	0.00	Box Culverts		3.525W x 1.6H		1	Existing	1	9\11	0
P 9\10	9\10	9\09	11.2		-0.389	-0.389	0.00	Box Culverts		3.525W x 1.6H		1	Existing	1	9\10	0
P 9\09	9\09	9\08	11.2		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\09	0
P 9\08	9\08	9\07	11.2		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\08	0
P 9\07	9\07	9\06	29.431		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\07	0
P 9\06	9\06	9\05	54.352		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\06	0
P 9\05	9\05	9\04	11.776		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\05	0
P 9\04	9\04	9\03	11.2		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\04	0
P 9\03	9\03	9\02	24.86		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\03	0
P 9\02	9\02	9\01	30.23		-0.389	-0.389	0.00	Box Culverts		3.505W x 1.6H		1	Existing	1	9\02	0
P 8\06	8\06	8\05	8.333		0.650	0.600	0.60	Box Culverts		1.2W x 1.5H		0.3	Existing	1	8\06	0
P 8\05	8\05	8\04	8.26		0.600	0.550	0.61	Box Culverts		1.2W x 1.5H		0.3	Existing	1	8\05	0
P 11\43	11\43	11\42	11.2		0.600	0.560	0.36	Box Culverts		3.6W x 2.1H		0.3	Existing	1	11\43	0
P 11\42	11\42	11\41	11.2		0.550	0.540	0.09	Box Culverts		3.6W x 2.1H		0.3	Existing	1	11\42	0
P 11\41	11\41	11\40	11.2		0.540	0.530	0.09	Box Culverts		3.6W x 2.1H		0.3	Existing	1	11\41	0
P 11\40	11\40	11\39	11.2		0.530	0.440	0.80	Box Culverts		3.6W x 2.1H		0.3	Existing	1	11\40	0
P 11\39	11\39	11\38	13.33		0.440	-0.060	3.75	Box Culverts		4.3W x 2.4H		0.3	Existing	1	11\39	0
P 11\38	11\38	11\37	13.33		-0.060	-0.190	0.98	Box Culverts		4.3W x 2.4H		0.3	Existing	1	11\38	0
P 11\37	11\37	11\36	13.33		-0.190	-0.141	-0.37	Box Culverts		4.3W x 2.4H		0.3	Existing	1	11\37	0
P 11\36	11\36	11\35	13.33		-0.141	-0.083	-0.44	Box Culverts								

P 19I07	19I07	19I06	17.926	-0.087	-0.193	0.59	RCP Class 2	1500	1524	0.3	Existing	1	19I07	0
P 19I06	19I06	19I05	17.031	-0.193	-0.294	0.59	RCP Class 2	1500	1524	0.3	Existing	1	19I06	0
P 19I05	19I05	19I04	12.667	-0.294	-0.369	0.59	RCP Class 2	1500	1524	0.3	Existing	1	19I05	0
P 19I04	19I04	19I03	21.329	-0.369	-0.490	0.57	RCP Class 2	1500	1524	0.3	Existing	1	19I04	0
P 19I03	19I03	19I02	7.904	-0.490	-0.490	0.00	RCP Class 2	1500	1524	0.3	Existing	1	19I03	0
P 19I02	19I02	19I01	11.361	-0.400	-0.420	0.18	RCP Class 2	1500	1524	0.3	Existing	1	19I02	0
P 19I01	19I01	46I15	19.935	-0.490	-0.897	2.04	RCP Class 2	1500	1524	0.3	Existing	1	19I01	0
P 13I02	13I02	13I01	6.693	1.760	1.320	6.57	RCP Class 2	375	375	0.3	Existing	1	13I02	0
P 13I01	13I01	10I01	4.91	1.320	1.200	2.44	RCP Class 2	375	375	0.3	Existing	1	13I01	0
P 10I01	10I01	9I18	7.11	0.430	-0.129	7.86	RCP Class 2	375	375	0.3	Existing	1	10I01	0
P 9I18	9I18	9I17	42.746	-0.129	-0.185	0.13	Box Culverts	3.35W x 1.6H	1	Existing	1	9I18	0	
P 9I17	9I17	9I16	11.2	-0.185	-0.199	0.12	Box Culverts	3.35W x 1.6H	1	Existing	1	9I17	0	
P 15I04	15I04	15I03	10.102	2.480	2.380	0.99	RCP Class 2	450	450	0.3	Existing	1	15I04	0
P 15I03	15I03	15I02	10.77	2.300	2.200	0.93	RCP Class 2	525	525	0.3	Existing	1	15I03	0
P 15I02	15I02	15I01	9.309	0.440	0.340	1.07	RCP Class 2	525	525	0.3	Existing	1	15I02	0
P 15I01	15I01	9I19	7.93	0.320	-0.111	5.44	RCP Class 2	525	525	0.3	Existing	1	15I01	0
P 9I19	9I19	9I18	14.555	-0.111	-0.129	0.12	Box Culverts	3.35W x 1.6H	1	Existing	1	9I19	0	
P 16I03	16I03	16I02	64.878	0.490	0.050	0.68	RCP Class 2	750	750	0.3	Existing	1	16I03	0
P 16I02	16I02	16I01	9.332	0.050	0.040	0.11	RCP Class 2	750	750	0.3	Existing	1	16I02	0
P 16I01	16I01	11I35	6.321	0.040	0.030	0.16	RCP Class 2	750	750	0.3	Existing	1	16I01	0
P 17I02	17I02	17I01	11.229	1.560	0.330	10.95	uPVC	225	242	0.3	Existing	1	17I02	0
P 17I01	17I01	19I13	4.52	0.300	0.280	0.44	RCP Class 2	525	525	0.3	Existing	1	17I01	0
P 18I02	18I02	18I01	1.342	1.330	1.300	2.24	RCP Class 2	300	300	0.3	Existing	1	18I02	0
P 18I01	18I01	70I01	3.203	1.260	1.100	5.00	RCP Class 2	300	300	0.3	Existing	1	18I01	0
P 70I01	70I01	19I17	7.101	1.100	1.050	0.70	RCP Class 2	450	450	0.3	Existing	1	70I01	0
P 19I28	19I28	19I27	14.325	4.200	3.800	2.79	uPVC	375	386	0.3	Existing	1	19I28	0
P 19I27	19I27	19I26	111.522	3.800	1.360	2.19	uPVC	375	386	0.3	Existing	1	19I27	0
P 35I04	35I04	35I03	9.8	4.400	4.370	0.31	uPVC	150	154	0.3	Existing	1	35I04	0
P 35I03	35I03	35I02	9.085	2.790	2.710	0.88	RCP Class 2	375	375	0.3	Existing	1	35I03	0
P 35I02	35I02	35I01	16.369	2.150	1.370	4.77	RCP Class 2	525	525	0.3	Existing	1	35I02	0
P 35I01	35I01	38I14	5.167	1.350	1.200	2.90	RCP Class 2	525	525	0.3	Existing	1	35I01	0
P 38I14	38I14	38I13	4.6	1.230	1.230	0.00	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I14	0	
P 38I13	38I13	38I12	5	1.230	1.220	0.20	RCP Class 2	1500	1524	0.3	Existing	1	38I13	0
P 38I12	38I12	38I11	5.458	1.220	1.180	0.73	RCP Class 2	1500	1524	0.3	Existing	1	38I12	0
P 38I11	38I11	38I10	33.77	1.180	0.980	0.59	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I11	0	
P 38I10	38I10	38I09	6.91	0.980	0.940	0.58	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I10	0	
P 38I09	38I09	38I08	11.725	0.870	0.980	-0.94	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I09	0	
P 38I08	38I08	38I07	6.438	0.870	0.830	0.62	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I08	0	
P 38I07	38I07	38I06	9.092	0.830	0.774	0.62	RCP Class 2	1800	1800	0.3	Existing	1	38I07	0
P 38I06	38I06	38I05	26.425	0.774	0.610	0.62	RCP Class 2	1800	1800	0.3	Existing	1	38I06	0
P 38I05	38I05	38I04	19.037	0.610	0.500	0.58	RCP Class 2	1800	1800	0.3	Existing	1	38I05	0
P 38I04	38I04	38I03	27.946	0.500	0.330	0.61	RCP Class 2	1800	1800	0.3	Existing	1	38I04	0
P 38I03	38I03	38I02	19.022	0.330	0.210	0.63	RCP Class 2	1800	1800	0.3	Existing	1	38I03	0
P 38I02	38I02	38I01	36.949	0.210	0.215	-0.01	Box Culverts	1.5W x 1.275H	0.3	Existing	1	38I02	0	
P 38I01	38I01	46I05	10.456	-0.215	-0.997	7.48	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I01	0	
P 36I03	36I03	36I02	74.52	0.810	0.000	1.09	RCP Class 2	600	600	0.3	Existing	1	36I03	0
P 36I02	36I02	36I01	29.439	0.000	-0.170	0.58	RCP Class 2	750	750	0.3	Existing	1	36I02	0
P 36I01	36I01	46I06	44.872	-0.190	-0.997	1.80	RCP Class 2	900	900	0.3	Existing	1	36I01	0
P 38I17	38I17	38I16	17.593	3.120	1.830	7.33	RCP Class 2	1050	1070	0.3	Existing	1	38I17	0
P 38I16	38I16	38I15	35.827	1.490	1.260	0.64	RCP Class 2	1350	1370	0.3	Existing	1	38I16	0
P 38I15	38I15	38I14	4.613	1.260	1.230	0.65	Box Culverts	1.5W x 1.5H	0.3	Existing	1	38I15	0	
P 39I05	39I05	39I04	20.051	4.320	4.100	1.10	RCP Class 2	375	375	0.3	Existing	1	39I05	0
P 39I04	39I04	39I03	22.584	4.080	2.280	7.97	RCP Class 2	375	375	0.3	Existing	1	39I04	0
P 39I03	39I03	39I02	35.77	2.260	0.390	5.23	RCP Class 2	375	375	0.3	Existing	1	39I03	0
P 39I02	39I02	39I01	16.264	0.250	0.150	0.61	RCP Class 2	1200	1200	0.3	Existing	1	39I02	0
P 39I01	39I01	19I09	10.435	0.120	0.020	0.96	RCP Class 2	1500	1524	0.3	Existing	1	39I01	0
P 40I03	40I03	40I02	3.758	0.660	0.530	3.46	RCP Class 2	375	375	0.3	Existing	1	40I03	0
P 40I02	40I02	40I01	6.621	0.330	0.270	0.91	RCP Class 2	900	900	0.3	Existing	1	40I02	0
P 40I01	40I01	39I02	6.905	0.240	0.370	-1.88	RCP Class 2	1050	1070	0.3	Existing	1	40I01	0
P 41I02	41I02	41I01	5.514	0.420	0.090	5.98	RCP Class 2	600	600	0.3	Existing	1	41I02	0
P 41I01	41I01	19I10	3.3	0.110	0.110	0.00	RCP Class 2	1050	1070	0.3	Existing	1	41I01	0
P 42I02	42I02	42I01	6.477	0.470	0.310	2.47	RCP Class 2	900	900	0.3	Existing	1	42I02	0
P 42I01	42I01	39I02	5.986	0.280	0.320	-0.67	RCP Class 2	900	900	0.3	Existing	1	42I01	0
P 43I03	43I03	43I02	2.088	2.140	2.120	0.96	RCP Class 2	225	225	0.3	Existing	1	43I03	0
P 43I02	43I02	43I01	5.951	2.120	1.970	2.52	RCP Class 2	300	300	0.3	Existing	1	43I02	0
P 43I01	43I01	11I22	4.306	1.830	1.800	0.70	RCP Class 2	300	300	0.3	Existing	1	43I01	0
P 44I02	44I02	44I01	72.965	0.960	0.420	0.74	RCP Class 2	600	600	0.3	Existing	1	44I02	0
P 44I01	44I01	11I24	8.459	0.420	0.300	1.42	RCP Class 2	600	600	0.3	Existing	1	44I01	0
P 45I05	45I05	45I04	41.092	6.180	4.000	5.31	RCP Class 2	750	750	0.3	Existing	1	45I05	0
P 45I04	45I04	45I03	20.023	1.200	1.000	1.00	RCP Class 2	900	900	0.3	Existing	1	45I04	0
P 45I03	45I03	45I02	35.293	0.900	0.600	0.85	RCP Class 2	900	900	0.3	Existing	1	45I03	0
P 45I02	45I02	45I01	5.449	0.600	0.500	1.84	RCP Class 2	900	900	0.3	Existing	1	45I02	0
P 45I01	45I01	9I23	13.704	0.500	0.058	3.23	RCP Class 2	900	900	0.3	Existing	1	45I01	0
P 9I23	9I23	9I22	33.783	0.058	0.014	0.13	Box Culverts	3.35W x 1.6H	1	Existing	1	9I23	0	
P 9I22	9I22	9I21	66.821	0.014	-0.073	0.13	Box Culverts	3.35W x 1.6H	1	Existing	1	9I22	0	
P 9I21	9I21	9I20	11.2	-0.073	-0.081	0.07	Box Culverts	3.35W x 1.6H	1	Existing	1	9I21	0	
P 9I20	9I20	9I19	22.825	-0.081	-0.111	0.13	Box Culverts	3.35W x 1.6H	1	Existing	1	9I20	0	
P 46I27	46I27	46I26	53.751	0.568	0.260	0.57	Box Culverts	3.05W x 1.98H	1.5	Existing	1	46I27	0	
P 46I26	46I26	46I25	12.12	0.260	0.190	0.58	Box Culverts	3.05W x 1.98H	1.5	Existing	1	46I26	0	
P 46I25	46I25	46I24	93.351	0.190	-0.346	0.57	Box Culverts	3.05W x 1.95H	1.5	Existing	1	46I25	0	
P 46I24	46I24	46I23	11.5	-0.346	-0.380	0.30	Box Culverts	3.05W x 1.95H	1.5	Existing	1	46I24	0	
P 46I23	46I23	46I22	37.84	-0.380	-0.600	0.58	Box Culverts	3.05W x 1.98H	1.5	Existing	1	46I23	0	
P 46I22	46I22	46I21	13.159	-0.600	-0.675	0.57	Box Culverts	3.05W x 1.98H	1.5	Existing	1	46I22	0	
P 46I21	46I21	46I20	11.5	-0.675	-0.710	0.30	Box Culverts	3.05W x 1.98H	1.5	Existing	1	46I21	0	
P 46I20	46I20	46I19	18.358	-0.710	-0.727	0.09	Box Culverts	3.43W x 2.21H	1.5	Existing	1	46I20	0	
P 46I19	46I19	46I18	120	-0.727	-0.832	0.09	Box Culverts	3.43W x 2.21H	1.5	Existing	1	46I19	0	
P 46I18	46I18	46I17	39.317	-0.832	-0.867	0.09	Box Culverts	3.71W x 2.175H	1.5	Existing	1	46I18	0	
P 47I02	47I02	47I01	85.22	0.360	-0.351	0.83	Box Culverts	3.075W x 1.575H	1	Existing	1	47I02	0	
P 47I01	47I01	11I3	47.843	-0.351	-0.750	0.83	Box Culverts	3.075W x 1.575H	1	Existing	1	47I01	0	
P 48I09	48I09	48I08	17.544	8.600	5.650	16.81	uPVC	225	242	0.3	Existing	1	48I09	0
P 48I08	48I08	48I07	71.972	5.600	2.700	4.03	uPVC	225	242	0.3	Existing	1	48I08	0
P 48I07	48I07	48I06	3.112	2.650	2.571	2.54	RCP Class 2							

P 73I04	73I04	73I03	6.925		3.230	3.120	1.59	RCP Class 2	225	225	0.3	Existing	1	73I04	0
P 73I03	73I03	73I02	2.09		3.110	3.040	3.35	RCP Class 2	225	225	0.3	Existing	1	73I03	0
P 73I02	73I02	73I01	4.694		2.340	2.300	0.85	RCP Class 2	225	225	0.3	Existing	1	73I02	0
P 73I01	73I01	11I42	6.014		2.340	2.300	0.67	RCP Class 2	225	225	0.3	Existing	1	73I01	0
P 74I02	74I02	74I01	1.2		3.030	3.010	1.67	Box Culverts	0.375W x 0.225H		0.3	Existing	1	74I02	0
P 74I01	74I01	11I38	3.088		2.078	2.000	2.53	RCP Class 2	225	225	0.3	Existing	1	74I01	0
P 75I02	75I02	75I01	2.854		2.920	2.560	12.61	RCP Class 2	225	225	0.3	Existing	1	75I02	0
P 75I01	75I01	46I25	7.145		2.540	2.000	7.56	RCP Class 2	225	225	0.3	Existing	1	75I01	0
P 76I02	76I02	76I01	15.979		2.750	2.410	2.13	RCP Class 2	300	300	0.3	Existing	1	76I02	0
P 76I01	76I01	11I31	1.366		2.410	2.000	30.01	RCP Class 2	300	300	0.3	Existing	1	76I01	0
P 77I01	77I01	76I01	6.82		2.950	2.470	7.04	RCP Class 2	300	300	0.3	Existing	1	77I01	0
P 78I08	78I08	78I07	5.427		2.980	2.860	2.21	uPVC	150	154	0.3	Existing	1	78I08	0
P 78I07	78I07	78I06	12.503		2.850	2.710	1.12	uPVC	150	154	0.3	Existing	1	78I07	0
P 78I06	78I06	78I05	5.729		2.700	2.630	1.22	uPVC	150	154	0.3	Existing	1	78I06	0
P 78I05	78I05	78I04	9.672		2.620	2.550	0.72	uPVC	150	154	0.3	Existing	1	78I05	0
P 78I04	78I04	78I03	11.797		2.540	2.470	0.59	uPVC	150	154	0.3	Existing	1	78I04	0
P 78I03	78I03	78I02	3.634		2.450	2.410	1.10	uPVC	150	154	0.3	Existing	1	78I03	0
P 78I02	78I02	78I01	2.95		2.390	2.100	9.83	uPVC	150	154	0.3	Existing	1	78I02	0
P 78I01	78I01	19I24	10.15		2.050	1.220	8.18	RCP Class 2	225	225	0.3	Existing	1	78I01	0
P 80I01	80I01	79I01	9.186		0.850	0.790	0.65	RCP Class 2	375	375	0.3	Existing	1	80I01	0
P 79I01	79I01	11I11	42.279		-0.240	-0.550	0.73	RCP Class 2	375	375	0.3	Existing	1	79I01	0
P 89I01	89I01	182I07	11.763		5.480	4.620	7.31	RCP Class 2	375	375	0.3	Existing	1	89I01	0
P 182I07	182I07	182I06	7.055		4.440	3.860	8.22	RCP Class 2	375	375	0.3	Existing	1	182I07	0
P 182I06	182I06	182I05	15.743		3.170	2.940	1.46	RCP Class 2	375	375	0.3	Existing	1	182I06	0
P 182I05	182I05	N1804	15.947		2.860	2.720	0.88	RCP Class 2	375	375	0.3	Existing	1	182I05	0
P 90I02	90I02	90I01	9.984		3.930	3.450	4.81	uPVC	150	154	0.3	Existing	1	90I02	0
P 111I03	111I03	111I02	13.422		1.840	1.790	0.37	RCP Class 2	225	225	0.3	Existing	1	111I03	0
P 111I02	111I02	111I01	12.377		0.760	0.000	6.14	RCP Class 2	375	375	0.3	Existing	1	111I02	0
P672	111I01	11I03A	4		0.760	0.000	19.00	RCP Class 2	375	375	0.3	Existing	1	111I01	0
P 112I01	112I01	111I02	1.153		2.060	1.770	25.15	uPVC	225	242	0.3	Existing	1	112I01	0
P 113I02	113I02	113I01	17.38		1.200	1.120	0.46	RCP Class 2	375	375	0.3	Existing	1	113I02	0
P 113I01	113I01	111I01	20.714		0.980	0.780	0.97	RCP Class 2	375	375	0.3	Existing	1	113I01	0
P 129I01	129I01	5I02	11.936		1.060	1.060	0.00	RCP Class 2	375	375	0.3	Existing	1	129I01	0
P 151I02	151I02	151I01	16.077		1.660	1.610	0.31	RCP Class 2	300	300	0.3	Existing	1	151I02	0
P 151I01	151I01	11I19	5.057		1.590	1.550	0.79	RCP Class 2	300	300	0.3	Existing	1	151I01	0
P 152I01	152I01	179I01	2.77		1.890	1.800	3.25	RCP Class 2	300	300	0.3	Existing	1	152I01	0
P 179I01	179I01	11I18	7.386		1.250	1.200	0.68	RCP Class 2	450	450	0.3	Existing	1	179I01	0
P 153I03	153I03	153I02	3.36		1.470	1.360	3.27	RCP Class 2	375	375	0.3	Existing	1	153I03	0
P 153I02	153I02	153I01	7.048		1.270	1.140	1.84	RCP Class 2	375	375	0.3	Existing	1	153I02	0
P 153I01	153I01	11I21	11.651		1.020	1.000	0.17	RCP Class 2	1050	1070	0.3	Existing	1	153I01	0
P 154I01	154I01	46I22	3.507		1.800	1.600	5.70	RCP Class 2	300	300	0.3	Existing	1	154I01	0
P 155I02	155I02	155I01	6.249		2.100	1.780	5.12	RCP Class 2	300	300	0.3	Existing	1	155I02	0
P 155I01	155I01	19I21	1.844		1.370	1.200	9.22	RCP Class 2	450	450	0.3	Existing	1	155I01	0
P 156I02	156I02	156I01	10.888		1.870	1.600	2.48	RCP Class 2	225	225	0.3	Existing	1	156I02	0
P 156I01	156I01	19I18	9.873		1.600	1.500	1.01	RCP Class 2	225	225	0.3	Existing	1	156I01	0
P 157I01	157I01	156I01	7.707		1.760	1.600	2.08	RCP Class 2	225	225	0.3	Existing	1	157I01	0
P 158I01	158I01	19I16	13.727		0.780	0.650	0.95	RCP Class 2	450	450	0.3	Existing	1	158I01	0
P 159I01	159I01	19I11	21.982		1.550	1.203	1.58	RCP Class 2	375	375	0.3	Existing	1	159I01	0
P 160I02	160I02	160I01	9.155		0.450	0.350	1.09	RCP Class 2	375	375	0.3	Existing	1	160I02	0
P 160I01	160I01	19I07	1.973		0.330	0.320	0.51	RCP Class 2	375	375	0.3	Existing	1	160I01	0
P 161I01	161I01	19I06	2.928		0.450	0.440	0.34	RCP Class 2	375	375	0.3	Existing	1	161I01	0
P 162I01	162I01	19I05	2.417		0.200	0.190	0.41	RCP Class 2	375	375	0.3	Existing	1	162I01	0
P 163I01	163I01	19I04	1.643		0.200	0.190	0.61	RCP Class 2	375	375	0.3	Existing	1	163I01	0
P 164I01	164I01	19I03	1.81		0.100	0.090	0.55	RCP Class 2	375	375	0.3	Existing	1	164I01	0
P 165I01	165I01	19I12	4.335		0.200	0.180	0.46	RCP Class 2	1050	1070	0.3	Existing	1	165I01	0
P 166I01	166I01	19I08	1.942		0.320	0.310	0.51	RCP Class 2	375	375	0.3	Existing	1	166I01	0
P 167I01	167I01	48I08	14.007		5.800	5.700	0.71	uPVC	225	242	0.3	Existing	1	167I01	0
P 168I01	168I01	48I01	10.77		2.880	2.780	0.93	RCP Class 2	225	225	0.3	Existing	1	168I01	0
P 169I01	169I01	73I01	7.745		3.020	2.900	1.55	uPVC	150	154	0.3	Existing	1	169I01	0
P 170I03	170I03	170I02	63.214		2.900	1.870	1.63	RCP Class 2	750	750	0.3	Existing	1	170I03	0
P 171I01	171I01	11I33	7.192		2.970	1.800	16.27	RCP Class 2	300	300	0.3	Existing	1	171I01	0
P 172I01	172I01	11I39	3.722		2.860	2.500	9.67	RCP Class 2	225	225	0.3	Existing	1	172I01	0
P 173I01	173I01	55I01	10.051		3.310	2.450	8.56	uPVC	300	303	0.3	Existing	1	173I01	0
P 174I01	174I01	11I29	7.824		2.160	2.000	2.04	RCP Class 2	225	225	0.3	Existing	1	174I01	0
P 175I01	175I01	11I28	5.753		2.520	2.000	9.04	RCP Class 2	300	300	0.3	Existing	1	175I01	0
P 176I01	176I01	11I27	4.693		2.520	2.000	11.08	RCP Class 2	300	300	0.3	Existing	1	176I01	0
P 177I01	177I01	46I24	4.693		2.520	2.000	11.08	RCP Class 2	300	300	0.3	Existing	1	177I01	0
P 178I01	178I01	11I25	5.309		1.524	1.438	1.62	Box Culverts	0.225W x 0.225H		0.3	Existing	1	178I01	0
P 179I02	179I02	179I01	11.26		2.300	1.300	8.88	RCP Class 2	300	300	0.3	Existing	1	179I02	0
P 180I02	180I02	180I01	8.576		2.070	1.890	2.10	uPVC	150	154	0.3	Existing	1	180I02	0
P 180I01	180I01	46I18	66.467		1.080	1.000	0.12	RCP Class 2	300	300	0.3	Existing	1	180I01	0
P 181I01	181I01	46I13	5.199		1.100	1.000	1.92	RCP Class 2	375	375	0.3	Existing	1	181I01	0
P 182I09	182I09	182I08	11.822		5.370	4.730	5.41	RCP Class 2	375	375	0.3	Existing	1	182I09	0
P 182I08	182I08	182I07	3.567		4.700	4.560	3.92	RCP Class 2	375	375	0.3	Existing	1	182I08	0
P 186I02	186I02	186I01	13.252		1.380	1.280	0.75	RCP Class 2	225	225	0.3	Existing	1	186I02	0
P 186I01	186I01	36I02	1.738		0.001	0.000	0.06	RCP Class 2	300	300	0.3	Existing	1	186I01	0
P 187I02	187I02	187I01	11.274		0.830	0.730	0.89	RCP Class 2	450	450	0.3	Existing	1	187I02	0
P 187I01	187I01	36I01	62.438		0.730	0.200	0.85	RCP Class 2	450	450	0.3	Existing	1	187I01	0
P 189I01	189I01	15I03	13.675		2.530	2.430	0.73	RCP Class 2	300	300	0.3	Existing	1	189I01	0
P 190I01	190I01	64I01	6.528		1.900	1.830	1.07	RCP Class 2	375	375	0.3	Existing	1	190I01	0
P 191I01	191I01	63I02	5.985		1.600	1.470	2.17	RCP Class 2	300	300	0.3	Existing	1	191I01	0
P 192I01	192I01	197I02	11.245		2.240	2.070	1.51	RCP Class 2	225	225	0.3	Existing	1	192I01	0
P 197I02	197I02	197I01	5.231		2.070	2.060	0.19	RCP Class 2	300	300	0.3	Existing	1	197I02	0
P 197I01	197I01	10I01	14.353		1.620	1.360	1.81	RCP Class 2	375	375	0.3	Existing	1	197I01	0
P 193I01	193I01	8I05	10.829		4.000	3.500	4.62	RCP Class 2	225	225	0.3	Existing	1	193I01	0
P 197I04	197I04	197I03	12.483		2.230	2.180	0.40	RCP Class 2	225	225	0.3	Existing	1	197I04	0
P 197I03	197I03	197I02	4.591		2.110	2.080	0.65	RCP Class 2	300	300	0.3	Existing	1	197I03	0

P 200I04	200I04	200I03	12.314		0.963	0.840	1.00	RCP Class 2	525	525	0.3	Existing	1	200I04	0
P 200I03	200I03	200I02	19.3		0.749	0.556	1.00	RCP Class 2	525	525	0.3	Existing	1	200I03	0
P 200I02	200I02	200I01	29.638		0.536	-0.499	3.49	RCP Class 2	525	525	0.3	Existing	1	200I02	0
P 201I01	201I01	200I02	13.229		0.851	0.719	1.00	RCP Class 2	375	375	0.3	Existing	1	201I01	0
P 202I02	202I02	202I01	13.87		1.403	1.265	0.99	uPVC	150	154	0.03	Existing	1	202I02	0
P 202I01	202I01	200I03	8.016		1.067	0.986	1.01	RCP Class 2	375	375	0.3	Existing	1	202I01	0
P 204I02	204I02	204I01	9.029		1.251	0.929	3.57	RCP Class 2	450	450	0.3	Existing	1	204I02	0
P 204I01	204I01	200I03	13.96		0.909	0.769	1.00	RCP Class 2	450	450	0.3	Existing	1	204I01	0
P 205I04	205I04	205I03	25.377		3.975	0.738	12.76	RCP Class 2	450	450	0.3	Existing	1	205I04	0
P 205I03	205I03	205I02	16.421		0.718	0.553	1.00	RCP Class 2	375	375	0.3	Existing	1	205I03	0
P 205I02	205I02	205I01	45.368		0.533	-0.341	1.93	RCP Class 2	450	450	0.3	Existing	1	205I02	0
P 206I03	206I03	206I02	17.479		0.655	0.568	0.50	RCP Class 2	750	750	0.3	Existing	1	206I03	0
P 206I02	206I02	206I01	36.993		0.548	0.363	0.50	RCP Class 2	750	750	0.3	Existing	1	206I02	0
P 206I01	206I01	208I02	8.669		0.343	0.300	0.50	RCP Class 2	750	750	0.3	Existing	1	206I01	0
P 208I02	208I02	208I01	32.225		-0.584	-0.681	0.30	RCP Class 2	1800	1800	0.3	Existing	1	208I02	0
P 207I02	207I02	207I01	8.599		2.164	1.687	5.55	RCP Class 2	300	300	0.3	Existing	1	207I02	0
P 207I01	207I01	208I02	16.659		1.621	1.538	0.50	RCP Class 2	375	375	0.3	Existing	1	207I01	0
P 208I04	208I04	208I03	66.821		0.222	0.021	0.30	RCP Class 2	1500	1524	0.3	Existing	1	208I04	0
P 208I03	208I03	208I02	29.174		-0.477	-0.564	0.30	RCP Class 2	1800	1800	0.3	Existing	1	208I03	0
P 209I17	209I17	209I16	10.24		4.191	3.943	2.42	RCP Class 2	225	225	0.3	Existing	1	209I17	0
P 209I16	209I16	209I15	18.804		3.850	3.756	0.50	RCP Class 2	300	300	0.3	Existing	1	209I16	0
P 209I15	209I15	209I14	21.162		3.704	3.599	0.50	RCP Class 2	300	300	0.3	Existing	1	209I15	0
P 209I14	209I14	209I13	21.756		3.577	3.469	0.50	RCP Class 2	300	300	0.3	Existing	1	209I14	0
P 209I13	209I13	209I12	18.777		3.280	3.090	1.01	RCP Class 2	450	450	0.3	Existing	1	209I13	0
P 209I12	209I12	209I11	9.175		3.070	2.983	0.95	RCP Class 2	450	450	0.3	Existing	1	209I12	0
P 209I11	209I11	209I10	14.018		2.755	2.685	0.50	RCP Class 2	450	450	0.3	Existing	1	209I11	0
P 209I10	209I10	209I09	7.217		2.268	2.232	0.50	RCP Class 2	675	675	0.3	Existing	1	209I10	0
P 209I09	209I09	209I08	23.341		2.212	2.095	0.50	RCP Class 2	750	750	0.3	Existing	1	209I09	0
P 209I08	209I08	209I07	8.391		2.075	2.033	0.50	RCP Class 2	750	750	0.3	Existing	1	209I08	0
P 209I07	209I07	209I06	21.933		2.013	1.615	1.81	RCP Class 2	750	750	0.3	Existing	1	209I07	0
P 209I06	209I06	209I05	15.613		1.595	1.342	1.62	RCP Class 2	750	750	0.3	Existing	1	209I06	0
P 209I05	209I05	209I04	27.277		1.075	-0.018	4.01	RCP Class 2	750	750	0.3	Existing	1	209I05	0
P 209I04	209I04	209I03	24.136		-0.038	-0.159	0.50	RCP Class 2	900	900	0.3	Existing	1	209I04	0
P 209I03	209I03	209I02	33.857		-0.179	-0.348	0.50	RCP Class 2	900	900	0.3	Existing	1	209I03	0
P 209I02	209I02	209I01	4.347		-0.368	-0.390	0.51	RCP Class 2	900	900	0.3	Existing	1	209I02	0
P 209I01	209I01	208I03	9.319		-0.410	-0.457	0.50	RCP Class 2	900	900	0.3	Existing	1	209I01	0
P 210I05	210I05	210I04	12.841		0.420	0.292	1.00	RCP Class 2	375	375	0.3	Existing	1	210I05	0
P 210I04	210I04	210I03	27.081		0.272	0.137	0.50	RCP Class 2	375	375	0.3	Existing	1	210I04	0
P 210I03	210I03	210I02	9.228		0.117	0.071	0.50	RCP Class 2	375	375	0.3	Existing	1	210I03	0
P 210I02	210I02	210I01	9.64		0.051	0.003	0.50	RCP Class 2	375	375	0.3	Existing	1	210I02	0
P 210I01	210I01	209I03	2.982		-0.017	-0.032	0.50	RCP Class 2	375	375	0.3	Existing	1	210I01	0
P 211I03	211I03	211I02	5.519		0.428	0.375	0.96	RCP Class 2	375	375	0.3	Existing	1	211I03	0
P 211I02	211I02	211I01	3.959		0.355	0.336	0.48	RCP Class 2	375	375	0.3	Existing	1	211I02	0
P 211I01	211I01	209I04	10.314		0.316	0.264	0.50	RCP Class 2	525	525	0.3	Existing	1	211I01	0
P 212I01	212I01	209I05	21.451		2.233	1.551	3.18	RCP Class 2	375	375	0.3	Existing	1	212I01	0
P 213I07	213I07	213I06	8.561		3.255	3.213	0.49	RCP Class 2	375	375	0.3	Existing	1	213I07	0
P 213I06	213I06	213I05	16.542		3.193	2.803	2.36	RCP Class 2	375	375	0.3	Existing	1	213I06	0
P 213I05	213I05	213I04	19.019		2.783	2.688	0.50	RCP Class 2	375	375	0.3	Existing	1	213I05	0
P 213I04	213I04	213I03	13.857		2.668	2.599	0.50	RCP Class 2	375	375	0.3	Existing	1	213I04	0
P 213I03	213I03	213I02	14.408		2.579	2.507	0.50	RCP Class 2	300	300	0.3	Existing	1	213I03	0
P 213I02	213I02	213I01	22.885		2.487	2.372	0.50	RCP Class 2	450	450	0.3	Existing	1	213I02	0
P 213I01	213I01	209I10	12.821		2.352	2.288	0.50	RCP Class 2	375	375	0.3	Existing	1	213I01	0
P 214I02	214I02	214I01	8.146		5.115	4.703	5.06	RCP Class 2	225	225	0.3	Existing	1	214I02	0
P 214I01	214I01	209I11	36.307		4.249	2.775	4.06	RCP Class 2	375	375	0.3	Existing	1	214I01	0
P 215I01	215I01	209I11	7.051		3.348	3.091	3.64	RCP Class 2	375	375	0.3	Existing	1	215I01	0
P 216I01	216I01	209I12	10.246		3.619	3.280	3.31	RCP Class 2	225	225	0.3	Existing	1	216I01	0
P 217I01	217I01	209I13	13.596		3.785	3.305	3.53	RCP Class 2	375	375	0.3	Existing	1	217I01	0
P 218I01	218I01	209I14	11.18		4.092	3.597	4.43	RCP Class 2	300	300	0.3	Existing	1	218I01	0
P 219I01	219I01	209I15	10.189		4.190	3.724	4.57	RCP Class 2	300	300	0.3	Existing	1	219I01	0
P 220I02	220I02	220I01	24.011		2.417	2.297	0.50	RCP Class 2	375	375	0.3	Existing	1	220I02	0
P 220I01	220I01	209I07	2.527		2.277	2.265	0.47	RCP Class 2	375	375	0.3	Existing	1	220I01	0
P 221I01	221I01	209I09	24.045		3.094	2.715	1.58	RCP Class 2	525	525	0.3	Existing	1	221I01	0
P 46I10 weir	46I10 weir	46I09	23.507		0.200	-0.997	5.09	Box Culverts	3.7W x 1H		1.5	Existing	1	46I10 weir	0
Dummy Pipe DQ 1	Dummy DQ 1	46I04A	5		2.800	2.750	1.00	Box Culverts	0.45W x 0.15H		0.3	NewFixed	1	Dummy DQ 1	0
P948	Dummy DQ 2	46I04A	5		2.800	2.750	1.00	Box Culverts	0.45W x 0.15H		0.3	NewFixed	1	Dummy DQ 2	0
Pipe951	Pit1483	N1622	10		13.490	13.190	3.00	RCP Class 2	900	900	0.3	Existing	1	Pit1483	0
Pipe960	Pit1563	11I04	2		2.000	1.980	1.00	RCP Class 2	450	450	0.3	New	1	Pit1563	0
P BV01I02	BV01I02	BV01I01	34.44		1.295	0.950	1.00	RCP Class 2	375	375	0.3	New	1	BV01I02	0
P BV01I01	BV01I01	102I02	19.1		0.643	0.190	2.37	RCP Class 2	375	375	0.3	New	1	BV01I01	0
P 102I02	102I02	102I01	8.823		0.210	0.110	1.13	RCP Class 2	450	450	0.3	Existing	1	102I02	0
P 102I01	102I01	9I04	32.469		0.110	0.000	0.34	RCP Class 2	450	450	0.3	Existing	1	102I01	0
P BV02I02	BV02I02	BV02I01	32.514		1.144	0.819	1.00	RCP Class 2	375	375	0.3	New	1	BV02I02	0
P BV02I01	BV02I01	BV01I01	13.616		0.799	0.663	1.00	RCP Class 2	375	375	0.3	New	1	BV02I01	0
P BV03I02	BV03I02	BV03I01	32.514		1.144	0.819	1.00	RCP Class 2	375	375	0.3	New	1	BV03I02	0
P BV03I01	BV03I01	102I02	13.616		0.799	0.663	1.00	RCP Class 2	375	375	0.3	New	1	BV03I01	0
P BV04I01	BV04I01	BV03I01	6.659		1.170	1.104	0.99	RCP Class 2	375	375	0.3	New	1	BV04I01	0
P BV05I01	BV05I01	102I02	34.44		1.295	0.950	1.00	RCP Class 2	375	375	0.3	New	1	BV05I01	0
P BV06I03	BV06I03	BV06I02	15.994		5.333	1.255	25.50	RCP Class 2	375	375	0.3	New	1	BV06I03	0
P BV06I02	BV06I02	BV06I01	19.002		0.130	-0.060	1.00	RCP Class 2	1500	1524	0.3	New	1	BV06I02	0
P BV06I01	BV06I01	96I01	7.684		-0.080	-0.490	5.34	RCP Class 2	1500	1524	0.3	New	1	BV06I01	0
P 96I01	96I01	9I06	10.39		-0.490	0.000	-4.72	RCP Class 2	1500	1524	0.3	Existing	1	96I01	0
P BV07I02	BV07I02	BV07I01	25		1.342	1.092	1.00	RCP Class 2	375	375	0.3	New	1	BV07I02	0
P BV07I01	BV07I01	BV06I01	39.868		1.072	0.673	1.00	RCP Class 2	375	375	0.3	New	1	BV07I01	0
P BV08I01	BV08I01	130I01	15.999		0.161	0.001	1.00	RCP Class 2	1500	1524	0.3	New	1	BV08I01	0
P 130I01	130I01	9I07	48.36		0.003	0.000	0.01	RCP Class 2	1050	1070	0.3	Existing	1	130I01	0
P BV09I02	BV09I02	BV09I01	40		1.361	0.961	1.00	RCP Class 2	375	375	0.3	New	1	BV09I02	0
P BV09I01	BV09I01	130I01	25.6		0.941	0.685	1								

P SP12\04	SP12\04	SP12\03	8.331		0.879	0.838	0.49	RCP Class 2		450	450	0.3	New	1		SP12\04	0
P SP12\03	SP12\03	SP12\02	5.5		0.818	0.790	0.51	RCP Class 2		450	450	0.3	New	1		SP12\03	0
P SP12\02	SP12\02	SP12\01	23.054		0.770	0.655	0.50	RCP Class 2		450	450	0.3	New	1		SP12\02	0
P SP12\01	SP12\01	BV12\02	34.426		0.635	0.447	0.55	RCP Class 2		450	450	0.3	New	1		SP12\01	0
P TG01\04	TG01\04	TG01\03	22.344		1.380	1.157	1.00	RCP Class 2		375	375	0.3	New	1		TG01\04	0
P TG01\03	TG01\03	TG01\02	42.243		1.137	0.714	1.00	RCP Class 2		375	375	0.3	New	1		TG01\03	0
P TG01\02	TG01\02	TG01\01	39.762		0.694	0.296	1.00	RCP Class 2		375	375	0.3	New	1		TG01\02	0
P TG01\01	TG01\01	46\06	9.979		0.276	0.177	0.99	RCP Class 2		375	375	0.3	New	1		TG01\01	0
P TG02\04	TG02\04	TG02\03	1.823		3.400	3.400	0.00	RCP Class 2		375	375	0.3	New	1		TG02\04	0
P TG02\03	TG02\03	TG02\02	20.927		3.531	3.058	2.26	RCP Class 2		375	375	0.3	New	1		TG02\03	0
P TG02\02	TG02\02	TG02\01	42.867		3.017	2.109	2.12	RCP Class 2		375	375	0.3	New	1		TG02\02	0
P TG02\01	TG02\01	BV11\02	40.672		2.089	1.399	1.70	RCP Class 2		375	375	0.3	New	1		TG02\01	0
P DI02	DI02	DI01	27.019		1.287	1.016	1.00	RCP Class 2		375	375	0.3	New	1		DI02	0
P DI01	DI01	31-02 A	8.917		1.016	0.936	0.90	RCP Class 2		375	375	0.3	NewFixed	1		DI01	0
P EI04	EI04	EI03	34.599		1.894	1.548	1.00	RCP Class 2		375	375	0.3	New	1		EI04	0
P EI03	EI03	EI02	13.778		1.548	1.384	1.19	RCP Class 2		375	375	0.3	NewFixed	1		EI03	0
P EI02	EI02	EI01	16.556		1.384	1.260	0.75	RCP Class 2		375	375	0.3	NewFixed	1		EI02	0
P EI01	EI01	32-01	8.084		1.260	1.206	0.67	RCP Class 2		450	450	0.3	NewFixed	1		EI01	0
P 32-01	32-01	29-01	68.564		1.400	1.220	0.26	RCP Class 2		675	675	0.3	Existing	1		32-01	0
P FI02	FI02	FI01	36.426		1.965	1.600	1.00	RCP Class 2		375	375	0.3	NewFixed	1		FI02	0
P FI01	FI01	33-01	1.2		1.617	1.608	0.75	RCP Class 2		375	375	0.3	NewFixed	1		FI01	0
P 33-01	33-01	32-01	6.857		1.660	1.600	0.88	RCP Class 2		450	450	0.3	Existing	1		33-01	0
P GI02	GI02	GI01	13.477		1.206	1.068	1.02	RCP Class 2		375	375	0.3	New	1		GI02	0
P GI01	GI01	29-02 A	22.495		1.068	0.846	0.99	RCP Class 2		375	375	0.3	New	1		GI01	0
P HI01	HI01	21-04 A	20.613		1.383	1.154	1.11	RCP Class 2		375	375	0.3	New	1		HI01	0
P 21-04	21-04 A	21-03	11.6235		1.715	1.610	0.90	RCP Class 2		450	450	0.3	Existing	1		21-04 A	0
P I\02	I\02	I\01	17.692		1.566	1.389	1.00	RCP Class 2		375	375	0.3	New	1		I\02	0
P I\01	I\01	127-01	4.841		1.610	1.562	0.99	RCP Class 2		375	375	0.3	New	1		I\01	0
P 127-01	127-01	21-02	2.51		1.270	1.000	10.76	RCP Class 4		375	375	0.3	Existing	1		127-01	0
P KI01	KI01	24-02 A	16.392		1.776	1.612	1.00	RCP Class 2		375	375	0.3	New	1		KI01	0
P 24-02	24-02 A	3-06	4.6831		0.000	0.000	0.00	RCP Class 2		450	450	0.3	Existing	1		24-02 A	0
P LI01	LI01	21-04 A	3.444		1.682	1.648	0.99	RCP Class 2		375	375	0.3	New	1		LI01	0
P LR1\01	LR1\01	Q\01	3.535		2.679	1.367	37.11	RCP Class 2		375	375	0.3	New	1		LR1\01	0
P Q\01	Q\01	124-01	25.225		1.253	1.001	1.00	RCP Class 2		375	375	0.3	New	1		Q\01	0
P 124-01	124-01	22-01	4.652		1.420	1.373	1.01	RCP Class 2		450	450	0.3	Existing	1		124-01	0
P LR2\01	LR2\01	124-01	3.623		2.065	1.125	25.95	RCP Class 2		375	375	0.3	New	1		LR2\01	0
P LR4\01	LR4\01	J\02	6.664		1.756	1.027	10.94	RCP Class 2		375	375	0.3	New	1		LR4\01	0
P J\02	J\02	J\01	19.745		1.246	1.048	1.00	RCP Class 2		375	375	0.3	New	1		J\02	0
P J\01	J\01	22-02 A	5.658		1.102	1.018	1.48	RCP Class 2		375	375	0.3	New	1		J\01	0
P LR5\01	LR5\01	J\03	4.972		1.714	1.359	7.14	RCP Class 2		375	375	0.3	New	1		LR5\01	0
P J\03	J\03	J\02	42.887		1.442	0.378	2.48	RCP Class 2		375	375	0.3	New	1		J\03	0
P LR6\01	LR6\01	T\01	4.692		2.416	1.485	19.84	RCP Class 2		375	375	0.3	New	1		LR6\01	0
P T\01	T\01	3-06	10.64		1.433	1.327	1.00	RCP Class 2		375	375	0.3	New	1		T\01	0
P LR7\01	LR7\01	B\02	4.789		2.290	1.476	17.00	RCP Class 2		375	375	0.3	New	1		LR7\01	0
P B\02	B\02	B\01	3.905		1.238	1.229	0.23	RCP Class 2		375	375	0.3	New	1		B\02	0
P B\01	B\01	4-01	1.414		1.229	1.224	0.35	RCP Class 2		375	375	0.3	NewFixed	1		B\01	0
P 4-01	4-01	3-09	3.01		1.150	1.120	1.00	RCP Class 2		450	450	0.3	Existing	1		4-01	0
P LR8\01	LR8\01	B\03	4.36		2.125	1.545	13.30	RCP Class 2		375	375	0.3	New	1		LR8\01	0
P B\03	B\03	B\02	25.2		1.561	1.238	1.28	RCP Class 2		375	375	0.3	New	1		B\03	0
P M\02	M\02	M\01	37.32		1.907	1.627	0.75	RCP Class 2		375	375	0.3	New	1		M\02	0
P M\01	M\01	21-03	5.696		1.721	1.616	1.84	RCP Class 2		375	375	0.3	New	1		M\01	0
P O\01	O\01	30-02 A	24.94		1.351	1.089	1.05	RCP Class 2		375	375	0.3	New	1		O\01	0
P PI04	PI04	PI03	19.832		1.515	1.515	0.00	RCP Class 2		375	375	0.3	New	1		PI04	0
P PI03	PI03	PI02	14.138		1.512	1.370	1.00	RCP Class 2									

F 102	30-02	O101	0.2				8 m wide road (half section)	0.14	0.14	0.6	0.4	0		-253976869
OF1553	30-02 A	30-01	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		-216450484
F 30-01	30-01	31-01	0.2				Kerb and Gutter	0.15	0.15	0.6	1	50		3017897
OF2899	31-02	N1729	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		9945119
OF2743	31-01	N1729	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		9316518
OF606	29-01	31-02	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		28885427
OF5011	120-01	119A-01	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		16503883
OF2453	120A-01	N1727	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		8185479
F 119A-01	119A-01	N1727	0.2				Kerb and Gutter	0.15	0.15	0.6	0.8	50		3017901
F 121-06	121-06	121-05	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		3017902
F 122A-01	121-05	N1726	0.2				Kerb and Gutter	0.15	0.15	0.6	0.5	60		3017903
F 122-02	122-02	123-02	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		3017904
OF4002	122A-01	N1726	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		13653823
OF3808	123-02	N1727	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		13009657
OF1801	124A-02	N5971	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		5455166
F 125-02	125-02	122A-01	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		3017906
OF6765	132-02	121-05	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		20702334
OF4017	3-11	4-01	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		13653838
F 3-10	3-10	3-11	0.2				Concrete V-Drain	0.1	0.1	0.6	3	0		3017892
OF4035	29-02	31-01	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		13653859
F H01	29-02 A	G101	0.2				8 m wide road (half section)	0.14	0.14	0.6	0.4	0		-253976871
OF616	Dummy 1	N1000	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		78534361
OF623	Dummy 3	N1012	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		78534394
OF621	Dummy 2	N1013	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		78534392
F 200104	200104	200103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534581
F 200103	200103	200102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534582
F 200102	200102	O 200102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534583
F 201101	201101	O 201101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534584
F 202102	202102	202101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534585
F 202101	202101	200103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534586
F 204102	204102	201101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534587
F 204101	204101	201101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534588
F 205104	205104	205103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534589
F 205103	205103	O 205103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534590
F 205102	205102	O 205102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534591
F 206103	206103	206102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534592
F 206102	206102	206101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534593
F 206101	206101	208102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534594
F 208102	208102	O 208102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534599
F 207102	207102	207101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534595
F 207101	207101	208102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534596
F 208104	208104	208103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534597
F 208103	208103	208102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534598
F 209117	209117	219101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534600
F 209116	209116	209115	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534601
F 209115	209115	209114	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534602
F 209114	209114	209113	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534603
F 209113	209113	209112	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534604
F 209112	209112	209111	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534605
F 209111	209111	209110	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534606
F 209110	209110	209109	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534607
F 209109	209109	209108	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534608
F 209108	209108	209107	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534609
F 209107	209107	209106	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534610
F 209106	209106	209105	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534611
F 209105	209105	209104	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534612
F 209104	209104	209103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534613
F 209103	209103	209102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534614
F 209102	209102	209101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534615
F 209101	209101	208103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534616
F 210105	210105	O 210105	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534617
F 210104	210104	210105	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534618
F 210103	210103	210101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534619
F 210102	210102	210101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534620
F 210101	210101	209103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534621
F 211103	211103	211102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534622
F 211102	211102	211101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534623
F 211101	211101	209104	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534624
F 212101	212101	209105	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534625
F 213107	213107	213102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534626
F 213106	213106	213105	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534627
F 213105	213105	213104	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534628
F 213104	213104	213103	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534629
F 213103	213103	213102	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534630
F 213102	213102	213101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534631
F 213101	213101	209110	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534632
F 214102	214102	209107	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534633
F 214101	214101	209111	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534634
F 215101	215101	209111	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534635
F 216101	216101	209111	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534636
F 217101	217101	216101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534637
F 218101	218101	217101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534638
F 219101	219101	218101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534639
F 220102	220102	220101	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534640
F 220101	220101	209107	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534641
F 221101	221101	209108	0.2				8 m wide road (half section)	0.14	0.14	0.6	1	0		78534642
OF686	N1085	N1086	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534645
OF691	N1094	N1092	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534662
OF693	N1096	N1097	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534669
OF697	N1100	N1099	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534678
OF700	N1102	N1101	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534681
OF701	N1104	N1103	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534682
OF702	N1106	N1105	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534683
OF703	N1108	N1107	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534684
OF704	N1110	N1109	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534685
OF695	N1111	N1095	0.2				Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		78534676
OF1120	N1498	N1719	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1422776178
OF1006	Dummy DQ 1	46104A	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		492611251
OF1008	Dummy DQ 2	46104A	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		492611253
OF1020	Pit1483	11143	0.2				Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		492611272
OF1018														

F 130\01	130\01	9\07	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1550
F BV09\02	BV09\02	BV09\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977120
F BV09\01	BV09\01	130\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977119
F BV10\02	BV10\02	BV09\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977118
F BV10\01	BV10\01	BV10\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977117
F 134-01	134-01	46\08	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		-262242606
F BV11\06	BV11\06	BV11\05	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977116
F BV11\05	BV11\05	BV11\04	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977115
F BV11\04	BV11\04	BV11\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977114
F BV11\03	BV11\03	BV11\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977113
F BV11\02	BV11\02	BV11\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977112
F BV11\01	BV11\01	TG01\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977111
F 81\01	81\01	46\09	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1454
F BV12\05	BV12\05	BV12\04	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977110
F BV12\04	BV12\04	BV12\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977109
F BV12\03	BV12\03	BV12\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977108
F BV12\02	BV12\02	BV12\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977107
F BV12\01	BV12\01	5\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977106
F PA17\02	PA17\02	PA17\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977105
F PA17\01	PA17\01	10\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977104
F PA19\03	PA19\03	PA19\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977103
F PA19\02	PA19\02	PA19\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977102
F PA19\01	PA19\01	O PA19\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977101
F PA21\04	PA21\04	9\21	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977100
F PA21\03	PA21\03	PA21\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977099
F PA21\02	PA21\02	O PA21\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977098
F PA22\05	PA22\05	PA22\04	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977097
F PA22\04	PA22\04	PA22\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977096
F PA22\03	PA22\03	PA22\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977095
F PA22\02	PA22\02	PA22\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977094
F PA22\01	PA22\01	9\25	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977093
F 9\25	9\25	9\24	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1164
F PA23\01	PA23\01	PA23\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977091
F PA23\02	PA23\02	79\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977092
F 79\03	79\03	11\11	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1445
F 79\02	79\02	11\11	0.2					Dummy used to model flow across road low points	0.2	0.05	0.6	1	0		1446
F PA3\02	PA3\02	46\13	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977090
F PA7\04	PA7\04	PA7\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977089
F PA7\03	PA7\03	PA7\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977088
F PA7\02	PA7\02	11\12	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977087
F PA7\01	PA7\01	79\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977086
F SP01\03	SP01\03	SP01\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977085
F SP01\02	SP01\02	SP01\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977084
F SP01\01	SP01\01	BV12\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977083
F SP02\04	SP02\04	BV12\04	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977082
F SP02\03	SP02\03	SP02\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977081
F SP02\02	SP02\02	SP02\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977080
F SP02\01	SP02\01	BV12\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977079
F SP03\01	SP03\01	SP02\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977078
F SP04\02	SP04\02	SP04\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977077
F SP04\01	SP04\01	SP05\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977076
F SP05\02	SP05\02	46\22	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977075
F SP05\01	SP05\01	SP05\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977074
F SP07\03	SP07\03	SP07\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977070
F SP07\02	SP07\02	SP07\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977069
F SP07\01	SP07\01	71\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977068
F SP08\01	SP08\01	11\14	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977067
F SP09\01	SP09\01	11\16	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977066
F SP10\01	SP10\01	71\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977065
F SP11\01	SP11\01	SP07\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977064
F SP12\07	SP12\07	SP12\06	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977063
F SP12\06	SP12\06	SP12\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977062
F SP12\05	SP12\05	SP12\04	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977061
F SP12\04	SP12\04	SP12\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977060
F SP12\03	SP12\03	SP12\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977059
F SP12\02	SP12\02	SP12\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977058
F SP12\01	SP12\01	BV12\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977057
F TG01\04	TG01\04	TG01\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977056
F TG01\03	TG01\03	TG01\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977055
F TG01\02	TG01\02	TG01\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977054
F TG01\01	TG01\01	46\06	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977053
F TG02\04	TG02\04	TG02\03	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977052
F TG02\03	TG02\03	TG02\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977051
F TG02\02	TG02\02	TG02\01	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977050
F TG02\01	TG02\01	BV11\02	1					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253977049
F DI02	DI02	DI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.1	0		-253976880
F DI01	DI01	29\01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.6	0		-253976881
F EI04	EI04	EI03	0.2					8 m wide road (half section)	0.14	0.14	0.6	1.6	0		-253976876
F EI03	EI03	EI02	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.8	0		-253976877
F EI02	EI02	EI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253976878
F EI01	EI01	GI02	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.5	0		-253976879
F FI02	FI02	FI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253976874
F FI01	FI01	33-01	0.2					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253976875
F 33-01	33-01	DI02	0.2					Kerb and Gutter	0.15	0.15	0.6	1	50		3017900
F GI02	GI02	GI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.4	0		-253976872
F GI01	GI01	29-01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.6	0		-253976873
OF1513	HI01	29-02 A	0.2					8 m wide road (half section)	0.3	0.15	0.4	-0.3	0		-216450600
F I\01	I\01	I\02	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.5	0		-253976870
F 127-01	127-01	30-01	0.2					Concrete V-Drain	0.1	0.1	0.6	1	100		3017907
F KI01	KI01	24-02 A	0.2					8 m wide road (half section)	0.14	0.14	0.6	-0.1	0		-253976865
F LI01	LI01	21-04 A	0.2					8 m wide road (half section)	0.14	0.14	0.6	-0.3	0		-253976864
F LR1\01	LR1\01	QI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.8	0		-253976863
F QI01	QI01	124-01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.4	0		-253976849
OF2315	124-01	124A-02	0.2					Dummy used to model flow across road low points	0.3	0.3	0.6	1	0		7619970
F LR2\01	LR2\01	124-01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.4	0		-253976862
F LR4\01	LR4\01	JI02	0.2					8 m wide road (half section)	0.14	0.14	0.6	1.0	0		-253976861
F JI02	JI02	JI01	0.2					8 m wide road (half section)	0.14	0.14	0.6	0.9	0		-253976867
F JI01															

Proposed DRAINS Model Results



PROJECT SICEEP DARLING HARBOUR

TITLE 100 YEAR ARI RESULTS

JOB No
PREPARED
CHECKED

CM

AA004399
DATE
DATE

4/03/2013

DRAINS File Path:	F:\AA004399\ID-Calcs\A-Civil\A-Stormwater\A-DRAINS
DRAINS Version:	DRAINS Version 2012.12 - 10 October 2012
Modeller's Name:	Chris McClelland
Description:	Proposed Development

DRAINS results prepared 07 March, 2013 from Version 2012.14								RESULTS 100 YEAR ARI		
PIT / NODE DETAILS				Version 8						
Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint			
1\24	3.72		9.434		0.55	0.000	None			
1\23	3.70		0.000		0.72	0.000	None			
1\22	3.69		0.000		0.74	0.000	None			
1\21	3.56		0.000		0.53	0.000	None			
1\20	3.53		0.000		0.46	0.000	None			
1\19	3.46		1.041		0.23	1.041	Inlet Capacity			
1\18	3.24		1.041		0.22	1.041	Inlet Capacity			
1\17	3.21		1.041		0.17	1.041	Inlet Capacity			
1\16	3.09		1.244		0.07	1.244	Inlet Capacity			
1\15	2.97		1.244		0.27	1.244	Inlet Capacity			
1\14	2.92		1.244		0.30	1.244	Inlet Capacity			
1\13	2.88		6.280		0.34	6.280	Inlet Capacity			
1\12	2.42		0.000		0.68	0.000	None			
1\11	2.38		0.000		0.95	0.000	None			
1\10	2.14		0.000		1.83	0.000	None			
1\09	2.05		0.000		1.60	0.000	None			
1\08	1.99		0.000		0.77	0.000	None			
1\07	1.92		0.000		2.13	0.000	None			
1\06	1.55		0.000		3.68	0.000	None			
1\05	1.47		0.000		1.21	0.000	None			
1\04	1.26		0.000		2.34	0.000	None			
1\03	1.23		0.000		1.97	0.000	None			
1\02	0.97		0.000		1.54	0.000	None			
1\01	0.90		0.000							
5\03	2.23		0.000		1.04	0.000	None			
5\02	2.23		0.112		0.00	0.031	Outlet System			
5\01	2.11		0.762		0.00	1.358	Outlet System			
46\17	2.32		12.437		7.68	12.437	Inlet Capacity			
46\16	2.30		12.437		7.70	12.437	Inlet Capacity			
46\15	2.28		14.808		0.42	14.808	Inlet Capacity			
46\14	2.21		14.808		0.39	14.808	Inlet Capacity			
46\13	2.17		15.024		0.36	15.024	Inlet Capacity			
46\12	2.09		15.036		3.61	15.036	Inlet Capacity			
46\11	2.07		15.036		3.38	15.036	Inlet Capacity			
46\10	2.04		0.157		0.63	0.157	Inlet Capacity			
46\09	1.58		15.036		2.18	15.036	Inlet Capacity			
46\08	1.57		15.036		2.01	15.036	Inlet Capacity			
46\07	1.53		15.036		1.16	15.036	Inlet Capacity			
46\06	1.51		15.755		1.62	15.755	Inlet Capacity			
46\05	1.48		16.081		2.37	16.081	Inlet Capacity			
46\04A	1.37		0.000		2.48	0.000	None			
46\04	1.08		16.081		1.72	16.081	Inlet Capacity			
46\03	1.04		16.081		1.85	16.081	Inlet Capacity			
46\02	0.96		16.081		1.84	16.081	Inlet Capacity			
46\01	0.90		0.000							
7\03	2.69		0.000		2.17	0.000	None			
7\02	2.69		0.040		2.42	0.013	Inlet Capacity			
7\01	1.54		0.013		3.53	0.013	Inlet Capacity			
8\04	1.43		0.013		3.44	0.013	Inlet Capacity			
8\03	1.39		0.013		3.67	0.013	Inlet Capacity			
8\02	1.39		0.013		2.34	0.013	Inlet Capacity			
8\01	1.24		0.013		2.53	0.013	Inlet Capacity			
9\16	1.20		5.832		2.93	5.832	Inlet Capacity			
9\15	1.16		5.832		4.62	5.832	Inlet Capacity			
9\14	1.11		5.832		8.89	5.832	Inlet Capacity			
9\13	1.10		5.832		4.60	5.832	Inlet Capacity			
9\12	1.10		5.864		4.39	5.864	Inlet Capacity			
9\11	1.08		5.900		2.77	5.900	Inlet Capacity			
9\10	1.06		5.900		1.67	5.900	Inlet Capacity			
9\09	1.06		5.900		1.40	5.900	Inlet Capacity			
9\08	1.05		5.900		1.41	5.900	Inlet Capacity			
9\07	1.04		5.930		1.42	5.930	Inlet Capacity			
9\06	1.00		5.930		2.35	5.930	Inlet Capacity			
9\05	0.95		5.930		2.09	5.930	Inlet Capacity			
9\04	0.95		6.122		2.42	6.122	Inlet Capacity			
9\03	0.93		6.122		2.37	6.122	Inlet Capacity			
9\02	0.92		6.122		1.55	6.122	Inlet Capacity			
9\01	0.90		0.000							
8\06	1.47		2.937		3.49	0.000	None			
8\05	1.47		0.000		3.35	0.000	None			
11\43	4.04		49.781		0.23	15.797	Inlet Capacity			

11\42	3.97	3.97	0.000	5.0	-0.10	9.254	Outlet System				
11\41	3.89	3.96	0.000	5.0	-0.13	1.756	Outlet System				
11\40	3.80	4.01	0.000	5.0	-0.09	1.909	Outlet System				
11\39	3.72	4.05	0.000	5.0	-0.16	0.670	Outlet System				
11\38	3.34	3.54	0.000	0.0	0.20	0.000	None				
11\37	3.29	3.58	0.000	0.0	0.28	0.000	None				
11\36	3.25	3.61	0.000	0.0	0.37	0.000	None				
11\35	3.14	3.64	0.000	0.0	0.51	0.000	None				
11\34	3.01	3.67	0.000	0.0	0.66	0.000	None				
11\33	2.99	3.74	0.000	0.0	0.76	0.000	None				
11\32	2.93	3.77	0.000	0.0	0.83	0.000	None				
11\31	2.81		0.001		0.79	0.001	Inlet Capacity				
11\30	2.75		0.001		0.77	0.001	Inlet Capacity				
11\29	2.71		0.002		0.58	0.002	Inlet Capacity				
11\28	2.69		0.003		0.52	0.003	Inlet Capacity				
11\27	2.63		0.016		0.54	0.016	Inlet Capacity				
11\26	2.54		0.016		0.30	0.016	Inlet Capacity				
11\25	2.52		0.016		0.23	0.016	Inlet Capacity				
11\24	2.47		1.221		0.26	1.221	Inlet Capacity				
11\23	2.41		1.228		0.25	1.228	Inlet Capacity				
11\22	2.34		1.572		0.28	1.572	Inlet Capacity				
11\21	2.26		1.572		0.53	1.572	Inlet Capacity				
11\20	2.13		1.572		0.71	1.572	Inlet Capacity				
11\19	2.10		1.625		0.80	1.625	Inlet Capacity				
11\18	2.05		1.625		0.89	1.625	Inlet Capacity				
11\17	1.99		1.625		1.31	1.625	Inlet Capacity				
11\16	1.96		1.934		1.75	1.934	Inlet Capacity				
11\15	1.73		1.934		8.27	1.934	Inlet Capacity				
11\14	1.66		2.171		8.34	2.171	Inlet Capacity				
11\13	1.65		2.171		8.35	2.171	Inlet Capacity				
11\12	1.63		2.206		8.37	1.881	Inlet Capacity				
11\11	1.59		2.019		0.71	2.019	Inlet Capacity				
11\10	1.38		2.019		0.94	2.019	Inlet Capacity				
11\09	1.37		2.019		3.58	2.019	Inlet Capacity				
11\08	1.21		2.019		2.40	2.019	Inlet Capacity				
11\07	1.20		2.019		1.54	2.019	Inlet Capacity				
11\06	1.17		2.019		1.46	2.019	Inlet Capacity				
11\05	1.08		2.019		2.10	2.019	Inlet Capacity				
11\04	1.07		2.019		2.00	2.019	Inlet Capacity				
11\03A	0.97		0.000		1.74		None				
11\03	0.94		2.228		1.77	2.228	Inlet Capacity				
11\02	0.93		2.228		1.60	2.228	Inlet Capacity				
11\01	0.90		0.000								
12\01	3.15		0.134		0.00	0.085	Outlet System				
19\26	3.13		0.508		0.00	0.575	Outlet System				
19\25	3.05		0.575		0.09	0.575	Inlet Capacity				
19\24	3.02		0.738		0.12	0.738	Inlet Capacity				
19\23	2.84		0.738		0.13	0.738	Inlet Capacity				
19\22	2.77		1.143		0.06	1.143	Inlet Capacity				
19\21	2.52		1.176		0.18	1.176	Inlet Capacity				
19\20	2.37		1.176		0.31	1.176	Inlet Capacity				
19\19	2.35		1.176		0.19	1.176	Inlet Capacity				
19\18	2.35		1.290		0.11	1.290	Inlet Capacity				
19\17	2.34		1.502		0.00	2.041	Outlet System				
19\16	2.34		2.107		0.00	2.107	Inlet Capacity				
19\15	2.34		2.107		0.01	2.107	Inlet Capacity				
19\14	2.34		2.240		0.03	2.240	Inlet Capacity				
19\13	2.34		2.896		0.26	2.896	Inlet Capacity				
19\12	2.34		2.896		0.28	2.896	Inlet Capacity				
19\11	2.34		2.896		0.23	2.896	Inlet Capacity				
19\10	2.34	2.49	2.896	5.0	0.06	2.896	Inlet Capacity				
19\09	2.33		2.896		0.18	2.896	Inlet Capacity				
19\08	2.32		0.000		0.12		None				
19\07	2.32		0.000		0.45		None				
19\06	2.31		2.658		0.09	2.658	Inlet Capacity				
19\05	2.31		0.000		0.10		None				
19\04	2.30		0.000		0.01		None				
19\03	2.29		0.000		0.24		None				
19\02	2.29		2.371		0.22	2.371	Inlet Capacity				
19\01	2.29		2.371		0.14	2.371	Inlet Capacity				
13\02	1.96		0.027		1.08	0.007	Inlet Capacity				
13\01	1.63		0.033		1.26	0.000	None				
10\01	1.63		0.087		1.50	0.087	Inlet Capacity				
9\18	1.21		6.156		2.32	5.830	Inlet Capacity				
9\17	1.20		5.830		2.66	5.830	Inlet Capacity				
15\04	2.48		0.000		2.44	0.000	None				
15\03	2.30		0.000		1.06	0.000	None				
15\02	1.21		0.000		2.43	0.000	None				
15\01	1.21		0.000		2.32	0.000	None				
9\19	1.21		6.098		2.04	6.098	Inlet Capacity				
16\03	4.40		1.751		0.00	0.121	Outlet System				
16\02	3.44	3.73	0.000	0.0	0.29	0.000	None				
16\01	3.23	3.62	0.000	0.0	0.39	0.000	None				
17\02	2.98		0.309		0.00	0.183	Outlet System				
17\01	2.68		0.781		0.00	0.858	Outlet System				
18\02	2.28		0.000		0.02	0.000	None				
18\01	2.28		0.075		0.00	0.088	Outlet System				
70\01	2.28		0.110		0.00	0.246	Outlet System				

19\28	5.25		0.697		0.00	0.282	Outlet System				
19\27	4.80		0.282		0.00	0.423	Outlet System				
35\04	4.76		0.025		0.27	0.008	Inlet Capacity				
35\03	3.03		0.048		2.23	0.048	Inlet Capacity				
35\02	3.02		0.048		1.82	0.048	Inlet Capacity				
35\01	3.02		0.048		1.34	0.048	Inlet Capacity				
38\14	3.02		0.218		1.25	0.218	Inlet Capacity				
38\13	2.96		0.218		1.13	0.218	Inlet Capacity				
38\12	2.93		0.218		1.04	0.218	Inlet Capacity				
38\11	2.83		0.218		7.17	0.218	Inlet Capacity				
38\10	2.65		0.700		1.21	0.489	Inlet Capacity				
38\09	2.58		0.489		1.51	0.489	Inlet Capacity				
38\08	1.88		0.489		2.31	0.489	Inlet Capacity				
38\07	1.88		0.489		2.43	0.489	Inlet Capacity				
38\06	1.82		0.489		3.07	0.489	Inlet Capacity				
38\05	1.81		0.548		3.01	0.548	Inlet Capacity				
38\04	1.81		0.548		2.53	0.548	Inlet Capacity				
38\03	1.81		0.685		2.32	0.685	Inlet Capacity				
38\02	1.81		0.685		1.94	0.685	Inlet Capacity				
38\01	1.57		0.685		2.30	0.685	Inlet Capacity				
36\03	1.54		0.167		2.33	0.092	Inlet Capacity				
36\02	1.52		0.092		3.16	0.092	Inlet Capacity				
36\01	1.52		0.490		3.15	0.490	Inlet Capacity				
38\17	4.20		6.491		2.33	0.000	None				
38\16	3.55		0.000		1.91	0.000	None				
38\15	3.08		0.170		1.36	0.170	Inlet Capacity				
39\05	4.53		0.032		1.03	0.010	Inlet Capacity				
39\04	4.30		0.010		1.24	0.001	Inlet Capacity				
39\03	2.36		0.001		1.42	0.001	Inlet Capacity				
39\02	2.34	2.39	0.001	0.5	0.03	0.000	Inlet Capacity				
39\01	2.33	2.39	0.000	0.0	0.06	0.000	None				
40\03	2.37	2.46	0.046	5.0	-0.01	0.002	Outlet System				
40\02	2.34	2.35	0.004	1.0	-0.06	0.000	Outlet System				
40\01	2.34	2.38	0.015	1.6	-0.11	0.000	Outlet System				
41\02	2.34	2.49	0.044	3.4	0.07	0.000	Inlet Capacity				
41\01	2.34	2.41	0.082	5.0	-0.03	0.017	Outlet System				
42\02	2.35	2.46	0.107	4.0	-0.07	0.000	Outlet System				
42\01	2.34	2.37	0.005	1.2	-0.10	0.000	Outlet System				
43\03	2.66		0.371		0.00	0.354	Outlet System				
43\02	2.62		0.436		0.00	0.470	Outlet System				
43\01	2.64		0.497		0.00	0.359	Outlet System				
44\02	2.87		1.206		0.96	1.206	Inlet Capacity				
44\01	2.47		1.206		0.35	1.206	Inlet Capacity				
45\05	6.65		2.216		1.93	0.000	None				
45\04	2.10		0.000		4.14	0.000	None				
45\03	1.88		0.000		4.37	0.000	None				
45\02	1.45		0.005		2.02	0.005	Inlet Capacity				
45\01	1.38		0.030		2.29	0.030	Inlet Capacity				
9\23	1.23		6.064		2.11	6.064	Inlet Capacity				
9\22	1.22		6.067		2.27	6.067	Inlet Capacity				
9\21	1.21		6.098		2.41	6.098	Inlet Capacity				
9\20	1.21		6.098		2.29	6.098	Inlet Capacity				
46\27	3.51		25.604		0.00	11.083	Outlet System				
46\26	3.04		11.083		0.68	11.083	Inlet Capacity				
46\25	3.02		11.085		0.61	11.085	Inlet Capacity				
46\24	2.77		11.085		0.48	11.085	Inlet Capacity				
46\23	2.72		11.085		0.49	11.085	Inlet Capacity				
46\22	2.63		11.242		0.19	11.242	Inlet Capacity				
46\21	2.57		11.242		0.20	11.242	Inlet Capacity				
46\20	2.55		11.242		0.13	11.242	Inlet Capacity				
46\19	2.53		11.242		0.21	11.242	Inlet Capacity				
46\18	2.38	3.27	11.242	5.0	0.69	11.242	Inlet Capacity				
47\02	3.39		15.937		0.26	0.000	None				
47\01	3.01		0.413		0.00	5.477	Outlet System				
48\09	9.69		0.640		0.00	0.461	Outlet System				
48\08	8.78		0.461		0.03	0.461	Inlet Capacity				
48\07	4.33		0.461		1.01	0.461	Inlet Capacity				
48\06	4.30		0.461		0.87	0.461	Inlet Capacity				
48\05	4.26		0.461		0.88	0.461	Inlet Capacity				
48\04	4.19		0.461		0.42	0.461	Inlet Capacity				
48\03	4.03	4.03	0.461	5.0	-0.20	0.525	Outlet System				
48\02	3.98	3.98	0.000	4.7	-0.30	0.000	Outlet System				
48\01	3.94	3.80	0.000	1.7	-0.29	0.000	Outlet System				
49\01	4.29		0.003		1.36	0.000	None				
50\04	4.16		0.030		0.97	0.011	Inlet Capacity				
50\03	4.01		0.047		1.19	0.015	Inlet Capacity				
50\02	3.75		0.015		0.66	0.015	Inlet Capacity				
50\01	3.61		0.015		0.75	0.015	Inlet Capacity				
51\01	2.91		0.953		0.00	0.598	Outlet System				
52\05	3.07		0.038		0.20	0.013	Inlet Capacity				
52\04	2.96		0.054		0.25	0.021	Inlet Capacity				
52\03	2.72		0.033		0.32	0.013	Inlet Capacity				
52\02	2.45		0.026		0.18	0.007	Inlet Capacity				
52\01	2.42		0.007		0.20	0.007	Inlet Capacity				
53\01	3.36	3.64	0.000	0.0	0.28	0.000	None				
170\02	3.36	3.74	0.000	0.0	0.38	0.000	None				
170\01	3.32	3.71	0.000	0.0	0.39	0.000	None				
54\04	3.67	3.68	0.046	1.0	-0.09	0.000	Outlet System				

54\03	3.37	3.55	0.000	0.0	0.18	0.000	None					
54\02	3.35	3.56	0.000	0.0	0.21	0.000	None					
54\01	3.34	3.66	0.000	0.0	0.32	0.000	None					
55\03	3.85	3.82	0.121	1.6	-0.22	0.000	Outlet System					
55\02	3.64	3.89	0.000	0.0	0.25	0.000	None					
55\01	3.53	3.87	0.000	0.0	0.34	0.000	None					
59\02	3.82	3.91	0.000	2.9	-0.20	0.000	Outlet System					
59\01	3.82	3.75	0.008	1.0	-0.20	0.000	Outlet System					
60\01	2.91		0.248		0.00	0.301	Outlet System					
61\01	2.94		0.325		0.00	0.413	Outlet System					
61\02	3.00		0.063		0.08	0.026	Inlet Capacity					
62\03	2.04		0.070		2.38	0.030	Inlet Capacity					
62\02	1.31		0.030		2.36	0.009	Inlet Capacity					
62\01	1.23		0.009		2.38	0.009	Inlet Capacity					
63\03	2.73		0.013		0.74	0.002	Inlet Capacity					
63\02	1.59		0.021		1.71	0.005	Inlet Capacity					
63\01	1.46		0.005		1.96	0.005	Inlet Capacity					
64\03	1.88		0.000		1.36	0.000	None					
64\02	1.80		0.009		1.55	0.001	Inlet Capacity					
64\01	1.65		0.009		1.70	0.001	Inlet Capacity					
9\24	1.23		6.298		2.12	6.037	Inlet Capacity					
65\02	3.01		0.150		0.00	0.220	Outlet System					
65\01	3.06		0.220		0.15	0.220	Inlet Capacity					
67\02	4.30		0.000		0.87	0.000	None					
67\01	4.30		0.000		0.89	0.000	None					
68\02	2.34		0.005		0.04	0.000	None					
68\01	2.34		0.013		0.05	0.002	Inlet Capacity					
69\02	2.23		0.021		0.00	0.010	Outlet System					
69\01	2.23		0.030		0.00	0.162	Outlet System					
70\03	2.33		0.067		0.00	0.050	Outlet System					
70\02	2.29		0.057		0.01	0.022	Inlet Capacity					
71\03	2.92		0.000		0.40	0.000	None					
71\02	2.92		0.351		0.14	0.351	Inlet Capacity					
71\01	2.92		0.649		0.00	0.411	Outlet System					
73\04	3.92	3.92	0.000	4.6	-0.29	0.000	Outlet System					
73\03	3.95	3.92	0.000	3.4	-0.19	0.000	Outlet System					
73\02	3.96	3.91	0.000	2.8	-0.18	0.000	Outlet System					
73\01	3.96	3.94	0.000	2.3	-0.09	0.000	Outlet System					
74\02	3.83	3.85	0.076	3.7	-0.57	0.000	Outlet System					
74\01	3.72	3.45	0.003	0.5	-0.39	0.000	Outlet System					
75\02	3.14		0.002		0.45	0.000	None					
75\01	3.14		0.058		0.52	0.023	Inlet Capacity					
76\02	2.82		0.000		0.58	0.000	None					
76\01	2.82		0.009		0.75	0.001	Inlet Capacity					
77\01	3.04		0.004		0.63	0.000	None					
78\08	3.43		0.105		0.00	0.096	Outlet System					
78\07	3.38		0.096		0.00	0.090	Outlet System					
78\06	3.27		0.149		0.00	0.152	Outlet System					
78\05	3.22		0.157		0.00	0.164	Outlet System					
78\04	3.21		0.180		0.00	0.179	Outlet System					
78\03	3.19		0.179		0.00	0.180	Outlet System					
78\02	3.18		0.185		0.00	0.182	Outlet System					
78\01	3.15		0.195		0.00	0.163	Outlet System					
80\01	2.07		0.136		0.23	0.071	Inlet Capacity					
79\01	1.99	2.51	0.131	5.0	0.22	0.131	Inlet Capacity					
89\01	5.63		0.032		0.94	0.019	Inlet Capacity					
182\07	4.66		0.024		1.10	0.013	Inlet Capacity					
182\06	3.40		0.017		1.84	0.008	Inlet Capacity					
182\05	3.12		0.015		1.74	0.007	Inlet Capacity					
N1804	2.85		0.007									
90\02	3.93		0.000		0.75	0.000	None					
90\01	3.45		0.000									
111\03	2.11		0.062		0.79	0.044	Inlet Capacity					
111\02	1.26		0.115		1.58	0.115	Inlet Capacity					
111\01	1.20		0.219		1.59	0.219	Inlet Capacity					
112\01	2.84		0.147		0.00	0.072	Outlet System					
113\02	1.20		0.000		1.50	0.000	None					
113\01	1.20		0.000		1.55	0.000	None					
129\01	2.23		0.000		0.01	0.000	None					
151\02	2.19		0.000		0.57	0.000	None					
151\01	2.19		0.127		0.69	0.065	Inlet Capacity					
152\01	2.05		0.000		0.78	0.000	None					
179\01	2.05		0.000		0.74	0.000	None					
153\03	2.26		0.000		0.55	0.000	None					
153\02	2.26		0.000		0.51	0.000	None					
153\01	2.26	2.63	0.000	0.0	0.38	0.000	None					
154\01	2.63		0.000		0.24	0.000	None					
155\02	2.52		0.000		0.60	0.000	None					
155\01	2.52		0.000		0.30	0.000	None					
156\02	2.46		0.063		0.00	0.085	Outlet System					
156\01	2.56		0.154		0.00	0.179	Outlet System					
157\01	2.79		0.172		0.00	0.069	Outlet System					
158\01	2.30		0.003		0.00	0.067	Outlet System					
159\01	2.50		0.193		0.27	0.000	None					
160\02	2.76		0.364		7.24	0.000	None					
160\01	2.50		2.821		0.00	2.739	Outlet System					
161\01	2.33		2.739		0.17	2.658	Inlet Capacity					
162\01	2.32		2.658		0.14	2.576	Inlet Capacity					

163\01	2.32		2.576		0.03	2.494	Inlet Capacity					
164\01	2.55		2.499		0.00	2.371	Outlet System					
165\01	2.34		0.000		0.38	0.000	None					
166\01	2.34		2.897		0.13	2.816	Inlet Capacity					
167\01	8.78		0.000		0.49	0.000	None					
168\01	4.04	4.04	0.081	5.0	-0.40	0.024	Outlet System					
169\01	3.92	3.92	0.016	5.0	-0.10	0.021	Outlet System					
170\03	3.40		0.322		0.81	0.000	None					
171\01	2.99	3.83	0.000	0.1	0.83	0.000	Inlet Capacity					
172\01	3.77	3.77	0.024	1.7	-0.25	0.000	Outlet System					
173\01	3.53	3.76	0.002	0.1	0.22	0.000	Inlet Capacity					
174\01	2.77		0.022		0.49	0.001	Inlet Capacity					
175\01	2.69		0.007		0.50	0.001	Inlet Capacity					
176\01	2.74		0.034		0.48	0.013	Inlet Capacity					
177\01	2.77		0.000		0.47	0.000	None					
178\01	2.52		0.000		0.26	0.000	None					
179\02	2.30		0.000		0.98	0.000	None					
180\02	2.38		0.000		0.09	0.000	None					
180\01	2.38		0.000		0.05	0.000	None					
181\01	2.17		0.000		0.34	0.000	None					
182\09	5.48		0.007		1.33	0.000	None					
182\08	4.83		0.005		1.08	0.000	None					
186\02	1.52		0.000		3.07	0.000	None					
186\01	1.52		0.000		3.19	0.000	None					
187\02	1.57		0.456		1.80	0.402	Inlet Capacity					
187\01	1.54		0.402		1.86	0.402	Inlet Capacity					
189\01	2.53		0.000		1.99	0.000	None					
190\01	1.90		0.000		2.49	0.000	None					
191\01	1.60		0.000		2.94	0.000	None					
192\01	2.52		0.000		1.52	0.000	None					
197\02	2.53		0.033		0.77	0.033	Inlet Capacity					
197\01	2.25		0.033		0.97	0.033	Inlet Capacity					
193\01	4.00		0.000		1.37	0.000	None					
197\04	2.79		0.000		1.51	0.000	None					
197\03	2.79		0.072		0.92	0.029	Inlet Capacity					
198\02	4.83		3.068		0.00	0.814	Outlet System					
198\01	3.79		0.000		0.00	0.248	Outlet System					
199\01	1.72		0.139		0.95	0.110	Inlet Capacity					
22-02	1.61		4.697		2.39	0.000	None					
22-02 A	1.39		0.000		2.61		None					
22-01	1.37		0.000		1.18		None					
3-05	1.34		0.108		1.30		None					
3-04	1.20		0.000		1.47		None					
3-03	1.16		0.107		1.56		None					
3-02	1.10		0.000		1.80		None					
3-01	1.05		0.000		2.14		None					
A-02	1.00		0.034		2.35	0.034	Inlet Capacity					
A-01	0.90		0.034									
23-02	2.20		3.770		1.48	0.000	None					
3-06	2.08		0.000		0.95		None					
3-06A	1.83		0.000		2.67		None					
27-02	2.52	3.60	0.139	2.8	0.93	0.000	Inlet Capacity					
27-01	2.19		0.028		0.72	0.008	Inlet Capacity					
21-01	2.16		0.008		0.85		None					
3-09	2.12		0.000		0.59		None					
3-08	2.11		0.047		0.62		None					
3-07	2.09		0.029		0.84		None					
30-02	2.75	3.31	0.220	4.0	0.36	0.027	Inlet Capacity					
30-02 A	2.44	3.11	0.000	0.0	0.67	0.000	None					
30-01	2.24		0.014		0.53	0.002	Inlet Capacity					
21-03	2.22		0.000		0.65		None					
21-02	2.19		0.000		0.89		None					
31-02	2.78	3.63	0.586	5.0	0.65	0.394	Inlet Capacity					
31-02 A	2.47	3.43	0.000	0.0	0.96		None					
31-01	2.27	2.64	0.023	1.0	0.30	0.000	Inlet Capacity					
29-01	2.24		0.337		0.26	0.337	Inlet Capacity					
119-02	1.99		0.000		0.85		None					
119-01	1.72		0.000		1.26		None					
120-01	1.72		0.423		1.36	0.198	Inlet Capacity					
121-01	1.51		0.000		1.47		None					
120A-01	2.12		0.000		0.94	0.000	None					
119A-01	2.12		0.198		0.68	0.114	Inlet Capacity					
121-06	2.52		0.070		0.58	0.030	Inlet Capacity					
121-05	2.48	3.14	0.065	1.4	0.55	0.000	Inlet Capacity					
121-04	2.30		0.000		0.75		None					
121-03	2.14		0.000		1.00		None					
121-02	2.09		0.000		1.00		None					
122-02	1.98		0.000		0.95	0.000	None					
122-01	1.88		0.000		1.02		None					
122A-01	2.14		0.000		1.02	0.000	None					
123-02	1.72	2.68	0.000	0.0	0.96	0.000	None					
123-01	1.68		0.000		0.98		None					
124A-02	2.90	2.88	0.114	3.2	-0.32	0.000	Outlet System					
124A-01	1.86		0.000		0.74		None					
125-02	1.49		0.293		1.97	0.000	None					
125-01	1.46		0.000		1.73		None					
132-02	1.05		0.182		2.05	0.000	None					
132-01	1.05		0.000		2.01		None					

3-11	2.12	2.57	0.000	0.0	0.45	0.000	None					
3-10	2.12		0.000		0.64	0.000	None					
29-02	2.33	2.61	0.000	0.0	0.27	0.000	None					
29-02 A	2.33	2.69	0.031	1.1	0.27	0.000	Inlet Capacity					
111A\01	1.90		0.000		0.82		None					
Dummy 1	2.13		0.629		7.87	0.000	None					
Dummy 3	2.09		0.559		7.91	0.000	None					
Dummy 2	2.18		0.717		7.82	0.000	None					
200\04	0.96		0.000		1.71	0.000	None					
200\03	0.90		0.000		1.78	0.000	None					
200\02	0.90		0.000		1.64	0.000	None					
200\01	0.90		0.000									
201\01	0.90		0.000		1.45	0.000	None					
202\02	1.40		0.000		1.26	0.000	None					
202\01	1.07		0.000		1.50	0.000	None					
204\02	1.25		0.000		1.62	0.000	None					
204\01	0.91		0.000		1.63	0.000	None					
205\04	3.97		0.000		1.83	0.000	None					
205\03	0.90		0.000		1.66	0.000	None					
205\02	0.90		0.000		1.37	0.000	None					
205\01	0.90		0.000									
206\03	1.95		3.631		0.00	2.568	Outlet System					
206\02	1.88		2.568		0.38	1.964	Inlet Capacity					
206\01	1.30		2.122		1.89	1.518	Inlet Capacity					
208\02	1.02		1.522		1.78	1.522	Inlet Capacity					
208\01	0.90		0.000									
207\02	2.32		0.012		0.84	0.000	None					
207\01	1.79		0.017		0.73	0.000	None					
208\04	1.18		3.419		1.25	0.000	None					
208\03	1.06		0.051		1.73	0.005	Inlet Capacity					
209\17	4.66		0.009		0.43	0.000	None					
209\16	4.64		0.014		0.04	0.000	None					
209\15	4.62		0.024		0.00	0.026	Outlet System					
209\14	4.51		0.048		0.00	0.073	Outlet System					
209\13	4.32		0.098		0.00	0.043	Outlet System					
209\12	4.13		0.068		0.00	0.103	Outlet System					
209\11	3.99		0.243		0.00	0.284	Outlet System					
209\10	3.60		0.350		0.32	0.141	Inlet Capacity					
209\09	3.36		0.143		0.59	0.037	Inlet Capacity					
209\08	3.23		0.065		0.70	0.009	Inlet Capacity					
209\07	3.17		0.030		0.41	0.001	Inlet Capacity					
209\06	2.91		0.065		0.04	0.009	Inlet Capacity					
209\05	1.96		0.010		0.68	0.000	None					
209\04	1.52		0.632		0.00	0.667	Outlet System					
209\03	1.44		0.755		0.53	0.392	Inlet Capacity					
209\02	1.20		0.395		1.15	0.166	Inlet Capacity					
209\01	1.15		0.168		1.31	0.048	Inlet Capacity					
210\05	1.82		0.042		1.08	0.003	Inlet Capacity					
210\04	1.79		0.066		0.79	0.022	Inlet Capacity					
210\03	1.68		0.009		1.03	0.000	None					
210\02	1.60		0.000		1.20	0.000	None					
210\01	1.51		0.000		0.54	0.000	None					
211\03	1.34		0.083		0.00	0.032	Outlet System					
211\02	1.28		0.153		0.00	0.326	Outlet System					
211\01	1.41		0.326		0.00	0.400	Outlet System					
212\01	2.47		0.029		0.87	0.001	Inlet Capacity					
213\07	3.77		0.015		0.38	0.000	None					
213\06	3.77		0.038		0.58	0.003	Inlet Capacity					
213\05	3.73		0.022		0.06	0.000	None					
213\04	3.69		0.046		0.00	0.153	Outlet System					
213\03	3.69		0.199		0.00	0.278	Outlet System					
213\02	3.85		0.419		0.00	0.206	Outlet System					
213\01	3.78		0.214		0.43	0.069	Inlet Capacity					
214\02	5.48		0.036		0.44	0.002	Inlet Capacity					
214\01	4.35		0.000		1.14	0.000	None					
215\01	4.27		0.176		0.00	0.052	Outlet System					
216\01	4.29		0.032		0.21	0.001	Inlet Capacity					
217\01	4.39		0.071		0.43	0.010	Inlet Capacity					
218\01	4.62		0.053		0.40	0.006	Inlet Capacity					
219\01	4.69		0.040		0.42	0.003	Inlet Capacity					
220\02	3.19		0.029		0.81	0.001	Inlet Capacity					
220\01	3.17		0.001		0.42	0.001	Inlet Capacity					
221\01	3.36		0.032		0.80	0.001	Inlet Capacity					
46\10 weir	1.58		0.157		1.08		None					
Dummy DQ 1	3.19		0.232		0.66	0.000	None					
Dummy DQ 2	3.20		0.237		0.64	0.000	None					
Pit1483	15.29		6.902		0.00	4.920	Outlet System					
N1622	13.65		0.000									
Pit1563	2.11		0.048		0.96	0.000	None					
BV01\02	1.56		2.087		0.85	2.049	Inlet Capacity					
BV01\01	1.52		2.049		0.82	2.012	Inlet Capacity					
102\02	1.25		0.540		1.17	0.540	Inlet Capacity					
102\01	1.14		0.540		1.96	0.540	Inlet Capacity					
BV02\02	1.60		1.998		0.65	1.961	Inlet Capacity					
BV02\01	1.58		2.020		0.73	1.983	Inlet Capacity					
BV03\02	1.25		0.010		1.00	0.008	Inlet Capacity					
BV03\01	1.25		0.012		1.06	0.010	Inlet Capacity					
BV04\01	1.25		0.000		1.03	0.000	None					

BV05\01	1.49		0.303		0.92	0.285	Inlet Capacity					
BV06\03	5.62		2.050		0.90	2.013	Inlet Capacity					
BV06\02	1.00		2.091		1.42	2.053	Inlet Capacity					
BV06\01	1.00		0.288		1.42	0.271	Inlet Capacity					
96\01	1.00		0.000		1.45	0.000	None					
BV07\02	1.48		0.074		0.97	0.065	Inlet Capacity					
BV07\01	1.24		0.203		1.20	0.187	Inlet Capacity					
BV08\01	1.04		0.095		8.11	0.000	None					
130\01	1.04		0.064		4.60	0.064	Inlet Capacity					
BV09\02	1.47		0.039		1.00	0.034	Inlet Capacity					
BV09\01	1.09		0.034		1.36	0.028	Inlet Capacity					
BV10\02	1.57		0.046		0.91	0.039	Inlet Capacity					
BV10\01	1.57		0.053		0.94	0.046	Inlet Capacity					
134-01	1.57		0.000		0.97	0.000	None					
BV11\06	1.82		0.000		0.73	0.000	None					
BV11\05	1.82		0.083		0.72	0.073	Inlet Capacity					
BV11\04	1.82		0.155		0.71	0.141	Inlet Capacity					
BV11\03	1.82		0.330		0.71	0.312	Inlet Capacity					
BV11\02	1.81		0.389		0.71	0.369	Inlet Capacity					
BV11\01	1.76		0.369		0.74	0.349	Inlet Capacity					
81\01	1.71		0.000		0.86	0.000	None					
BV12\05	2.21		0.049		0.26	0.042	Inlet Capacity					
BV12\04	2.21		0.109		0.24	0.096	Inlet Capacity					
BV12\03	2.20		0.439		0.23	0.418	Inlet Capacity					
BV12\02	2.16		0.729		0.20	0.705	Inlet Capacity					
BV12\01	2.13		0.779		0.12	0.755	Inlet Capacity					
PA17\02	2.43		0.072		0.94	0.063	Inlet Capacity					
PA17\01	2.18		0.063		0.99	0.054	Inlet Capacity					
PA19\03	3.01		0.073		1.27	0.000	None					
PA19\02	2.88		0.019		0.59	0.015	Inlet Capacity					
PA19\01	2.85		0.029		0.59	0.024	Inlet Capacity					
PA21\04	2.48		0.052		0.99	0.045	Inlet Capacity					
PA21\03	2.23		0.039		1.11	0.033	Inlet Capacity					
PA21\02	2.04		0.054		1.26	0.046	Inlet Capacity					
PA21\01	1.87		0.000									
PA22\05	2.80		0.075		1.19	0.000	None					
PA22\04	2.59		0.014		1.05	0.011	Inlet Capacity					
PA22\03	2.12		0.011		1.29	0.009	Inlet Capacity					
PA22\02	1.84		0.027		1.52	0.023	Inlet Capacity					
PA22\01	1.72		0.023		1.47	0.018	Inlet Capacity					
9\25	1.23		6.297		1.83	6.297	Inlet Capacity					
PA23\01	2.21		0.069		0.00	0.011	Outlet System					
PA23\02	2.14		0.011		0.00	0.143	Outlet System					
79\03	2.19	2.39	0.208	5.0	0.00	0.077	Inlet Capacity					
79\02	2.05	2.27	0.032	3.5	0.14	0.000	Inlet Capacity					
PA3\02	3.04		0.890		0.00	0.705	Outlet System					
PA7\04	2.05		0.035		0.64	0.000	None					
PA7\03	2.02		0.014		0.18	0.000	None					
PA7\02	2.01	2.01	0.022	1.0	0.00	0.022	Inlet Capacity					
PA7\01	2.00	1.99	0.024	1.0	-0.01	0.063	Outlet System					
SP01\03	2.75		0.022		0.63	0.018	Inlet Capacity					
SP01\02	2.38		0.036		1.19	0.031	Inlet Capacity					
SP01\01	2.21		0.031		0.33	0.026	Inlet Capacity					
SP02\04	5.98		0.054		4.02	0.000	None					
SP02\03	2.77		0.031		0.56	0.026	Inlet Capacity					
SP02\02	2.32		0.061		0.40	0.053	Inlet Capacity					
SP02\01	2.25		0.256		0.87	0.239	Inlet Capacity					
SP03\01	3.00		0.042		0.60	0.036	Inlet Capacity					
SP04\02	2.27		0.111		0.65	0.098	Inlet Capacity					
SP04\01	2.27		0.122		0.39	0.109	Inlet Capacity					
SP05\02	2.28		0.155		0.25	0.141	Inlet Capacity					
SP05\01	2.28		0.143		0.33	0.129	Inlet Capacity					
SP07\03	2.94		0.023		0.47	0.000	None					
SP07\02	2.92		0.023		0.33	0.000	None					
SP07\01	2.90		0.138		0.00	0.259	Outlet System					
SP08\01	2.20		0.323		0.00	0.293	Outlet System					
SP09\01	2.25		0.380		0.19	0.360	Inlet Capacity					
SP10\01	2.93		0.370		0.38	0.351	Inlet Capacity					
SP11\01	3.28		0.325		0.00	0.138	Outlet System					
SP12\07	2.14		0.008		0.29	0.006	Inlet Capacity					
SP12\06	2.14		0.017		0.19	0.014	Inlet Capacity					
SP12\05	2.14		0.008		0.19	0.000	None					
SP12\04	2.14		0.003		0.13	0.000	None					
SP12\03	2.14	2.14	0.018	1.0	0.00	0.055	Outlet System					
SP12\02	2.14	2.14	0.248	1.0	0.00	0.306	Outlet System					
SP12\01	2.15		0.306		0.33	0.288	Inlet Capacity					
TG01\04	1.55		0.000		0.94	0.000	None					
TG01\03	1.55		0.358		0.92	0.339	Inlet Capacity					
TG01\02	1.55		0.339		1.04	0.320	Inlet Capacity					
TG01\01	1.53		0.820		1.86	0.795	Inlet Capacity					
TG02\04	3.53		0.000		1.13	0.000	None					
TG02\03	3.53		0.000		1.12	0.000	None					
TG02\02	3.08		0.077		1.08	0.068	Inlet Capacity					
TG02\01	2.20		0.068		1.04	0.059	Inlet Capacity					
D\02	2.47		0.052		0.07	0.046	Inlet Capacity					
D\01	2.47		0.111		0.00	0.101	Outlet System					
E\04	2.26		0.049		0.78	0.043	Inlet Capacity					
E\03	2.26		0.105		0.54	0.095	Inlet Capacity					

E\02	2.26		0.096		0.79	0.087	Inlet Capacity					
E\01	2.25		0.113		0.59	0.103	Inlet Capacity					
32-01	2.25		0.278		0.77		None					
F\02	2.26		0.044		0.96	0.038	Inlet Capacity					
F\01	2.26		0.071		0.61	0.063	Inlet Capacity					
33-01	2.25		0.063		0.67	0.026	Inlet Capacity					
G\02	2.41		0.299		0.05	0.285	Inlet Capacity					
G\01	2.40	2.58	0.304	5.0	0.03	0.219	Inlet Capacity					
H\01	2.22		0.036		0.41	0.031	Inlet Capacity					
21-04 A	2.22		0.000		0.57		None					
I\02	2.19		0.015		0.63		None					
I\01	2.19		0.003		0.67	0.002	Inlet Capacity					
127-01	2.19		0.000		0.84	0.000	None					
K\01	2.11		0.694		0.70	0.675	Inlet Capacity					
24-02 A	2.10	2.99	0.683	5.0	0.79		Inlet Capacity					
L\01	2.22		0.003		0.41	0.000	None					
LR1\01	3.02		0.049		0.59	0.000	None					
Q\01	1.91		0.042		0.51	0.042	Inlet Capacity					
124-01	1.86	2.57	0.042	1.3	0.61	0.000	Inlet Capacity					
LR2\01	2.25		0.017		0.82	0.000	None					
LR4\01	1.93		0.015		1.27	0.000	None					
J\02	1.57		0.070		0.93	0.061	Inlet Capacity					
J\01	1.45		0.118		0.87	0.108	Inlet Capacity					
LR5\01	1.98		0.032		1.33	0.000	None					
J\03	1.68		0.026		1.03	0.022	Inlet Capacity					
LR6\01	2.72		0.042		0.77	0.000	None					
T\01	2.08		0.019		0.59	0.015	Inlet Capacity					
LR7\01	2.50		0.022		0.92	0.000	None					
B\02	2.17		0.054		0.31	0.047	Inlet Capacity					
B\01	2.16		0.022		0.33	0.019	Inlet Capacity					
4-01	2.14	2.83	0.401	133.4	0.53	0.000	Inlet Capacity					
LR8\01	2.24		0.007		1.08	0.000	None					
B\03	2.18		0.023		0.37	0.019	Inlet Capacity					
M\02	2.22		0.006		0.73	0.004	Inlet Capacity					
M\01	2.22		0.026		0.56	0.022	Inlet Capacity					
O\01	2.45		0.047		0.15	0.041	Inlet Capacity					
P\04	2.08		0.012		0.62	0.010	Inlet Capacity					
P\03	2.08		0.021		0.58	0.017	Inlet Capacity					
P\02	2.08		0.029		0.33	0.025	Inlet Capacity					
P\01	2.08		0.010		0.35	0.008	Inlet Capacity					
24A-01 A	2.08		0.004		0.82	0.003	Inlet Capacity					
R\02	1.91		0.024		0.86	0.020	Inlet Capacity					
R\01	1.91		0.039		0.77	0.034	Inlet Capacity					
S\03	1.83		0.034		0.85	0.029	Inlet Capacity					
S\02	1.83		0.187		0.70	0.175	Inlet Capacity					
S\01	1.83		0.299		0.69	0.284	Inlet Capacity					
SUB-CATCHMENT DETAILS												
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm					
	Flow Q	Max Q	Max Q	Tc	Tc	Tc						
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)						
C 1\24	9.434	9.434	0.000	10.70	10.70	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 5\02	0.112	0.112	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 46\12	0.040	0.040	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 46\10	0.157	0.157	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 46\05	0.601	0.601	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 7\02	0.040	0.040	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 9\12	0.105	0.105	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 9\11	0.121	0.121	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 8\06	2.937	2.661	0.276	5.00	5.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
C 11\43	45.698	45.698	0.000	20.10	20.10	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
C 11\12	0.022	0.021	0.002	5.00	10.00	0.00	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1					
C 11\03	0.107	0.107	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 12\01	0.134	0.134	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 19\21	0.036	0.036	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 13\02	0.027	0.027	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 13\01	0.025	0.025	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 16\03	1.751	1.751	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 17\02	0.309	0.309	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 18\01	0.075	0.075	0.000	3.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 19\28	0.697	0.697	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 35\04	0.025	0.025	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 35\03	0.040	0.040	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 38\10	0.482	0.482	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 38\05	0.064	0.064	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 38\03	0.165	0.165	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 36\03	0.167	0.167	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 38\17	4.524	4.524	0.000	9.50	9.50	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
C 38\15	0.156	0.156	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 39\05	0.032	0.032	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 40\03	0.046	0.046	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 40\02	0.004	0.004	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 40\01	0.015	0.015	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 41\02	0.044	0.044	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 41\01	0.082	0.082	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 42\02	0.107	0.107	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 42\01	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
C 43\03	0.371	0.371	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					

C 43\02	0.082	0.082	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 43\01	0.027	0.027	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 44\02	1.206	1.206	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 45\05	2.216	2.216	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 45\01	0.025	0.025	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 46\27	0.169	0.169	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 46\22	0.096	0.096	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 47\02	15.937	15.937	0.000	14.40	14.40	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 48\09	0.640	0.640	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 49\01	0.003	0.000	0.003	1.00	1.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
C 50\04	0.030	0.000	0.030	1.00	1.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
C 50\03	0.036	0.000	0.036	1.00	1.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
C 51\01	0.953	0.953	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 52\05	0.038	0.038	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 52\04	0.041	0.041	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 52\03	0.012	0.012	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 52\02	0.013	0.013	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 54\04	0.046	0.046	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 59\02	0.000	0.000	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 59\01	0.008	0.008	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 60\01	0.248	0.248	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 61\02	0.063	0.063	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 62\03	0.070	0.070	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 63\03	0.013	0.013	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 63\02	0.019	0.019	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 64\02	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 64\01	0.008	0.008	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 65\02	0.150	0.150	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 68\02	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 68\01	0.013	0.013	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 69\02	0.021	0.021	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 69\01	0.020	0.020	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 70\03	0.067	0.036	0.032	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 70\02	0.007	0.007	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 71\01	0.052	0.052	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 74\02	0.076	0.076	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 74\01	0.003	0.003	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 75\02	0.002	0.002	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 75\01	0.058	0.058	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 76\01	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 77\01	0.004	0.004	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\08	0.105	0.105	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\06	0.059	0.059	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\05	0.006	0.006	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\04	0.016	0.016	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\02	0.006	0.006	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 78\01	0.013	0.013	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 80\01	0.136	0.136	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 89\01	0.032	0.032	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 182\07	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 182\06	0.003	0.003	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 182\05	0.007	0.007	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 111\03	0.062	0.062	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 112\01	0.147	0.147	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 151\01	0.127	0.127	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 156\02	0.063	0.063	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 157\01	0.172	0.172	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 158\01	0.003	0.003	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 159\01	0.193	0.193	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 160\02	0.364	0.188	0.176	4.00	4.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
C 160\01	0.021	0.021	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 164\01	0.018	0.018	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 166\01	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 168\01	0.081	0.081	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 169\01	0.016	0.016	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 170\03	0.322	0.322	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 171\01	0.000	0.000	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 172\01	0.024	0.024	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 173\01	0.002	0.002	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 174\01	0.022	0.022	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 175\01	0.007	0.007	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 176\01	0.034	0.034	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 182\09	0.007	0.007	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 182\08	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 187\02	0.456	0.236	0.220	4.00	4.00	0.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
C 197\02	0.004	0.004	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 197\03	0.072	0.072	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 198\02	3.068	3.068	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 199\01	0.139	0.139	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 22-02	4.697	4.287	0.412	12.20	12.20	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 3-03	0.107	0.098	0.010	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C A\02	0.034	0.034	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 23-02 Indire	3.770	3.433	0.338	9.40	9.40	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 27-02	0.139	0.139	0.000	3.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 27-01	0.028	0.028	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21-01	0.008	0.007	0.001	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 30-02	0.220	0.220	0.000	3.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 30-01	0.014	0.014	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	

C 31-02	0.249	0.249	0.000	3.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 31-01	0.021	0.021	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 29-01	0.017	0.017	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 120-01	0.423	0.423	0.000	5.00	2.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 121-06	0.070	0.070	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 121-05	0.034	0.034	0.000	1.00	2.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
Roof	0.293	0.293	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
Cat10889	0.182	0.182	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 4602	0.629	0.629	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 4604	0.559	0.559	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 4603	0.717	0.717	0.000	4.00	4.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20603	3.631	3.631	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 20601	0.169	0.169	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20702	0.012	0.012	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20701	0.017	0.017	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20804	3.419	3.419	0.000	5.00	5.00	0.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1	
C 20803	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20917	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20916	0.014	0.014	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20915	0.024	0.024	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20914	0.022	0.022	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20913	0.026	0.026	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20912	0.025	0.025	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20911	0.087	0.087	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20910	0.001	0.001	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20909	0.004	0.004	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20908	0.034	0.034	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20907	0.019	0.019	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20906	0.064	0.064	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20904	0.232	0.232	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20903	0.098	0.098	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20902	0.006	0.006	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 20901	0.006	0.006	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21005	0.020	0.020	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21004	0.066	0.066	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21003	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21103	0.083	0.083	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21102	0.121	0.121	0.000	3.00	3.00	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
C 21201	0.029	0.02						

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P 11\41	27.661	3.66	3.836	3.804	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\40	27.298	3.61	3.749	3.717	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\39	27.317	2.65	3.360	3.343	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\38	27.376	2.65	3.313	3.295	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\37	27.376	2.65	3.265	3.247	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\36	27.728	2.69	3.154	3.135	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\35	29.388	2.85	3.030	3.009	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\34	29.388	2.85	3.009	2.987	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\33	29.388	2.85	2.952	2.931	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\32	29.388	2.85	2.931	2.810	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\31	29.399	2.85	2.775	2.753	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\30	29.399	2.85	2.753	2.711	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\29	29.419	2.85	2.711	2.690	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\28	29.425	2.85	2.655	2.633	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\27	29.445	2.85	2.598	2.544	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\26	29.445	2.85	2.544	2.522	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\25	29.445	2.85	2.487	2.466	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\24	29.445	2.85	2.431	2.409	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\23	29.539	2.86	2.374	2.341	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\22	29.685	2.88	2.305	2.256	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\21	29.737	2.88	2.148	2.127	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\20	29.737	2.88	2.127	2.105	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\19	29.797	2.89	2.069	2.047	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\18	29.797	2.89	2.011	1.985	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\17	29.260	2.84	1.985	1.963	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 11\16	27.405	1.90	1.741	1.731	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\15	27.405	1.90	1.731	1.657	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\14	27.435	1.91	1.657	1.646	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\13	27.435	1.91	1.646	1.635	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\12	27.761	1.93	1.635	1.587	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\11	27.916	1.94	1.395	1.384	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\10	27.916	1.94	1.384	1.365	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\09	27.916	1.94	1.365	1.208	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\08	27.916	1.94	1.208	1.197	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\07	27.916	1.94	1.197	1.167	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\06	27.916	1.94	1.167	1.080	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\05	27.916	1.94	1.080	1.066	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\04	27.962	1.94	1.066	0.974	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\03A	28.083	1.95	0.955	0.941	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\03	28.083	1.95	0.941	0.930	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 11\02	28.083	1.95	0.930	0.900	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 12\01	0.090	2.26	3.154	3.134	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\26	0.376	3.21	3.075	3.049	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\25	0.376	3.21	3.049	3.023	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\24	0.429	3.67	2.944	2.845	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 19\23	0.689	1.56	2.792	2.770	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\22	0.850	1.92	2.618	2.522	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\21	0.850	1.92	2.401	2.373	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\20	0.850	1.92	2.363	2.348	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\19	0.850	0.75	2.346	2.345	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\18	0.938	0.83	2.342	2.337	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\17	1.010	0.89	2.337	2.338	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 19\16	1.013	0.90	2.338	2.338	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 19\15	1.029	0.91	2.338	2.338	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 19\14	1.063	0.94	2.338	2.342	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\13	1.671	1.48	2.339	2.339	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\12	1.671	1.13	2.338	2.338	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\11	1.856	1.26	2.338	2.337	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\10	1.964	1.33	2.335	2.334	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\09	2.164	1.19	2.323	2.322	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\08	2.233	1.22	2.321	2.319	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 19\07	2.659	1.46	2.314	2.311	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\06	2.736	1.50	2.309	2.306	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\05	2.810	1.54	2.304	2.301	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\04	2.880	1.58	2.299	2.294	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\03	3.133	1.72	2.291	2.289	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\02	3.133	1.72	2.289	2.285	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 19\01	3.133	1.72	2.282	2.277	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 13\02	0.020	2.54	1.806	1.629	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 13\01	0.053	0.54	1.629	1.626	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 10\01	0.194	1.76	1.243	1.206	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 9\18	3.104	0.70	1.204	1.198	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 9\17	3.104	0.67	1.198	1.197	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 15\04	0.000	0.00	2.480	2.380	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 15\03	0.000	0.00	2.300	2.200	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 15\02	0.000	0.00	1.209	1.209	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 15\01	0.000	0.00	1.209	1.209	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 9\19	2.654	0.60	1.208	1.206	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 16\03	1.751	3.96	4.401	3.437	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 16\02	1.751	3.96	3.368	3.229	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 16\01	1.751	3.96	3.229	3.135	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 17\02	0.200	4.34	2.982	2.678	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 17\01	0.650	3.00	2.366	2.342	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 18\02	0.000	0.00	2.280	2.279	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 18\01	0.042	0.60	2.280	2.283	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 70\01	0.105	0.66	2.284	2.337	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\28	0.415	3.55	5.246	4.804	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 19\27	0.300	2.56	4.665	3.134	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			

P 3504	0.017	1.09	4.589	4.489	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3503	0.017	0.23	3.022	3.022	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3502	0.017	0.08	3.022	3.021	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3501	0.017	0.08	3.021	3.021	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3814	6.545	2.91	2.978	2.959	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3813	6.545	3.59	2.959	2.929	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3812	6.545	3.59	2.864	2.831	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3811	6.545	2.91	2.788	2.650	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3810	6.715	2.98	2.605	2.575	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3809	6.715	3.53	2.530	2.249	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3808	6.715	4.43	1.880	1.880	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3807	6.715	4.35	1.880	1.824	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3806	6.715	4.37	1.822	1.810	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3805	6.715	3.72	1.810	1.810	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3804	6.715	3.38	1.810	1.810	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3803	6.715	3.00	1.810	1.810	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3802	6.715	3.51	1.810	1.569	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3801	6.715	2.98	1.524	1.479	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3603	0.075	0.27	1.526	1.519	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3602	0.075	0.17	1.517	1.516	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3601	0.128	0.20	1.513	1.511	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3817	6.491	7.22	4.195	3.548	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3816	6.493	4.40	3.449	3.083	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3815	6.532	2.90	3.040	3.021	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3905	0.022	1.44	4.394	4.295	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3904	0.031	3.26	4.133	2.358	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3903	0.031	1.62	2.346	2.339	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3902	0.271	0.24	2.335	2.334	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3901	0.271	0.15	2.334	2.334	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 4003	0.043	0.39	2.342	2.341	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 4002	0.062	0.10	2.341	2.341	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 4001	0.118	0.13	2.339	2.339	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 4102	0.043	0.15	2.337	2.337	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4101	0.108	0.12	2.337	2.337	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4202	0.105	0.17	2.343	2.343	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4201	0.129	0.20	2.339	2.339	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 4303	0.040	1.00	2.621	2.615	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4302	0.073	1.03	2.619	2.639	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4301	0.146	2.07	2.374	2.341	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4402	0.000	0.00	2.870	2.466	AR&R 100 year, 1 hour storm, average 94.5 mm/h, Zone 1			
P 4401	0.000	0.00	2.466	2.466	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4505	2.216	7.65	6.648	4.468	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4504	2.216	3.51	2.097	1.876	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4503	2.216	3.56	1.876	1.449	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4502	2.243	3.84	1.377	1.377	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4501	2.243	3.55	1.377	1.233	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 9123	2.600	0.66	1.227	1.223	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 9122	2.654	0.66	1.221	1.213	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 9121	2.654	0.62	1.213	1.212	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 9120	2.654	0.61	1.212	1.209	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 46127	15.716	2.60	3.159	3.042	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46126	15.716	2.60	3.042	3.015	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46125	15.716	2.64	2.985	2.773	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46124	15.716	2.64	2.743	2.716	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46123	15.716	2.60	2.716	2.633	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46122	15.716	2.60	2.604	2.574	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46121	15.716	2.60	2.574	2.548	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46120	15.716	2.07	2.548	2.526	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46119	15.716	2.07	2.526	2.380	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 46118	15.716	1.95	2.364	2.322	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4702	15.937	3.29	3.388	3.005	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4701	14.162	2.92	2.982	2.885	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 4809	0.184	4.01	9.685	8.781	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4808	0.184	4.01	8.451	4.334	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4807	0.184	1.16	4.306	4.299	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4806	0.184	1.16	4.271	4.259	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4805	0.184	1.16	4.231	4.190	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4804	0.184	1.16	4.163	4.028	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4803	0.184	1.16	3.987	3.984	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4802	0.184	1.16	3.943	3.939	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4801	0.266	1.67	3.917	3.891	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 4901	0.003	3.11	4.214	3.548	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 5004	0.019	1.39	4.025	4.012	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 5003	0.052	0.81	3.949	3.753	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 5002	0.052	0.96	3.614	3.608	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 5001	0.052	1.46	3.476	3.301	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 5101	0.538	4.87	2.914	2.678	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5205	0.025	0.23	3.066	2.958	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5204	0.059	0.53	2.958	2.723	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5203	0.079	0.50	2.723	2.450	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5202	0.098	0.62	2.428	2.423	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5201	0.098	0.45	2.411	2.409	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5301	0.000	0.00	3.361	3.361	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 17002	0.380	0.86	3.323	3.321	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 17001	0.423	0.96	3.260	3.247	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 5404	0.046	1.14	3.424	3.371	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5403	0.046	0.41	3.357	3.354	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 5402	0.046	0.41	3.342	3.342	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			

P 54I01	0.046	0.41	3.324	3.321	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 55I03	0.072	1.00	3.646	3.637	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 55I02	0.072	1.02	3.537	3.527	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 55I01	0.074	1.04	3.380	3.361	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 59I02	0.127	0.65	3.818	3.818	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 59I01	0.092	1.30	3.809	3.804	AR&R 100 year, 1 hour storm, average 94.5 mm/h, Zone 1			
P 60I01	0.098	0.62	2.907	2.938	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 61I01	0.135	0.85	2.938	3.005	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 61I02	0.037	0.52	2.945	2.938	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 62I03	0.040	1.52	1.858	1.738	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 62I02	0.061	0.56	1.244	1.234	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 62I01	0.061	0.56	1.225	1.223	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 63I03	0.011	2.37	2.606	1.592	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 63I02	0.028	2.11	1.466	1.455	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 63I01	0.028	0.25	1.450	1.449	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 64I03	0.000	0.00	1.880	1.802	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 64I02	0.008	1.12	1.722	1.646	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 64I01	0.015	2.22	1.512	1.233	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 9I24	0.367	0.09	1.233	1.233	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 65I02	0.070	0.44	3.008	3.062	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 65I01	0.070	0.44	3.062	3.092	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 67I02	0.000	0.00	4.299	4.299	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 67I01	0.000	0.00	4.299	4.299	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 68I02	0.005	0.10	2.339	2.339	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 68I01	0.016	0.10	2.338	2.338	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 69I02	0.016	0.32	2.227	2.226	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 69I01	0.035	0.22	2.227	2.338	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 70I03	0.039	0.97	2.295	2.293	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 70I02	0.063	0.39	2.284	2.283	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 71I03	0.000	0.00	2.924	2.924	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 71I02	0.019	0.27	2.920	2.919	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 71I01	0.290	1.82	2.786	2.770	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 73I04	0.046	1.15	3.913	3.950	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 73I03	0.049	1.24	3.956	3.957	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 73I02	0.049	1.24	3.957	3.960	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 73I01	0.076	1.91	3.960	3.975	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 74I02	0.075	0.88	3.726	3.723	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 74I01	0.077	1.94	3.385	3.343	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 75I02	0.002	0.06	3.144	3.144	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 75I01	0.037	0.94	3.044	3.015	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 76I02	0.000	0.00	2.816	2.816	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 76I01	0.011	0.16	2.810	2.810	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 77I01	0.004	1.64	2.971	2.816	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 78I08	0.010	0.54	3.387	3.377	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 78I07	0.015	0.78	3.332	3.267	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 78I06	0.018	0.95	3.242	3.219	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 78I05	0.021	1.14	3.217	3.207	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 78I04	0.025	1.33	3.205	3.191	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 78I03	0.029	1.56	3.190	3.184	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 78I02	0.045	2.42	3.158	3.150	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 78I01	0.064	1.62	3.062	3.023	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 80I01	0.065	0.59	2.003	1.995	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 79I01	0.224	2.03	1.804	1.587	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 89I01	0.012	1.97	5.520	4.660	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 182I07	0.035	3.43	4.495	3.915	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 182I06	0.043	1.84	3.269	3.117	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 182I05	0.051	1.53	2.988	2.848	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 90I02	0.000	0.00	3.930	3.450	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 111I03	0.018	0.92	2.030	1.901	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 111I02	0.103	0.93	1.214	1.198	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P67I2	0.129	1.85	0.987	0.974	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P 112I01	0.086	6.29	2.301	1.852	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P 113I02	0.000	0.00	1.202	1.198	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 113I01	0.000	0.00	1.198	1.198	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 129I01	0.000	0.00	2.230	2.230	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 151I02	0.000	0.00	2.191	2.191	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 151I01	0.062	0.87	2.117	2.105	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 152I01	0.000	0.00	2.047	2.047	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 179I01	0.000	0.00	2.047	2.047	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 153I03	0.000	0.00	2.256	2.256	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 153I02	0.000	0.00	2.256	2.256	AR&R 100 year, 3 hours storm, average 47.3 mm/h, Zone 1			
P 153I01	0.053	0.06	2.256	2.256	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 154I01	0.000	0.00	2.633	2.633	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 155I02	0.000	0.00	2.522	2.522	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 155I01	0.000	0.00	2.522	2.522	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 156I02	0.031	0.78	2.463	2.564	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 156I01	0.100	2.52	2.416	2.345	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 157I01	0.112	2.83	2.786	2.564	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1			
P 158I01	0.003	0.02	2.298	2.338	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 159I01	0.193	1.75	2.500	2.338	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 160I02	0.364	3.29	2.757	2.499	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 160I01	0.439	3.98	2.349	2.319	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 161I01	0.084	0.76	2.316	2.311	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P 162I01	0.084	0.76	2.310	2.306	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 163I01	0.084	0.76	2.303	2.301	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 164I01	0.289	2.61	2.299	2.294	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 165I01	0.000	0.00	2.339	2.339	AR&R 100 year, 2 hours storm, average 61.8 mm/h, Zone 1			
P 166I01	0.084	0.76	2.325	2.322	AR&R 100 year, 1 hour storm, average 94.5 mm/h, Zone 1			

P 167/01	0.000	0.00	8.781	8.781	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 168/01	0.081	2.05	3.907	3.939	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 169/01	0.028	1.48	3.927	3.960	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 170/03	0.322	1.04	3.396	3.361	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 171/01	0.000	0.00	2.987	2.987	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 172/01	0.029	0.74	3.723	3.717	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 173/01	0.002	0.03	3.528	3.527	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 174/01	0.021	0.53	2.722	2.711	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 175/01	0.006	0.15	2.690	2.690	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 176/01	0.021	0.83	2.635	2.633	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 177/01	0.000	0.00	2.773	2.773	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 178/01	0.000	0.00	2.522	2.522	AR&R 100 year, 1 hour storm, average 94.5 mm/h, Zone 1			
P 179/02	0.000	0.00	2.300	2.047	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 180/02	0.000	0.00	2.380	2.380	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 180/01	0.000	0.00	2.380	2.380	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 181/01	0.000	0.00	2.166	2.166	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 182/09	0.007	1.50	5.402	4.828	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 182/08	0.012	1.69	4.743	4.660	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 186/02	0.000	0.00	1.519	1.519	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 186/01	0.000	0.00	1.519	1.519	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 187/02	0.054	0.34	1.547	1.545	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 187/01	0.054	0.34	1.532	1.516	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1			
P 189/01	0.000	0.00	2.530	2.430	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 190/01	0.000	0.00	1.900	1.830	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 191/01	0.000	0.00	1.600	1.592	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 192/01	0.000	0.00	2.520	2.528	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 197/02	0.124	1.90	2.370	2.322	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 197/01	0.124	2.54	1.791	1.626	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 193/01	0.000	0.00	4.000	3.500	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 197/04	0.000	0.00	2.790	2.790	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 197/03	0.124	1.76	2.569	2.528	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 198/02	3.023	6.84	4.827	3.791	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 198/01	3.023	6.84	3.689	3.464	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 199/01	0.029	1.74	1.572	1.345	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 22-02	4.697	2.49	1.606	1.394	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P1255	4.750	2.51	1.394	1.370	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 22-01	4.844	2.56	1.370	1.341	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-05	9.666	2.25	1.213	1.198	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-04	9.755	2.26	1.172	1.159	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-03	9.755	2.26	1.133	1.100	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-02	9.755	2.26	1.074	1.049	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-01	10.619	2.46	1.018	1.003	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P A-02	10.619	2.18	1.003	0.900	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 23-02	3.770	1.99	2.197	2.076	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 3-06	4.791	1.88	1.985	1.827	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-06A	4.822	1.89	1.369	1.341	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 27-02	0.139	1.26	2.217	2.189	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 27-01	0.159	1.00	2.170	2.161	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 21-01	0.836	0.93	2.157	2.120	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3-09	0.938	0.51	2.116	2.114	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-08	0.938	1.04	2.109	2.093	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 3-07	0.938	1.04	2.088	2.076	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 30-02	0.192	1.21	2.454	2.444	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P1244	0.199	1.25	2.247	2.242	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 30-01	0.210	1.32	2.234	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 21-03	0.673	0.75	2.205	2.189	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 21-02	0.677	0.75	2.175	2.161	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 31-02	0.192	1.21	2.477	2.468	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P1232	0.209	1.31	2.272	2.268	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 31-01	0.232	1.46	2.258	2.240	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 29-01	0.450	0.50	2.228	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 119-02	0.000	0.00	1.990	1.970	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 119-01	0.000	0.00	1.720	1.720	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 120-01	0.225	1.41	1.571	1.510	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 121-01	0.409	1.53	1.133	1.049	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 120A-01	0.000	0.00	2.124	2.124	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 119A-01	0.084	2.54	1.850	1.620	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 121-06	0.040	0.36	2.491	2.482	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 121-05	0.105	0.95	2.307	2.305	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 121-04	0.105	0.95	2.191	2.144	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 121-03	0.105	0.95	2.107	2.094	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 121-02	0.105	1.67	1.820	1.720	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 122-02	0.000	0.00	1.980	1.885	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 122-01	0.000	0.00	1.885	1.850	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 122A-01	0.000	0.00	2.144	2.144	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 123-02	0.000	0.00	1.720	1.700	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 123-01	0.000	0.00	1.680	1.630	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 124A-02	0.096	2.14	2.084	1.946	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 124A-01	0.096	1.86	1.663	1.587	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 125-02	0.293	1.35	1.487	1.457	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 125-01	0.293	1.35	1.067	1.049	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
Pipe1185	0.182	0.10	1.049	1.049	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
Pipe1187	0.182	0.10	1.049	1.049	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3-11	0.000	0.00	2.120	2.120	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 3-10	0.000	0.00	2.120	2.120	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 29-02	0.000	0.00	2.332	2.332	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 29-02 A	0.130	0.82	2.248	2.240	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 111A/01	0.000	0.00	1.900	1.700	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			

Pipe678	0.629	2.91	2.128	2.028	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P683	0.559	2.89	2.088	1.988	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P688	0.717	2.97	2.178	2.078	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 200/04	0.000	0.00	0.963	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 200/03	0.000	0.00	0.900	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 200/02	0.000	0.00	0.900	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 201/01	0.000	0.00	0.900	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 202/02	0.000	0.00	1.403	1.265	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 202/01	0.000	0.00	1.067	0.986	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 204/02	0.000	0.00	1.251	0.929	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 204/01	0.000	0.00	0.909	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 205/04	0.000	0.00	3.975	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 205/03	0.000	0.00	0.900	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 205/02	0.000	0.00	0.900	0.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 206/03	1.588	3.59	1.953	1.876	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P 206/02	1.683	3.81	1.876	1.303	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 206/01	2.285	5.17	1.303	1.050	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 208/02	7.348	3.15	0.968	0.900	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 207/02	0.012	2.18	2.203	1.786	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 207/01	0.029	1.08	1.729	1.646	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 208/04	3.419	2.84	1.178	1.062	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 208/03	5.051	2.21	1.038	1.019	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 209/17	0.009	0.24	4.646	4.643	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/16	0.023	0.33	4.630	4.622	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/15	0.070	0.99	4.565	4.515	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 209/14	0.126	1.78	4.412	4.316	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 209/13	0.207	1.30	4.193	4.133	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/12	0.264	1.66	4.022	3.993	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/11	0.454	2.86	3.708	3.600	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/10	0.810	2.26	3.396	3.356	AR&R 100 year, 45 minutes storm, average 111 mm/h, Zone 1			
P 209/09	0.899	2.04	3.335	3.231	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/08	0.947	2.14	3.208	3.166	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/07	0.999	2.26	3.036	2.912	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/06	1.055	2.89	2.173	1.956	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/05	1.093	2.75	1.707	1.523	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/04	1.097	1.72	1.479	1.442	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/03	1.388	2.18	1.317	1.196	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 209/02	1.529	2.40	1.168	1.147	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 209/01	1.648	2.59	1.114	1.062	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 210/05	0.038	0.35	1.792	1.787	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 210/04	0.082	0.74	1.722	1.682	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 210/03	0.091	0.83	1.612	1.596	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 210/02	0.091	0.83	1.527	1.511	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 210/01	0.091	0.83	1.446	1.442	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 211/03	0.052	0.47	1.293	1.283	AR&R 100 year, 10 minutes storm, average 212 mm/h, Zone 1			
P 211/02	0.101	0.92	1.290	1.406	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 211/01	0.185	0.86	1.408	1.523	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 212/01	0.028	2.31	2.296	1.956	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/07	0.015	0.13	3.769	3.768	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/06	0.051	0.46	3.744	3.734	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/05	0.073	0.66	3.712	3.688	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/04	0.104	0.94	3.690	3.691	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/03	0.147	2.07	3.695	3.849	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 213/02	0.210	1.32	3.803	3.784	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
P 213/01	0.308	2.79	3.759	3.600	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 214/02	0.033	2.71	5.339	4.781	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 214/01	0.033	2.65	4.313	3.993	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 215/01	0.123	1.12	4.017	3.993	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 216/01	0.031	0.77	4.164	4.133	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 217/01	0.061	0.55	4.327	4.316	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 218/01	0.047	0.66	4.533	4.515	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 219/01	0.037	0.52	4.632	4.622	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 220/02	0.028	0.26	3.178	3.173	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 220/01	0.028	0.26	3.167	3.166	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 221/01	0.030	0.28	3.357	3.356	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 461/0 weir	0.000	0.00	1.582	1.582	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1			
Dummy Pipe	0.232	3.44	3.190	2.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P948	0.237	3.52	3.204	2.900	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
Pipe951	1.981	5.99	14.366	13.654	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
Pipe960	0.048	1.66	2.107	2.087	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV01/02	0.038	0.52	1.531	1.520	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV01/01	0.146	1.33	1.341	1.254	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 102/02	0.166	1.05	1.160	1.139	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P 102/01	0.166	1.05	1.018	0.947	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV02/02	0.037	0.33	1.592	1.582	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV02/01	0.074	0.67	1.537	1.520	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV03/02	0.002	0.07	1.254	1.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV03/01	0.004	0.04	1.254	1.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV04/01	0.000	0.00	1.254	1.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV05/01	0.018	1.33	1.363	1.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV06/03	0.038	4.90	5.379	1.301	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV06/02	0.075	0.07	1.005	1.005	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P BV06/01	0.117	0.08	1.005	1.005	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P 96/01	0.117	0.09	1.005	1.004	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1			
P BV07/02	0.009	1.08	1.392	1.235	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV07/01	0.026	1.44	1.154	1.005	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV08/01	0.095	0.09	1.041	1.041	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 130/01	0.106	0.12	1.040	1.040	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			

P BV09 02	0.006	0.86	1.404	1.091	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV09 01	0.011	0.48	1.041	1.041	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV10 02	0.007	0.12	1.569	1.569	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
Pipe1164	0.014	0.09	1.568	1.568	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P620	0.014	0.09	1.568	1.567	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 06	0.000	0.00	1.821	1.821	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 05	0.010	0.09	1.820	1.820	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 04	0.025	0.22	1.819	1.816	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 03	0.043	0.39	1.814	1.808	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 02	0.081	0.51	1.777	1.761	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV11 01	0.099	0.62	1.718	1.714	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 81 01	0.099	0.90	1.633	1.582	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV12 05	0.007	0.06	2.211	2.210	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV12 04	0.020	0.18	2.208	2.204	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV12 03	0.146	0.68	2.193	2.162	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV12 02	0.202	0.71	2.138	2.134	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P BV12 01	0.225	0.79	2.120	2.105	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA17 02	0.009	1.09	2.342	2.183	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA17 01	0.017	1.32	2.129	1.923	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA19 03	0.073	0.66	2.908	2.884	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA19 02	0.077	0.69	2.870	2.852	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA19 01	0.081	0.74	2.819	2.790	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA21 04	0.007	0.95	2.402	2.235	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA21 03	0.013	1.29	2.199	2.042	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA21 02	0.021	1.36	2.000	1.867	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA22 05	0.075	0.87	2.695	2.585	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA22 04	0.077	1.79	2.440	2.117	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA22 03	0.080	1.80	2.037	1.843	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA22 02	0.084	1.83	1.792	1.721	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA22 01	0.089	1.86	1.585	1.349	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 9 25	0.089	0.03	1.233	1.233	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA23 01	0.062	0.57	2.152	2.139	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA23 02	0.062	0.57	2.141	2.186	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 79 03	0.102	1.44	2.066	2.055	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 79 02	0.120	1.09	2.004	1.995	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA3 02	0.204	1.84	2.444	2.166	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P PA7 04	0.035	0.32	2.026	2.020	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA7 03	0.049	0.44	2.015	2.005	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA7 02	0.049	0.31	2.000	1.995	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P PA7 01	0.054	0.34	1.995	1.995	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP01 03	0.004	1.03	2.672	2.383	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP01 02	0.010	2.64	2.326	2.207	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP01 01	0.015	0.14	2.205	2.204	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP02 04	0.054	2.92	4.028	2.769	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP02 03	0.059	2.52	2.594	2.319	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP02 02	0.068	0.61	2.274	2.246	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP02 01	0.091	0.57	2.218	2.204	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP03 01	0.006	1.36	2.894	2.412	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP04 02	0.013	0.11	2.272	2.271	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP04 01	0.053	0.34	2.257	2.256	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP05 02	0.014	0.13	2.278	2.277	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP05 01	0.028	0.25	2.274	2.271	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP07 03	0.023	0.21	2.928	2.925	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP07 02	0.046	0.41	2.915	2.905	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP07 01	0.265	1.66	2.856	2.845	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP08 01	0.048	1.63	2.170	1.931	AR&R 100 year, 1 hour storm, average 94.5 mm/h, Zone 1			
P SP09 01	0.020	1.35	2.122	2.017	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP10 01	0.019	0.18	2.925	2.924	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP11 01	0.219	1.38	2.966	2.905	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 07	0.002	0.01	2.139	2.139	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 06	0.005	0.05	2.139	2.139	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 05	0.013	0.11	2.137	2.137	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 04	0.015	0.10	2.136	2.136	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 03	0.015	0.10	2.136	2.136	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 02	0.015	0.10	2.136	2.154	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P SP12 01	0.032	0.20	2.154	2.162	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P TG01 04	0.000	0.00	1.552	1.552	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P TG01 03	0.019	0.17	1.551	1.547	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P TG01 02	0.038	0.34	1.538	1.526	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P TG01 01	0.063	0.57	1.519	1.511	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1			
P TG02 04	0.000	0.00	3.531	3.531	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P TG02 03	0.000	0.00	3.531	3.079	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P TG02 02	0.010	1.33	3.061	2.204	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P TG02 01	0.018	1.64	2.149	1.808	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P D 02	0.007	0.06	2.468	2.468	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P D 01	0.017	0.15	2.468	2.468	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P E 04	0.006	0.06	2.262	2.262	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P E 03	0.016	0.15	2.260	2.260	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P E 02	0.026	0.23	2.256	2.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P E 01	0.036	0.22	2.251	2.250	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 32-01	0.087	0.24	2.245	2.240	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P F 02	0.006	0.06	2.255	2.255	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P F 01	0.014	0.13	2.254	2.254	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 33-01	0.051	0.32	2.252	2.250	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P G 02	0.014	0.13	2.402	2.401	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P G 01	0.100	0.90	2.381	2.332	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P H 01	0.005	0.04	2.219	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			
P 21-04	0.008	0.05	2.218	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1			

P I\02	0.003	0.03	2.189	2.189	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P I\01	0.004	0.03	2.189	2.189	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P 127-01	0.004	0.03	2.189	2.189	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P K\01	0.019	0.18	2.103	2.102	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1				
P 24-02	0.069	0.43	2.078	2.076	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1				
P L\01	0.003	0.03	2.218	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR1\01	0.049	6.14	2.726	1.912	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P Q\01	0.058	0.52	1.877	1.858	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P 124-01	0.117	1.97	1.600	1.553	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR2\01	0.017	3.09	2.102	1.858	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR4\01	0.015	2.43	1.796	1.565	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P J\02	0.059	0.88	1.467	1.452	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P J\01	0.070	0.74	1.400	1.394	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR5\01	0.032	3.18	1.769	1.681	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P J\03	0.036	0.99	1.578	1.565	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR6\01	0.042	4.83	2.466	2.084	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P T\01	0.045	0.41	2.080	2.076	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P LR7\01	0.022	3.30	2.331	2.174	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P B\02	0.040	0.36	2.158	2.157	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P B\01	0.043	0.39	2.139	2.138	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P 4-01	0.122	0.77	2.124	2.120	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1				
P LR8\01	0.007	0.82	2.176	2.176	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P B\03	0.011	0.10	2.174	2.174	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P M\02	0.001	0.01	2.218	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P M\01	0.005	0.05	2.218	2.218	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P O\01	0.006	0.06	2.445	2.444	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P P\04	0.002	0.02	2.078	2.078	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P P\03	0.006	0.05	2.078	2.077	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P P\02	0.010	0.09	2.077	2.077	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P P\01	0.012	0.11	2.076	2.076	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P 24A-01	0.013	0.03	2.076	2.076	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P R\02	0.004	0.03	1.913	1.913	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P R\01	0.009	0.08	1.912	1.912	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P S\03	0.005	0.04	1.834	1.833	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P S\02	0.017	0.15	1.833	1.832	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
P S\01	0.031	0.20	1.827	1.827	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1				
CHANNEL DETAILS									
Name	Max Q	Max V	Chainage	Max	Due to Storm				
	(cu.m/s)	(m/s)	(m)	HGL (m)					
OVERFLOW ROUTE DETAILS									
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm	
F 1\24	0	0	7.665	0	0	0	0		
F 1\23	0	0	7.665	0	0	0	0		
F 1\22	0	0	7.665	0	0	0	0		
F 1\21	0	0	7.665	0	0	0	0		
F 1\20	0	0	7.665	0	0	0	0		
F 1\19	1.041	1.041	7.665	0.088	0.09	21.69	0.97	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\18	1.041	1.041	7.665	0.088	0.09	21.69	0.97	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\17	1.041	1.041	7.665	0.088	0.09	21.69	0.97	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\16	1.244	1.244	7.665	0.096	0.10	23.13	1.01	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\15	1.244	1.244	7.665	0.096	0.10	23.13	1.01	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\14	1.244	1.244	7.665	0.096	0.10	23.13	1.01	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\13	6.280	6.280	7.665	0.185	0.28	40.91	1.54	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1	
F 1\12	0	0	7.665	0	0	0	0		
F 1\11	0	0	7.665	0	0	0	0		
F 1\10	0	0	7.665	0	0	0	0		
F 1\09	0	0	7.665	0	0	0	0		
F 1\08	0	0	7.665	0	0	0	0		
F 1\07	0	0	7.665	0	0	0	0		
F 1\06	0	0	7.665	0	0	0	0		
F 1\05	0	0	7.665	0	0	0	0		
F 1\04	0	0	7.665	0	0	0	0		
F 1\03	0	0	7.665	0	0	0	0		
F 1\02	0	0	7.665	0	0	0	0		
F 5\03	0	0	7.665	0	0	0	0		
F 5\02	0.031	0.031	7.665	0.023	0.01	7.63	0.35	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 5\01	1.358	1.358	7.665	0.099	0.10	23.85	1.03	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\17	12.437	12.437	7.665	0.230	0.47	49.99	2.02	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\16	12.437	12.437	7.665	0.230	0.47	49.99	2.02	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\15	14.808	14.808	7.665	0.230	0.55	49.99	2.41	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\14	14.808	14.808	7.665	0.230	0.55	49.99	2.41	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\13	15.024	15.024	7.665	0.230	0.56	49.99	2.44	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\12	15.036	15.036	7.665	0.230	0.56	49.99	2.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\11	15.036	15.036	7.665	0.230	0.56	49.99	2.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
OF1002	0.157	0.157	7.665	0.041	0.02	12.17	0.58	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	
F 46\09	15.036	15.036	7.665	0.230	0.56	49.99	2.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\08	15.036	15.036	7.665	0.230	0.56	49.99	2.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\07	15.036	15.036	7.665	0.230	0.56	49.99	2.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\06	15.755	15.755	7.665	0.230	0.59	49.99	2.56	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\05	16.081	16.081	7.665	0.230	0.60	49.99	2.62	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
OF1010	0	0	7.665	0	0	0	0		
F 46\04	16.081	16.081	7.665	0.230	0.60	49.99	2.62	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\03	16.081	16.081	7.665	0.230	0.60	49.99	2.62	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 46\02	16.081	16.081	7.665	0.230	0.60	49.99	2.62	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1	
F 7\03	0	0	7.665	0	0	0	0		
F 7\02	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1	

F 701	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 804	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 803	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 802	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 801	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 916	5.832	5.832	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 915	5.832	5.832	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 914	5.832	5.832	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 913	5.832	5.832	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 912	5.864	5.864	7.665	0.179	0.27	39.83	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 911	5.900	5.900	7.665	0.180	0.27	40.01	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 910	5.900	5.900	7.665	0.180	0.27	40.01	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 909	5.900	5.900	7.665	0.180	0.27	40.01	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 908	5.900	5.900	7.665	0.180	0.27	40.01	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 907	5.930	5.930	7.665	0.180	0.27	40.01	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 906	5.930	5.930	7.665	0.180	0.27	40.01	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 905	5.930	5.930	7.665	0.180	0.27	40.01	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 904	6.122	6.122	7.665	0.183	0.28	40.55	1.53	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 903	6.122	6.122	7.665	0.183	0.28	40.55	1.53	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 902	6.122	6.122	7.665	0.183	0.28	40.55	1.53	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 806	0	0	7.665	0	0	0	0	
F 805	0	0	7.665	0	0	0	0	
F 1143	15.797	15.797	7.665	0.230	0.59	49.99	2.57	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1142	9.254	9.254	7.665	0.216	0.37	47.20	1.69	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1141	1.756	1.756	7.665	0.110	0.12	26.00	1.10	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1
F 1140	1.909	1.909	7.665	0.114	0.13	26.72	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1139	0.670	0.670	7.665	0.074	0.06	18.82	0.85	AR&R 100 year, 30 minutes storm, average 136 mm/h, Zone 1
F 1138	0	0	7.665	0	0	0	0	
F 1137	0	0	7.665	0	0	0	0	
F 1136	0	0	7.665	0	0	0	0	
F 1135	0	0	7.665	0	0	0	0	
F 1134	0	0	7.665	0	0	0	0	
F 1133	0	0	7.665	0	0	0	0	
F 1132	0	0	7.665	0	0	0	0	
F 1131	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1130	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1129	0.002	0.002	7.665	0.009	0.00	2.84	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1128	0.003	0.003	7.665	0.009	0.00	3.14	0.18	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1127	0.016	0.016	7.665	0.018	0.01	5.84	0.31	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1126	0.016	0.016	7.665	0.018	0.01	5.84	0.31	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1125	0.016	0.016	7.665	0.018	0.01	5.84	0.31	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1124	1.221	1.221	7.665	0.095	0.10	22.95	1.00	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1123	1.228	1.228	7.665	0.095	0.10	22.95	1.01	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1122	1.572	1.572	7.665	0.105	0.11	24.92	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1121	1.572	1.572	7.665	0.105	0.11	24.92	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1120	1.572	1.572	7.665	0.105	0.11	24.92	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1119	1.625	1.625	7.665	0.106	0.12	25.28	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1118	1.625	1.625	7.665	0.106	0.12	25.28	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1117	1.625	1.625	7.665	0.106	0.12	25.28	1.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1116	1.934	1.934	7.665	0.115	0.13	26.90	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1115	1.934	1.934	7.665	0.115	0.13	26.90	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1114	2.171	2.171	7.665	0.120	0.14	27.98	1.17	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1113	2.171	2.171	7.665	0.120	0.14	27.98	1.17	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1112	1.881	1.881	7.665	0.113	0.13	26.54	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1111	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1110	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1109	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1108	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1107	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1106	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1105	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1104	2.019	2.019	7.665	0.116	0.13	27.26	1.15	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 1103	2.228	2.228	7.665	0.121	0.14	28.16	1.18	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1102	2.228	2.228	7.665	0.121	0.14	28.16	1.18	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 1201	0.085	0.085	7.665	0.033	0.02	10.56	0.48	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1926	0.575	0.575	7.665	0.070	0.06	17.92	0.82	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1925	0.575	0.575	7.665	0.070	0.06	17.92	0.82	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1924	0.738	0.738	7.665	0.077	0.07	19.36	0.88	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1923	0.738	0.738	7.665	0.077	0.07	19.36	0.88	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1922	1.143	1.143	7.665	0.092	0.09	22.41	0.99	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1921	1.176	1.176	7.665	0.093	0.09	22.59	1.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1920	1.176	1.176	7.665	0.093	0.09	22.59	1.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1919	1.176	1.176	7.665	0.093	0.09	22.59	1.00	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1918	1.290	1.290	7.665	0.097	0.10	23.31	1.03	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1917	2.041	2.041	7.665	0.117	0.13	27.44	1.15	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1916	2.107	2.107	7.665	0.118	0.14	27.62	1.17	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1915	2.107	2.107	7.665	0.118	0.14	27.62	1.17	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1914	2.240	2.240	7.665	0.122	0.14	28.34	1.17	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1913	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1912	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1911	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1910	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1909	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1906	2.658	2.658	7.665	0.130	0.16	29.95	1.24	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1902	2.371	2.371	7.665	0.124	0.15	28.88	1.19	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1901	2.371	2.371	7.665	0.124	0.15	28.88	1.19	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 1302	0.007	0.007	7.665	0.013	0.00	4.34	0.26	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 1301	0	0	7.665	0	0	0	0	

F 10\01	0.087	0.087	7.665	0.033	0.02	10.56	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 9\18	5.830	5.830	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 9\17	5.830	5.830	7.665	0.179	0.27	39.83	1.51	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 15\04	0	0	7.665	0	0	0	0	
F 15\03	0	0	7.665	0	0	0	0	
F 15\02	0	0	7.665	0	0	0	0	
F 15\01	0	0	7.665	0	0	0	0	
F 9\19	6.098	6.098	7.665	0.183	0.28	40.55	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 16\03	0.121	0.121	7.665	0.037	0.02	11.45	0.53	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 16\02	0	0	7.665	0	0	0	0	
F 16\01	0	0	7.665	0	0	0	0	
F 17\02	0.183	0.183	7.665	0.044	0.03	12.71	0.60	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 17\01	0.858	0.858	7.665	0.082	0.07	20.43	0.91	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 18\02	0	0	7.665	0	0	0	0	
F 18\01	0.088	0.088	7.665	0.034	0.02	10.74	0.47	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 70\01	0.246	0.246	7.665	0.049	0.03	13.79	0.65	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 19\28	0.282	0.282	7.665	0.052	0.04	14.33	0.68	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 19\27	0.423	0.423	7.665	0.062	0.05	16.30	0.75	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 35\04	0.008	0.008	7.665	0.014	0.00	4.64	0.26	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 35\03	0.048	0.048	7.665	0.026	0.01	8.83	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 35\02	0.048	0.048	7.665	0.026	0.01	8.83	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 35\01	0.048	0.048	7.665	0.026	0.01	8.83	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\14	0.218	0.218	7.665	0.047	0.03	13.43	0.62	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\13	0.218	0.218	7.665	0.047	0.03	13.43	0.62	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\12	0.218	0.218	7.665	0.047	0.03	13.43	0.62	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\11	0.218	0.218	7.665	0.047	0.03	13.43	0.62	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\10	0.489	0.489	7.665	0.065	0.05	17.02	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\09	0.489	0.489	7.665	0.065	0.05	17.02	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\08	0.489	0.489	7.665	0.065	0.05	17.02	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\07	0.489	0.489	7.665	0.065	0.05	17.02	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\06	0.489	0.489	7.665	0.065	0.05	17.02	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\05	0.548	0.548	7.665	0.068	0.06	17.56	0.82	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\04	0.548	0.548	7.665	0.068	0.06	17.56	0.82	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 38\03	0.685	0.685	7.665	0.075	0.06	19.00	0.85	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 38\02	0.685	0.685	7.665	0.075	0.06	19.00	0.85	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 38\01	0.685	0.685	7.665	0.075	0.06	19.00	0.85	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 36\03	0.092	0.092	7.665	0.034	0.02	10.74	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 36\02	0.092	0.092	7.665	0.034	0.02	10.74	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 36\01	0.490	0.490	7.665	0.065	0.05	17.02	0.79	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 38\17	0	0	7.665	0	0	0	0	
F 38\16	0	0	7.665	0	0	0	0	
F 38\15	0.170	0.170	7.665	0.043	0.02	12.53	0.58	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 39\05	0.010	0.010	7.665	0.015	0.00	4.94	0.27	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 39\04	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 39\03	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 39\02	0	0	7.665	0	0	0	0	
F 39\01	0	0	7.665	0	0	0	0	
F 40\03	0.002	0.002	7.665	0.008	0.00	2.54	0.19	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 40\02	0	0	7.665	0	0	0	0	
F 40\01	0	0	7.665	0	0	0	0	
F 41\02	0	0	7.665	0	0	0	0	
F 41\01	0.017	0.017	7.665	0.018	0.01	6.14	0.30	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 42\02	0	0	7.665	0	0	0	0	
F 42\01	0	0	7.665	0	0	0	0	
F 43\03	0.354	0.354	7.665	0.057	0.04	15.41	0.72	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 43\02	0.470	0.470	7.665	0.064	0.05	16.84	0.77	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 43\01	0.359	0.359	7.665	0.057	0.04	15.41	0.73	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 44\02	1.206	1.206	7.665	0.094	0.09	22.77	1.01	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 44\01	1.206	1.206	7.665	0.094	0.09	22.77	1.01	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 45\05	0	0	7.665	0	0	0	0	
F 45\04	0	0	7.665	0	0	0	0	
F 45\03	0	0	7.665	0	0	0	0	
F 45\02	0.005	0.005	7.665	0.011	0.00	3.74	0.23	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 45\01	0.030	0.030	7.665	0.022	0.01	7.33	0.37	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 9\23	6.064	6.064	7.665	0.182	0.28	40.37	1.53	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 9\22	6.067	6.067	7.665	0.182	0.28	40.37	1.53	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 9\21	6.098	6.098	7.665	0.183	0.28	40.55	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 9\20	6.098	6.098	7.665	0.183	0.28	40.55	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
OF1272	11.083	11.083	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\26	11.083	11.083	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\25	11.085	11.085	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\24	11.085	11.085	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\23	11.085	11.085	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\22	11.242	11.242	7.665	0.230	0.42	49.99	1.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\21	11.242	11.242	7.665	0.230	0.42	49.99	1.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\20	11.242	11.242	7.665	0.230	0.42	49.99	1.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\19	11.242	11.242	7.665	0.230	0.42	49.99	1.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 46\18	11.242	11.242	7.665	0.230	0.42	49.99	1.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 47\02	0	0	7.665	0	0	0	0	
F 47\01	5.477	5.477	7.665	0.175	0.26	38.93	1.48	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 48\09	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\08	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\07	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\06	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\05	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\04	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 48\03	0.525	0.525	7.665	0.067	0.05	17.38	0.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 48\02	0	0	7.665	0	0	0	0	

F 48\01	0	0	7.665	0	0	0	0						
F 49\01	0	0	7.665	0	0	0	0						
F 50\04	0.011	0.011	7.665	0.016	0.00	5.24	0.27	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 50\03	0.015	0.015	7.665	0.018	0.01	5.84	0.29	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 50\02	0.015	0.015	7.665	0.018	0.01	5.84	0.29	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 50\01	0.015	0.015	7.665	0.018	0.01	5.84	0.29	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 51\01	0.598	0.598	7.665	0.070	0.06	18.10	0.83	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 52\05	0.013	0.013	7.665	0.017	0.00	5.54	0.28	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 52\04	0.021	0.021	7.665	0.019	0.01	6.44	0.33	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 52\03	0.013	0.013	7.665	0.017	0.00	5.54	0.28	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 52\02	0.007	0.007	7.665	0.013	0.00	4.34	0.25	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 52\01	0.007	0.007	7.665	0.013	0.00	4.34	0.25	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 53\01	0	0	7.665	0	0	0	0						
F 170\02	0	0	7.665	0	0	0	0						
F 170\01	0	0	7.665	0	0	0	0						
F 54\04	0	0	7.665	0	0	0	0						
F 54\03	0	0	7.665	0	0	0	0						
F 54\02	0	0	7.665	0	0	0	0						
F 54\01	0	0	7.665	0	0	0	0						
F 55\03	0	0	7.665	0	0	0	0						
F 55\02	0	0	7.665	0	0	0	0						
F 55\01	0	0	7.665	0	0	0	0						
F 59\02	0	0	7.665	0	0	0	0						
F 59\01	0	0	7.665	0	0	0	0						
F 60\01	0.301	0.301	7.665	0.053	0.04	14.69	0.69	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 61\01	0.413	0.413	7.665	0.061	0.05	16.12	0.75	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 61\02	0.026	0.026	7.665	0.021	0.01	7.03	0.35	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 62\03	0.030	0.030	7.665	0.023	0.01	7.63	0.35	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 62\02	0.009	0.009	7.665	0.014	0.00	4.64	0.27	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 62\01	0.009	0.009	7.665	0.014	0.00	4.64	0.27	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 63\03	0.002	0.002	7.665	0.008	0.00	2.54	0.20	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 63\02	0.005	0.005	7.665	0.011	0.00	3.74	0.23	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 63\01	0.005	0.005	7.665	0.011	0.00	3.74	0.23	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 64\03	0	0	7.665	0	0	0	0						
F 64\02	0.001	0.001	7.665	0.007	0.00	2.25	0.14	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 64\01	0.001	0.001	7.665	0.007	0.00	2.25	0.14	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 9\24	6.037	6.037	7.665	0.182	0.28	40.37	1.52	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1					
F 65\02	0.220	0.220	7.665	0.047	0.03	13.43	0.63	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1					
F 65\01	0.220	0.220	7.665	0.047	0.03	13.43	0.63	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1					
F 67\02	0	0	7.665	0	0	0	0						
F 67\01	0	0	7.665	0	0	0	0						
F 68\02	0	0	7.665	0	0	0	0						
F 68\01	0.002	0.002	7.665	0.008	0.00	2.54	0.19	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 69\02	0.010	0.010	7.665	0.015	0.00	4.94	0.29	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 69\01	0.162	0.162	7.665	0.042	0.02	12.35	0.58	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 70\03	0.050	0.050	7.665	0.027	0.01	9.13	0.40	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 70\02	0.022	0.022	7.665	0.020	0.01	6.74	0.33	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 71\03	0	0	7.665	0	0	0	0						
F 71\02	0.351	0.351	7.665	0.057	0.04	15.41	0.71	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 71\01	0.411	0.411	7.665	0.061	0.05	16.12	0.75	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 73\04	0	0	7.665	0	0	0	0						
F 73\03	0	0	7.665	0	0	0	0						
F 73\02	0	0	7.665	0	0	0	0						
F 73\01	0	0	7.665	0	0	0	0						
F 74\02	0	0	7.665	0	0	0	0						
F 74\01	0	0	7.665	0	0	0	0						
F 75\02	0	0	7.665	0	0	0	0						
F 75\01	0.023	0.023	7.665	0.020	0.01	6.74	0.33	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 76\02	0	0	7.665	0	0	0	0						
F 76\01	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 77\01	0	0	7.665	0	0	0	0						
F 78\08	0.096	0.096	7.665	0.035	0.02	10.91	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\07	0.090	0.090	7.665	0.034	0.02	10.74	0.48	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\06	0.152	0.152	7.665	0.041	0.02	12.17	0.56	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\05	0.164	0.164	7.665	0.042	0.02	12.35	0.58	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\04	0.179	0.179	7.665	0.044	0.03	12.71	0.59	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\03	0.180	0.180	7.665	0.044	0.03	12.71	0.59	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\02	0.182	0.182	7.665	0.044	0.03	12.71	0.60	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 78\01	0.163	0.163	7.665	0.042	0.02	12.35	0.58	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 80\01	0.071	0.071	7.665	0.031	0.01	10.20	0.44	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 79\01	0.131	0.131	7.665	0.038	0.02	11.63	0.55	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 89\01	0.019	0.019	7.665	0.019	0.01	6.44	0.31	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 182\07	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 182\06	0.008	0.008	7.665	0.014	0.00	4.64	0.25	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 182\05	0.007	0.007	7.665	0.013	0.00	4.34	0.24	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 90\02	0	0	7.665	0	0	0	0						
F 111\03	0.044	0.044	7.665	0.026	0.01	8.53	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 111\02	0.115	0.115	7.665	0.036	0.02	11.27	0.53	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 111\01	0.219	0.219	7.665	0.047	0.03	13.43	0.62	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 112\01	0.072	0.072	7.665	0.031	0.01	10.20	0.45	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 113\02	0	0	7.665	0	0	0	0						
F 113\01	0	0	7.665	0	0	0	0						
F 129\01	0	0	7.665	0	0	0	0						
F 151\02	0	0	7.665	0	0	0	0						
F 151\01	0.065	0.065	7.665	0.030	0.01	10.02	0.43	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 152\01	0	0	7.665	0	0	0	0						
F 179\01	0	0	7.665	0	0	0	0						
F 153\03	0	0	7.665	0	0	0	0						

F 153\02	0	0	7.665	0	0	0	0						
F 153\01	0	0	7.665	0	0	0	0						
F 154\01	0	0	7.665	0	0	0	0						
F 155\02	0	0	7.665	0	0	0	0						
F 155\01	0	0	7.665	0	0	0	0						
F 156\02	0.085	0.085	7.665	0.033	0.02	10.56	0.48	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 156\01	0.179	0.179	7.665	0.044	0.03	12.71	0.59	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 157\01	0.069	0.069	7.665	0.031	0.01	10.20	0.43	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 158\01	0.067	0.067	7.665	0.030	0.01	10.02	0.45	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 159\01	0	0	7.665	0	0	0	0						
F 160\02	0	0	7.665	0	0	0	0						
F 19\07	2.739	2.739	7.665	0.132	0.16	30.31	1.25	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 161\01	2.658	2.658	7.665	0.130	0.16	29.95	1.24	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 19\05	2.576	2.576	7.665	0.129	0.16	29.77	1.22	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 19\04	2.494	2.494	7.665	0.127	0.15	29.41	1.21	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 19\03	2.371	2.371	7.665	0.124	0.15	28.88	1.19	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 165\01	0	0	7.665	0	0	0	0						
F 19\08	2.816	2.816	7.665	0.133	0.17	30.67	1.25	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 167\01	0	0	7.665	0	0	0	0						
F 168\01	0.024	0.024	7.665	0.021	0.01	7.03	0.33	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 169\01	0.021	0.021	7.665	0.020	0.01	6.74	0.32	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 170\03	0	0	7.665	0	0	0	0						
F 171\01	0	0	7.665	0	0	0	0						
F 172\01	0	0	7.665	0	0	0	0						
F 173\01	0	0	7.665	0	0	0	0						
F 174\01	0.001	0.001	7.665	0.006	0.00	1.95	0.14	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 175\01	0.001	0.001	7.665	0.005	0.00	1.65	0.14	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 176\01	0.013	0.013	7.665	0.017	0.00	5.54	0.29	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 177\01	0	0	7.665	0	0	0	0						
F 178\01	0	0	7.665	0	0	0	0						
F 179\02	0	0	7.665	0	0	0	0						
F 180\02	0	0	7.665	0	0	0	0						
F 180\01	0	0	7.665	0	0	0	0						
F 181\01	0	0	7.665	0	0	0	0						
F 182\09	0	0	7.665	0	0	0	0						
F 182\08	0	0	7.665	0	0	0	0						
F 186\02	0	0	7.665	0	0	0	0						
F 186\01	0	0	7.665	0	0	0	0						
F 187\02	0.402	0.402	7.665	0.060	0.04	15.94	0.75	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 187\01	0.402	0.402	7.665	0.060	0.04	15.94	0.75	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
F 189\01	0	0	7.665	0	0	0	0						
F 190\01	0	0	7.665	0	0	0	0						
F 191\01	0	0	7.665	0	0	0	0						
F 192\01	0	0	7.665	0	0	0	0						
F 197\02	0.033	0.033	7.665	0.023	0.01	7.63	0.37	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 197\01	0.033	0.033	7.665	0.023	0.01	7.63	0.37	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 193\01	0	0	7.665	0	0	0	0						
F 197\04	0	0	7.665	0	0	0	0						
F 197\03	0.029	0.029	7.665	0.022	0.01	7.33	0.36	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF589	0.814	0.814	7.665	0.080	0.07	20.08	0.90	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1					
OF590	0.248	0.248	7.665	0.049	0.03	13.79	0.66	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 199\01	0.110	0.110	7.665	0.036	0.02	11.27	0.51	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF4518	0	0	7.665	0	0	0	0						
F A\02	0.034	0.034	0.190	0.083	0.07	1.43	0.85	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF4761	0	0	7.665	0	0	0	0						
OF4040	0	0	7.665	0	0	0	0						
F 27-01	0.008	0.008	0.298	0.045	0.03	0.67	0.59	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F \02	0.027	0.027	0.120	0.090	0.05	1.65	0.55	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF1553	0	0	7.665	0	0	0	0						
F 30-01	0.002	0.013	0.298	0.053	0.03	0.94	0.65	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF2899	0.394	0.394	7.665	0.060	0.04	15.94	0.74	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF2743	0	0	7.665	0	0	0	0						
OF606	0.337	0.337	7.665	0.056	0.04	15.23	0.70	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF5011	0.198	0.198	7.665	0.045	0.03	13.07	0.60	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
OF2453	0	0	7.665	0	0	0	0						
F 119A-01	0.114	0.114	0.267	0.113	0.09	2.95	0.84	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 121-06	0.030	0.030	7.665	0.023	0.01	7.63	0.35	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 122A-01	0	0	0.211	0	0	0	0						
F 122-02	0	0	7.665	0	0	0	0						
OF4002	0	0	7.665	0	0	0	0						
OF3808	0	0	7.665	0	0	0	0						
OF1801	0	0	7.665	0	0	0	0						
F 125-02	0	0	7.665	0	0	0	0						
OF6765	0	0	7.665	0	0	0	0						
OF4017	0	0	7.665	0	0	0	0						
F 3-10	0	0	0.087	0	0	0	0						
OF4035	0	0	7.665	0	0	0	0						
F H\01	0	0	0.120	0	0	0	0						
OF616	0	0	7.665	0	0	0	0						
OF623	0	0	7.665	0	0	0	0						
OF621	0	0	7.665	0	0	0	0						
F 200\04	0	0	0.190	0	0	0	0						
F 200\03	0	0	0.190	0	0	0	0						
F 200\02	0	0	0.190	0	0	0	0						
F 201\01	0	0	0.190	0	0	0	0						
F 202\02	0	0	0.190	0	0	0	0						
F 202\01	0	0	0.190	0	0	0	0						
F 204\02	0	0	0.190	0	0	0	0						

F 204\01	0	0	0.190	0	0	0	0						
F 205\04	0	0	0.190	0	0	0	0						
F 205\03	0	0	0.190	0	0	0	0						
F 205\02	0	0	0.190	0	0	0	0						
F 206\03	2.568	2.568	0.190	0.301	0.69	6.40	2.31	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 206\02	1.964	1.964	0.190	0.275	0.57	6.40	2.07	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 206\01	1.518	1.518	0.190	0.253	0.48	6.40	1.88	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 208\02	1.522	1.522	0.190	0.253	0.48	6.40	1.88	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 207\02	0	0	0.190	0	0	0	0						
F 207\01	0	0	0.190	0	0	0	0						
F 208\04	0	0	0.190	0	0	0	0						
F 208\03	0.005	0.005	0.190	0.046	0.03	0.38	0.61	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 209\17	0	0	0.190	0	0	0	0						
F 209\16	0	0	0.190	0	0	0	0						
F 209\15	0.026	0.026	0.190	0.077	0.06	1.22	0.83	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\14	0.073	0.073	0.190	0.105	0.10	2.13	0.94	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\13	0.043	0.043	0.190	0.090	0.08	1.63	0.88	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\12	0.103	0.103	0.190	0.116	0.11	2.51	0.99	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\11	0.284	0.284	0.190	0.163	0.18	4.66	1.08	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\10	0.141	0.141	0.190	0.128	0.13	2.90	1.04	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\09	0.037	0.037	0.190	0.086	0.07	1.49	0.87	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\08	0.009	0.009	0.190	0.055	0.04	0.48	0.72	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\07	0.001	0.001	0.190	0.025	0.01	0.21	0.40	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\06	0.009	0.009	0.190	0.056	0.04	0.50	0.71	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\05	0	0	0.190	0	0	0	0						
F 209\04	0.667	0.667	0.190	0.203	0.28	6.40	1.37	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\03	0.392	0.392	0.190	0.178	0.21	5.38	1.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\02	0.166	0.166	0.190	0.135	0.14	3.12	1.06	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 209\01	0.048	0.048	0.190	0.093	0.08	1.74	0.88	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
F 210\05	0.003	0.003	0.190	0.039	0.02	0.32	0.55	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 210\04	0.022	0.022	0.190	0.073	0.06	1.09	0.81	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 210\03	0	0	0.190	0	0	0	0						
F 210\02	0	0	0.190	0	0	0	0						
F 210\01	0	0	0.190	0	0	0	0						
F 211\03	0.032	0.032	0.190	0.082	0.07	1.38	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 211\02	0.326	0.326	0.190	0.169	0.19	4.97	1.11	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 211\01	0.400	0.400	0.190	0.179	0.21	5.44	1.17	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 212\01	0.001	0.001	0.190	0.023	0.01	0.19	0.38	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 213\07	0	0	0.190	0	0	0	0						
F 213\06	0.003	0.003	0.190	0.035	0.02	0.29	0.53	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 213\05	0	0	0.190	0	0	0	0						
F 213\04	0.153	0.153	0.190	0.131	0.14	3.01	1.05	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 213\03	0.278	0.278	0.190	0.163	0.17	4.63	1.07	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 213\02	0.206	0.206	0.190	0.143	0.16	3.42	1.11	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 213\01	0.069	0.069	0.190	0.103	0.10	2.08	0.92	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 214\02	0.002	0.002	0.190	0.032	0.02	0.27	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 214\01	0	0	0.190	0	0	0	0						
F 215\01	0.052	0.052	0.190	0.095	0.09	1.81	0.90	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 216\01	0.001	0.001	0.190	0.027	0.01	0.22	0.45	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 217\01	0.010	0.010	0.190	0.058	0.04	0.57	0.74	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 218\01	0.006	0.006	0.190	0.047	0.03	0.39	0.63	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 219\01	0.003	0.003	0.190	0.036	0.02	0.30	0.53	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 220\02	0.001	0.001	0.190	0.023	0.01	0.19	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 220\01	0.001	0.001	0.190	0.023	0.01	0.19	0.41	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
F 221\01	0.001	0.001	0.190	0.027	0.01	0.22	0.43	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF686	0	0	19.770	0	0	0	0						
OF691	0	0	19.770	0	0	0	0						
OF693	0	0	19.770	0	0	0	0						
OF697	0	0	19.770	0	0	0	0						
OF700	0.028	0.028	19.770	0.022	0.01	7.33	0.35	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF701	0.006	0.006	19.770	0.012	0.00	4.04	0.24	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF702	0.007	0.007	19.770	0.013	0.00	4.34	0.24	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF703	0.040	0.040	19.770	0.025	0.01	8.23	0.39	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF704	0.155	0.155	19.770	0.041	0.02	12.17	0.57	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1					
OF695	0	0	19.770	0	0	0	0						
OF1120	15.817	15.817	7.665	0.230	0.59	49.99	2.57	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
OF1006	0	0	7.665	0	0	0	0						
OF1008	0	0	7.665	0	0	0	0						
OF1020	4.920	4.920	7.665	0.167	0.24	37.50	1.44	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
OF1018	1.981	1.981	7.665	0.115	0.13	27.08	1.14	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
OF1062	15.817	15.817	7.665	0.230	0.59	49.99	2.57	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
OF1107	0	0	7.665	0	0	0	0						
OF1110	0	0	7.665	0	0	0	0						
OF1114	0	0	7.665	0	0	0	0						
OF1129	0	0	7.665	0	0	0	0						
OF1125	0.525	0.525	7.665	0.067	0.05	17.38	0.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
OF1167	0	0	7.665	0	0	0	0						
OF1161	0	0	7.665	0	0	0	0						
OF1154	0	0	7.665	0	0	0	0						
OF1148	0	0	7.665	0	0	0	0						
OF1142	1.756	1.756	7.665	0.110	0.12	26.00	1.10	AR&R 100 year, 15 minutes storm, average 182 mm/h, Zone 1					
OF1135	1.909	1.909	7.665	0.114	0.13	26.72	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
OF1172	0	0	7.665	0	0	0	0						
OF1173	0	0	7.665	0	0	0	0						
OF1174	1.909	1.909	7.665	0.114	0.13	26.72	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1					
OF1175	9.254	9.254	7.665	0.216	0.37	47.20	1.69	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
OF1176	16.337	16.337	7.665	0.230	0.61	49.99	2.66	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					
OF1177	25.479	25.479	7.665	0.230	0.95	49.99	4.14	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1					

OF1178	1.909	1.909	7.665	0.114	0.13	26.72	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 46/27	25.498	25.498	7.665	0.230	0.95	49.99	4.15	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
OF1206	0	0	7.665	0	0	0	0	
OF1205	0.002	0.002	7.665	0.008	0.00	2.54	0.19	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
OF1207	2.896	2.896	7.665	0.135	0.17	31.03	1.26	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
OF1214	0	0	7.665	0	0	0	0	
OF1221	0.114	0.114	7.665	0.036	0.02	11.27	0.52	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
OF1230	0.008	0.008	7.665	0.014	0.00	4.64	0.24	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF1231	0.394	0.394	7.665	0.060	0.04	15.94	0.74	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF1235	0	0	7.665	0	0	0	0	
OF1278	11.083	11.083	7.665	0.230	0.41	49.99	1.80	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F BV01/02	2.049	2.049	0.190	0.278	0.59	6.40	2.11	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV01/01	2.012	2.012	0.190	0.277	0.58	6.40	2.09	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 102/02	0.540	0.540	7.665	0.068	0.05	17.56	0.80	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F 102/01	0.540	0.540	7.665	0.068	0.05	17.56	0.80	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F BV02/02	1.961	1.961	0.190	0.274	0.57	6.40	2.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV02/01	1.983	1.983	0.190	0.276	0.57	6.40	2.08	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV03/02	0.008	0.008	0.190	0.053	0.04	0.44	0.69	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV03/01	0.010	0.010	0.190	0.057	0.04	0.54	0.74	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV04/01	0	0	0.190	0	0	0	0	
F BV05/01	0.285	0.285	0.190	0.164	0.18	4.70	1.07	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV06/03	2.013	2.013	0.190	0.277	0.58	6.40	2.09	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV06/02	2.053	2.053	0.190	0.279	0.59	6.40	2.11	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV06/01	0.271	0.271	0.190	0.161	0.17	4.56	1.07	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 96/01	0	0	7.665	0	0	0	0	
F BV07/02	0.065	0.065	0.190	0.101	0.09	2.01	0.93	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV07/01	0.187	0.187	0.190	0.139	0.15	3.28	1.09	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV08/01	0	0	0.190	0	0	0	0	
F 130/01	0.064	0.064	7.665	0.030	0.01	10.02	0.43	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV09/02	0.034	0.034	0.190	0.083	0.07	1.43	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV09/01	0.028	0.028	0.190	0.079	0.07	1.27	0.85	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV10/02	0.039	0.039	0.190	0.088	0.08	1.56	0.86	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV10/01	0.046	0.046	0.190	0.092	0.08	1.70	0.88	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 134-01	0	0	7.665	0	0	0	0	
F BV11/06	0	0	0.190	0	0	0	0	
F BV11/05	0.073	0.073	0.190	0.105	0.10	2.15	0.93	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV11/04	0.141	0.141	0.190	0.128	0.13	2.90	1.04	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV11/03	0.312	0.312	0.190	0.167	0.18	4.87	1.10	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV11/02	0.369	0.369	0.190	0.175	0.20	5.24	1.15	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F BV11/01	0.349	0.349	0.190	0.173	0.19	5.14	1.13	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F 81/01	0	0	7.665	0	0	0	0	
F BV12/05	0.042	0.042	0.190	0.089	0.08	1.61	0.88	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV12/04	0.096	0.096	0.190	0.114	0.11	2.44	0.97	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV12/03	0.418	0.418	0.190	0.180	0.22	5.51	1.19	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BV12/02	0.705	0.705	0.190	0.205	0.29	6.40	1.40	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F BV12/01	0.755	0.755	0.190	0.209	0.30	6.40	1.44	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F PA17/02	0.063	0.063	0.190	0.101	0.09	1.99	0.91	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA17/01	0.054	0.054	0.190	0.096	0.09	1.86	0.89	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA19/03	0	0	0.190	0	0	0	0	
F PA19/02	0.015	0.015	0.190	0.064	0.05	0.79	0.80	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA19/01	0.024	0.024	0.190	0.075	0.06	1.15	0.83	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA21/04	0.045	0.045	0.190	0.091	0.08	1.68	0.87	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA21/03	0.033	0.033	0.190	0.083	0.07	1.43	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA21/02	0.046	0.046	0.190	0.092	0.08	1.70	0.88	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA22/05	0	0	0.190	0	0	0	0	
F PA22/04	0.011	0.011	0.190	0.058	0.04	0.59	0.76	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA22/03	0.009	0.009	0.190	0.055	0.04	0.48	0.69	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA22/02	0.023	0.023	0.190	0.074	0.06	1.11	0.82	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA22/01	0.018	0.018	0.190	0.069	0.06	0.95	0.81	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 9/25	6.297	6.297	7.665	0.185	0.28	40.91	1.54	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F PA23/01	0.011	0.011	0.190	0.058	0.04	0.59	0.76	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA23/02	0.143	0.143	0.190	0.128	0.13	2.92	1.04	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 79/03	0.077	0.077	7.665	0.032	0.01	10.38	0.46	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F 79/02	0	0	7.665	0	0	0	0	
F PA3/02	0.705	0.705	0.190	0.205	0.29	6.40	1.40	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F PA7/04	0	0	0.190	0	0	0	0	
F PA7/03	0	0	0.190	0	0	0	0	
F PA7/02	0.022	0.022	0.190	0.073	0.06	1.06	0.82	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PA7/01	0.063	0.063	0.190	0.101	0.09	1.99	0.92	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F SP01/03	0.018	0.018	0.190	0.068	0.05	0.93	0.80	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP01/02	0.031	0.031	0.190	0.081	0.07	1.36	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP01/01	0.026	0.026	0.190	0.077	0.06	1.20	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP02/04	0	0	0.190	0	0	0	0	
F SP02/03	0.026	0.026	0.190	0.077	0.06	1.20	0.83	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP02/02	0.053	0.053	0.190	0.096	0.09	1.83	0.89	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP02/01	0.239	0.239	0.190	0.152	0.17	3.77	1.12	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP03/01	0.036	0.036	0.190	0.085	0.07	1.47	0.86	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP04/02	0.098	0.098	0.190	0.115	0.11	2.47	0.97	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP04/01	0.109	0.109	0.190	0.118	0.12	2.58	1.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP05/02	0.141	0.141	0.190	0.128	0.13	2.90	1.04	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP05/01	0.129	0.129	0.190	0.124	0.13	2.78	1.03	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP07/03	0	0	0.190	0	0	0	0	
F SP07/02	0	0	0.190	0	0	0	0	
F SP07/01	0.259	0.259	0.190	0.158	0.17	4.34	1.07	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F SP08/01	0.293	0.293	0.190	0.165	0.18	4.73	1.09	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP09/01	0.360	0.360	0.190	0.174	0.20	5.21	1.14	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP10/01	0.351	0.351	0.190	0.173	0.20	5.14	1.13	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP11/01	0.138	0.138	0.190	0.127	0.13	2.87	1.03	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1

F SP12I07	0.006	0.006	0.190	0.049	0.03	0.40	0.66	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP12I06	0.014	0.014	0.190	0.063	0.05	0.75	0.79	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SP12I05	0	0	0.190	0	0	0	0	
F SP12I04	0	0	0.190	0	0	0	0	
F SP12I03	0.055	0.055	0.190	0.096	0.09	1.86	0.90	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F SP12I02	0.306	0.306	0.190	0.167	0.18	4.83	1.10	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F SP12I01	0.288	0.288	0.190	0.164	0.18	4.70	1.08	AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1
F TG01I04	0	0	0.190	0	0	0	0	
F TG01I03	0.339	0.339	0.190	0.171	0.19	5.07	1.12	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F TG01I02	0.320	0.320	0.190	0.169	0.19	4.93	1.11	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F TG01I01	0.795	0.795	0.190	0.212	0.31	6.40	1.46	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F TG02I04	0	0	0.190	0	0	0	0	
F TG02I03	0	0	0.190	0	0	0	0	
F TG02I02	0.068	0.068	0.190	0.103	0.09	2.06	0.93	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F TG02I01	0.059	0.059	0.190	0.098	0.09	1.92	0.91	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F DI02	0.046	0.046	0.060	0.129	0.04	2.94	0.33	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F DI01	0.101	0.101	0.147	0.125	0.10	2.81	0.79	AR&R 100 year, 25 minutes storm, average 148 mm/h, Zone 1
F EI04	0.043	0.043	0.240	0.083	0.09	1.43	1.08	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F EI03	0.095	0.095	0.170	0.118	0.10	2.56	0.89	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F EI02	0.087	0.087	0.190	0.111	0.11	2.33	0.96	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F EI01	0.103	0.103	0.134	0.129	0.10	2.94	0.74	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F FI02	0.038	0.038	0.190	0.086	0.07	1.52	0.87	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F FI01	0.063	0.063	0.190	0.101	0.09	1.99	0.91	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F 33-01	0.026	0.039	0.298	0.076	0.06	1.73	0.77	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F GI02	0.285	0.285	0.120	0.184	0.14	5.68	0.77	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F GI01	0.219	0.219	0.147	0.163	0.14	4.66	0.83	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF15I3	0.031	0.031	0.000	0.698	0.01	6.40	0.01	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F I101	0.002	0.002	0.134	0.038	0.01	0.31	0.39	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F I27-01	0.000	0.014	0.050	0.061	0.04	0.61	0.73	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F KI01	0.675	0.675	0.000	0.698	0.13	6.40	0.18	AR&R 100 year, 20 minutes storm, average 163 mm/h, Zone 1
F LI01	0	0	0.000	0	0	0	0	
F LR1I01	0	0	0.170	0	0	0	0	
F QI01	0.042	0.042	0.120	0.102	0.06	2.04	0.59	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF23I5	0	0	19.770	0	0	0	0	
F LR2I01	0	0	0.120	0	0	0	0	
F LR4I01	0	0	0.190	0	0	0	0	
F JI02	0.061	0.061	0.180	0.101	0.09	2.01	0.87	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F JI01	0.108	0.108	0.085	0.153	0.08	3.89	0.49	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F LR5I01	0	0	0.120	0	0	0	0	
F JI03	0.022	0.022	0.190	0.073	0.06	1.06	0.83	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F LR6I01	0	0	0.190	0	0	0	0	
F TI01	0.015	0.015	0.104	0.079	0.04	1.27	0.46	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F LR7I01	0	0	0.104	0	0	0	0	
F BI02	0.047	0.047	0.190	0.092	0.08	1.72	0.87	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F BI01	0.019	0.019	0.104	0.083	0.04	1.43	0.47	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF40I25	0	0	7.665	0	0	0	0	
F LR8I01	0	0	0.159	0	0	0	0	
F BI03	0.019	0.019	0.085	0.090	0.04	1.63	0.39	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F MI02	0.004	0.004	0.147	0.047	0.02	0.39	0.48	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F MI01	0.022	0.022	0.000	0.698	0.00	6.40	0.01	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F OI01	0.041	0.041	0.060	0.124	0.04	2.78	0.32	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PI04	0.010	0.010	0.060	0.081	0.02	1.36	0.27	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PI03	0.017	0.017	0.240	0.063	0.06	0.75	0.99	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PI02	0.025	0.025	0.190	0.076	0.06	1.18	0.84	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F PI01	0.008	0.008	0.240	0.048	0.04	0.40	0.81	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
OF15I21	0.003	0.003	0.000	0.698	0.00	6.40	0.00	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F RI02	0.020	0.020	0.190	0.071	0.06	1.02	0.81	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F RI01	0.034	0.034	0.159	0.088	0.06	1.58	0.72	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SI03	0.029	0.029	0.159	0.084	0.06	1.45	0.72	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SI02	0.175	0.175	0.159	0.144	0.13	3.44	0.93	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
F SI01	0.284	0.284	0.190	0.164	0.17	4.70	1.07	AR&R 100 year, 5 minutes storm, average 269 mm/h, Zone 1
DETENTION BASIN DETAILS								
Name	Max WL	MaxVol	Max Q	Max Q	Max Q			
			Total	Low Level	High Level			
CONTINUITY CHECK for AR&R 100 year, 1.5 hours storm, average 74.2 mm/h, Zone 1								
Node	Inflow (cu.m)	Outflow (cu.m)	Storage Chan (cu.m)	Difference %				
I124	16889.15	16889.15	0.00	0.0				
I123	16889.15	16883.26	0.00	0.0				
I122	16883.26	16877.56	0.00	0.0				
I121	16877.56	16872.06	0.00	0.0				
I120	16872.06	16865.90	0.00	0.0				
I119	21533.65	21528.08	0.00	0.0				
I118	21528.07	21515.68	0.00	0.1				
I117	21515.68	21503.58	0.00	0.1				
I116	21725.38	21713.33	0.00	0.1				
I115	21713.44	21701.66	0.00	0.1				
I114	21701.78	21690.28	0.00	0.1				
I113	54067.84	54074.85	0.00	-0.0				
I112	53244.20	53247.55	0.00	-0.0				
I111	53247.55	53244.30	0.00	0.0				
I110	53244.30	53241.70	0.00	0.0				
I109	53241.70	53238.65	0.00	0.0				
I108	53238.65	53235.55	0.00	0.0				
I107	53235.55	53232.42	0.00	0.0				

1\06	53232.42	53232.34	0.00	0.0							
1\05	53232.34	53231.73	0.00	0.0							
1\04	53231.73	53231.51	0.00	0.0							
1\03	53231.51	53231.23	0.00	0.0							
1\02	53231.23	53231.23	0.00	0.0							
1\01	53231.23	53231.23	0.00	0.0							
5\03	0.00	0.00	0.00	0.0							
5\02	164.90	164.88	0.00	0.0							
5\01	1598.83	1598.57	0.00	0.0							
46\17	23252.82	23254.37	0.00	-0.0							
46\16	23254.53	23255.78	0.00	-0.0							
46\15	29854.99	29852.09	0.00	0.0							
46\14	29852.14	29849.46	0.00	0.0							
46\13	31205.10	31203.51	0.00	0.0							
46\12	31264.46	31262.70	0.00	0.0							
46\11	31262.76	31261.28	0.00	0.0							
46\10	25238.61	25237.64	0.00	0.0							
46\09	31503.32	31531.18	0.00	-0.1							
46\08	31557.27	31555.60	0.00	0.0							
46\07	31555.66	31556.51	0.00	-0.0							
46\06	33651.34	33652.42	0.00	-0.0							
46\05	51465.80	51466.80	0.00	-0.0							
46\04A	42445.73	42450.37	0.00	-0.0							
46\04	52989.34	52993.47	0.00	-0.0							
46\03	54052.06	54052.05	0.00	0.0							
46\02	54980.22	54980.18	0.00	0.0							
46\01	45266.32	45266.32	0.00	0.0							
7\03	0.00	0.00	0.00	0.0							
7\02	58.35	58.29	0.00	0.1							
7\01	58.29	58.29	0.00	0.0							
8\04	4457.92	4457.92	0.00	0.0							
8\03	4457.93	4457.92	0.00	0.0							
8\02	4457.93	4457.92	0.00	0.0							
8\01	4457.93	4457.92	0.00	0.0							
9\16	9514.03	9514.05	0.00	-0.0							
9\15	9514.04	9514.05	0.00	-0.0							
9\14	9514.04	9514.05	0.00	-0.0							
9\13	9514.04	9514.05	0.00	-0.0							
9\12	9668.86	9668.88	0.00	-0.0							
9\11	9846.85	9846.83	0.00	0.0							
9\10	9846.81	9846.83	0.00	-0.0							
9\09	9846.81	9846.83	0.00	-0.0							
9\08	9846.81	9846.83	0.00	-0.0							
9\07	10096.64	10096.61	0.00	0.0							
9\06	10436.97	10436.96	0.00	0.0							
9\05	10436.97	10436.96	0.00	0.0							
9\04	11739.88	11740.04	0.00	-0.0							
9\03	11740.04	11740.04	0.00	-0.0							
9\02	11740.04	11740.04	0.00	-0.0							
9\01	9961.13	9961.13	0.00	0.0							
8\06	4399.64	4399.64	0.00	0.0							
8\05	4399.64	4399.64	0.00	0.0							
11\43	110063.07	110063.05	0.00	0.0							
11\42	97930.94	97919.16	5.00	0.0							
11\41	90131.60	90123.88	2.55	0.0							
11\40	90135.76	90131.97	0.00	0.0							
11\39	90167.09	90168.49	1.03	-0.0							
11\38	90286.14	90276.03	0.00	0.0							
11\37	90276.03	90266.30	0.00	0.0							
11\36	90815.02	90805.19	0.00	0.0							
11\35	93465.32	93459.16	0.00	0.0							
11\34	93459.16	93447.48	0.00	0.0							
11\33	93448.09	93436.84	0.00	0.0							
11\32	93436.84	93425.90	0.00	0.0							
11\31	93444.05	93433.67	0.00	0.0							
11\30	93433.63	93423.47	0.00	0.0							
11\29	93455.41	93445.48	0.00	0.0							
11\28	93455.25	93445.45	0.00	0.0							
11\27	93495.66	93485.88	0.00	0.0							
11\26	93486.41	93477.13	0.00	0.0							
11\25	93477.65	93468.75	0.00	0.0							
11\24	95305.77	95297.45	0.00	0.0							
11\23	95452.70	95444.73	0.00	0.0							
11\22	96155.08	96148.06	0.00	0.0							
11\21	96257.44	96250.56	0.00	0.0							
11\20	96250.20	96243.67	0.00	0.0							
11\19	96430.05	96414.77	0.00	0.0							
11\18	96414.95	96400.11	0.00	0.0							
11\17	96400.30	96385.82	0.00	0.0							
11\16	96946.34	96939.74	0.00	0.0							
11\15	96939.84	96933.57	0.00	0.0							
11\14	97410.56	97402.35	0.00	0.0							
11\13	97402.28	97395.31	0.00	0.0							
11\12	97460.30	97455.80	0.00	0.0							
11\11	98004.34	98001.85	0.00	0.0							
11\10	98002.08	98018.14	0.00	-0.0							
11\09	98018.36	98017.63	0.00	0.0							
11\08	98017.85	98016.85	0.00	0.0							

11\07	98017.07	98015.86	0.00	0.0							
11\06	98016.08	98014.91	0.00	0.0							
11\05	98015.14	98014.41	0.00	0.0							
11\04	98085.45	98085.21	0.00	0.0							
11\03A	96233.65	96233.53	0.00	0.0							
11\03	98769.13	98769.61	0.00	-0.0							
11\02	98769.52	98769.61	0.00	-0.0							
11\01	96233.53	96233.53	0.00	0.0							
12\01	198.43	198.37	0.00	0.0							
19\26	1227.63	1227.57	0.00	0.0							
19\25	1227.57	1227.51	0.00	0.0							
19\24	1529.09	1529.09	0.00	0.0							
19\23	2001.91	2002.02	0.00	-0.0							
19\22	2700.31	2699.52	0.00	0.0							
19\21	2754.01	2753.43	0.00	0.0							
19\20	2753.44	2752.99	0.00	0.0							
19\19	2753.00	2753.14	0.00	-0.0							
19\18	3099.19	3097.37	0.00	0.1							
19\17	3311.03	3308.98	0.00	0.1							
19\16	3313.73	3311.87	0.00	0.1							
19\15	3338.39	3336.53	0.00	0.1							
19\14	3397.51	3395.61	0.00	0.1							
19\13	5302.44	5302.15	0.00	0.0							
19\12	5302.16	5300.55	0.00	0.0							
19\11	5585.92	5582.40	0.00	0.1							
19\10	5766.63	5758.01	5.00	0.1							
19\09	6067.59	6063.78	0.00	0.1							
19\08	4706.91	4703.24	0.00	0.1							
19\07	5290.93	5287.59	0.00	0.1							
19\06	6601.17	6596.76	0.00	0.1							
19\05	5471.66	5467.12	0.00	0.1							
19\04	5546.55	5541.90	0.00	0.1							
19\03	5722.22	5717.32	0.00	0.1							
19\02	6609.69	6604.49	0.00	0.1							
19\01	6604.49	6599.14	0.00	0.1							
13\02	40.04	39.92	0.00	0.3							
13\01	77.42	77.42	0.00	0.0							
10\01	416.38	416.44	0.00	-0.0							
9\18	5055.97	5056.09	0.00	-0.0							
9\17	5056.09	5056.09	0.00	0.0							
15\04	0.00	0.00	0.00	0.0							
15\03	0.00	0.00	0.00	0.0							
15\02	0.00	0.00	0.00	0.0							
15\01	0.00	0.00	0.00	0.0							
9\19	4639.53	4639.53	0.00	0.0							
16\03	2666.17	2666.16	0.00	0.0							
16\02	2661.90	2660.14	0.00	0.1							
16\01	2660.14	2660.14	0.00	0.0							
17\02	456.20	456.19	0.00	0.0							
17\01	1907.07	1906.85	0.00	0.0							
18\02	0.00	0.00	0.00	0.0							
18\01	111.29	111.29	0.00	0.0							
70\01	213.82	213.64	0.00	0.1							
19\28	1029.43	1029.42	0.00	0.0							
19\27	1029.42	1029.26	0.00	0.0							
35\04	37.06	36.97	0.00	0.3							
35\03	96.09	96.09	0.00	0.0							
35\02	96.09	96.09	0.00	-0.0							
35\01	96.09	96.09	0.00	-0.0							
38\14	15872.27	15872.46	0.00	-0.0							
38\13	15872.36	15872.46	0.00	-0.0							
38\12	15872.36	15872.46	0.00	-0.0							
38\11	15872.36	15872.46	0.00	-0.0							
38\10	16583.21	16583.16	0.00	0.0							
38\09	16583.12	16583.16	0.00	-0.0							
38\08	16583.12	16583.16	0.00	-0.0							
38\07	16583.12	16583.16	0.00	-0.0							
38\06	16583.12	16583.16	0.00	-0.0							
38\05	16681.04	16681.08	0.00	-0.0							
38\04	16681.06	16681.08	0.00	-0.0							
38\03	16924.23	16924.25	0.00	-0.0							
38\02	16924.28	16924.25	0.00	0.0							
38\01	16924.28	16926.78	0.00	-0.0							
36\03	246.63	246.63	0.00	0.0							
36\02	246.63	246.43	0.00	0.1							
36\01	879.06	878.96	0.00	0.0							
38\17	15457.44	15457.41	0.00	0.0							
38\16	15461.20	15461.23	0.00	-0.0							
38\15	15773.95	15776.37	0.00	-0.0							
39\05	47.43	47.37	0.00	0.1							
39\04	47.37	47.36	0.00	0.0							
39\03	47.36	47.36	0.00	-0.0							
39\02	308.49	307.93	0.41	0.0							
39\01	307.93	307.69	0.00	0.1							
40\03	68.06	68.05	0.00	0.0							
40\02	74.34	74.37	0.00	-0.0							
40\01	96.21	96.30	0.00	-0.1							
41\02	65.41	65.41	0.00	0.0							

41\01	186.18	186.12	0.00	0.0								
42\02	157.84	157.86	0.00	-0.0								
42\01	164.81	164.82	0.00	-0.0								
43\03	547.53	547.53	0.00	0.0								
43\02	669.30	669.30	0.00	0.0								
43\01	709.90	709.93	0.00	-0.0								
44\02	1836.49	1836.49	0.00	0.0								
44\01	1836.49	1836.49	0.00	0.0								
45\05	3373.86	3373.86	0.00	0.0								
45\04	3373.86	3373.86	0.00	0.0								
45\03	3373.86	3373.86	0.00	0.0								
45\02	3421.75	3422.06	0.00	-0.0								
45\01	3460.34	3460.33	0.00	0.0								
9\23	4472.85	4472.86	0.00	-0.0								
9\22	4576.46	4576.67	0.00	-0.0								
9\21	4639.53	4639.53	0.00	0.0								
9\20	4639.53	4639.53	0.00	0.0								
46\27	21233.38	21233.23	0.00	0.0								
46\26	21233.41	21234.25	0.00	-0.0								
46\25	21323.18	21325.08	0.00	-0.0								
46\24	21325.04	21327.38	0.00	-0.0								
46\23	21327.34	21329.91	0.00	-0.0								
46\22	21653.93	21656.01	0.00	-0.0								
46\21	21656.25	21656.35	0.00	-0.0								
46\20	21656.59	21657.88	0.00	-0.0								
46\19	21658.12	21658.34	0.00	-0.0								
46\18	21658.57	21654.04	5.00	-0.0								
47\02	31910.79	31910.79	0.00	0.0								
47\01	32368.65	32377.60	0.00	-0.0								
48\09	945.05	945.03	0.00	0.0								
48\08	945.03	944.94	0.00	0.0								
48\07	944.93	945.21	0.00	-0.0								
48\06	945.21	944.90	0.00	0.0								
48\05	944.90	944.58	0.00	0.0								
48\04	944.58	944.25	0.00	0.0								
48\03	944.24	938.93	5.00	0.0								
48\02	552.78	547.68	4.67	0.1								
48\01	664.23	662.52	1.14	0.1								
49\01	3.78	3.78	0.00	0.0								
50\04	37.67	37.59	0.00	0.2								
50\03	82.32	82.30	0.00	0.0								
50\02	82.30	82.32	0.00	-0.0								
50\01	82.32	82.32	0.00	-0.0								
51\01	1450.88	1450.87	0.00	0.0								
52\05	56.47	56.31	0.00	0.3								
52\04	117.20	117.11	0.00	0.1								
52\03	135.42	135.30	0.00	0.1								
52\02	155.16	155.02	0.00	0.1								
52\01	155.02	154.91	0.00	0.1								
53\01	0.00	0.00	0.00	0.0								
170\02	482.29	482.53	0.00	-0.1								
170\01	549.27	548.72	0.00	0.1								
54\04	67.17	66.84	0.00	0.5								
54\03	66.84	66.84	0.00	0.0								
54\02	66.84	66.79	0.00	0.1								
54\01	66.79	66.74	0.00	0.1								
55\03	4.26	4.26	0.00	0.0								
55\02	4.26	4.23	0.00	0.7								
55\01	6.76	6.56	0.00	3.0								
59\02	0.55	0.47	0.00	14.3								
59\01	11.83	11.88	0.00	-0.4								
60\01	365.87	365.86	0.00	0.0								
61\01	458.15	457.87	0.00	0.1								
61\02	92.43	92.29	0.00	0.2								
62\03	103.68	103.68	0.00	0.0								
62\02	103.68	103.59	0.00	0.1								
62\01	103.59	103.60	0.00	-0.0								
63\03	19.74	19.72	0.00	0.1								
63\02	47.96	47.90	0.00	0.1								
63\01	47.90	47.90	0.00	-0.0								
64\03	0.00	0.00	0.00	0.0								
64\02	12.79	12.76	0.00	0.3								
64\01	24.01	23.99	0.00	0.1								
9\24	1012.54	1012.53	0.00	0.0								
65\02	221.92	221.92	0.00	0.0								
65\01	221.92	221.79	0.00	0.1								
67\02	0.00	0.00	0.00	0.0								
67\01	0.00	0.00	0.00	0.0								
68\02	7.17	7.13	0.00	0.6								
68\01	26.54	26.52	0.00	0.1								
69\02	31.10	30.98	0.00	0.4								
69\01	61.09	60.98	0.00	0.2								
70\03	92.59	92.50	0.00	0.1								
70\02	102.64	102.53	0.00	0.1								
71\03	0.00	0.00	0.00	0.0								
71\02	546.65	546.62	0.00	0.0								
71\01	698.32	698.30	0.00	0.0								
73\04	0.00	-1.76	0.00	0.0								

73\03	-1.76	-3.55	0.00	0.0								
73\02	-3.55	-8.17	2.79	0.0								
73\01	-2.09	-5.58	2.16	0.0								
74\02	112.73	112.83	0.00	-0.1								
74\01	116.92	117.65	0.00	-0.6								
75\02	3.53	3.53	0.00	0.0								
75\01	88.90	88.80	0.00	0.1								
76\02	0.00	0.00	0.00	0.0								
76\01	18.20	18.16	0.00	0.2								
77\01	5.29	5.29	0.00	0.0								
78\08	154.31	154.31	0.00	-0.0								
78\07	154.31	154.32	0.00	-0.0								
78\06	241.45	241.47	0.00	-0.0								
78\05	249.63	249.64	0.00	-0.0								
78\04	273.57	273.57	0.00	-0.0								
78\03	273.57	273.58	0.00	-0.0								
78\02	281.85	281.86	0.00	-0.0								
78\01	301.49	301.58	0.00	-0.0								
80\01	200.97	200.96	0.00	0.0								
79\01	539.28	534.04	5.00	0.0								
89\01	46.77	46.77	0.00	0.0								
182\07	70.81	70.81	0.00	-0.0								
182\06	75.78	75.78	0.00	-0.0								
182\05	85.37	85.37	0.00	-0.0								
N1804	85.37	85.37	0.00	0.0								
90\02	0.00	0.00	0.00	0.0								
90\01	0.00	0.00	0.00	0.0								
111\03	92.10	92.10	0.00	-0.0								
111\02	316.55	316.52	0.00	0.0								
111\01	521.34	521.35	0.00	-0.0								
112\01	224.46	224.45	0.00	0.0								
113\02	0.00	0.00	0.00	0.0								
113\01	0.00	0.00	0.00	0.0								
129\01	0.00	0.00	0.00	0.0								
151\02	0.00	0.00	0.00	0.0								
151\01	186.74	186.73	0.00	0.0								
152\01	0.00	0.00	0.00	0.0								
179\01	0.00	0.00	0.00	0.0								
153\03	0.00	0.00	0.00	0.0								
153\02	0.00	0.00	0.00	0.0								
153\01	109.81	109.74	0.00	0.1								
154\01	0.00	0.00	0.00	0.0								
155\02	0.00	0.00	0.00	0.0								
155\01	0.00	0.00	0.00	0.0								
156\02	92.76	92.61	0.00	0.2								
156\01	346.06	346.07	0.00	-0.0								
157\01	253.47	253.45	0.00	0.0								
158\01	4.74	4.74	0.00	0.0								
159\01	285.35	285.35	0.00	0.0								
160\02	504.90	504.90	0.00	0.0								
160\01	1901.25	1901.27	0.00	-0.0								
161\01	1313.58	1313.58	0.00	-0.0								
162\01	1213.24	1213.24	0.00	-0.0								
163\01	1125.09	1125.09	0.00	0.0								
164\01	1072.70	1072.69	0.00	0.0								
165\01	0.00	0.00	0.00	0.0								
166\01	1487.31	1487.29	0.00	0.0								
167\01	0.00	0.00	0.00	0.0								
168\01	120.12	120.95	0.00	-0.7								
169\01	23.16	23.17	0.00	-0.0								
170\03	475.73	475.73	0.00	0.0								
171\01	0.66	0.60	0.00	8.7								
172\01	35.85	35.13	0.00	2.0								
173\01	2.54	2.53	0.00	0.2								
174\01	31.99	31.97	0.00	0.0								
175\01	9.71	9.67	0.00	0.4								
176\01	50.08	49.99	0.00	0.2								
177\01	0.00	0.00	0.00	0.0								
178\01	0.00	0.00	0.00	0.0								
179\02	0.00	0.00	0.00	0.0								
180\02	0.00	0.00	0.00	0.0								
180\01	0.00	0.00	0.00	0.0								
181\01	0.00	0.00	0.00	0.0								
182\09	10.15	10.15	0.00	0.0								
182\08	17.32	17.32	0.00	-0.0								
186\02	0.00	0.00	0.00	0.0								
186\01	0.00	0.00	0.00	0.0								
187\02	632.73	632.73	0.00	-0.0								
187\01	632.73	632.63	0.00	0.0								
189\01	0.00	0.00	0.00	0.0								
190\01	0.00	0.00	0.00	0.0								
191\01	0.00	0.00	0.00	0.0								
192\01	0.00	0.00	0.00	0.0								
197\02	232.85	232.87	0.00	-0.0								
197\01	232.87	232.85	0.00	0.0								
193\01	0.00	0.00	0.00	0.0								
197\04	0.00	0.00	0.00	0.0								
197\03	227.65	227.66	0.00	-0.0								

198\02	4671.21	4671.21	0.00	0.0								
198\01	4571.37	4567.90	0.00	0.1								
199\01	204.83	204.83	0.00	0.0								
O 1\02	0.00	0.00	0.00	0.0								
O 9\02	1778.91	1778.91	0.00	0.0								
O 11\02	2536.01	2536.01	0.00	0.0								
O 46\02	9713.86	9713.86	0.00	0.0								
O 90\02	0.00	0.00	0.00	0.0								
22-02	8766.02	8766.02	0.00	0.0								
22-02 A	8881.94	8881.94	0.00	0.0								
22-01	9058.20	9058.25	0.00	-0.0								
3-05	18026.45	17906.26	0.00	0.7								
3-04	17987.22	17988.54	0.00	-0.0								
3-03	18144.71	17988.54	0.00	0.9								
3-02	17988.54	17988.53	0.00	0.0								
3-01	19405.80	19407.93	0.00	-0.0								
A-02	19457.48	19457.45	0.00	0.0								
A-01	19457.63	19457.63	0.00	0.0								
23-02	6422.14	6422.14	0.00	0.0								
3-06	8729.90	8742.99	0.00	-0.1								
3-06A	8823.53	8822.04	0.00	0.0								
27-02	205.16	205.16	0.00	0.0								
27-01	246.52	246.08	0.00	0.2								
21-01	1685.28	1672.49	0.00	0.8								
3-09	1887.44	1886.14	0.00	0.1								
3-08	1949.85	1885.14	0.00	3.3								
3-07	1924.87	1885.14	0.00	2.1								
30-02	324.61	324.61	0.00	0.0								
30-02 A	327.63	327.81	0.00	-0.1								
30-01	347.98	347.96	0.00	0.0								
21-03	1427.98	1427.98	0.00	-0.0								
21-02	1433.19	1432.88	0.00	0.0								
31-02	607.87	607.87	0.00	0.0								
31-02 A	487.29	487.25	0.00	0.0								
31-01	520.05	519.76	0.00	0.1								
29-01	1297.01	1297.47	0.00	-0.0								
119-02	0.00	0.00	0.00	0.0								
119-01	0.00	0.00	0.00	0.0								
120-01	643.60	643.60	0.00	0.0								
121-01	717.48	717.53	0.00	-0.0								
120A-01	0.00	0.00	0.00	0.0								
119A-01	196.95	196.93	0.00	0.0								
121-06	103.90	103.90	0.00	0.0								
121-05	154.64	154.63	0.00	0.0								
121-04	154.63	154.73	0.00	-0.1								
121-03	154.73	154.73	0.00	0.0								
121-02	154.73	154.71	0.00	0.0								
122-02	0.00	0.00	0.00	0.0								
122-01	0.00	0.00	0.00	0.0								
122A-01	0.00	0.00	0.00	0.0								
123-02	0.00	0.00	0.00	0.0								
123-01	0.00	0.00	0.00	0.0								
124A-02	80.82	80.79	0.00	0.0								
124A-01	80.79	80.97	0.00	-0.2								
125-02	432.38	432.38	0.00	0.0								
125-01	432.38	432.31	0.00	0.0								
132-02	268.03	268.03	0.00	0.0								
132-01	268.03	267.50	0.00	0.2								
N5971	0.00	0.00	0.00	0.0								
3-11	0.00	0.00	0.00	0.0								
3-10	0.00	0.00	0.00	0.0								
29-02	0.00	0.00	0.00	0.0								
29-02 A	370.80	370.90	0.00	-0.0								
111A\01	0.00	0.00	0.00	0.0								
N1000	0.00	0.00	0.00	0.0								
Dummy 1	928.17	928.17	0.00	0.0								
Dummy 3	825.04	825.04	0.00	0.0								
Dummy 2	1058.55	1058.55	0.00	0.0								
N1012	0.00	0.00	0.00	0.0								
N1013	0.00	0.00	0.00	0.0								
200\04	0.00	0.00	0.00	0.0								
200\03	0.00	0.00	0.00	0.0								
200\02	0.00	0.00	0.00	0.0								
200\01	0.00	0.00	0.00	0.0								
201\01	0.00	0.00	0.00	0.0								
202\02	0.00	0.00	0.00	0.0								
202\01	0.00	0.00	0.00	0.0								
204\02	0.00	0.00	0.00	0.0								
204\01	0.00	0.00	0.00	0.0								
205\04	0.00	0.00	0.00	0.0								
205\03	0.00	0.00	0.00	0.0								
205\02	0.00	0.00	0.00	0.0								
205\01	0.00	0.00	0.00	0.0								
206\03	5528.57	5528.55	0.00	0.0								
206\02	5528.57	5528.48	0.00	0.0								
206\01	5778.32	5778.26	0.00	0.0								
208\02	13639.16	13646.55	0.00	-0.1								
208\01	13133.69	13133.69	0.00	0.0								

207\02	17.43	17.43	0.00	0.0								
207\01	42.36	42.35	0.00	0.0								
208\04	5206.03	5206.03	0.00	0.0								
208\03	7811.46	7818.47	0.00	-0.1								
209\17	14.01	14.01	0.00	0.0								
209\16	34.52	34.51	0.00	0.0								
209\15	126.81	126.74	0.00	0.0								
209\14	230.90	230.85	0.00	0.0								
209\13	362.72	362.48	0.00	0.1								
209\12	435.68	435.49	0.00	0.0								
209\11	875.11	874.79	0.00	0.0								
209\10	1342.11	1342.81	0.00	-0.1								
209\09	1395.22	1395.60	0.00	-0.0								
209\08	1446.52	1446.21	0.00	0.0								
209\07	1517.27	1516.88	0.00	0.0								
209\06	1610.86	1610.53	0.00	0.0								
209\05	1652.99	1654.74	0.00	-0.1								
209\04	2298.22	2298.11	0.00	0.0								
209\03	2580.83	2580.79	0.00	0.0								
209\02	2589.52	2589.51	0.00	0.0								
209\01	2598.42	2598.44	0.00	-0.0								
210\05	48.07	48.06	0.00	0.0								
210\04	143.84	143.83	0.00	0.0								
210\03	138.56	138.56	0.00	-0.0								
210\02	138.56	138.56	0.00	0.0								
210\01	138.56	138.56	0.00	0.0								
211\03	121.99	121.92	0.00	0.1								
211\02	301.16	301.12	0.00	0.0								
211\01	301.12	301.12	0.00	0.0								
212\01	42.47	42.46	0.00	0.0								
213\07	21.95	21.95	0.00	0.0								
213\06	78.64	78.61	0.00	0.0								
213\05	107.18	107.05	0.00	0.1								
213\04	174.23	174.08	0.00	0.1								
213\03	242.36	242.16	0.00	0.1								
213\02	450.74	450.59	0.00	0.0								
213\01	465.92	465.88	0.00	0.0								
214\02	52.50	52.50	0.00	0.0								
214\01	51.94	52.04	0.00	-0.2								
215\01	259.21	259.12	0.00	0.0								
216\01	36.87	36.86	0.00	0.0								
217\01	98.70	98.70	0.00	0.0								
218\01	74.15	74.14	0.00	0.0								
219\01	58.46	58.45	0.00	0.0								
220\02	43.02	43.01	0.00	0.0								
220\01	43.01	42.93	0.00	0.2								
221\01	46.88	46.85	0.00	0.1								
O 200\02	0.00	0.00	0.00	0.0								
O 201\01	0.00	0.00	0.00	0.0								
O 205\03	0.00	0.00	0.00	0.0								
O 205\02	0.00	0.00	0.00	0.0								
O 208\02	512.88	512.88	0.00	0.0								
O 210\05	0.95	0.95	0.00	0.0								
N1085	0.00	0.00	0.00	0.0								
N1086	0.00	0.00	0.00	0.0								
N1092	0.00	0.00	0.00	0.0								
N1094	0.00	0.00	0.00	0.0								
N1095	0.00	0.00	0.00	0.0								
N1096	0.00	0.00	0.00	0.0								
N1097	0.00	0.00	0.00	0.0								
N1099	0.00	0.00	0.00	0.0								
N1100	0.00	0.00	0.00	0.0								
N1101	41.14	41.14	0.00	0.0								
N1102	41.14	41.14	0.00	0.0								
N1103	8.82	8.82	0.00	0.0								
N1104	8.82	8.82	0.00	0.0								
N1105	10.15	10.15	0.00	0.0								
N1106	10.15	10.15	0.00	0.0								
N1107	59.12	59.12	0.00	0.0								
N1108	59.12	59.12	0.00	0.0								
N1109	229.42	229.42	0.00	0.0								
N1110	229.42	229.42	0.00	0.0								
N1111	0.00	0.00	0.00	0.0								
N1498	12143.55	12143.55	0.00	0.0								
46\10 weir	231.74	0.00	0.00	100.0								
Dummy DQ 1	342.26	342.26	0.00	0.0								
Dummy DQ 2	350.54	350.54	0.00	0.0								
Pit1483	11684.26	11684.26	0.00	0.0								
N1622	7634.94	7634.94	0.00	0.0								
N1703	12143.57	12143.55	0.00	0.0								
N1704	0.00	0.00	0.00	0.0								
N1705	0.00	0.00	0.00	0.0								
N1706	0.00	0.00	0.00	0.0								
N1707	0.00	0.00	0.00	0.0								
N1708	386.15	386.15	0.00	0.0								
N1709	0.00	0.00	0.00	0.0								
N1710	0.00	0.00	0.00	0.0								
N1711	0.00	0.00	0.00	0.0								

N1712	0.00	0.00	0.00	0.0								
N1713	0.00	0.00	0.00	0.0								
N1714	4.39	4.39	0.00	0.0								
N1715	0.00	0.00	0.00	0.0								
N1716	0.00	0.00	0.00	0.0								
N1717	4.39	4.39	0.00	0.0								
N1718	8450.17	8450.17	0.00	0.0								
N1719	12529.69	12529.69	0.00	0.0								
N1720	20979.86	20979.87	0.00	-0.0								
N1721	4.39	4.39	0.00	0.0								
N1722	20984.26	20984.26	0.00	0.0								
N1723	0.00	0.00	0.00	0.0								
N1724	0.00	0.00	0.00	0.0								
N1725	1477.45	1477.45	0.00	0.0								
N1726	0.00	0.00	0.00	0.0								
N1727	80.82	80.82	0.00	0.0								
N1728	5.61	5.61	0.00	0.0								
N1729	147.49	147.49	0.00	0.0								
Pr1563	70.81	70.81	0.00	0.0								
N1780	3105.35	3105.35	0.00	0.0								
BV01\02	3246.77	3246.78	0.00	-0.0								
BV01\01	3474.57	3474.58	0.00	-0.0								
102\02	1302.91	1302.90	0.00	0.0								
102\01	1302.89	1302.90	0.00	-0.0								
BV02\02	3004.40	3004.37	0.00	0.0								
BV02\01	3144.24	3144.24	0.00	-0.0								
BV03\02	14.73	14.73	0.00	0.0								
BV03\01	21.37	21.36	0.00	0.0								
BV04\01	0.00	0.00	0.00	0.0								
BV05\01	423.93	423.94	0.00	-0.0								
BV06\03	3257.60	3257.61	0.00	-0.0								
BV06\02	3416.00	3415.99	0.00	0.0								
BV06\01	701.62	701.62	0.00	0.0								
96\01	340.34	340.34	0.00	0.0								
BV07\02	109.86	109.86	0.00	0.0								
BV07\01	313.91	313.91	0.00	-0.0								
BV08\01	140.52	140.52	0.00	0.0								
130\01	249.83	249.83	0.00	0.0								
BV09\02	52.83	52.83	0.00	-0.0								
BV09\01	52.83	52.83	0.00	-0.0								
BV10\02	64.73	64.73	0.00	0.0								
BV10\01	90.76	90.74	0.00	0.0								
134-01	26.01	26.03	0.00	-0.1								
BV11\06	0.00	0.00	0.00	0.0								
BV11\05	122.76	122.76	0.00	0.0								
BV11\04	244.53	244.51	0.00	0.0								
BV11\03	531.62	531.57	0.00	0.0								
BV11\02	696.46	696.42	0.00	0.0								
BV11\01	696.42	696.28	0.00	0.0								
81\01	242.92	242.93	0.00	-0.0								
BV12\05	72.47	72.47	0.00	0.0								
BV12\04	170.74	170.73	0.00	0.0								
BV12\03	832.77	832.46	0.00	0.0								
BV12\02	1263.95	1263.68	0.00	0.0								
BV12\01	1434.32	1433.94	0.00	0.0								
PA17\02	106.11	106.11	0.00	0.0								
PA17\01	106.11	106.11	0.00	0.0								
PA19\03	107.43	107.43	0.00	0.0								
PA19\02	134.78	134.80	0.00	-0.0								
PA19\01	155.76	155.76	0.00	-0.0								
PA21\04	76.66	76.66	0.00	0.0								
PA21\03	71.93	71.93	0.00	0.0								
PA21\02	101.82	101.82	0.00	0.0								
PA21\01	38.59	38.59	0.00	0.0								
PA22\05	110.19	110.19	0.00	0.0								
PA22\04	130.15	130.15	0.00	0.0								
PA22\03	130.15	130.15	0.00	0.0								
PA22\02	157.94	157.94	0.00	0.0								
PA22\01	157.94	157.94	0.00	0.0								
9\25	988.54	988.54	0.00	-0.0								
PA23\01	102.03	102.03	0.00	0.0								
PA23\02	102.03	101.80	0.00	0.2								
79\03	198.81	198.69	0.00	0.1								
79\02	231.23	231.11	0.00	0.1								
PA3\02	1355.59	1355.58	0.00	0.0								
PA3\01	0.00	0.00	0.00	0.0								
PA7\04	52.06	52.06	0.00	0.0								
PA7\03	72.36	72.32	0.00	0.1								
PA7\02	104.09	102.98	1.00	0.1								
PA7\01	107.28	107.21	0.00	0.1								
SP01\03	32.21	32.21	0.00	0.0								
SP01\02	60.11	60.11	0.00	0.0								
SP01\01	60.11	60.11	0.00	0.0								
SP02\04	80.19	80.19	0.00	0.0								
SP02\03	125.52	125.52	0.00	0.0								
SP02\02	177.91	177.91	0.00	0.0								
SP02\01	487.19	487.11	0.00	0.0								
SP03\01	62.32	62.32	0.00	0.0								

SP04\02	163.13	163.13	0.00	-0.0								
SP04\01	257.42	257.35	0.00	0.0								
SP05\02	206.92	206.92	0.00	-0.0								
SP05\01	226.34	226.32	0.00	0.0								
SP07\03	33.97	33.97	0.00	0.0								
SP07\02	67.28	67.23	0.00	0.1								
SP07\01	547.47	547.31	0.00	0.0								
SP08\01	476.94	476.91	0.00	0.0								
SP09\01	560.33	560.32	0.00	0.0								
SP10\01	546.65	546.65	0.00	-0.0								
SP11\01	480.25	480.24	0.00	0.0								
SP12\07	11.91	11.64	0.00	2.3								
SP12\06	27.52	27.78	0.00	-0.9								
SP12\05	18.71	18.70	0.00	0.0								
SP12\04	22.67	22.66	0.00	0.1								
SP12\03	49.90	48.88	1.00	0.0								
SP12\02	344.30	343.27	1.00	0.0								
SP12\01	343.27	343.26	0.00	0.0								
TG01\04	0.00	0.00	0.00	0.0								
TG01\03	470.79	470.78	0.00	0.0								
TG01\02	470.78	470.78	0.00	0.0								
TG01\01	1215.78	1215.74	0.00	0.0								
TG02\04	0.00	0.00	0.00	0.0								
TG02\03	0.00	0.00	0.00	0.0								
TG02\02	114.05	114.05	0.00	-0.0								
TG02\01	114.05	114.05	0.00	0.0								
O BV02\02	2890.57	2890.57	0.00	0.0								
O BV03\02	11.79	11.79	0.00	0.0								
O PA19\01	34.44	34.44	0.00	0.0								
O PA21\02	63.23	63.23	0.00	0.0								
D\02	60.10	60.10	0.00	0.0								
D\01	121.72	121.71	0.00	0.0								
E\04	72.58	72.58	0.00	0.0								
E\03	164.35	164.34	0.00	0.0								
E\02	166.00	165.97	0.00	0.0								
E\01	204.35	204.28	0.00	0.0								
32-01	577.86	166.77	0.00	71.1								
F\02	64.53	64.52	0.00	0.0								
F\01	113.50	113.50	0.00	0.0								
33-01	113.49	113.43	0.00	0.1								
G\02	420.08	420.07	0.00	0.0								
G\01	448.97	448.95	0.00	0.0								
H\01	51.10	51.09	0.00	0.0								
21-04 A	14.35	14.35	0.00	0.0								
I\02	21.81	4.36	0.00	80.0								
I\01	8.66	8.50	0.00	1.9								
127-01	5.22	5.21	0.00	0.1								
K\01	1056.23	1056.23	0.00	-0.0								
24-02 A	1070.02	334.03	0.00	68.8								
L\01	5.07	5.07	0.00	0.0								
LR1\01	71.92	71.92	0.00	0.0								
Q\01	150.72	150.72	0.00	0.0								
124-01	176.31	176.31	0.00	-0.0								
LR2\01	25.59	25.59	0.00	0.0								
LR4\01	22.61	22.61	0.00	0.0								
J\02	178.25	178.24	0.00	0.0								
J\01	262.07	262.07	0.00	0.0								
LR5\01	46.88	46.88	0.00	0.0								
J\03	84.71	84.71	0.00	0.0								
LR6\01	61.55	61.55	0.00	0.0								
T\01	88.90	88.90	0.00	-0.0								
LR7\01	32.21	32.21	0.00	0.0								
B\02	126.24	126.22	0.00	0.0								
B\01	94.28	94.16	0.00	0.1								
4-01	221.64	214.95	6.56	0.1								
LR8\01	10.81	10.81	0.00	0.0								
B\03	44.56	44.56	0.00	0.0								
M\02	8.27	8.27	0.00	0.1								
M\01	40.58	40.58	0.00	0.0								
O\01	31.44	31.43	0.00	0.0								
P\04	18.20	18.20	0.00	0.0								
P\03	34.30	34.30	0.00	0.0								
P\02	52.27	52.27	0.00	0.0								
P\01	31.90	31.90	0.00	0.0								
24A-01 A	26.71	26.69	0.00	0.1								
R\02	34.96	34.96	0.00	0.0								
R\01	63.42	63.42	0.00	0.0								
S\03	50.08	50.08	0.00	0.0								
S\02	282.70	282.70	0.00	0.0								
S\01	462.66	462.65	0.00	0.0								
O 30\02	0.00	0.00	0.00	0.0								
O 30\01	0.00	0.00	0.00	0.0								
O 31\02	0.00	0.00	0.00	0.0								
O 31\01	0.00	0.00	0.00	0.0								
O A\02	0.00	0.00	0.00	0.0								
O S\01	382.11	382.11	0.00	0.0								
Run Log for AA004399 run at 16:57:46 on 7/3/2013Water was lost from the system at 24-02 A, I\02, 46\10 weir, 32-01, 21-01, 3-03, 3-05, 3-07, 3-08.												



PROJECT SICEEP DARLING HARBOUR

TITLE 100 YEAR ARI WITH CLIMATE CHANGE RESULTS

JOB No
PREPARED
CHECKED

CM

AA004399
DATE
DATE

4/03/2013

DRAINS File Path:	F:\AA004399\ID-Calcs\A-Civil\A-Stormwater\A-DRAINS
DRAINS Version:	DRAINS Version 2012.12 - 10 October 2012
Modeller's Name:	Chris McClelland
Description:	Proposed Development

DRAINS results prepared 09 March, 2013 from Version 2012.14								RESULTS		
PIT / NODE DETAILS								100 YR ARI CC		
Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Version 8 Freeboard (m)	Overflow (cu.m/s)	Constraint			
1\24	3.93		10.823		0.34	0.000	None			
1\23	3.91		0.000		0.51	0.000	None			
1\22	3.89		0.000		0.54	0.000	None			
1\21	3.72		0.000		0.37	0.000	None			
1\20	3.69		0.000		0.30	0.000	None			
1\19	3.60		1.944		0.10	1.944	Inlet Capacity			
1\18	3.33		1.944		0.12	1.944	Inlet Capacity			
1\17	3.30		1.944		0.08	1.944	Inlet Capacity			
1\16	3.16		2.196		0.00	3.385	Outlet System			
1\15	3.05		3.385		0.19	3.385	Inlet Capacity			
1\14	3.00		3.385		0.22	3.385	Inlet Capacity			
1\13	2.97		15.640		0.25	15.640	Inlet Capacity			
1\12	2.70		0.000		0.40	0.000	None			
1\11	2.67		0.000		0.65	0.000	None			
1\10	2.54		0.000		1.44	0.000	None			
1\09	2.48		0.000		1.16	0.000	None			
1\08	2.44		0.000		0.31	0.000	None			
1\07	2.40		0.000		1.65	0.000	None			
1\06	2.18		0.000		3.05	0.000	None			
1\05	2.13		0.000		0.54	0.000	None			
1\04	2.01		0.000		1.58	0.000	None			
1\03	2.00		0.000		1.21	0.000	None			
1\02	1.84		0.000		0.67	0.000	None			
1\01	1.80		0.000							
5\03	2.23		0.000		1.04	0.000	None			
5\02	2.23		0.128		0.00	0.048	Outlet System			
5\01	2.11		0.926		0.00	1.716	Outlet System			
46\17	2.48		24.340		7.52	24.340	Inlet Capacity			
46\16	2.46		24.340		7.54	24.340	Inlet Capacity			
46\15	2.45		27.424		0.25	27.424	Inlet Capacity			
46\14	2.42		27.424		0.18	27.424	Inlet Capacity			
46\13	2.40		27.725		0.13	27.725	Inlet Capacity			
46\12	2.36		27.738		3.33	27.738	Inlet Capacity			
46\11	2.36		27.738		3.10	27.738	Inlet Capacity			
46\10	2.34		0.180		0.32	0.180	Inlet Capacity			
46\09	2.14		27.738		1.62	27.738	Inlet Capacity			
46\08	2.14		27.738		1.44	27.738	Inlet Capacity			
46\07	2.12		27.738		0.57	27.738	Inlet Capacity			
46\06	2.11		28.588		1.02	28.588	Inlet Capacity			
46\05	2.10		28.967		1.75	28.967	Inlet Capacity			
46\04A	2.03		0.000		1.82	0.000	None			
46\04	1.93		28.967		0.87	28.967	Inlet Capacity			
46\03	1.90		28.967		1.00	28.967	Inlet Capacity			
46\02	1.84		28.967		0.96	28.967	Inlet Capacity			
46\01	1.80		0.000							
7\03	2.70		0.000		2.16	0.000	None			
7\02	2.70		0.045		2.41	0.016	Inlet Capacity			
7\01	2.59		0.016		2.47	0.016	Inlet Capacity			
8\04	2.59		0.016		2.28	0.016	Inlet Capacity			
8\03	2.56		0.016		2.50	0.016	Inlet Capacity			
8\02	2.45		0.016		1.28	0.016	Inlet Capacity			
8\01	2.25		0.016		1.52	0.016	Inlet Capacity			
9\16	2.19		15.177		1.94	15.177	Inlet Capacity			
9\15	2.15		15.177		3.63	15.177	Inlet Capacity			
9\14	2.08		15.177		7.92	15.177	Inlet Capacity			
9\13	2.07		15.177		3.64	15.177	Inlet Capacity			
9\12	2.06		15.214		3.44	15.214	Inlet Capacity			
9\11	2.03		15.256		1.83	15.256	Inlet Capacity			
9\10	2.02		15.256		0.71	15.256	Inlet Capacity			
9\09	2.02		15.256		0.43	15.256	Inlet Capacity			
9\08	2.02		15.256		0.44	15.256	Inlet Capacity			
9\07	2.02		15.279		0.44	15.279	Inlet Capacity			
9\06	2.02		15.279		1.34	15.279	Inlet Capacity			
9\05	1.86		15.279		1.18	15.279	Inlet Capacity			
9\04	1.85		15.482		1.51	15.482	Inlet Capacity			
9\03	1.84		15.482		1.46	15.482	Inlet Capacity			
9\02	1.82		15.482		0.65	15.482	Inlet Capacity			
9\01	1.80		0.000							
8\06	2.64		3.379		2.32	0.000	None			
8\05	2.62		0.000		2.20	0.000	None			
11\43	4.04		57.536		0.23	23.790	Inlet Capacity			
11\42	3.97	3.97	0.000	5.0	-0.10	11.454	Outlet System			
11\41	3.91	3.76	0.000	0.0	-0.14	0.000	Outlet System			
11\40	3.83	3.97	0.000	3.7	-0.12	0.000	Outlet System			
11\39	3.76	3.81	0.000	1.8	-0.21	0.000	Outlet System			
11\38	3.45	3.54	0.000	0.0	0.09	0.000	None			
11\37	3.41	3.58	0.000	0.0	0.17	0.000	None			
11\36	3.37	3.61	0.000	0.0	0.25	0.000	None			
11\35	3.27	3.64	0.000	0.0	0.37	0.000	None			
11\34	3.17	3.67	0.000	0.0	0.50	0.000	None			
11\33	3.15	3.74	0.000	0.0	0.60	0.000	None			
11\32	3.10	3.77	0.000	0.0	0.67	0.000	None			
11\31	3.00		0.002		0.61	0.002	Inlet Capacity			
11\30	2.95		0.002		0.57	0.002	Inlet Capacity			

11129	2.91		0.003		0.38	0.003	Inlet Capacity				
11128	2.89		0.004		0.31	0.004	Inlet Capacity				
11127	2.85		0.020		0.33	0.020	Inlet Capacity				
11126	2.77		0.020		0.07	0.020	Inlet Capacity				
11125	2.75		0.020		0.00	0.020	Inlet Capacity				
11124	2.70		1.404		0.02	1.404	Inlet Capacity				
11123	2.66		1.664		0.00	5.885	Outlet System				
11122	2.62		6.373		0.00	6.373	Inlet Capacity				
11121	2.57		6.373		0.22	6.373	Inlet Capacity				
11120	2.50		6.373		0.34	6.373	Inlet Capacity				
11119	2.48		6.436		0.42	6.436	Inlet Capacity				
11118	2.45		6.436		0.49	6.436	Inlet Capacity				
11117	2.42		6.436		0.88	6.436	Inlet Capacity				
11116	2.40		6.796		1.31	6.796	Inlet Capacity				
11115	2.27		6.796		7.73	6.796	Inlet Capacity				
11114	2.23		7.130		7.77	7.130	Inlet Capacity				
11113	2.22		7.130		7.78	7.130	Inlet Capacity				
11112	2.22		7.166		7.78	6.840	Inlet Capacity				
11111	2.19		7.233		0.10	7.233	Inlet Capacity				
11110	2.07		7.233		0.25	7.233	Inlet Capacity				
11109	2.06		7.233		2.88	7.233	Inlet Capacity				
11108	1.97		7.233		1.63	7.233	Inlet Capacity				
11107	1.97		7.233		0.76	7.233	Inlet Capacity				
11106	1.95		7.233		0.67	7.233	Inlet Capacity				
11105	1.90		7.233		1.28	7.233	Inlet Capacity				
11104	1.89		7.233		1.18	7.233	Inlet Capacity				
11103A	1.84		0.000		0.87		None				
11103	1.82		7.487		0.89	7.487	Inlet Capacity				
11102	1.82		7.487		0.71	7.487	Inlet Capacity				
11101	1.80		0.000								
12101	3.15		0.154		0.00	0.104	Outlet System				
19126	3.13		0.630		0.00	0.721	Outlet System				
19125	3.05		0.721		0.09	0.721	Inlet Capacity				
19124	3.02		0.920		0.12	0.920	Inlet Capacity				
19123	2.85		0.920		0.13	0.920	Inlet Capacity				
19122	2.77		1.426		0.06	1.426	Inlet Capacity				
19121	2.52		1.461		0.18	1.461	Inlet Capacity				
19120	2.38		1.461		0.30	1.461	Inlet Capacity				
19119	2.36		1.461		0.17	1.461	Inlet Capacity				
19118	2.36		1.626		0.09	1.626	Inlet Capacity				
19117	2.34		1.877		0.00	2.606	Outlet System				
19116	2.34		2.674		0.00	2.674	Outlet System				
19115	2.35		2.675		0.00	2.675	Outlet System				
19114	2.35		2.833		0.01	2.833	Inlet Capacity				
19113	2.35		3.733		0.25	3.733	Inlet Capacity				
19112	2.35		3.733		0.27	3.733	Inlet Capacity				
19111	2.34		3.733		0.22	3.733	Inlet Capacity				
19110	2.34	2.49	3.733	5.0	0.05	3.733	Inlet Capacity				
19109	2.34		3.733		0.17	3.733	Inlet Capacity				
19108	2.33		0.000		0.11		None				
19107	2.33		0.000		0.44		None				
19106	2.32		3.622		0.08	3.622	Inlet Capacity				
19105	2.32		0.000		0.09		None				
19104	2.31		0.000		0.00		Outlet System				
19103	2.36		0.000		0.17		None				
19102	2.39		3.366		0.12	3.366	Inlet Capacity				
19101	2.41		3.366		0.02	3.366	Inlet Capacity				
13102	2.69		0.031		0.35	0.009	Inlet Capacity				
13101	2.68		0.038		0.21	0.000	None				
10101	2.67		0.102		0.45	0.102	Inlet Capacity				
9118	2.45		15.501		1.08	15.175	Inlet Capacity				
9117	2.45		15.175		1.41	15.175	Inlet Capacity				
15104	2.97		0.000		1.95	0.000	None				
15103	2.97		0.000		0.39	0.000	None				
15102	2.97		0.000		0.67	0.000	None				
15101	2.81		0.000		0.72	0.000	None				
9119	2.81		15.447		0.44	15.447	Inlet Capacity				
16103	4.40		2.010		0.00	0.473	Outlet System				
16102	3.54	3.73	0.000	0.0	0.19	0.000	None				
16101	3.36	3.62	0.000	0.0	0.26	0.000	None				
17102	2.98		0.355		0.00	0.237	Outlet System				
17101	2.68		0.959		0.00	1.046	Outlet System				
18102	2.30		0.000		0.00	0.000	Outlet System				
18101	2.28		0.087		0.00	0.100	Outlet System				
70101	2.28		0.130		0.00	0.268	Outlet System				
19128	5.25		0.801		0.00	0.384	Outlet System				
19127	4.80		0.384		0.00	0.527	Outlet System				
35104	4.81		0.029		0.22	0.010	Inlet Capacity				
35103	3.53		0.056		1.72	0.056	Inlet Capacity				
35102	3.53		0.056		1.32	0.056	Inlet Capacity				
35101	3.53		0.056		0.84	0.056	Inlet Capacity				
38114	3.53		0.254		0.75	0.254	Inlet Capacity				
38113	3.45		0.254		0.64	0.254	Inlet Capacity				
38112	3.42		0.254		0.55	0.254	Inlet Capacity				
38111	3.30		0.254		6.70	0.254	Inlet Capacity				
38110	3.08		0.807		0.78	0.575	Inlet Capacity				
38109	2.99		0.575		1.10	0.575	Inlet Capacity				
38108	2.87		0.575		1.32	0.575	Inlet Capacity				
38107	2.83		0.575		1.47	0.575	Inlet Capacity				
38106	2.80		0.575		2.09	0.575	Inlet Capacity				
38105	2.72		0.643		2.10	0.643	Inlet Capacity				
38104	2.66		0.643		1.69	0.643	Inlet Capacity				
38103	2.57		0.798		1.56	0.798	Inlet Capacity				
38102	2.50		0.798		1.25	0.798	Inlet Capacity				
38101	2.21		0.798		1.66	0.798	Inlet Capacity				
36103	2.15		0.192		1.72	0.109	Inlet Capacity				
36102	2.12		0.109		2.56	0.109	Inlet Capacity				
36101	2.12		0.577		2.55	0.577	Inlet Capacity				
38117	4.96		7.182		1.56	0.000	None				
38116	4.17		0.000		1.29	0.000	None				

38I15	3.60		0.198		0.84	0.198	Inlet Capacity				
39I05	4.54		0.037		1.02	0.012	Inlet Capacity				
39I04	4.31		0.012		1.23	0.002	Inlet Capacity				
39I03	2.37		0.002		1.41	0.002	Inlet Capacity				
39I02	2.35	2.39	0.002	0.7	0.02	0.000	Inlet Capacity				
39I01	2.34	2.39	0.000	0.0	0.05	0.000	None				
40I03	2.38	2.46	0.053	5.0	-0.01	0.010	Outlet System				
40I02	2.35	2.38	0.005	1.5	-0.06	0.000	Outlet System				
40I01	2.35	2.41	0.017	2.2	-0.11	0.000	Outlet System				
41I02	2.35	2.49	0.051	3.9	0.06	0.000	Inlet Capacity				
41I01	2.34	2.41	0.094	5.0	-0.03	0.029	Outlet System				
42I02	2.36	2.47	0.123	4.6	-0.08	0.000	Outlet System				
42I01	2.35	2.39	0.005	1.6	-0.11	0.000	Outlet System				
43I03	2.66		0.426		0.00	0.409	Outlet System				
43I02	2.62		0.504		0.00	0.548	Outlet System				
43I01	2.64		0.580		0.00	0.522	Outlet System				
44I02	2.70		1.385		1.12	1.385	Inlet Capacity				
44I01	2.70		1.385		0.11	1.385	Inlet Capacity				
45I05	6.70		2.544		1.88	0.000	None				
45I04	3.36		0.000		2.88	0.000	None				
45I03	3.08		0.000		3.17	0.000	None				
45I02	2.81		0.006		0.66	0.006	Inlet Capacity				
45I01	2.81		0.035		0.86	0.035	Inlet Capacity				
9I23	2.81		15.426		0.54	15.426	Inlet Capacity				
9I22	2.81		15.427		0.69	15.427	Inlet Capacity				
9I21	2.81		15.447		0.81	15.447	Inlet Capacity				
9I20	2.81		15.447		0.70	15.447	Inlet Capacity				
46I27	3.51		36.159		0.00	22.618	Outlet System				
46I26	3.11		22.618		0.61	22.618	Inlet Capacity				
46I25	3.09		22.622		0.54	22.622	Inlet Capacity				
46I24	2.87		22.622		0.38	22.622	Inlet Capacity				
46I23	2.82		22.622		0.39	22.622	Inlet Capacity				
46I22	2.75		22.845		0.07	22.845	Inlet Capacity				
46I21	2.70		22.845		0.07	22.845	Inlet Capacity				
46I20	2.68		22.845		0.00	22.845	Outlet System				
46I19	2.66		22.845		0.08	22.845	Inlet Capacity				
46I18	2.53	3.27	22.876	5.0	0.53	22.876	Inlet Capacity				
47I02	3.51		18.284		0.13	0.000	None				
47I01	3.01		0.461		0.00	12.468	Outlet System				
48I09	9.69		0.735		0.00	0.571	Outlet System				
48I08	8.78		0.571		0.03	0.571	Inlet Capacity				
48I07	4.33		0.571		1.01	0.571	Inlet Capacity				
48I06	4.30		0.571		0.87	0.571	Inlet Capacity				
48I05	4.26		0.571		0.88	0.571	Inlet Capacity				
48I04	4.19		0.571		0.42	0.571	Inlet Capacity				
48I03	4.03	4.03	0.571	5.0	-0.20	0.621	Outlet System				
48I02	3.98	3.99	0.000	5.0	-0.30	0.007	Outlet System				
48I01	3.95	3.82	0.000	2.1	-0.30	0.000	Outlet System				
49I01	4.29		0.004		1.35	0.000	None				
50I04	4.17		0.035		0.95	0.014	Inlet Capacity				
50I03	4.03		0.056		1.18	0.019	Inlet Capacity				
50I02	3.78		0.019		0.63	0.019	Inlet Capacity				
50I01	3.71		0.019		0.65	0.019	Inlet Capacity				
51I01	2.91		1.094		0.00	0.731	Outlet System				
52I05	2.74		0.044		0.53	0.016	Inlet Capacity				
52I04	2.72		0.063		0.48	0.026	Inlet Capacity				
52I03	2.67		0.040		0.38	0.017	Inlet Capacity				
52I02	2.63		0.033		0.00	0.069	Outlet System				
52I01	2.62		0.069		0.00	0.268	Outlet System				
53I01	3.51	3.64	0.000	0.0	0.13	0.000	None				
170I02	3.51	3.74	0.000	0.0	0.23	0.000	None				
170I01	3.46	3.71	0.000	0.0	0.25	0.000	None				
54I04	3.81	3.81	0.052	3.3	-0.23	0.000	Outlet System				
54I03	3.51	3.55	0.000	0.0	0.04	0.000	None				
54I02	3.49	3.56	0.000	0.0	0.07	0.000	None				
54I01	3.48	3.66	0.000	0.0	0.18	0.000	None				
55I03	4.03	4.03	0.473	5.0	-0.40	0.398	Outlet System				
55I02	3.82	3.89	0.000	0.0	0.07	0.000	None				
55I01	3.70	3.87	0.000	0.0	0.17	0.000	None				
59I02	3.86	3.94	0.000	3.4	-0.24	0.000	Outlet System				
59I01	3.85	3.80	0.009	1.6	-0.24	0.000	Outlet System				
60I01	2.91		0.285		0.00	0.345	Outlet System				
61I01	2.94		0.377		0.00	0.461	Outlet System				
61I02	3.01		0.072		0.06	0.031	Inlet Capacity				
62I03	2.98		0.081		1.43	0.036	Inlet Capacity				
62I02	2.98		0.036		0.68	0.012	Inlet Capacity				
62I01	2.81		0.012		0.81	0.012	Inlet Capacity				
63I03	2.81		0.015		0.66	0.002	Inlet Capacity				
63I02	2.81		0.024		0.49	0.006	Inlet Capacity				
63I01	2.81		0.006		0.61	0.006	Inlet Capacity				
64I03	2.24		0.000		1.01	0.000	None				
64I02	2.81		0.010		0.55	0.001	Inlet Capacity				
64I01	2.81		0.010		0.54	0.001	Inlet Capacity				
9I24	2.81		15.660		0.55	15.399	Inlet Capacity				
65I02	3.01		0.173		0.00	0.270	Outlet System				
65I01	3.11		0.270		0.10	0.270	Inlet Capacity				
67I02	4.30		0.000		0.87	0.000	None				
67I01	4.30		0.000		0.89	0.000	None				
68I02	2.35		0.006		0.03	0.000	Inlet Capacity				
68I01	2.35		0.016		0.03	0.003	Inlet Capacity				
69I02	2.23		0.024		0.00	0.014	Outlet System				
69I01	2.23		0.037		0.00	0.170	Outlet System				
70I03	2.33		0.078		0.00	0.062	Outlet System				
70I02	2.30		0.070		0.00	0.030	Outlet System				
71I03	2.92		0.000		0.40	0.000	None				
71I02	2.92		0.405		0.14	0.405	Inlet Capacity				
71I01	2.92		0.766		0.00	0.526	Outlet System				
73I04	3.92	3.92	0.000	4.6	-0.29	0.000	Outlet System				
73I03	3.95	3.92	0.000	3.5	-0.19	0.000	Outlet System				
73I02	3.96	3.91	0.000	2.8	-0.18	0.000	Outlet System				

7301	3.96	3.94	0.000	2.3	-0.09	0.000	Outlet System					
7402	3.95	3.96	0.088	5.0	-0.69	0.017	Outlet System					
7401	3.84	3.61	0.003	1.6	-0.51	0.000	Outlet System					
7502	3.24		0.003		0.35	0.000	None					
7501	3.24		0.066		0.42	0.028	Inlet Capacity					
7602	3.00		0.000		0.39	0.000	None					
7601	3.00		0.010		0.56	0.002	Inlet Capacity					
7701	3.04		0.004		0.63	0.000	None					
7808	3.43		0.120		0.00	0.112	Outlet System					
7807	3.38		0.112		0.00	0.106	Outlet System					
7806	3.27		0.173		0.00	0.176	Outlet System					
7805	3.22		0.183		0.00	0.189	Outlet System					
7804	3.21		0.208		0.00	0.207	Outlet System					
7803	3.19		0.207		0.00	0.207	Outlet System					
7802	3.18		0.214		0.00	0.210	Outlet System					
7801	3.15		0.225		0.00	0.199	Outlet System					
8001	2.26		0.156		0.04	0.084	Inlet Capacity					
7901	2.16	2.51	0.330	5.0	0.05	0.330	Inlet Capacity					
8901	5.64		0.036		0.94	0.023	Inlet Capacity					
18207	4.67		0.028		1.09	0.017	Inlet Capacity					
18206	3.42		0.021		1.83	0.011	Inlet Capacity					
18205	3.13		0.018		1.73	0.009	Inlet Capacity					
N1804	2.86		0.009									
9002	3.93		0.000		0.75	0.000	None					
9001	3.45		0.000									
11103	2.16		0.072		0.73	0.052	Inlet Capacity					
11102	2.09		0.144		0.75	0.144	Inlet Capacity					
11101	1.99		0.265		0.80	0.265	Inlet Capacity					
11201	2.84		0.169		0.00	0.094	Outlet System					
11302	1.99		0.000		0.71	0.000	None					
11301	1.99		0.000		0.76	0.000	None					
12901	2.23		0.000		0.01	0.000	None					
15102	2.59		0.000		0.17	0.000	None					
15101	2.59		0.145		0.29	0.077	Inlet Capacity					
15201	2.45		0.000		0.38	0.000	None					
17901	2.45		0.000		0.33	0.000	None					
15303	2.57		0.000		0.23	0.000	None					
15302	2.57		0.000		0.20	0.000	None					
15301	2.57	2.63	0.000	0.0	0.06	0.000	None					
15401	2.75		0.000		0.13	0.000	None					
15502	2.52		0.000		0.60	0.000	None					
15501	2.52		0.000		0.30	0.000	None					
15602	2.46		0.072		0.00	0.097	Outlet System					
15601	2.56		0.196		0.00	0.216	Outlet System					
15701	2.79		0.197		0.00	0.099	Outlet System					
15801	2.30		0.004		0.00	0.094	Outlet System					
15901	2.56		0.222		0.21	0.000	None					
16002	4.88		0.420		5.12	0.000	None					
16001	2.50		3.661		0.00	3.704	Outlet System					
16101	2.34		3.704		0.16	3.622	Inlet Capacity					
16201	2.34		3.622		0.13	3.540	Inlet Capacity					
16301	2.33		3.540		0.02	3.458	Inlet Capacity					
16401	2.55		3.473		0.00	3.366	Outlet System					
16501	2.35		0.000		0.37	0.000	None					
16601	2.35		3.735		0.12	3.653	Inlet Capacity					
16701	8.78		0.000		0.49	0.000	None					
16801	4.04	4.04	0.093	5.0	-0.40	0.038	Outlet System					
16901	3.92	3.92	0.018	5.0	-0.10	0.024	Outlet System					
17003	3.56		0.370		0.65	0.000	None					
17101	3.15	3.83	0.001	0.1	0.67	0.000	Inlet Capacity					
17201	3.82	3.82	0.028	2.1	-0.30	0.000	Outlet System					
17301	3.70	3.76	0.002	0.2	0.04	0.000	Inlet Capacity					
17401	3.00		0.025		0.27	0.001	Inlet Capacity					
17501	2.90		0.008		0.30	0.001	Inlet Capacity					
17601	2.87		0.039		0.35	0.016	Inlet Capacity					
17701	2.87		0.000		0.37	0.000	None					
17801	2.75		0.000		0.03	0.000	None					
17902	2.45		0.000		0.82	0.000	None					
18002	2.43		0.000		0.04	0.000	None					
18001	2.43		0.000		0.00	0.034	Outlet System					
18101	2.40		0.000		0.11	0.000	None					
18209	5.49		0.008		1.32	0.000	None					
18208	4.84		0.006		1.07	0.000	None					
18602	2.12		0.000		2.47	0.000	None					
18601	2.12		0.000		2.59	0.000	None					
18702	2.18		0.526		1.19	0.468	Inlet Capacity					
18701	2.15		0.468		1.25	0.468	Inlet Capacity					
18901	2.74		0.000		1.78	0.000	None					
19001	2.23		0.000		2.16	0.000	None					
19101	2.81		0.000		1.73	0.000	None					
19201	3.14		0.000		0.89	0.000	None					
19702	3.14		0.039		0.15	0.039	Inlet Capacity					
19701	2.95		0.039		0.27	0.039	Inlet Capacity					
19301	4.00		0.000		1.37	0.000	None					
19704	3.39		0.000		0.91	0.000	None					
19703	3.39		0.083		0.32	0.035	Inlet Capacity					
19802	4.83		3.522		0.00	1.284	Outlet System					
19801	3.79		0.000		0.00	0.692	Outlet System					
19901	2.00		0.159		0.68	0.128	Inlet Capacity					
22-02	2.57		5.404		1.43	0.000	None					
22-02 A	2.29		0.000		1.71		None					
22-01	2.25		0.000		0.30		None					
3-05	2.22		0.128		0.42		None					
3-04	2.08		0.000		0.59		None					
3-03	2.05		0.123		0.67		None					
3-02	1.99		0.000		0.91		None					
3-01	1.94		0.000		1.25		None					
A-02	1.90		0.039		1.45	0.039	Inlet Capacity					
A-01	1.80		0.039									
23-02	2.82		4.332		0.85	0.000	None					

3-06	2.66		0.000		0.36		None					
3-06A	2.51		0.000		1.99		None					
27-02	3.10	3.62	0.160	3.3	0.34	0.000	Inlet Capacity					
27-01	2.67		0.032		0.23	0.010	Inlet Capacity					
21-01	2.64		0.009		0.37		None					
3-09	2.65		0.000		0.06		None					
3-08	2.65		0.227		0.08		None					
3-07	2.66		0.244		0.28		None					
30-02	2.99	3.31	0.253	4.0	0.12	0.060	Inlet Capacity					
30-02 A	2.68	3.11	0.000	0.0	0.43	0.000	None					
30-01	2.59		0.016		0.19	0.003	Inlet Capacity					
21-03	2.58		0.000		0.29		None					
21-02	2.61		0.000		0.48		None					
31-02	2.84	3.63	1.991	5.0	0.59	1.798	Inlet Capacity					
31-02 A	2.53	3.43	0.000	0.0	0.90		None					
31-01	2.51	2.65	0.027	1.2	0.06	0.000	Inlet Capacity					
29-01	2.50		0.680		0.00	1.728	Outlet System					
119-02	2.73		0.000		0.11		None					
119-01	2.73		0.000		0.25		None					
120-01	2.73		0.485		0.36	0.237	Inlet Capacity					
121-01	2.45		0.000		0.53		None					
120A-01	2.49		0.000		0.57	0.000	None					
119A-01	2.49		0.237		0.31	0.142	Inlet Capacity					
121-06	3.09		0.081		0.00	0.125	Outlet System					
121-05	3.15	3.20	0.157	2.9	-0.11	0.000	Outlet System					
121-04	2.98		0.000		0.08		None					
121-03	2.82		0.000		0.32		None					
121-02	2.77		0.000		0.33		None					
122-02	1.99		0.000		0.94	0.000	None					
122-01	1.99		0.000		0.91		None					
122A-01	2.82		0.000		0.35	0.000	None					
123-02	2.05	2.68	0.000	0.0	0.63	0.000	None					
123-01	2.05		0.000		0.62		None					
124A-02	2.98	2.98	1.826	5.0	-0.40	1.736	Outlet System					
124A-01	2.12		0.000		0.49		None					
125-02	2.52		0.336		0.93	0.000	None					
125-01	2.48		0.000		0.71		None					
132-02	1.94		0.209		1.16	0.000	None					
132-01	1.94		0.000		1.11		None					
3-11	2.65	2.65	0.000	1.4	-0.08	0.000	Outlet System					
3-10	2.65		0.000		0.11	0.000	None					
29-02	2.52	2.61	0.000	0.0	0.08	0.000	None					
29-02 A	2.52	2.70	0.036	1.2	0.08	0.000	Inlet Capacity					
111A01	1.99		0.000		0.73		None					
Dummy 1	2.18		0.722		7.82	0.000	None					
Dummy 3	2.14		0.642		7.86	0.000	None					
Dummy 2	2.30		0.824		7.70	0.000	None					
200V04	1.80		0.000		0.87	0.000	None					
200V03	1.80		0.000		0.88	0.000	None					
200V02	1.80		0.000		0.74	0.000	None					
200V01	1.80		0.000									
201V01	1.80		0.000		0.55	0.000	None					
202V02	1.80		0.000		0.86	0.000	None					
202V01	1.80		0.000		0.77	0.000	None					
204V02	1.80		0.000		1.07	0.000	None					
204V01	1.80		0.000		0.74	0.000	None					
205V04	3.97		0.000		1.83	0.000	None					
205V03	1.80		0.000		0.76	0.000	None					
205V02	1.80		0.000		0.47	0.000	None					
205V01	1.80		0.000									
206V03	1.95		4.169		0.00	4.180	Outlet System					
206V02	2.04		4.180		0.22	3.576	Inlet Capacity					
206V01	1.97		3.755		1.23	3.151	Inlet Capacity					
208V02	1.90		4.101		0.90	4.101	Inlet Capacity					
208V01	1.80		0.000									
207V02	2.34		0.014		0.83	0.000	None					
207V01	1.91		0.019		0.61	0.000	None					
208V04	2.11		3.925		0.32	0.000	None					
208V03	1.96		1.582		0.83	0.982	Inlet Capacity					
209V17	4.67		0.011		0.42	0.000	None					
209V16	4.65		0.016		0.04	0.000	None					
209V15	4.62		0.027		0.00	0.038	Outlet System					
209V14	4.51		0.063		0.00	0.093	Outlet System					
209V13	4.32		0.123		0.00	0.077	Outlet System					
209V12	4.13		0.105		0.00	0.147	Outlet System					
209V11	3.99		0.328		0.00	0.433	Outlet System					
209V10	3.74		0.599		0.18	0.292	Inlet Capacity					
209V09	3.51		0.294		0.43	0.110	Inlet Capacity					
209V08	3.36		0.142		0.57	0.036	Inlet Capacity					
209V07	3.28		0.060		0.30	0.008	Inlet Capacity					
209V06	2.95		0.080		0.00	0.139	Outlet System					
209V05	1.97		0.140		0.67	0.036	Inlet Capacity					
209V04	1.52		0.740		0.00	3.284	Outlet System					
209V03	1.85		3.388		0.12	2.784	Inlet Capacity					
209V02	1.96		2.787		0.38	2.183	Inlet Capacity					
209V01	1.97		2.186		0.49	1.582	Inlet Capacity					
210V05	2.34		0.050		0.56	0.005	Inlet Capacity					
210V04	2.30		0.075		0.27	0.027	Inlet Capacity					
210V03	2.17		0.010		0.54	0.000	None					
210V02	2.06		0.000		0.74	0.000	None					
210V01	1.95		0.000		0.11	0.000	None					
211V03	1.34		0.095		0.00	0.044	Outlet System					
211V02	1.28		0.184		0.00	0.356	Outlet System					
211V01	1.41		0.356		0.00	0.448	Outlet System					
212V01	2.49		0.033		0.85	0.002	Inlet Capacity					
213V07	3.80		0.017		0.36	0.000	None					
213V06	3.79		0.044		0.55	0.004	Inlet Capacity					
213V05	3.75		0.026		0.05	0.000	Inlet Capacity					
213V04	3.69		0.053		0.00	0.171	Outlet System					
213V03	3.69		0.224		0.00	0.303	Outlet System					

21302	3.85		0.465		0.00	0.388	Outlet System				
21301	3.86		0.398		0.36	0.168	Inlet Capacity				
21402	5.52		0.041		0.41	0.003	Inlet Capacity				
21401	4.35		0.000		1.13	0.000	None				
21501	4.27		0.202		0.00	0.079	Outlet System				
21601	4.35		0.039		0.15	0.003	Inlet Capacity				
21701	4.41		0.083		0.40	0.014	Inlet Capacity				
21801	4.65		0.061		0.38	0.008	Inlet Capacity				
21901	4.71		0.045		0.40	0.004	Inlet Capacity				
22002	3.31		0.033		0.69	0.002	Inlet Capacity				
22001	3.29		0.002		0.30	0.002	Inlet Capacity				
22101	3.51		0.036		0.65	0.002	Inlet Capacity				
4610 weir	2.14		0.180		0.52		None				
Dummy DQ 1	2.95		0.266		0.89	0.000	None				
Dummy DQ 2	2.95		0.273		0.89	0.000	None				
Pit1483	15.29		7.984		0.00	5.973	Outlet System				
N1622	13.66		0.000								
Pit1563	2.12		0.055		0.95	0.000	None				
BV0102	2.26		2.399		0.14	2.358	Inlet Capacity				
BV0101	2.24		2.358		0.10	2.318	Inlet Capacity				
10202	2.07		0.625		0.35	0.625	Inlet Capacity				
10201	1.99		0.625		1.11	0.625	Inlet Capacity				
BV0202	2.25		2.304		0.00	2.299	Outlet System				
BV0201	2.25		2.328		0.06	2.287	Inlet Capacity				
BV0302	2.07		0.011		0.18	0.009	Inlet Capacity				
BV0301	2.07		0.014		0.24	0.011	Inlet Capacity				
BV0401	2.07		0.000		0.21	0.000	None				
BV0501	2.08		0.354		0.32	0.335	Inlet Capacity				
BV0603	5.64		2.352		0.88	2.312	Inlet Capacity				
BV0602	2.41		2.401		0.01	2.360	Inlet Capacity				
BV0601	2.32		0.333		0.10	0.315	Inlet Capacity				
9601	2.13		0.000		0.32	0.000	None				
BV0702	2.40		0.085		0.05	0.075	Inlet Capacity				
BV0701	2.38		0.234		0.06	0.217	Inlet Capacity				
BV0801	4.26		0.109		4.89	0.000	None				
13001	2.08		0.075		3.57	0.075	Inlet Capacity				
BV0902	2.45		0.046		0.02	0.039	Inlet Capacity				
BV0901	2.45		0.039		0.00	0.033	Inlet Capacity				
BV1002	2.14		0.053		0.35	0.046	Inlet Capacity				
BV1001	2.14		0.061		0.37	0.053	Inlet Capacity				
134-01	2.14		0.000		0.40	0.000	None				
BV1106	2.43		0.000		0.13	0.000	None				
BV1105	2.43		0.096		0.12	0.084	Inlet Capacity				
BV1104	2.42		0.179		0.11	0.164	Inlet Capacity				
BV1103	2.42		0.382		0.10	0.362	Inlet Capacity				
BV1102	2.41		0.450		0.10	0.429	Inlet Capacity				
BV1101	2.35		0.429		0.15	0.408	Inlet Capacity				
8101	2.30		0.000		0.27	0.000	None				
BV1205	2.23		0.056		0.24	0.049	Inlet Capacity				
BV1204	2.23		0.125		0.22	0.112	Inlet Capacity				
BV1203	2.22		0.509		0.21	0.487	Inlet Capacity				
BV1202	2.17		0.864		0.19	0.838	Inlet Capacity				
BV1201	2.14		0.934		0.11	0.907	Inlet Capacity				
PA1702	2.68		0.083		0.69	0.072	Inlet Capacity				
PA1701	2.68		0.072		0.50	0.063	Inlet Capacity				
PA1903	3.64		0.084		0.64	0.000	None				
PA1902	3.48		0.021		0.00	0.019	Outlet System				
PA1901	3.44		0.035		0.00	0.048	Outlet System				
PA2104	2.48		0.060		0.99	0.052	Inlet Capacity				
PA2103	2.24		0.045		1.10	0.039	Inlet Capacity				
PA2102	2.05		0.062		1.26	0.054	Inlet Capacity				
PA2101	1.87		0.000								
PA2205	2.84		0.086		1.16	0.000	None				
PA2204	2.61		0.016		1.02	0.012	Inlet Capacity				
PA2203	2.48		0.012		0.93	0.010	Inlet Capacity				
PA2202	2.81		0.032		0.55	0.026	Inlet Capacity				
PA2201	2.81		0.026		0.38	0.022	Inlet Capacity				
9125	2.81		15.660		0.26	15.660	Inlet Capacity				
PA2301	2.21		0.079		0.00	0.022	Outlet System				
PA2302	2.14		0.022		0.00	0.182	Outlet System				
7903	2.22	2.39	0.254	5.0	-0.03	0.123	Outlet System				
7902	2.19	2.28	0.037	4.0	0.00	0.000	Outlet System				
PA302	3.04		1.022		0.00	0.861	Outlet System				
PA704	2.07		0.041		0.62	0.000	None				
PA703	2.03		0.016		0.18	0.000	None				
PA702	2.01	2.01	0.025	1.0	0.00	0.035	Outlet System				
PA701	2.00	1.99	0.027	1.0	-0.01	0.247	Outlet System				
SP0103	2.76		0.025		0.62	0.021	Inlet Capacity				
SP0102	2.39		0.042		1.19	0.036	Inlet Capacity				
SP0101	2.23		0.036		0.31	0.030	Inlet Capacity				
SP0204	7.01		0.062		2.99	0.000	None				
SP0203	2.79		0.035		0.54	0.030	Inlet Capacity				
SP0202	2.37		0.071		0.35	0.061	Inlet Capacity				
SP0201	2.27		0.295		0.84	0.277	Inlet Capacity				
SP0301	3.03		0.048		0.57	0.042	Inlet Capacity				
SP0402	2.57		0.127		0.36	0.114	Inlet Capacity				
SP0401	2.57		0.142		0.10	0.128	Inlet Capacity				
SP0502	2.53		0.182		0.00	0.219	Outlet System				
SP0501	2.56		0.167		0.04	0.152	Inlet Capacity				
SP0703	2.95		0.026		0.46	0.000	None				
SP0702	2.93		0.026		0.32	0.000	None				
SP0701	2.90		0.186		0.00	0.317	Outlet System				
SP0801	2.20		0.371		0.00	0.377	Outlet System				
SP0901	2.41		0.436		0.03	0.415	Inlet Capacity				
SP1001	2.93		0.425		0.37	0.405	Inlet Capacity				
SP1101	3.28		0.374		0.00	0.186	Outlet System				
SP1207	2.14		0.009		0.29	0.007	Inlet Capacity				
SP1206	2.14		0.020		0.19	0.016	Inlet Capacity				
SP1205	2.14		0.009		0.19	0.000	None				
SP1204	2.14		0.003		0.13	0.000	None				

SP1203	2.14	2.14	0.021	1.0	0.00	0.063	Outlet System					
SP1202	2.14	2.14	0.285	1.0	0.00	0.353	Outlet System					
SP1201	2.16		0.353		0.32	0.334	Inlet Capacity					
TG0104	2.16		0.000		0.33	0.000	None					
TG0103	2.16		0.418		0.32	0.397	Inlet Capacity					
TG0102	2.15		0.397		0.44	0.377	Inlet Capacity					
TG0101	2.13		0.960		1.26	0.934	Inlet Capacity					
TG0204	3.53		0.000		1.13	0.000	None					
TG0203	3.53		0.000		1.12	0.000	None					
TG0202	3.08		0.089		1.08	0.078	Inlet Capacity					
TG0201	2.42		0.078		0.83	0.068	Inlet Capacity					
DI02	2.47		0.062		0.07	0.055	Inlet Capacity					
DI01	2.47		0.209		0.00	0.337	Outlet System					
EI04	2.53		0.056		0.52	0.049	Inlet Capacity					
EI03	2.53		0.121		0.27	0.110	Inlet Capacity					
EI02	2.52		0.112		0.52	0.102	Inlet Capacity					
EI01	2.52		0.131		0.32	0.121	Inlet Capacity					
32-01	2.51		0.320		0.50		None					
FI02	2.52		0.050		0.70	0.044	Inlet Capacity					
FI01	2.52		0.082		0.35	0.073	Inlet Capacity					
33-01	2.52		0.073		0.41	0.032	Inlet Capacity					
GI02	2.46		0.346		0.00	0.396	Outlet System					
GI01	2.53	2.58	0.413	5.0	-0.10	0.328	Outlet System					
HI01	2.58		0.041		0.05	0.036	Inlet Capacity					
21-04 A	2.58		0.000		0.21		None					
II02	2.61		0.017		0.21		None					
II01	2.61		0.003		0.25	0.003	Inlet Capacity					
127-01	2.61		0.000		0.42	0.000	None					
KI01	2.70		0.796		0.11	0.777	Inlet Capacity					
24-02 A	2.69	2.99	0.786	5.0	0.20		Inlet Capacity					
LI01	2.58		0.004		0.05	0.000	None					
LR101	3.05		0.056		0.56	0.000	None					
QI01	2.41		0.048		0.01	0.048	Inlet Capacity					
124-01	2.34	2.58	0.048	1.5	0.13	0.000	Inlet Capacity					
LR201	2.36		0.020		0.71	0.000	None					
LR401	2.41		0.018		0.79	0.000	None					
JI02	2.40		0.080		0.09	0.071	Inlet Capacity					
JI01	2.33		0.137		0.00	0.128	Outlet System					
LR501	2.46		0.036		0.85	0.000	None					
JI03	2.44		0.029		0.27	0.025	Inlet Capacity					
LR601	2.75		0.048		0.75	0.000	None					
TI01	2.67		0.021		0.00	0.030	Outlet System					
LR701	2.53		0.025		0.89	0.000	None					
BI02	2.48		0.182		0.00	0.227	Outlet System					
BI01	2.49		0.026		0.00	0.133	Outlet System					
4-01	2.65	2.86	1.806	170.0	0.02	1.686	Inlet Capacity					
LR801	2.49		0.008		0.84	0.000	None					
BI03	2.49		0.026		0.06	0.022	Inlet Capacity					
MI02	2.58		0.006		0.37	0.005	Inlet Capacity					
MI01	2.58		0.030		0.20	0.026	Inlet Capacity					
OI01	2.60		0.082		0.00	0.130	Outlet System					
PI04	2.43		0.014		0.27	0.011	Inlet Capacity					
PI03	2.43		0.024		0.23	0.020	Inlet Capacity					
PI02	2.40		0.176		0.00	0.241	Outlet System					
PI01	2.43		0.011		0.00	0.153	Outlet System					
24A-01 A	2.65		0.005		0.24	0.004	Inlet Capacity					
RI02	2.41		0.027		0.36	0.023	Inlet Capacity					
RI01	2.41		0.045		0.27	0.039	Inlet Capacity					
SI03	2.52		0.039		0.16	0.034	Inlet Capacity					
SI02	2.52		0.215		0.02	0.202	Inlet Capacity					
SI01	2.52		0.345		0.00	0.330	Inlet Capacity					
SUB-CATCHMENT DETAILS												
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm					
	Flow Q	Max Q	Max Q	Tc	Tc	Tc						
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)						
C 1124	10.823	10.823	0.000	10.70	10.70	0.00	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
C 5102	0.128	0.128	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 46112	0.046	0.046	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 46110	0.180	0.180	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 46105	0.690	0.690	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 7102	0.045	0.045	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 9112	0.121	0.121	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 9111	0.138	0.138	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 8106	3.379	3.059	0.320	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 11143	52.533	52.533	0.000	20.10	20.10	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 11112	0.026	0.024	0.002	5.00	10.00	0.00	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
C 11103	0.123	0.123	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 12101	0.154	0.154	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 19121	0.041	0.041	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 13102	0.031	0.031	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 13101	0.029	0.029	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 16103	2.010	2.010	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 17102	0.355	0.355	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 18101	0.087	0.087	0.000	3.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 19128	0.801	0.801	0.000	4.00	4.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 35104	0.029	0.029	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 35103	0.046	0.046	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 38110	0.553	0.553	0.000	4.00	4.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 38105	0.074	0.074	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
C 38103	0.189	0.189	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 36103	0.192	0.192	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 38117	5.190	5.190	0.000	9.50	9.50	0.00	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
C 38115	0.179	0.179	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 39105	0.037	0.037	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 40103	0.053	0.053	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 40102	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 40101	0.017	0.017	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 41102	0.051	0.051	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
C 41101	0.094	0.094	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					

C 4202	0.123	0.123	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4201	0.005	0.005	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4303	0.426	0.426	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4302	0.095	0.095	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4301	0.032	0.032	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4402	1.385	1.385	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 4505	2.544	2.544	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 4501	0.029	0.029	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 4627	0.194	0.194	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4622	0.111	0.111	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 4702	18.284	18.284	0.000	14.40	14.40	0.00	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
C 4809	0.735	0.735	0.000	4.00	4.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 4901	0.004	0.000	0.004	1.00	1.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 5004	0.035	0.000	0.035	1.00	1.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 5003	0.042	0.000	0.042	1.00	1.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 5101	1.094	1.094	0.000	5.00	5.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 5205	0.044	0.044	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5204	0.047	0.047	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5203	0.014	0.014	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5202	0.015	0.015	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5404	0.052	0.052	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5902	0.000	0.000	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 5901	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6001	0.285	0.285	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6102	0.072	0.072	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6203	0.081	0.081	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6303	0.015	0.015	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6302	0.022	0.022	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6402	0.010	0.010	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6401	0.009	0.009	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6502	0.173	0.173	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6802	0.006	0.006	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6801	0.015	0.015	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6902	0.024	0.024	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 6901	0.023	0.023	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 7003	0.078	0.041	0.037	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 7002	0.008	0.008	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 7101	0.060	0.060	0.000	1.00	1.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1

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C SP0201	0.192	0.192	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0301	0.048	0.048	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0402	0.127	0.127	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0401	0.028	0.028	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0502	0.030	0.030	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0501	0.038	0.038	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0703	0.026	0.026	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0702	0.026	0.026	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0801	0.371	0.371	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP0901	0.436	0.436	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1001	0.425	0.425	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1101	0.374	0.374	0.000	3.00	3.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1207	0.009	0.009	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1206	0.012	0.012	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1205	0.009	0.009	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1204	0.003	0.003	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1203	0.021	0.021	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SP1202	0.214	0.214	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C TG0103	0.014	0.014	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C TG0101	0.583	0.000	0.583	1.00	10.00	0.00	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
C TG0202	0.089	0.089	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C DI02	0.030	0.030	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C DI01	0.028	0.028	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C EI04	0.056	0.056	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C EI03	0.071	0.071	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C EI02	0.001	0.001	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C EI01	0.030	0.030	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 32-01	0.320	0.320	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C FI02	0.050	0.050	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C FI01	0.038	0.038	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C GI02	0.226	0.226	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C GI01	0.022	0.022	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C HI01	0.015	0.015	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C I02	0.014	0.014	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C I01	0.003	0.003	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C KI01	0.796	0.796	0.000	5.00	2.00	0.00	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
C 24-02	0.011	0.011	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LI01	0.004	0.004	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR1101	0.056	0.056	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C QI01	0.048	0.048	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR201	0.020	0.020	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR401	0.018	0.018	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C JI02	0.055	0.055	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C JI01	0.065	0.065	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR501	0.036	0.036	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C JI03	0.029	0.029	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR601	0.048	0.048	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C TI01	0.021	0.021	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR701	0.025	0.025	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C BI02	0.023	0.023	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C BI01	0.004	0.004	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C LR801	0.008	0.008	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C BI03	0.026	0.026	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C MI02	0.006	0.006	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C MI01	0.025	0.025	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C OI01	0.022	0.022	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C PI04	0.014	0.014	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C PI03	0.013	0.013	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C PI02	0.005	0.005	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C PI01	0.011	0.011	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C 24A-01	0.005	0.005	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C RI02	0.027	0.027	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C RI01	0.022	0.022	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SI03	0.039	0.039	0.000	1.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SI02	0.181	0.181	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
C SI01	0.104	0.104	0.000	3.00	2.00	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
Outflow Volumes for Total Catchment (228 impervious + 8.16 pervious = 236 total ha)							
Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious R cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)			
AR&R 100 ye	60705.81	57636.10 (94.78%)	56327.68 (96.00%)	1308.42 (62.2%)			
AR&R 100 ye	95871.96	92638.43 (96.62%)	90276.98 (97.19%)	2361.44 (71.1%)			
AR&R 100 ye	123179.75	119806.26 (97.26%)	116638.86 (97.96%)	3167.40 (74.3%)			
AR&R 100 ye	146951.28	143455.10 (97.62%)	139586.56 (97.00%)	3868.54 (76.0%)			
AR&R 100 ye	166990.09	163367.53 (97.85%)	158931.31 (97.44%)	4436.22 (76.7%)			
AR&R 100 ye	183885.55	180155.24 (97.94%)	175240.63 (97.94%)	4914.62 (77.2%)			
AR&R 100 ye	226322.69	222331.32 (98.24%)	216209.22 (97.91%)	6122.10 (78.1%)			
AR&R 100 ye	256968.28	252768.13 (98.37%)	245791.91 (97.99%)	6976.22 (78.4%)			
AR&R 100 ye	301641.09	297108.25 (98.49%)	288916.66 (97.91%)	8191.59 (78.4%)			
AR&R 100 ye	335235.56	330415.69 (98.57%)	321339.75 (97.95%)	9075.94 (78.2%)			
AR&R 100 ye	384745.22	379385.69 (98.61%)	369092.16 (97.99%)	10293.54 (77.3%)			
PIPE DETAILS							
Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm		
P 1/24	10.823	2.86	3.927	3.908	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/23	10.823	2.86	3.908	3.889	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/22	10.823	2.86	3.889	3.716	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/21	10.823	2.86	3.716	3.688	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/20	10.823	2.86	3.688	3.596	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/19	12.359	3.27	3.432	3.333	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/18	12.359	3.27	3.333	3.302	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/17	12.359	3.27	3.302	3.161	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/16	10.897	2.88	3.120	3.053	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/15	10.897	2.88	3.053	3.002	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/14	10.897	2.88	3.002	2.973	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/13	16.901	2.35	2.720	2.697	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/12	16.901	2.35	2.697	2.673	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 1/11	16.901	2.35	2.644	2.535	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		

P 110	16.901	2.35	2.535	2.479	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 109	16.901	2.35	2.479	2.445	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 108	16.901	2.35	2.445	2.405	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 107	16.901	2.35	2.405	2.182	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 106	16.901	2.35	2.182	2.135	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 105	16.901	2.35	2.135	2.011	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 104	16.901	2.35	2.011	1.996	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 103	16.901	2.35	1.996	1.844	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 102	16.901	2.35	1.844	1.800	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 503	0.000	0.00	2.230	2.230	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 502	0.093	0.84	2.149	2.105	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 501	0.334	1.18	2.114	2.484	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 4617	13.270	1.64	2.472	2.462	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4616	13.270	1.62	2.462	2.447	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4615	11.366	1.39	2.423	2.416	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4614	11.366	1.41	2.408	2.398	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4613	11.366	1.41	2.398	2.363	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4612	11.366	1.39	2.363	2.357	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4611	11.366	1.39	2.357	2.342	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4610	11.366	1.69	2.162	2.143	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4609	11.367	0.88	2.140	2.136	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4608	11.367	0.88	2.133	2.119	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4607	11.367	0.88	2.116	2.111	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4606	11.394	0.88	2.101	2.097	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 4605	18.112	1.41	2.047	2.026	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 4604A	18.602	1.44	2.015	1.930	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 4604	19.220	1.49	1.918	1.898	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 4603	20.013	1.55	1.885	1.841	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 4602	20.709	1.61	1.828	1.800	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 703	0.000	0.00	2.698	2.698	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 702	0.029	1.12	2.597	2.594	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 701	0.029	0.26	2.587	2.586	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 804	3.407	1.89	2.568	2.561	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 803	3.407	3.79	2.561	2.453	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 802	3.407	3.79	2.453	2.249	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 801	3.407	3.79	2.249	2.189	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 916	6.927	1.29	2.163	2.150	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 915	6.927	1.29	2.150	2.075	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 914	6.927	1.29	2.075	2.066	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 913	6.927	1.29	2.066	2.058	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 912	6.927	1.23	2.058	2.026	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 911	6.927	1.23	2.020	2.020	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 910	6.927	1.23	2.020	2.020	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 909	6.927	1.24	2.020	2.020	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 908	6.927	1.24	2.020	2.020	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 907	7.045	1.26	2.020	2.020	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 906	7.168	1.28	2.020	1.861	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 905	7.168	1.28	1.861	1.853	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 904	7.305	1.30	1.844	1.837	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 903	7.305	1.30	1.837	1.820	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 902	7.305	1.30	1.820	1.800	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 806	3.379	1.88	2.637	2.620	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 805	3.379	1.88	2.602	2.586	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1143	34.083	4.51	4.037	3.975	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1142	23.776	3.14	3.932	3.906	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1141	23.776	3.14	3.860	3.833	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1140	23.786	3.15	3.787	3.760	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1139	23.725	2.30	3.462	3.447	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 1138	23.726	2.30	3.422	3.407	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 1137	23.726	2.30	3.382	3.366	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 1136	23.726	2.30	3.288	3.272	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 1135	24.871	2.41	3.183	3.165	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1134	24.871	2.41	3.165	3.147	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1133	24.872	2.41	3.117	3.099	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1132	24.872	2.41	3.099	2.996	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1131	24.883	2.41	2.967	2.949	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1130	24.883	2.41	2.949	2.913	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 1129	24.906	2.41	2.913	2.894	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1128	24.913	2.41	2.865	2.846	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1127	24.935	2.42	2.817	2.771	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1126	24.935	2.42	2.771	2.752	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1125	24.935	2.42	2.722	2.704	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1124	24.935	2.42	2.674	2.656	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 1123	20.817	2.02	2.639	2.620	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 1122	20.816	2.02	2.600	2.571	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 1121	20.706	2.01	2.509	2.496	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1120	20.706	2.01	2.496	2.484	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1119	20.706	2.01	2.463	2.451	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1118	20.706	2.01	2.430	2.415	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1117	20.706	2.01	2.415	2.403	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1116	20.707	1.44	2.277	2.271	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 1115	20.707	1.44	2.271	2.228	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 1114	20.686	1.44	2.228	2.222	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 1113	20.686	1.44	2.222	2.216	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 1112	21.007	1.46	2.216	2.188	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1111	20.929	1.45	2.081	2.074	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1110	20.929	1.45	2.074	2.064	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1109	20.929	1.45	2.064	1.975	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1108	20.929	1.45	1.975	1.968	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1107	20.929	1.45	1.968	1.951	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1106	20.929	1.45	1.951	1.902	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1105	20.929	1.45	1.902	1.894	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1104	20.984	1.46	1.894	1.842	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1103A	21.110	1.47	1.831	1.823	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1103	21.110	1.47	1.823	1.817	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1102	21.110	1.47	1.817	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 1201	0.062	1.55	3.154	3.134	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 1926	0.302	2.58	3.075	3.049	AR&R 100 year (+15%CC), 1 hour storm, average 109 mm/h, Zone 1		
P 1925	0.302	2.58	3.049	3.023	AR&R 100 year (+15%CC), 1 hour storm, average 109 mm/h, Zone 1		
P 1924	0.346	2.96	2.944	2.845	AR&R 100 year (+15%CC), 1 hour storm, average 109 mm/h, Zone 1		

P 19/23	0.526	1.19	2.793	2.770	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/22	0.662	1.50	2.618	2.523	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/21	0.662	1.50	2.401	2.375	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/20	0.662	1.50	2.371	2.364	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/19	0.662	0.59	2.363	2.363	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/18	0.765	0.68	2.361	2.337	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/17	0.779	0.69	2.342	2.342	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/16	0.782	0.69	2.342	2.348	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/15	0.795	0.70	2.347	2.354	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 19/14	0.822	0.73	2.354	2.354	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/13	1.284	1.14	2.350	2.347	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/12	1.284	0.87	2.344	2.344	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/11	1.467	1.00	2.343	2.343	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/10	1.564	1.06	2.341	2.341	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/09	1.762	0.97	2.332	2.331	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/08	1.787	0.98	2.330	2.329	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/07	2.215	1.21	2.325	2.322	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/06	2.257	1.24	2.321	2.318	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/05	2.279	1.25	2.316	2.309	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/04	2.305	1.26	2.314	2.358	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/03	2.478	1.36	2.358	2.386	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/02	2.478	1.36	2.386	2.407	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 19/01	2.478	1.36	2.407	2.447	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 13/02	0.022	0.20	2.679	2.678	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 13/01	0.104	0.94	2.678	2.675	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 10/01	0.211	1.91	2.449	2.449	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 9/18	3.535	0.66	2.449	2.449	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 9/17	3.535	0.66	2.449	2.189	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 15/04	0.000	0.00	2.967	2.967	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 15/03	0.018	0.08	2.967	2.967	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 15/02	0.018	0.08	2.967	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 15/01	0.018	0.08	2.806	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 9/19	3.014	0.56	2.806	2.449	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 16/03	1.672	3.78	4.401	3.541	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 16/02	1.672	3.78	3.480	3.356	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 16/01	1.672	3.78	3.356	3.272	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 17/02	0.146	3.17	2.982	2.678	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 17/01	0.488	2.25	2.370	2.354	AR&R 100 year (+15%CC), 1 hour storm, average 109 mm/h, Zone 1		
P 18/02	0.010	0.14	2.297	2.279	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 18/01	0.038	0.54	2.283	2.283	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 70/01	0.079	0.50	2.328	2.337	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/28	0.418	3.57	5.246	4.804	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 19/27	0.275	2.35	4.665	3.134	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 35/04	0.019	1.15	4.602	4.495	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 35/03	0.019	0.17	3.529	3.528	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 35/02	0.019	0.09	3.527	3.527	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 35/01	0.019	0.09	3.527	3.527	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 38/14	7.244	3.22	3.474	3.451	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/13	7.244	3.97	3.451	3.415	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/12	7.244	3.97	3.335	3.296	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/11	7.244	3.22	3.244	3.077	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/10	7.434	3.30	3.022	2.985	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/09	7.434	3.30	2.930	2.868	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/08	7.434	3.30	2.868	2.834	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/07	7.434	2.92	2.834	2.805	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/06	7.434	2.92	2.805	2.718	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/05	7.434	2.92	2.718	2.656	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/04	7.434	2.92	2.656	2.565	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/03	7.434	2.92	2.565	2.503	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/02	7.434	3.89	2.503	2.207	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 38/01	7.434	3.30	2.152	2.097	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 36/03	0.083	0.29	2.131	2.121	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 36/02	0.083	0.19	2.120	2.118	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 36/01	0.141	0.22	2.114	2.111	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 38/17	7.182	7.99	4.960	4.168	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/16	7.185	4.87	4.047	3.601	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 38/15	7.229	3.21	3.549	3.527	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 39/05	0.025	1.48	4.398	4.311	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 39/04	0.035	3.42	4.136	2.368	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 39/03	0.035	1.59	2.355	2.345	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 39/02	0.288	0.25	2.342	2.341	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 39/01	0.306	0.17	2.341	2.341	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 40/03	0.201	1.82	2.349	2.347	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 40/02	0.389	0.61	2.347	2.347	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 40/01	0.264	0.29	2.345	2.345	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 41/02	0.261	0.92	2.343	2.343	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 41/01	0.317	0.35	2.343	2.343	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 42/02	0.136	0.21	2.351	2.351	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 42/01	0.160	0.25	2.346	2.345	AR&R 100 year (+15%CC), 45 minutes storm, average 128 mm/h, Zone 1		
P 43/03	0.038	0.96	2.622	2.615	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 43/02	0.074	1.04	2.620	2.639	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 43/01	0.147	2.07	2.620	2.620	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 44/02	0.000	0.00	2.704	2.704	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 44/01	0.000	0.00	2.704	2.704	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 45/05	2.544	7.73	6.703	4.523	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 45/04	2.544	4.00	3.358	3.077	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 45/03	2.544	4.00	3.077	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 45/02	2.573	4.05	2.806	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 45/01	2.573	4.05	2.806	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 9/23	2.949	0.55	2.806	2.806	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 9/22	3.014	0.56	2.806	2.806	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 9/21	3.014	0.56	2.806	2.806	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 9/20	3.014	0.56	2.806	2.806	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/27	13.833	2.29	3.211	3.109	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/26	13.833	2.29	3.109	3.085	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/25	13.833	2.33	3.059	2.873	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/24	13.833	2.33	2.847	2.823	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/23	13.833	2.29	2.823	2.751	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/22	13.833	2.29	2.725	2.700	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/21	13.833	2.29	2.700	2.677	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		

P 46/20	13.833	1.82	2.677	2.657	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/19	13.833	1.82	2.657	2.534	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 46/18	13.811	1.71	2.520	2.484	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 47/02	18.284	3.78	3.515	3.005	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 47/01	11.705	2.42	3.004	2.973	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 48/09	0.184	3.99	9.685	8.781	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/08	0.184	3.99	8.451	4.334	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/07	0.184	1.15	4.306	4.299	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/06	0.184	1.15	4.271	4.259	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/05	0.184	1.15	4.231	4.190	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/04	0.184	1.15	4.163	4.028	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/03	0.184	1.15	3.988	3.985	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/02	0.184	1.15	3.951	3.948	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 48/01	0.275	1.73	3.929	3.906	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 49/01	0.004	2.90	4.216	4.168	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 50/04	0.021	1.41	4.029	4.028	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 50/03	0.058	1.31	3.831	3.781	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 50/02	0.058	0.82	3.715	3.708	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 50/01	0.058	0.82	3.632	3.601	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 51/01	0.449	4.07	2.914	2.678	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 52/05	0.028	0.26	2.723	2.721	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 52/04	0.065	0.59	2.680	2.667	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 52/03	0.088	0.56	2.643	2.629	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 52/02	0.111	0.70	2.623	2.620	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 52/01	0.111	0.51	2.621	2.656	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 53/01	0.000	0.00	3.513	3.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 17/0/02	0.449	1.02	3.464	3.461	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 17/0/01	0.490	1.11	3.383	3.366	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 54/04	0.052	1.31	3.567	3.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 54/03	0.052	0.47	3.498	3.495	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 54/02	0.052	0.47	3.483	3.482	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 54/01	0.052	0.47	3.464	3.461	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 55/03	0.084	1.16	3.830	3.821	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 55/02	0.084	1.19	3.713	3.703	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 55/01	0.085	1.20	3.537	3.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 59/02	0.191	0.97	3.852	3.853	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 59/01	0.063	0.90	3.837	3.833	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 60/01	0.108	0.68	2.907	2.938	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 61/01	0.149	0.94	2.938	3.005	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 61/02	0.041	0.58	2.947	2.938	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 62/03	0.045	0.41	2.983	2.983	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 62/02	0.069	0.62	2.983	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 62/01	0.069	0.62	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 63/03	0.013	0.22	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 63/02	0.031	0.28	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 63/01	0.031	0.28	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 64/03	0.000	0.00	2.235	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 64/02	0.009	0.08	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 64/01	0.017	0.16	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 9/24	0.415	0.08	2.806	2.806	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 65/02	0.077	0.48	3.036	3.107	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 65/01	0.077	0.48	3.107	3.161	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 67/02	0.000	0.00	4.299	4.299	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 67/01	0.000	0.00	4.299	4.299	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 68/02	0.010	0.23	2.355	2.355	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 68/01	0.048	0.30	2.355	2.348	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 69/02	0.034	0.67	2.231	2.226	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 69/01	0.039	0.25	2.254	2.354	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 70/03	0.026	0.66	2.328	2.299	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 70/02	0.240	1.51	2.299	2.283	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 71/03	0.000	0.00	2.925	2.925	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 71/02	0.021	0.29	2.920	2.919	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 71/01	0.277	1.74	2.787	2.770	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 73/04	0.047	1.18	3.913	3.951	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 73/03	0.051	1.28	3.957	3.958	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 73/02	0.051	1.28	3.958	3.961	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 73/01	0.074	1.86	3.961	3.975	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 74/02	0.089	1.05	3.849	3.838	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 74/01	0.092	2.32	3.492	3.447	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 75/02	0.003	0.07	3.242	3.242	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 75/01	0.041	1.04	3.122	3.085	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 76/02	0.000	0.00	3.004	3.004	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 76/01	0.012	0.17	2.997	2.996	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 77/01	0.004	0.47	3.004	3.004	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 78/08	0.010	0.54	3.387	3.377	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 78/07	0.015	0.78	3.332	3.267	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 78/06	0.019	1.02	3.243	3.219	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 78/05	0.022	1.21	3.218	3.207	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 78/04	0.027	1.45	3.206	3.191	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 78/03	0.030	1.59	3.191	3.184	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 78/02	0.036	1.92	3.159	3.150	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 78/01	0.058	1.47	3.062	3.023	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 80/01	0.072	0.65	2.169	2.158	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 79/01	0.106	0.96	2.158	2.188	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 89/01	0.014	2.10	5.521	4.673	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 182/07	0.038	3.55	4.498	3.918	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 182/06	0.048	1.87	3.276	3.134	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 182/05	0.057	1.56	2.997	2.857	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 90/02	0.000	0.00	3.930	3.450	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 111/03	0.020	0.50	2.108	2.090	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 111/02	0.095	0.86	2.014	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P672	0.127	1.15	1.856	1.842	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 112/01	0.076	6.12	2.136	2.090	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 113/02	0.000	0.00	1.990	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 113/01	0.000	0.00	1.990	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 129/01	0.000	0.00	2.230	2.230	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 151/02	0.000	0.00	2.595	2.595	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 151/01	0.068	0.97	2.499	2.484	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 152/01	0.000	0.00	2.451	2.451	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 179/01	0.000	0.00	2.451	2.451	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		

P 153/03	0.000	0.00	2.570	2.570	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 153/02	0.000	0.00	2.570	2.570	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 153/01	0.056	0.06	2.570	2.571	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 154/01	0.000	0.00	2.751	2.751	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 155/02	0.000	0.00	2.523	2.523	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 155/01	0.000	0.00	2.523	2.523	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 156/02	0.028	0.70	2.464	2.564	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 156/01	0.070	1.76	2.417	2.363	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 157/01	0.098	2.46	2.786	2.564	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 158/01	0.021	0.13	2.319	2.342	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 159/01	0.222	2.01	2.560	2.344	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 160/02	0.420	3.80	4.875	2.499	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 160/01	0.439	3.98	2.358	2.329	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 161/01	0.084	0.76	2.327	2.322	AR&R 100 year (+15%CC), 1 hour storm, average 109 mm/h, Zone 1		
P 162/01	0.084	0.76	2.322	2.318	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 163/01	0.084	0.76	2.316	2.309	AR&R 100 year (+15%CC), 45 minutes storm, average 128 mm/h, Zone 1		
P 164/01	0.206	1.87	2.362	2.358	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 165/01	0.004	0.00	2.347	2.347	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 166/01	0.084	0.76	2.334	2.331	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 167/01	0.000	0.00	8.781	8.781	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 168/01	0.093	2.35	3.920	3.948	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 169/01	0.026	1.41	3.927	3.961	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 170/03	0.370	0.90	3.562	3.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 171/01	0.000	0.00	3.147	3.147	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 172/01	0.028	0.70	3.768	3.760	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 173/01	0.002	0.03	3.703	3.703	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 174/01	0.024	0.60	2.926	2.913	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 175/01	0.007	0.09	2.895	2.894	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 176/01	0.023	0.32	2.848	2.846	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 177/01	0.000	0.00	2.873	2.873	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 178/01	0.000	0.00	2.752	2.752	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 179/02	0.000	0.00	2.451	2.451	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 180/02	0.000	0.00	2.431	2.431	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 180/01	0.000	0.00	2.431	2.534	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 181/01	0.000	0.00	2.398	2.398	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 182/09	0.008	1.40	5.407	4.838	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 182/08	0.013	1.83	4.744	4.673	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 186/02	0.000	0.00	2.121	2.121	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 186/01	0.000	0.00	2.121	2.121	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 187/02	0.058	0.37	2.156	2.152	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 187/01	0.058	0.37	2.137	2.118	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 189/01	0.000	0.00	2.745	2.967	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 190/01	0.000	0.00	2.234	2.806	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 191/01	0.000	0.00	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 192/01	0.000	0.00	3.145	3.145	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 197/02	0.140	1.98	3.002	2.952	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 197/01	0.140	1.27	2.718	2.675	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 193/01	0.000	0.00	4.000	3.500	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 197/04	0.000	0.00	3.389	3.389	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 197/03	0.140	1.98	3.189	3.145	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 198/02	2.639	5.97	4.827	3.791	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 198/01	2.639	5.97	3.732	3.596	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 199/01	0.031	0.20	1.991	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 22-02	5.404	2.86	2.566	2.286	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P1255	5.463	2.89	2.286	2.254	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 22-01	5.576	2.95	2.254	2.215	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-05	9.342	2.16	2.096	2.083	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-04	9.430	2.18	2.058	2.046	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-03	9.430	2.18	2.022	1.990	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-02	9.430	2.18	1.966	1.943	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-01	10.399	2.41	1.913	1.899	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P A-02	10.399	2.14	1.899	1.800	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 23-02	4.332	2.29	2.824	2.664	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 3-06	3.773	1.48	2.609	2.512	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 3-06A	3.805	1.50	2.233	2.215	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1		
P 27-02	0.159	1.44	2.709	2.672	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 27-01	0.182	1.14	2.647	2.635	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 21-01	0.830	0.92	2.635	2.650	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 3-09	0.886	0.49	2.650	2.651	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 3-08	0.886	0.99	2.651	2.658	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 3-07	0.886	0.99	2.658	2.664	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 30-02	0.192	1.21	2.692	2.683	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P1244	0.201	1.27	2.592	2.590	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 30-01	0.214	1.35	2.585	2.577	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 21-03	0.677	0.75	2.577	2.608	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 21-02	0.681	0.76	2.608	2.635	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 31-02	0.192	1.21	2.543	2.534	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P1232	0.210	1.32	2.508	2.507	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 31-01	0.235	1.48	2.505	2.500	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 29-01	0.464	0.52	2.501	2.577	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 119-02	0.000	0.00	2.726	2.726	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 119-01	0.000	0.00	2.726	2.726	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 120-01	0.248	1.56	2.529	2.449	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 121-01	0.444	1.57	1.973	1.943	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 120A-01	0.000	0.00	2.491	2.491	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 119A-01	0.095	0.44	2.453	2.449	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 121-06	0.045	0.41	3.095	3.149	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 121-05	0.120	1.09	2.978	2.975	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 121-04	0.120	1.09	2.864	2.819	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 121-03	0.120	1.09	2.784	2.772	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 121-02	0.120	1.70	2.503	2.449	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 122-02	0.000	0.00	1.990	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 122-01	0.000	0.00	1.990	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 122A-01	0.000	0.00	2.819	2.819	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 123-02	0.000	0.00	2.046	2.046	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 123-01	0.000	0.00	2.046	2.046	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 124A-02	0.098	2.14	2.223	2.119	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 124A-01	0.098	0.62	2.088	2.083	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 125-02	0.336	1.55	2.520	2.481	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 125-01	0.336	1.55	1.966	1.943	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		

Pipe1185	0.209	0.11	1.943	1.943	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
Pipe1187	0.209	0.11	1.943	1.943	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 3-11	0.024	0.21	2.647	2.649	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 3-10	0.024	0.11	2.649	2.650	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 29-02	0.000	0.00	2.524	2.524	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 29-02 A	0.135	0.85	2.504	2.500	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 111A01	0.000	0.00	1.990	1.990	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
Pipe678	0.722	2.97	2.181	2.081	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P683	0.642	2.92	2.135	2.035	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P688	0.824	3.04	2.300	2.149	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 200I04	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 200I03	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 200I02	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 201I01	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 202I02	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 202I01	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 204I02	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 204I01	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 205I04	0.000	0.00	3.975	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 205I03	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 205I02	0.000	0.00	1.800	1.800	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 206I03	0.634	1.44	2.045	2.045	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 206I02	0.673	1.52	2.045	1.970	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 206I01	1.201	2.72	1.970	1.900	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 208I02	6.106	2.40	1.871	1.800	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 207I02	0.014	2.31	2.205	1.907	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 207I01	0.033	0.37	1.900	1.900	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 208I04	3.925	2.15	2.105	1.960	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 208I03	4.878	1.92	1.942	1.900	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 209I17	0.011	0.27	4.654	4.649	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I16	0.027	0.38	4.632	4.622	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I15	0.070	0.99	4.565	4.515	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I14	0.127	1.79	4.412	4.316	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I13	0.206	1.29	4.193	4.133	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 209I12	0.269	1.69	4.024	3.993	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I11	0.455	2.86	3.814	3.745	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I10	0.763	2.13	3.547	3.508	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 209I09	0.959	2.17	3.484	3.364	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I08	1.063	2.41	3.334	3.281	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I07	1.146	2.59	3.109	2.947	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I06	1.087	3.02	2.165	1.967	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I05	1.220	2.85	1.773	1.523	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I04	-0.852	0.00	1.544	1.849	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I03	0.000	0.00	1.849	1.963	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 209I02	0.000	0.00	1.963	1.965	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 209I01	0.485	0.76	1.963	1.960	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 210I05	0.045	0.40	2.311	2.305	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 210I04	0.093	0.85	2.221	2.169	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 210I03	0.104	0.94	2.079	2.058	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 210I02	0.104	0.94	1.968	1.945	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 210I01	0.104	0.94	1.855	1.849	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 211I03	0.052	0.47	1.294	1.283	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P 211I02	-0.121	0.00	1.291	1.406	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 211I01	-0.198	0.00	1.408	1.523	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 212I01	0.032	2.38	2.300	1.967	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 213I07	0.017	0.15	3.792	3.792	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 213I06	0.057	0.52	3.760	3.748	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 213I05	0.083	0.75	3.719	3.688	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 213I04	0.105	0.95	3.690	3.691	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 213I03	0.147	2.09	3.695	3.849	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 213I02	0.209	1.31	3.850	3.860	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P 213I01	0.305	2.76	3.845	3.745	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P 214I02	0.038	2.76	5.339	4.787	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 214I01	0.038	2.72	4.318	3.993	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 215I01	0.123	1.12	4.019	3.993	AR&R 100 year (+15%CC), 45 minutes storm, average 128 mm/h, Zone 1		
P 216I01	0.036	0.91	4.176	4.133	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 217I01	0.069	0.63	4.331	4.316	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 218I01	0.053	0.75	4.538	4.515	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 219I01	0.042	0.59	4.635	4.622	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 220I02	0.032	0.29	3.296	3.290	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 220I01	0.032	0.29	3.281	3.281	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 221I01	0.034	0.19	3.510	3.508	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 4610 weir	0.000	0.00	2.143	2.143	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
Dummy Pipe	0.266	3.95	2.950	2.900	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P948	0.273	4.04	2.950	2.900	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
Pipe951	2.011	6.02	14.367	13.658	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
Pipe960	0.055	1.70	2.116	2.096	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV01I02	0.041	0.37	2.251	2.237	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV01I01	0.127	1.15	2.127	2.073	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 102I02	0.140	0.88	2.008	1.993	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P 102I01	0.140	0.88	1.905	1.853	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV02I02	0.036	0.33	2.253	2.253	AR&R 100 year (+15%CC), 10 minutes storm, average 244 mm/h, Zone 1		
P BV02I01	0.069	0.63	2.242	2.237	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV03I02	0.056	0.51	2.074	2.074	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P BV03I01	0.071	0.64	2.073	2.073	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV04I01	0.039	0.35	2.074	2.074	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV05I01	0.019	0.17	2.076	2.073	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV06I03	0.041	5.10	5.380	2.408	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV06I02	0.081	0.04	2.408	2.321	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P BV06I01	0.126	0.07	2.321	2.135	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P 96I01	0.126	0.07	2.135	2.020	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P BV07I02	0.011	0.10	2.402	2.377	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV07I01	0.027	0.25	2.377	2.321	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV08I01	0.109	0.06	4.256	2.078	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 130I01	0.122	0.14	2.078	2.020	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV09I02	0.007	0.06	2.451	2.451	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV09I01	0.090	0.82	2.451	2.078	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1		
P BV10I02	0.007	0.07	2.139	2.139	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
Pipe1164	0.015	0.10	2.138	2.138	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P620	0.015	0.10	2.137	2.136	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		

P BV1106	0.000	0.00	2.426	2.426	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1105	0.012	0.10	2.425	2.425	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1104	0.027	0.24	2.423	2.420	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1103	0.046	0.42	2.417	2.411	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1102	0.088	0.55	2.373	2.354	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1101	0.107	0.67	2.304	2.299	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 8101	0.107	0.97	2.204	2.143	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1205	0.008	0.07	2.230	2.229	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1204	0.021	0.19	2.227	2.223	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1203	0.161	0.74	2.209	2.172	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1202	0.219	0.77	2.144	2.140	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P BV1201	0.242	0.85	2.124	2.105	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA1702	0.010	0.09	2.678	2.678	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA1701	0.019	0.18	2.676	2.675	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA1903	0.084	0.76	3.508	3.478	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA1902	0.088	0.80	3.459	3.437	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA1901	0.092	0.84	3.411	3.389	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2104	0.008	1.00	2.404	2.239	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2103	0.014	1.33	2.201	2.049	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2102	0.023	1.39	2.004	1.871	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2205	0.086	0.99	2.699	2.612	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2204	0.089	1.09	2.543	2.479	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2203	0.091	0.83	2.463	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2202	0.096	0.87	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2201	0.101	0.92	2.806	2.806	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 9125	0.398	0.08	2.806	2.806	AR&R 100 year (+15%CC), 30 minutes storm, average 156 mm/h, Zone 1		
P PA2301	0.059	0.53	2.152	2.139	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA2302	0.047	0.43	2.141	2.224	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 7903	0.050	0.71	2.193	2.190	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 7902	0.074	0.67	2.163	2.158	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA302	0.206	1.86	2.613	2.398	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA704	0.040	0.37	2.036	2.027	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA703	0.056	0.51	2.021	2.007	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA702	0.051	0.32	2.002	1.995	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P PA701	0.034	0.21	1.997	2.158	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0103	0.005	1.04	2.674	2.387	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P SP0102	0.011	2.73	2.327	2.225	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0101	0.016	0.15	2.224	2.223	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0204	0.062	3.35	4.431	2.791	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0203	0.068	2.55	2.603	2.369	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0202	0.077	0.70	2.311	2.275	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0201	0.102	0.64	2.239	2.223	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0301	0.007	1.38	2.897	2.415	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0402	0.013	0.12	2.570	2.569	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0401	0.056	0.35	2.569	2.570	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0502	0.014	0.13	2.560	2.565	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0501	0.029	0.26	2.565	2.569	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0703	0.026	0.24	2.936	2.932	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0702	0.052	0.47	2.919	2.905	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0701	0.201	1.26	2.857	2.845	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP0801	0.046	0.65	2.226	2.228	AR&R 100 year (+15%CC), 2 hours storm, average 71.1 mm/h, Zone 1		
P SP0901	0.021	0.19	2.404	2.403	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1001	0.021	0.19	2.926	2.925	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1101	0.188	1.18	2.967	2.905	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1207	0.002	0.02	2.141	2.141	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1206	0.006	0.05	2.140	2.140	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1205	0.015	0.13	2.138	2.137	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1204	0.018	0.11	2.136	2.136	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1203	0.018	0.11	2.136	2.136	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1202	0.018	0.11	2.136	2.161	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P SP1201	0.035	0.22	2.161	2.172	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P TG0104	0.000	0.00	2.156	2.156	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P TG0103	0.020	0.18	2.155	2.151	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P TG0102	0.040	0.36	2.142	2.128	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P TG0101	0.066	0.60	2.121	2.111	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1		
P TG0204	0.000	0.00	3.531	3.531	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P TG0203	0.000	0.00	3.531	3.084	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P TG0202	0.011	1.41	3.063	2.417	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P TG0201	0.021	0.20	2.415	2.411	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P D102	0.008	0.07	2.470	2.468	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P D101	0.017	0.16	2.470	2.534	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P E104	0.007	0.06	2.528	2.527	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P E103	0.017	0.16	2.525	2.524	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P E102	0.028	0.25	2.521	2.518	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P E101	0.038	0.24	2.514	2.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 32-01	0.095	0.27	2.508	2.500	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P F102	0.006	0.06	2.520	2.519	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P F101	0.015	0.14	2.518	2.518	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 33-01	0.056	0.35	2.515	2.513	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P G102	0.015	0.14	2.459	2.530	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P G101	0.101	0.91	2.528	2.524	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P H101	0.006	0.05	2.578	2.578	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 21-04	0.009	0.06	2.578	2.577	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P I102	0.003	0.03	2.608	2.608	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P I101	0.004	0.04	2.608	2.608	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 127-01	0.004	0.04	2.608	2.608	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P K101	0.020	0.18	2.692	2.691	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P 24-02	0.070	0.44	2.666	2.664	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1		
P L101	0.004	0.04	2.578	2.578	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P LR101	0.056	6.55	2.728	2.410	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P Q101	0.066	0.60	2.368	2.345	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P 124-01	0.134	0.84	2.260	2.254	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P LR201	0.020	0.23	2.345	2.345	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P LR401	0.018	0.16	2.405	2.404	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P J102	0.067	0.61	2.360	2.327	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P J101	0.078	0.71	2.293	2.286	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P LR501	0.036	0.33	2.438	2.436	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P J103	0.041	0.37	2.420	2.404	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P LR601	0.048	0.60	2.672	2.670	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		
P T101	0.051	0.47	2.667	2.664	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1		

P LR701	0.025	0.43	2.486	2.485	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P B02	0.045	0.41	2.485	2.486	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P B01	0.049	0.44	2.487	2.650	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P 4-01	0.143	0.90	2.650	2.650	AR&R 100 year (+15%CC), 45 minutes storm, average 128 mm/h, Zone 1				
P LR801	0.008	0.08	2.488	2.488	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P B03	0.012	0.11	2.486	2.485	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P M02	0.001	0.01	2.578	2.578	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P M01	0.006	0.05	2.578	2.577	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P O01	0.009	0.08	2.598	2.683	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P P04	0.003	0.03	2.427	2.427	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P P03	0.007	0.06	2.427	2.404	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P P02	0.011	0.10	2.427	2.428	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P P01	0.014	0.12	2.430	2.654	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P 24A-01	0.015	0.03	2.654	2.664	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P R02	0.004	0.04	2.412	2.411	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P R01	0.010	0.09	2.410	2.410	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P S03	0.005	0.05	2.520	2.520	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P S02	0.018	0.16	2.519	2.518	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
P S01	0.033	0.21	2.513	2.512	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1				
CHANNEL DETAILS									
Name	Max Q	Max V	Chainage	Max	Due to Storm				
	(cu.m/s)	(m/s)	(m)	HGL (m)					
OVERFLOW ROUTE DETAILS									
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm	
F 1\24	0	0	7.665	0	0	0	0		
F 1\23	0	0	7.665	0	0	0	0		
F 1\22	0	0	7.665	0	0	0	0		
F 1\21	0	0	7.665	0	0	0	0		
F 1\20	0	0	7.665	0	0	0	0		
F 1\19	1.944	1.944	7.665	0.115	0.13	26.90	1.14	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\18	1.944	1.944	7.665	0.115	0.13	26.90	1.14	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\17	1.944	1.944	7.665	0.115	0.13	26.90	1.14	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\16	3.385	3.385	7.665	0.143	0.19	32.65	1.32	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\15	3.385	3.385	7.665	0.143	0.19	32.65	1.32	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\14	3.385	3.385	7.665	0.143	0.19	32.65	1.32	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\13	15.640	15.640	7.665	0.230	0.59	49.99	2.54	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 1\12	0	0	7.665	0	0	0	0		
F 1\11	0	0	7.665	0	0	0	0		
F 1\10	0	0	7.665	0	0	0	0		
F 1\09	0	0	7.665	0	0	0	0		
F 1\08	0	0	7.665	0	0	0	0		
F 1\07	0	0	7.665	0	0	0	0		
F 1\06	0	0	7.665	0	0	0	0		
F 1\05	0	0	7.665	0	0	0	0		
F 1\04	0	0	7.665	0	0	0	0		
F 1\03	0	0	7.665	0	0	0	0		
F 1\02	0	0	7.665	0	0	0	0		
F 5\03	0	0	7.665	0	0	0	0		
F 5\02	0.048	0.048	7.665	0.026	0.01	8.83	0.41	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 5\01	1.716	1.716	7.665	0.109	0.12	25.82	1.10	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 46\17	24.340	24.340	7.665	0.230	0.91	49.99	3.96	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\16	24.340	24.340	7.665	0.230	0.91	49.99	3.96	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\15	27.424	27.424	7.665	0.230	1.03	49.99	4.46	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\14	27.424	27.424	7.665	0.230	1.03	49.99	4.46	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\13	27.725	27.725	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\12	27.738	27.738	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\11	27.738	27.738	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
OF1002	0.180	0.180	7.665	0.044	0.03	12.71	0.59	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 46\09	27.738	27.738	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\08	27.738	27.738	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\07	27.738	27.738	7.665	0.230	1.04	49.99	4.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\06	28.588	28.588	7.665	0.230	1.07	49.99	4.65	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\05	28.967	28.967	7.665	0.230	1.08	49.99	4.71	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
OF1010	0	0	7.665	0	0	0	0		
F 46\04	28.967	28.967	7.665	0.230	1.08	49.99	4.71	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\03	28.967	28.967	7.665	0.230	1.08	49.99	4.71	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 46\02	28.967	28.967	7.665	0.230	1.08	49.99	4.71	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 7\03	0	0	7.665	0	0	0	0		
F 7\02	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 7\01	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 8\04	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 8\03	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 8\02	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 8\01	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1	
F 9\16	15.177	15.177	7.665	0.230	0.57	49.99	2.47	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\15	15.177	15.177	7.665	0.230	0.57	49.99	2.47	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\14	15.177	15.177	7.665	0.230	0.57	49.99	2.47	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\13	15.177	15.177	7.665	0.230	0.57	49.99	2.47	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\12	15.214	15.214	7.665	0.230	0.57	49.99	2.47	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\11	15.256	15.256	7.665	0.230	0.57	49.99	2.48	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\10	15.256	15.256	7.665	0.230	0.57	49.99	2.48	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\09	15.256	15.256	7.665	0.230	0.57	49.99	2.48	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\08	15.256	15.256	7.665	0.230	0.57	49.99	2.48	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\07	15.279	15.279	7.665	0.230	0.57	49.99	2.49	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\06	15.279	15.279	7.665	0.230	0.57	49.99	2.49	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\05	15.279	15.279	7.665	0.230	0.57	49.99	2.49	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\04	15.482	15.482	7.665	0.230	0.58	49.99	2.52	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\03	15.482	15.482	7.665	0.230	0.58	49.99	2.52	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 9\02	15.482	15.482	7.665	0.230	0.58	49.99	2.52	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone	
F 8\06	0	0	7.665	0	0	0	0		
F 8\05	0	0	7.665	0	0	0	0		
F 11\43	23.790	23.790	7.665	0.230	0.89	49.99	3.87	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 11\42	11.454	11.454	7.665	0.230	0.43	49.99	1.86	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1	
F 11\41	0	0	7.665	0	0	0	0		
F 11\40	0	0	7.665	0	0	0	0		
F 11\39	0	0	7.665	0	0	0	0		
F 11\38	0	0	7.665	0	0	0	0		
F 11\37	0	0	7.665	0	0	0	0		

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F 38/15	0.198	0.198	7.665	0.045	0.03	13.07	0.60	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 39/05	0.012	0.012	7.665	0.016	0.00	5.24	0.30	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 39/04	0.002	0.002	7.665	0.008	0.00	2.54	0.18	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 39/03	0.002	0.002	7.665	0.008	0.00	2.54	0.18	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 39/02	0	0	7.665	0	0	0	0	
F 39/01	0	0	7.665	0	0	0	0	
F 40/03	0.010	0.010	7.665	0.015	0.00	4.94	0.28	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 40/02	0	0	7.665	0	0	0	0	
F 40/01	0	0	7.665	0	0	0	0	
F 41/02	0	0	7.665	0	0	0	0	
F 41/01	0.029	0.029	7.665	0.022	0.01	7.33	0.36	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 42/02	0	0	7.665	0	0	0	0	
F 42/01	0	0	7.665	0	0	0	0	
F 43/03	0.409	0.409	7.665	0.061	0.05	16.12	0.74	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 43/02	0.548	0.548	7.665	0.068	0.06	17.56	0.82	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 43/01	0.522	0.522	7.665	0.067	0.05	17.38	0.80	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 44/02	1.385	1.385	7.665	0.099	0.10	23.85	1.05	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 44/01	1.385	1.385	7.665	0.099	0.10	23.85	1.05	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 45/05	0	0	7.665	0	0	0	0	
F 45/04	0	0	7.665	0	0	0	0	
F 45/03	0	0	7.665	0	0	0	0	
F 45/02	0.006	0.006	7.665	0.012	0.00	4.04	0.26	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 45/01	0.035	0.035	7.665	0.024	0.01	7.93	0.37	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 9/23	15.426	15.426	7.665	0.230	0.58	49.99	2.51	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 9/22	15.427	15.427	7.665	0.230	0.58	49.99	2.51	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 9/21	15.447	15.447	7.665	0.230	0.58	49.99	2.51	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 9/20	15.447	15.447	7.665	0.230	0.58	49.99	2.51	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
OF1272	22.618	22.618	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/26	22.618	22.618	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/25	22.622	22.622	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/24	22.622	22.622	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/23	22.622	22.622	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/22	22.845	22.845	7.665	0.230	0.85	49.99	3.72	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/21	22.845	22.845	7.665	0.230	0.85	49.99	3.72	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/20	22.845	22.845	7.665	0.230	0.85	49.99	3.72	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/19	22.845	22.845	7.665	0.230	0.85	49.99	3.72	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 46/18	22.876	22.876	7.665	0.230	0.86	49.99	3.72	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 47/02	0	0	7.665	0	0	0	0	
F 47/01	12.468	12.468	7.665	0.230	0.47	49.99	2.03	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 48/09	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/08	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/07	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/06	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/05	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/04	0.571	0.571	7.665	0.070	0.06	17.92	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 48/03	0.621	0.621	7.665	0.071	0.06	18.28	0.84	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 48/02	0.007	0.007	7.665	0.013	0.00	4.34	0.24	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 48/01	0	0	7.665	0	0	0	0	
F 49/01	0	0	7.665	0	0	0	0	
F 50/04	0.014	0.014	7.665	0.017	0.01	5.54	0.31	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 50/03	0.019	0.019	7.665	0.018	0.01	6.14	0.33	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 50/02	0.019	0.019	7.665	0.018	0.01	6.14	0.33	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 50/01	0.019	0.019	7.665	0.018	0.01	6.14	0.33	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 51/01	0.731	0.731	7.665	0.077	0.07	19.36	0.87	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 52/05	0.016	0.016	7.665	0.018	0.01	5.84	0.31	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 52/04	0.026	0.026	7.665	0.021	0.01	7.03	0.35	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 52/03	0.017	0.017	7.665	0.018	0.01	6.14	0.30	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 52/02	0.069	0.069	7.665	0.031	0.01	10.20	0.43	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 52/01	0.268	0.268	7.665	0.051	0.03	14.15	0.67	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 53/01	0	0	7.665	0	0	0	0	
F 17/002	0	0	7.665	0	0	0	0	
F 17/001	0	0	7.665	0	0	0	0	
F 54/04	0	0	7.665	0	0	0	0	
F 54/03	0	0	7.665	0	0	0	0	
F 54/02	0	0	7.665	0	0	0	0	
F 54/01	0	0	7.665	0	0	0	0	
F 55/03	0.398	0.398	7.665	0.060	0.04	15.94	0.74	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 55/02	0	0	7.665	0	0	0	0	
F 55/01	0	0	7.665	0	0	0	0	
F 59/02	0	0	7.665	0	0	0	0	
F 59/01	0	0	7.665	0	0	0	0	
F 60/01	0.345	0.345	7.665	0.056	0.04	15.23	0.72	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 61/01	0.461	0.461	7.665	0.063	0.05	16.66	0.78	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 61/02	0.031	0.031	7.665	0.023	0.01	7.63	0.36	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 62/03	0.036	0.036	7.665	0.024	0.01	7.93	0.38	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 62/02	0.012	0.012	7.665	0.016	0.00	5.24	0.28	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 62/01	0.012	0.012	7.665	0.016	0.00	5.24	0.28	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 63/03	0.002	0.002	7.665	0.009	0.00	2.84	0.21	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 63/02	0.006	0.006	7.665	0.012	0.00	4.04	0.26	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 63/01	0.006	0.006	7.665	0.012	0.00	4.04	0.26	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 64/03	0	0	7.665	0	0	0	0	
F 64/02	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 64/01	0.001	0.001	7.665	0.007	0.00	2.25	0.17	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 9/24	15.399	15.399	7.665	0.230	0.58	49.99	2.50	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 65/02	0.270	0.270	7.665	0.051	0.03	14.15	0.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 65/01	0.270	0.270	7.665	0.051	0.03	14.15	0.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 67/02	0	0	7.665	0	0	0	0	
F 67/01	0	0	7.665	0	0	0	0	
F 68/02	0	0	7.665	0	0	0	0	
F 68/01	0.003	0.003	7.665	0.009	0.00	2.84	0.21	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 69/02	0.014	0.014	7.665	0.017	0.01	5.54	0.30	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 69/01	0.170	0.170	7.665	0.043	0.02	12.53	0.58	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 70/03	0.062	0.062	7.665	0.029	0.01	9.73	0.43	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 70/02	0.030	0.030	7.665	0.022	0.01	7.33	0.37	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 71/03	0	0	7.665	0	0	0	0	
F 71/02	0.405	0.405	7.665	0.060	0.05	15.94	0.76	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 71/01	0.526	0.526	7.665	0.067	0.05	17.38	0.80	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 73/04	0	0	7.665	0	0	0	0	
F 73/03	0	0	7.665	0	0	0	0	
F 73/02	0	0	7.665	0	0	0	0	

F 7301	0	0	7.665	0	0	0	0						
F 7402	0.017	0.017	7.665	0.018	0.01	6.14	0.30	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 7401	0	0	7.665	0	0	0	0						
F 7502	0	0	7.665	0	0	0	0						
F 7501	0.028	0.028	7.665	0.022	0.01	7.33	0.35	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7602	0	0	7.665	0	0	0	0						
F 7601	0.002	0.002	7.665	0.008	0.00	2.54	0.20	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7701	0	0	7.665	0	0	0	0						
F 7808	0.112	0.112	7.665	0.036	0.02	11.27	0.51	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7807	0.106	0.106	7.665	0.035	0.02	11.09	0.51	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7806	0.176	0.176	7.665	0.044	0.03	12.71	0.58	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7805	0.189	0.189	7.665	0.044	0.03	12.89	0.60	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7804	0.207	0.207	7.665	0.046	0.03	13.25	0.61	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7803	0.207	0.207	7.665	0.046	0.03	13.25	0.61	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7802	0.210	0.210	7.665	0.046	0.03	13.25	0.62	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7801	0.199	0.199	7.665	0.045	0.03	13.07	0.61	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 8001	0.084	0.084	7.665	0.033	0.02	10.56	0.47	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 7901	0.330	0.330	7.665	0.055	0.04	15.05	0.71	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 8901	0.023	0.023	7.665	0.020	0.01	6.74	0.33	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 18207	0.017	0.017	7.665	0.018	0.01	6.14	0.30	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 18206	0.011	0.011	7.665	0.016	0.00	5.24	0.27	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 18205	0.009	0.009	7.665	0.015	0.00	4.94	0.25	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 9002	0	0	7.665	0	0	0	0						
F 11103	0.052	0.052	7.665	0.027	0.01	9.13	0.41	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 11102	0.144	0.144	7.665	0.040	0.02	11.99	0.56	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 11101	0.265	0.265	7.665	0.051	0.03	14.15	0.66	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 11201	0.094	0.094	7.665	0.034	0.02	10.74	0.50	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 11302	0	0	7.665	0	0	0	0						
F 11301	0	0	7.665	0	0	0	0						
F 12901	0	0	7.665	0	0	0	0						
F 15102	0	0	7.665	0	0	0	0						
F 15101	0.077	0.077	7.665	0.032	0.01	10.38	0.46	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 15201	0	0	7.665	0	0	0	0						
F 17901	0	0	7.665	0	0	0	0						
F 15303	0	0	7.665	0	0	0	0						
F 15302	0	0	7.665	0	0	0	0						
F 15301	0	0	7.665	0	0	0	0						
F 15401	0	0	7.665	0	0	0	0						
F 15502	0	0	7.665	0	0	0	0						
F 15501	0	0	7.665	0	0	0	0						
F 15602	0.097	0.097	7.665	0.035	0.02	10.91	0.49	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 15601	0.216	0.216	7.665	0.047	0.03	13.43	0.62	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 15701	0.099	0.099	7.665	0.035	0.02	10.91	0.50	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 15801	0.094	0.094	7.665	0.034	0.02	10.74	0.50	AR&R 100 year (+15%CC), 15 minutes storm, average 209 mm/h, Zone 1					
F 15901	0	0	7.665	0	0	0	0						
F 16002	0	0	7.665	0	0	0	0						
F 1907	3.704	3.704	7.665	0.149	0.20	33.73	1.35	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 16101	3.622	3.622	7.665	0.148	0.20	33.55	1.33	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 1905	3.540	3.540	7.665	0.146	0.19	33.19	1.33	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 1904	3.458	3.458	7.665	0.145	0.19	33.01	1.32	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 1903	3.366	3.366	7.665	0.143	0.19	32.65	1.31	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 16501	0	0	7.665	0	0	0	0						
F 1908	3.653	3.653	7.665	0.149	0.20	33.73	1.33	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F 16701	0	0	7.665	0	0	0	0						
F 16901	0.038	0.038	7.665	0.025	0.01	8.23	0.38	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 16901	0.024	0.024	7.665	0.020	0.01	6.74	0.35	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 17003	0	0	7.665	0	0	0	0						
F 17101	0	0	7.665	0	0	0	0						
F 17201	0	0	7.665	0	0	0	0						
F 17301	0	0	7.665	0	0	0	0						
F 17401	0.001	0.001	7.665	0.007	0.00	2.25	0.13	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 17501	0.001	0.001	7.665	0.006	0.00	1.95	0.15	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 17601	0.016	0.016	7.665	0.018	0.01	5.84	0.32	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 17701	0	0	7.665	0	0	0	0						
F 17801	0	0	7.665	0	0	0	0						
F 17902	0	0	7.665	0	0	0	0						
F 18002	0	0	7.665	0	0	0	0						
F 18001	0.034	0.034	7.665	0.024	0.01	7.93	0.36	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F 18101	0	0	7.665	0	0	0	0						
F 18209	0	0	7.665	0	0	0	0						
F 18208	0	0	7.665	0	0	0	0						
F 18602	0	0	7.665	0	0	0	0						
F 18601	0	0	7.665	0	0	0	0						
F 18702	0.468	0.468	7.665	0.064	0.05	16.84	0.77	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 18701	0.468	0.468	7.665	0.064	0.05	16.84	0.77	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 18901	0	0	7.665	0	0	0	0						
F 19001	0	0	7.665	0	0	0	0						
F 19101	0	0	7.665	0	0	0	0						
F 19201	0	0	7.665	0	0	0	0						
F 19702	0.039	0.039	7.665	0.025	0.01	8.23	0.38	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 19701	0.039	0.039	7.665	0.025	0.01	8.23	0.38	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 19301	0	0	7.665	0	0	0	0						
F 19704	0	0	7.665	0	0	0	0						
F 19703	0.035	0.035	7.665	0.024	0.01	7.93	0.37	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF589	1.284	1.284	7.665	0.097	0.10	23.31	1.02	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF590	0.692	0.692	7.665	0.075	0.06	19.00	0.86	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 19901	0.128	0.128	7.665	0.038	0.02	11.63	0.54	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF4518	0	0	7.665	0	0	0	0						
F A02	0.039	0.039	0.190	0.087	0.08	1.54	0.87	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF4761	0	0	7.665	0	0	0	0						
OF4040	0	0	7.665	0	0	0	0						
F 27-01	0.010	0.010	0.298	0.048	0.03	0.79	0.63	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F I02	0.060	0.060	0.120	0.113	0.07	2.42	0.62	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF1553	0	0	7.665	0	0	0	0						
F 30-01	0.003	0.015	0.298	0.056	0.04	1.04	0.66	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF2899	1.798	1.798	7.665	0.111	0.12	26.18	1.11	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
OF2743	0	0	7.665	0	0	0	0						
OF606	1.728	1.728	7.665	0.109	0.12	25.82	1.10	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
OF5011	0.237	0.237	7.665	0.049	0.03	13.79	0.63	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF2453	0	0	7.665	0	0	0	0						

F 119A-01	0.142	0.142	0.267	0.122	0.11	3.24	0.87	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 121-06	0.125	0.125	7.665	0.038	0.02	11.63	0.52	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 122A-01	0	0	0.211	0	0	0	0	
F 122-02	0	0	7.665	0	0	0	0	
OF4002	0	0	7.665	0	0	0	0	
OF3808	0	0	7.665	0	0	0	0	
OF1801	1.736	1.736	7.665	0.109	0.12	25.82	1.11	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F 125-02	0	0	7.665	0	0	0	0	
OF6765	0	0	7.665	0	0	0	0	
OF4017	0	0	7.665	0	0	0	0	
F 3-10	0	0	0.087	0	0	0	0	
OF4035	0	0	7.665	0	0	0	0	
F H01	0	0	0.120	0	0	0	0	
OF616	0	0	7.665	0	0	0	0	
OF623	0	0	7.665	0	0	0	0	
OF621	0	0	7.665	0	0	0	0	
F 200I04	0	0	0.190	0	0	0	0	
F 200I03	0	0	0.190	0	0	0	0	
F 200I02	0	0	0.190	0	0	0	0	
F 201I01	0	0	0.190	0	0	0	0	
F 202I02	0	0	0.190	0	0	0	0	
F 202I01	0	0	0.190	0	0	0	0	
F 204I02	0	0	0.190	0	0	0	0	
F 204I01	0	0	0.190	0	0	0	0	
F 205I04	0	0	0.190	0	0	0	0	
F 205I03	0	0	0.190	0	0	0	0	
F 205I02	0	0	0.190	0	0	0	0	
F 206I03	4.180	4.180	0.190	0.362	1.01	6.40	2.77	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 206I02	3.576	3.576	0.190	0.340	0.89	6.40	2.62	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F 206I01	3.151	3.151	0.190	0.325	0.81	6.40	2.49	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
F 208I02	4.101	4.101	0.190	0.360	0.99	6.40	2.75	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
F 207I02	0	0	0.190	0	0	0	0	
F 207I01	0	0	0.190	0	0	0	0	
F 208I04	0	0	0.190	0	0	0	0	
F 208I03	0.982	0.982	0.190	0.223	0.36	6.40	1.59	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I17	0	0	0.190	0	0	0	0	
F 209I16	0	0	0.190	0	0	0	0	
F 209I15	0.038	0.038	0.190	0.087	0.07	1.54	0.85	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I14	0.093	0.093	0.190	0.113	0.11	2.40	0.98	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I13	0.077	0.077	0.190	0.107	0.10	2.20	0.94	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I12	0.147	0.147	0.190	0.129	0.14	2.94	1.05	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I11	0.433	0.433	0.190	0.182	0.22	5.62	1.20	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I10	0.292	0.292	0.190	0.165	0.18	4.73	1.08	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I09	0.110	0.110	0.190	0.119	0.12	2.60	0.99	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I08	0.036	0.036	0.190	0.086	0.07	1.49	0.86	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I07	0.008	0.008	0.190	0.053	0.04	0.44	0.69	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I06	0.139	0.139	0.190	0.127	0.13	2.87	1.04	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I05	0.036	0.036	0.190	0.085	0.07	1.47	0.86	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I04	3.284	3.284	0.190	0.330	0.83	6.40	2.53	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I03	2.784	2.784	0.190	0.310	0.74	6.40	2.38	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I02	2.183	2.183	0.190	0.285	0.62	6.40	2.16	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 209I01	1.582	1.582	0.190	0.257	0.49	6.40	1.90	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 210I05	0.005	0.005	0.190	0.044	0.03	0.36	0.61	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 210I04	0.027	0.027	0.190	0.077	0.06	1.22	0.84	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 210I03	0	0	0.190	0	0	0	0	
F 210I02	0	0	0.190	0	0	0	0	
F 210I01	0	0	0.190	0	0	0	0	
F 211I03	0.044	0.044	0.190	0.090	0.08	1.65	0.88	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 211I02	0.356	0.356	0.190	0.173	0.20	5.17	1.13	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 211I01	0.448	0.448	0.190	0.184	0.22	5.68	1.21	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 212I01	0.002	0.002	0.190	0.028	0.01	0.23	0.45	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 213I07	0	0	0.190	0	0	0	0	
F 213I06	0.004	0.004	0.190	0.041	0.02	0.34	0.56	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 213I05	0	0	0.190	0	0	0	0	
F 213I04	0.171	0.171	0.190	0.136	0.15	3.17	1.07	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 213I03	0.303	0.303	0.190	0.167	0.18	4.83	1.08	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 213I02	0.388	0.388	0.190	0.178	0.21	5.38	1.16	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 213I01	0.168	0.168	0.190	0.135	0.14	3.12	1.07	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 214I02	0.003	0.003	0.190	0.038	0.02	0.31	0.54	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 214I01	0	0	0.190	0	0	0	0	
F 215I01	0.079	0.079	0.190	0.107	0.10	2.22	0.95	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 216I01	0.003	0.003	0.190	0.036	0.02	0.30	0.53	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 217I01	0.014	0.014	0.190	0.064	0.05	0.77	0.78	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 218I01	0.008	0.008	0.190	0.054	0.04	0.44	0.70	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 219I01	0.004	0.004	0.190	0.041	0.02	0.34	0.58	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 220I02	0.002	0.002	0.190	0.029	0.01	0.24	0.46	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 220I01	0.002	0.002	0.190	0.029	0.01	0.24	0.46	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 221I01	0.002	0.002	0.190	0.033	0.02	0.27	0.51	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF686	0	0	19.770	0	0	0	0	
OF691	0	0	19.770	0	0	0	0	
OF693	0	0	19.770	0	0	0	0	
OF697	0	0	19.770	0	0	0	0	
OF700	0.032	0.032	19.770	0.023	0.01	7.63	0.37	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF701	0.007	0.007	19.770	0.013	0.00	4.34	0.24	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF702	0.008	0.008	19.770	0.014	0.00	4.64	0.24	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF703	0.046	0.046	19.770	0.026	0.01	8.83	0.39	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF704	0.179	0.179	19.770	0.044	0.03	12.71	0.59	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF695	0	0	19.770	0	0	0	0	
OF1120	23.813	23.813	7.665	0.230	0.89	49.99	3.87	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
OF1006	0	0	7.665	0	0	0	0	
OF1008	0	0	7.665	0	0	0	0	
OF1020	5.973	5.973	7.665	0.181	0.27	40.19	1.52	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
OF1018	2.011	2.011	7.665	0.116	0.13	27.26	1.14	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
OF1062	23.813	23.813	7.665	0.230	0.89	49.99	3.87	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
OF1107	0	0	7.665	0	0	0	0	
OF1110	0.398	0.398	7.665	0.060	0.04	15.94	0.74	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
OF1114	0	0	7.665	0	0	0	0	
OF1129	0	0	7.665	0	0	0	0	
OF1125	0.628	0.628	7.665	0.072	0.06	18.46	0.83	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
OF1167	0	0	7.665	0	0	0	0	

OF1161	0	0	7.665	0	0	0	0						
OF1154	0	0	7.665	0	0	0	0						
OF1148	0	0	7.665	0	0	0	0						
OF1142	0	0	7.665	0	0	0	0						
OF1135	0.038	0.038	7.665	0.025	0.01	8.23	0.38	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1172	0.398	0.398	7.665	0.060	0.04	15.94	0.74	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1173	0	0	7.665	0	0	0	0						
OF1174	0.038	0.038	7.665	0.025	0.01	8.23	0.38	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1175	11.454	11.454	7.665	0.230	0.43	49.99	1.86	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1176	24.433	24.433	7.665	0.230	0.91	49.99	3.97	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1177	35.630	35.630	7.665	0.230	1.33	49.99	5.80	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1178	0.433	0.433	7.665	0.062	0.05	16.30	0.77	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 46/27	36.037	36.037	7.665	0.230	1.35	49.99	5.86	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1206	0	0	7.665	0	0	0	0						
OF1205	0.010	0.010	7.665	0.015	0.00	4.94	0.28	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF1207	3.733	3.733	7.665	0.150	0.20	33.90	1.35	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
OF1214	0	0	7.665	0	0	0	0						
OF1221	0.142	0.142	7.665	0.040	0.02	11.99	0.55	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
OF1230	0.010	0.010	7.665	0.015	0.00	4.94	0.27	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
OF1231	1.798	1.798	7.665	0.111	0.12	26.18	1.11	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
OF1235	0	0	7.665	0	0	0	0						
OF1278	22.618	22.618	7.665	0.230	0.85	49.99	3.68	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F BV01/02	2.358	2.358	0.190	0.292	0.65	6.40	2.23	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F BV01/01	2.318	2.318	0.190	0.291	0.64	6.40	2.21	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F 102/02	0.625	0.625	7.665	0.071	0.06	18.28	0.85	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F 102/01	0.625	0.625	7.665	0.071	0.06	18.28	0.85	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F BV02/02	2.299	2.299	0.190	0.290	0.64	6.40	2.20	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F BV02/01	2.287	2.287	0.190	0.289	0.64	6.40	2.20	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F BV03/02	0.009	0.009	0.190	0.056	0.04	0.50	0.72	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV03/01	0.011	0.011	0.190	0.060	0.05	0.63	0.76	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV04/01	0	0	0.190	0	0	0	0						
F BV05/01	0.335	0.335	0.190	0.171	0.19	5.04	1.12	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV06/03	2.312	2.312	0.190	0.290	0.64	6.40	2.21	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F BV06/02	2.360	2.360	0.190	0.292	0.65	6.40	2.23	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1					
F BV06/01	0.315	0.315	0.190	0.168	0.18	4.90	1.10	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 96/01	0	0	7.665	0	0	0	0						
F BV07/02	0.075	0.075	0.190	0.106	0.10	2.17	0.93	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV07/01	0.217	0.217	0.190	0.146	0.16	3.51	1.12	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV08/01	0	0	0.190	0	0	0	0						
F 130/01	0.075	0.075	7.665	0.032	0.01	10.38	0.44	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F BV09/02	0.039	0.039	0.190	0.088	0.08	1.56	0.86	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV09/01	0.033	0.033	0.190	0.083	0.07	1.43	0.84	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV10/02	0.046	0.046	0.190	0.092	0.08	1.70	0.88	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV10/01	0.053	0.053	0.190	0.096	0.09	1.83	0.89	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 134-01	0	0	7.665	0	0	0	0						
F BV11/06	0	0	0.190	0	0	0	0						
F BV11/05	0.084	0.084	0.190	0.109	0.10	2.29	0.96	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV11/04	0.164	0.164	0.190	0.134	0.14	3.10	1.06	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV11/03	0.362	0.362	0.190	0.174	0.20	5.21	1.14	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV11/02	0.429	0.429	0.190	0.182	0.22	5.58	1.20	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F BV11/01	0.408	0.408	0.190	0.180	0.21	5.48	1.18	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F 81/01	0	0	7.665	0	0	0	0						
F BV12/05	0.049	0.049	0.190	0.093	0.08	1.74	0.89	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV12/04	0.112	0.112	0.190	0.120	0.12	2.63	0.99	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV12/03	0.487	0.487	0.190	0.188	0.23	5.89	1.24	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F BV12/02	0.838	0.838	0.190	0.214	0.32	6.40	1.50	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F BV12/01	0.907	0.907	0.190	0.218	0.34	6.40	1.55	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F PA17/02	0.072	0.072	0.190	0.105	0.10	2.13	0.94	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA17/01	0.063	0.063	0.190	0.101	0.09	1.99	0.92	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA19/03	0	0	0.190	0	0	0	0						
F PA19/02	0.019	0.019	0.190	0.070	0.06	0.97	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA19/01	0.048	0.048	0.190	0.093	0.08	1.74	0.88	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA21/04	0.052	0.052	0.190	0.095	0.08	1.81	0.88	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA21/03	0.039	0.039	0.190	0.087	0.08	1.54	0.87	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA21/02	0.054	0.054	0.190	0.096	0.09	1.83	0.90	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA22/05	0	0	0.190	0	0	0	0						
F PA22/04	0.012	0.012	0.190	0.061	0.05	0.68	0.78	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA22/03	0.010	0.010	0.190	0.057	0.04	0.54	0.74	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA22/02	0.026	0.026	0.190	0.077	0.06	1.22	0.84	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA22/01	0.022	0.022	0.190	0.073	0.06	1.09	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 91/25	15.660	15.660	7.665	0.230	0.59	49.99	2.55	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1					
F PA23/01	0.022	0.022	0.190	0.073	0.06	1.06	0.83	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA23/02	0.182	0.182	0.190	0.138	0.15	3.24	1.09	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F 79/03	0.123	0.123	7.665	0.037	0.02	11.45	0.54	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F 79/02	0	0	7.665	0	0	0	0						
F PA3/02	0.861	0.861	0.190	0.216	0.33	6.40	1.51	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1					
F PA7/04	0	0	0.190	0	0	0	0						
F PA7/03	0	0	0.190	0	0	0	0						
F PA7/02	0.035	0.035	0.190	0.084	0.07	1.45	0.85	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F PA7/01	0.247	0.247	0.190	0.155	0.17	4.06	1.09	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP01/03	0.021	0.021	0.190	0.072	0.06	1.04	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP01/02	0.036	0.036	0.190	0.085	0.07	1.47	0.87	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP01/01	0.030	0.030	0.190	0.081	0.07	1.34	0.85	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP02/04	0	0	0.190	0	0	0	0						
F SP02/03	0.030	0.030	0.190	0.080	0.07	1.31	0.85	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP02/02	0.061	0.061	0.190	0.100	0.09	1.97	0.91	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP02/01	0.277	0.277	0.190	0.163	0.17	4.63	1.07	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP03/01	0.042	0.042	0.190	0.089	0.08	1.61	0.87	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP04/02	0.114	0.114	0.190	0.120	0.12	2.65	0.99	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP04/01	0.128	0.128	0.190	0.124	0.13	2.78	1.02	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP05/02	0.219	0.219	0.190	0.146	0.16	3.51	1.13	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP05/01	0.152	0.152	0.190	0.131	0.14	3.01	1.04	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP07/03	0	0	0.190	0	0	0	0						
F SP07/02	0	0	0.190	0	0	0	0						
F SP07/01	0.317	0.317	0.190	0.169	0.18	4.93	1.10	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP08/01	0.377	0.377	0.190	0.176	0.20	5.31	1.15	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					
F SP09/01	0.415	0.415	0.190	0.180	0.21	5.51	1.19	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1					

F SP12I06	0.016	0.016	0.190	0.066	0.05	0.84	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F SP12I05	0	0	0.190	0	0	0	0	
F SP12I04	0	0	0.190	0	0	0	0	
F SP12I03	0.063	0.063	0.190	0.101	0.09	1.99	0.92	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F SP12I02	0.353	0.353	0.190	0.173	0.20	5.17	1.13	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F SP12I01	0.334	0.334	0.190	0.171	0.19	5.04	1.12	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F TG01I04	0	0	0.190	0	0	0	0	
F TG01I03	0.397	0.397	0.190	0.178	0.21	5.41	1.17	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
F TG01I02	0.377	0.377	0.190	0.176	0.20	5.31	1.15	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
F TG01I01	0.934	0.934	0.190	0.220	0.34	6.40	1.56	AR&R 100 year (+15%CC), 20 minutes storm, average 187 mm/h, Zone 1
F TG02I04	0	0	0.190	0	0	0	0	
F TG02I03	0	0	0.190	0	0	0	0	
F TG02I02	0.078	0.078	0.190	0.107	0.10	2.22	0.94	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F TG02I01	0.068	0.068	0.190	0.103	0.09	2.08	0.92	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F DI02	0.055	0.055	0.060	0.136	0.05	3.17	0.34	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F DI01	0.337	0.337	0.147	0.182	0.17	5.62	0.93	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F EI04	0.049	0.049	0.240	0.087	0.10	1.54	1.11	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F EI03	0.110	0.110	0.170	0.123	0.11	2.74	0.90	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F EI02	0.102	0.102	0.190	0.116	0.11	2.51	0.98	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F EI01	0.121	0.121	0.134	0.135	0.10	3.15	0.76	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F FI02	0.044	0.044	0.190	0.090	0.08	1.65	0.87	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F FI01	0.073	0.073	0.190	0.105	0.10	2.15	0.93	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 33-01	0.032	0.047	0.298	0.081	0.06	1.89	0.79	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F GI02	0.396	0.396	0.120	0.200	0.17	6.40	0.85	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F GI01	0.328	0.328	0.147	0.181	0.17	5.55	0.93	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF15I3	0.036	0.036	0.000	0.698	0.01	6.40	0.01	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F I01	0.003	0.003	0.134	0.040	0.02	0.33	0.41	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F 127-01	0.000	0.016	0.050	0.064	0.05	0.64	0.76	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F KI01	0.777	0.777	0.000	0.698	0.15	6.40	0.21	AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1
F LI01	0	0	0.000	0	0	0	0	
F LR1I01	0	0	0.170	0	0	0	0	
F QI01	0.048	0.048	0.120	0.107	0.06	2.20	0.59	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
OF23I5	0	0	19.770	0	0	0	0	
F LR2I01	0	0	0.120	0	0	0	0	
F LR4I01	0	0	0.190	0	0	0	0	
F JI02	0.071	0.071	0.180	0.106	0.09	2.17	0.89	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F JI01	0.128	0.128	0.085	0.164	0.08	4.70	0.48	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F LR5I01	0	0	0.120	0	0	0	0	
F JI03	0.025	0.025	0.190	0.076	0.06	1.18	0.84	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F LR6I01	0	0	0.190	0	0	0	0	
F TV01	0.030	0.030	0.104	0.097	0.05	1.88	0.49	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F LR7I01	0	0	0.104	0	0	0	0	
F BI02	0.227	0.227	0.190	0.148	0.17	3.55	1.14	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F BI01	0.133	0.133	0.104	0.154	0.09	3.94	0.60	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
OF40I25	1.686	1.686	7.665	0.108	0.12	25.64	1.09	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F LR8I01	0	0	0.159	0	0	0	0	
F BI03	0.022	0.022	0.085	0.094	0.04	1.77	0.40	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F MI02	0.005	0.005	0.147	0.049	0.03	0.41	0.51	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F MI01	0.026	0.026	0.000	0.698	0.00	6.40	0.01	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F OI01	0.130	0.130	0.060	0.180	0.07	5.51	0.37	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F PI04	0.011	0.011	0.060	0.085	0.02	1.47	0.27	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F PI03	0.020	0.020	0.240	0.066	0.07	0.86	0.99	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F PI02	0.241	0.241	0.190	0.153	0.17	3.89	1.10	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
F PI01	0.153	0.153	0.240	0.122	0.16	2.72	1.27	AR&R 100 year (+15%CC), 25 minutes storm, average 170 mm/h, Zone 1
OF15I21	0.004	0.004	0.000	0.698	0.00	6.40	0.00	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F RI02	0.023	0.023	0.190	0.075	0.06	1.13	0.81	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F RI01	0.039	0.039	0.159	0.092	0.07	1.72	0.73	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F SI03	0.034	0.034	0.159	0.088	0.06	1.58	0.72	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F SI02	0.202	0.202	0.159	0.153	0.14	3.89	0.92	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
F SI01	0.330	0.330	0.190	0.170	0.19	5.00	1.11	AR&R 100 year (+15%CC), 5 minutes storm, average 309 mm/h, Zone 1
DETENTION BASIN DETAILS								
Name	Max WL	MaxVol	Max Q	Max Q	Max Q			
			Total	Low Level	High Level			
CONTINUITY CHECK for AR&R 100 year (+15%CC), 1.5 hours storm, average 85.3 mm/h, Zone 1								
Node	Inflow (cu.m)	Outflow (cu.m)	Storage Char (cu.m)	Difference (%)				
1I24	19438.46	19438.45	0.00	0.0				
1I23	19438.45	19438.21	0.00	0.0				
1I22	19438.21	19438.09	0.00	0.0				
1I21	19438.09	19438.07	0.00	0.0				
1I20	19438.07	19438.11	0.00	-0.0				
1I19	24811.38	24811.45	0.00	-0.0				
1I18	24811.44	24811.45	0.00	-0.0				
1I17	24811.44	24811.45	0.00	-0.0				
1I16	25066.78	25066.97	0.00	-0.0				
1I15	25066.79	25066.97	0.00	-0.0				
1I14	25066.79	25066.97	0.00	-0.0				
1I13	62324.15	62324.00	0.00	0.0				
1I12	53285.93	53285.93	0.00	0.0				
1I11	53285.93	53285.93	0.00	0.0				
1I10	53285.93	53285.93	0.00	0.0				
1I09	53285.93	53285.93	0.00	0.0				
1I08	53285.93	53285.93	0.00	0.0				
1I07	53285.93	53285.93	0.00	0.0				
1I06	53285.93	53285.93	0.00	0.0				
1I05	53285.93	53285.93	0.00	0.0				
1I04	53285.93	53285.93	0.00	0.0				
1I03	53285.93	53285.93	0.00	0.0				
1I02	53285.93	53285.93	0.00	0.0				
1I01	53285.93	53285.93	0.00	0.0				
5I03	0.00	0.00	0.00	0.0				
5I02	189.79	189.68	0.00	0.1				
5I01	1841.40	1841.41	0.00	-0.0				
46I17	39723.36	39722.98	0.00	0.0				
46I16	39722.98	39722.98	0.00	-0.0				
46I15	42100.93	42100.93	0.00	0.0				
46I14	42101.06	42100.93	0.00	0.0				

4613	43661.34	43661.07	0.00	0.0								
4612	43731.59	43731.35	0.00	0.0								
4611	43731.39	43731.35	0.00	0.0								
4610	24823.10	24823.10	0.00	0.0								
46109	43998.28	43998.34	0.00	-0.0								
46108	44027.69	44027.65	0.00	0.0								
46107	44027.71	44027.65	0.00	0.0								
46106	46500.42	46500.29	0.00	0.0								
46105	66440.00	66439.91	0.00	0.0								
46104A	43975.09	43975.10	0.00	-0.0								
46104	68186.84	68186.84	0.00	-0.0								
46103	69405.23	69405.05	0.00	0.0								
46102	70473.34	70473.34	0.00	0.0								
46101	47211.15	47211.15	0.00	0.0								
7103	0.00	0.00	0.00	0.0								
7102	67.16	67.15	0.00	0.0								
7101	67.15	67.15	0.00	0.0								
8104	5147.36	5147.37	0.00	-0.0								
8103	5147.37	5147.37	0.00	0.0								
8102	5147.37	5147.34	0.00	0.0								
8101	5147.34	5147.31	0.00	0.0								
9116	19043.77	19043.75	0.00	0.0								
9115	19043.75	19043.72	0.00	0.0								
9114	19043.72	19043.70	0.00	0.0								
9113	19043.70	19043.68	0.00	0.0								
9112	19221.74	19221.84	0.00	-0.0								
9111	19426.77	19426.71	0.00	0.0								
9110	19426.70	19426.69	0.00	0.0								
9109	19426.68	19426.68	0.00	0.0								
9108	19426.67	19426.66	0.00	0.0								
9107	19714.83	19714.80	0.00	0.0								
9106	20079.00	20079.01	0.00	-0.0								
9105	20078.92	20079.01	0.00	-0.0								
9104	21530.99	21531.01	0.00	-0.0								
9103	21531.02	21531.01	0.00	0.0								
9102	21531.02	21531.01	0.00	0.0								
9101	11915.77	11915.77	0.00	0.0								
8106	5079.95	5079.95	0.00	0.0								
8105	5079.95	5080.24	0.00	-0.0								
11143	127409.26	127409.24	0.00	0.0								
11142	107654.37	107648.02	5.00	0.0								
11141	91650.21	91650.66	0.00	-0.0								
11140	91664.31	91665.60	0.00	-0.0								
11139	91708.24	91716.20	0.95	-0.0								
11138	91852.12	91854.76	0.00	-0.0								
11137	91854.76	91853.92	0.00	0.0								
11136	92501.51	92502.16	0.00	-0.0								
11135	95513.29	95519.27	0.00	-0.0								
11134	95519.27	95519.00	0.00	0.0								
11133	95519.69	95518.82	0.00	0.0								
11132	95518.82	95518.59	0.00	0.0								
11131	95539.45	95539.38	0.00	0.0								
11130	95539.55	95539.80	0.00	-0.0								
11129	95576.72	95577.14	0.00	-0.0								
11128	95588.69	95589.63	0.00	-0.0								
11127	95647.41	95648.22	0.00	-0.0								
11126	95648.70	95649.31	0.00	-0.0								
11125	95649.80	95649.31	0.00	0.0								
11124	97763.49	97763.88	0.00	-0.0								
11123	97941.88	97942.31	0.00	-0.0								
11122	98759.03	98758.88	0.00	0.0								
11121	98789.04	98789.09	0.00	-0.0								
11120	98788.90	98789.09	0.00	-0.0								
11119	99003.77	99004.00	0.00	-0.0								
11118	99003.83	99004.00	0.00	-0.0								
11117	99003.83	99004.00	0.00	-0.0								
11116	99648.73	99648.98	0.00	-0.0								
11115	99648.82	99648.98	0.00	-0.0								
11114	100197.74	100198.05	0.00	-0.0								
11113	100197.59	100198.05	0.00	-0.0								
11112	100275.21	100275.23	0.00	-0.0								
11111	100906.15	100906.11	0.00	0.0								
11110	100906.22	100906.11	0.00	0.0								
11109	100906.22	100906.11	0.00	0.0								
11108	100906.22	100906.11	0.00	0.0								
11107	100906.22	100906.11	0.00	0.0								
11106	100906.22	100906.11	0.00	0.0								
11105	100906.22	100906.11	0.00	0.0								
11104	100987.73	100987.59	0.00	0.0								
11103A	89675.37	89675.36	0.00	0.0								
11103	101774.30	101774.98	0.00	-0.0								
11102	101775.09	101774.98	0.00	0.0								
11101	89675.36	89675.36	0.00	0.0								
12101	228.38	228.37	0.00	0.0								
19126	1413.21	1413.20	0.00	0.0								
19125	1413.21	1413.20	0.00	0.0								
19124	1760.24	1760.24	0.00	-0.0								
19123	2207.25	2207.14	0.00	0.0								
19122	3108.22	3108.20	0.00	0.0								
19121	3170.94	3170.91	0.00	0.0								
19120	3170.92	3170.91	0.00	0.0								
19119	3170.92	3170.91	0.00	0.0								
19118	3569.17	3569.18	0.00	-0.0								
19117	3817.31	3817.31	0.00	-0.0								
19116	3822.10	3822.76	0.00	-0.0								
19115	3853.25	3853.26	0.00	-0.0								
19114	3923.50	3923.52	0.00	-0.0								
19113	6118.45	6118.45	0.00	0.0								
19112	6118.43	6118.45	0.00	-0.0								
19111	6446.84	6446.78	0.00	0.0								

APPENDIX C

TUFLOW MODEL INPUTS & OUTPUTS

Survey and DEM Notes

The topographical survey triangulation provided by Rygate and Company Pty Ltd excluded a number of spot levels (necessary to define change in grade surface levels), the full definition of the kerbs and road pavement levels. The resulting existing surface triangulation (in the DEM provided by Rygate and Company Pty Ltd) was not representative of all the features surveyed. Typically, this presented itself as contours not corresponding to surveyed spot levels and no definition of the kerbs and gutters at the sides of roads.

Using 12d software, Hyder manually created three-dimensional strings and points based on levels in the Rygate and Company Pty Ltd survey to improve the definition of the existing surface in areas of particular importance (Darling Drive, Hay Street car park entrances, the plaza and Harbour Street adjacent to the Entertainment Centre and the area around Pier Street). The existing kerb types (mountable kerb, kerb and gutter, barrier kerb, dish gutter et cetera) were recorded during site visits and their principle dimensions taken. The kerbs modelled represent the idealised shape of the kerbs (i.e. based on standard kerb construction details). Variations in kerb heights have not been possible to model. This data can only be recorded by detailed topographical survey.

The three-dimensional points and strings were triangulated to create a more representative existing surface model. This surface was then used to supersede the Rygate and Company Pty Ltd triangulation in the location that they overlapped.

Build-up of the existing surface model

The existing surface model is made up from a number of datasets each with an increasing level of accuracy. Each dataset replaces data from the preceding dataset.

The first surface is the Lidar/ALS data provided by City of Sydney. This data set covers approximately 4x4km. This is replaced by the Lidar/ALS provided by Worley Parsons (and used in their flood modelling). In turn, this is replaced by the Rygate and Company topographical survey triangulation and then by the Hyder manually created survey.

Build-up of the proposed re-development surface model

The existing surface model was modified to include the surface representation of the SICEEP site development proposal.

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

WP-FL-0001 COVER SHEET AND DRAWING SHEET

WP-FL-0101	5 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0102	20 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0103	100 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0104	PMF EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS

WP-FL-0111	5 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0112	20 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0113	100 YEAR ARI EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0114	PMF EXISTING CONDITIONS FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE

WP-FL-0121	5 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0122	20 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0123	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS
WP-FL-0124	PMF PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS

WP-FL-0131	5 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0132	20 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0133	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0134	PMF PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS INCLUDING POTENTIAL CLIMATE CHANGE

WP-FL-0201	5 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT
WP-FL-0202	20 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT
WP-FL-0203	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT

WP-FL-0211	5 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0212	20 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0213	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT INCLUDING POTENTIAL CLIMATE CHANGE

WP-FL-0401	5 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD
WP-FL-0402	20 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD
WP-FL-0403	100 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD
WP-FL-0404	PMF EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD

WP-FL-0411	5 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0412	20 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0413	100 YEAR ARI EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0414	PMF EXISTING CONDITIONS PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE

WP-FL-0421	5 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD
WP-FL-0422	20 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD
WP-FL-0423	100 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD
WP-FL-0424	PMF PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD

WP-FL-0431	5 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0432	20 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0433	100 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0434	PMF PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD INCLUDING POTENTIAL CLIMATE CHANGE

WP-FL-0501 8th NOVEMBER 1984 FLOOD ASSESSMENTS

WP-FL-0601	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS WITHOUT CULVERT AMPLIFICATION
WP-FL-0602	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT WITHOUT CULVERT AMPLIFICATION
WP-FL-0603	100 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD WITHOUT CULVERT AMPLIFICATION
WP-FL-0611	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD DEPTH AND LEVEL CONTOURS WITHOUT CULVERT AMPLIFICATION INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0612	100 YEAR ARI PROPOSED DEVELOPMENT FLOOD LEVEL IMPACT WITHOUT CULVERT AMPLIFICATION INCLUDING POTENTIAL CLIMATE CHANGE
WP-FL-0613	100 YEAR ARI PROPOSED DEVELOPMENT PROVISIONAL HYDRAULIC HAZARD WITHOUT CULVERT AMPLIFICATION INCLUDING POTENTIAL CLIMATE CHANGE

1. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
2. ALL COORDINATES TO MGA. ALL LEVELS TO AHD.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.
4. PRECINCT BOUNDARIES ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE

01	ISSUE FOR DEVELOPMENT APPLICATION	11/03/2013
REV	DESCRIPTION	DATE



Lend Lease

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PROJECT
**SICEEP
DARLING HARBOUR
PROJECT PRECINCT**

COVER SHEET AND
DRAWING SHEET

PRELIMINARY ONLY

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
-	RD	CM	BC	JH
PROJECT NUMBER:	DRAWING NUMBER			REV
AA004399	WP-FL-0001			01

CONDUIT LABEL	CONDUIT DIMENSION (m)	SYDNEY WATER CHANNEL	LOCATION	Q (m³/s) ¹	V (m/s) ²	STORM DURATION (MIN)
A	3.6 x 2.1	300	HAY STREET	25.6	3.4	60
B	3.1 x 2.0	30P	HAY STREET	9.1	3.2	60
C	Ø1.5	30P	PIER STREET	2.1	1.2	25
D	3.7 x 2.2	30P	PIER STREET	10.8	1.4	60
E	1.5 x 1.5	30P	TUMBALONG PARK	4.2	4.3	25
F	3.9 x 2.2	30P	IMAX THEATRE	8.1	1.1	60
G	3.1 x 2.2	30P	IMAX THEATRE	7.5	1.3	60
H	4.3 x 2.4	300	HAY STREET	17.3	1.9	60
I	3.0 x 2.4	300	DARLING DRIVE (CARPARK)	9.0	1.4	60
J	3.0 x 2.4	300	DARLING DRIVE (CARPARK)	9.1	1.4	60
K	3.0 x 2.4	300	PIER STREET	9.0	1.3	60
L	3.0 x 2.4	300	PIER STREET	9.1	1.3	60
M	3.0 x 2.4	300	COCKLE BAY OUTLET	9.1	1.3	60
N	3.0 x 2.4	300	COCKLE BAY OUTLET	9.1	1.3	60
O	3.1 x 1.6	30A2	DARLING DRIVE	8.4	1.7	25
P	2.1 x 1.8	30A2	DARLING DRIVE	7.7	2.0	25
Q	3.0 x 2.4	30A2	COCKLE BAY OUTLET	13.6	1.9	25
R	3.1 x 1.6	30A	DARLING DRIVE	2.6	0.7	25
S	Ø0.9	30A	DARLING DRIVE	1.4	2.2	25
T	Ø1.1	30A	DARLING DRIVE	1.8	2.2	25
U	3.5 x 1.6	30A	COCKLE BAY OUTLET	6.8	1.7	25
V	2.1 x 0.9	30B	DARLING DRIVE	2.3	1.2	25
W	Ø1.8	30B	DARLING DRIVE	3.1	1.3	25
X	2.1 x 0.9	30BA	DARLING DRIVE	2.9	1.5	25
Y	2.7 x 1.8	30B	HARBOURSIDE	6.8	1.4	25

OVERLAND FLOW LABEL	LOCATION	Q (m³/s) ¹
1	HAY STREET	0.0
2	HARBOUR STREET	0.0
3	HAY STREET	0.0
4	QUAY STREET	0.5
5	DARLING DRIVE (SOUTH)	0.2
6	BETWEEN EC AND CAR PARK/THE BOULEVARD	0.0
7	HARBOUR STREET	0.2
8	LITTLE PIER STREET	0.0
9	HARBOUR STREET	0.0
10	CHINESE GARDENS	0.0
11	EC CAR PARK FLOW PATH	0.0
12	EC CAR PARK FLOW PATH	0.0
13	PIER STREET	0.0
14	PIER STREET	0.0
15	DARLING DRIVE	0.1
16	DARLING DRIVE (NORTH)	0.0
17	DARLING QUARTER	0.0

TABLE NOTES		
¹ FLOW IS PEAK FOR MODELLED DESIGN CONDITION		
² VELOCITY IS AT CORRESPONDING DESIGN FLOW		

CO-INCIDENCE OF EVENTS	
STILL WATER LEVEL IN DARLING HARBOUR (mAHD)	CATCHMENT RUNOFF (YEAR ARI)
1.32	-
0.90	5



FLOOD MAPPING NOTES

LOCAL CATCHMENT FLOW AND FLOOD REGIMES AWAY FROM MAJOR OVERLAND FLOWPATHS ARE APPROXIMATE ONLY.

FLOOD LEVELS SHOWN ARE BASED ON THE ENVELOPE OF RESULTS FROM THE 25 AND 60 MINUTE STORM EVENT DURATIONS.

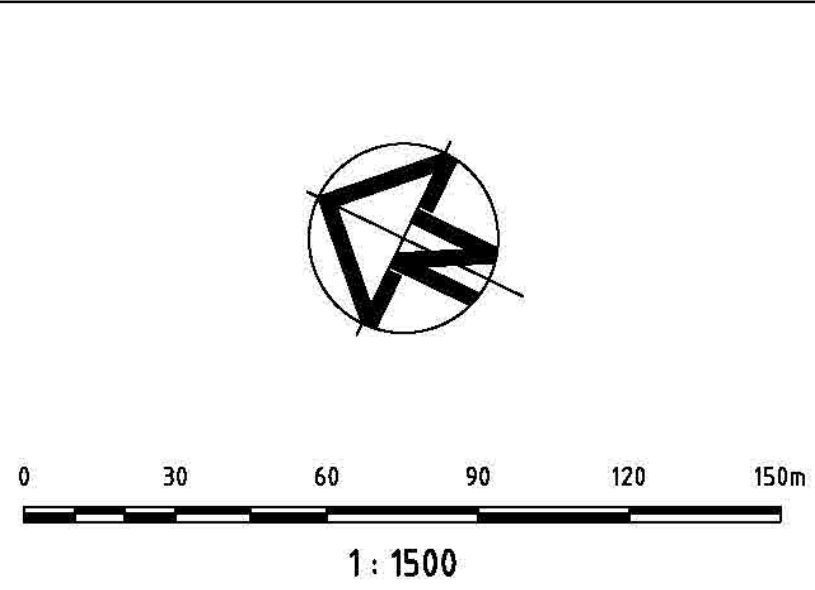
MODEL DETAILS ARE INCLUDED IN ACCOMPANYING REPORT.

EXISTING FLOOD RESULTS ARE ONLY REPRESENTATIVE OF THE DESIGN CONDITIONS IN ORDER TO ASSESS POTENTIAL DEVELOPMENT IMPACT. IN PARTICULAR, ALL OPEN STYLE GATES AND FENCES ACROSS OVERLAND FLOW PATHS ARE ASSUMED AS 0% BLOCKAGE.

TUFLOW (BUILD: 2011-09-AF-w64) MODEL FILE PATH: F:\AA004399\I-CADIC-Civil\J-120data\I-Flooding\A-TUFLOW Results

DRAINS MODEL FILE PATH: F:\AA004399\I-Calc\A-Civil\A-Stormwater\A-DRAINS

DARLING HARBOUR LIVE



- NOTES:**
- ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 - ALL COORDINATES TO MGA. ALL LEVELS TO AHD.
 - THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.
 - PRECINCT BOUNDARIES ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE.

REV	DESCRIPTION	DATE
01	ISSUE FOR DEVELOPMENT APPLICATION	11/03/2013

CLIENT



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PROJECT

SICEEP
DARLING HARBOUR
PROJECT PRECINCT

DRAWING TITLE

5 YEAR ARI
EXISTING CONDITIONS
FLOOD DEPTH AND LEVEL CONTOURS

STATUS

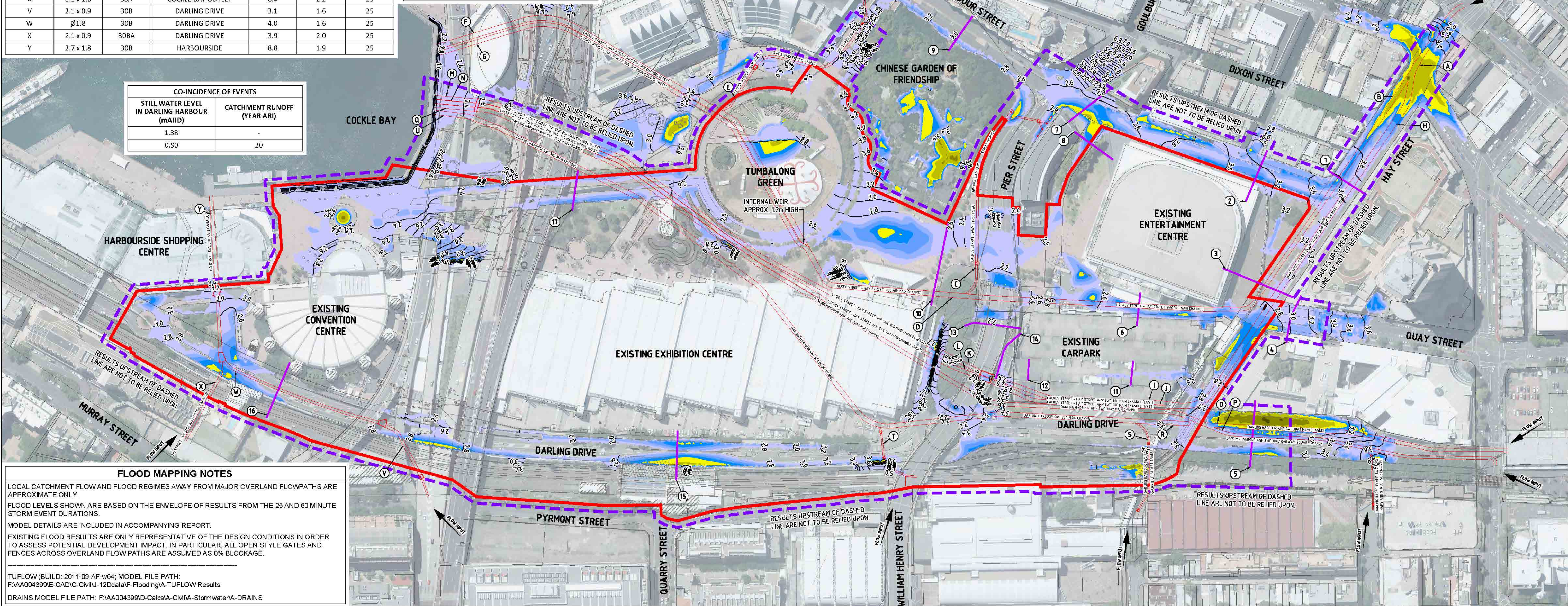
PRELIMINARY ONLY

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:1500	RD	CM	BC	JH
PROJECT NUMBER	DRAWING NUMBER	REV		
AA004399	WP-FL-0101	01		

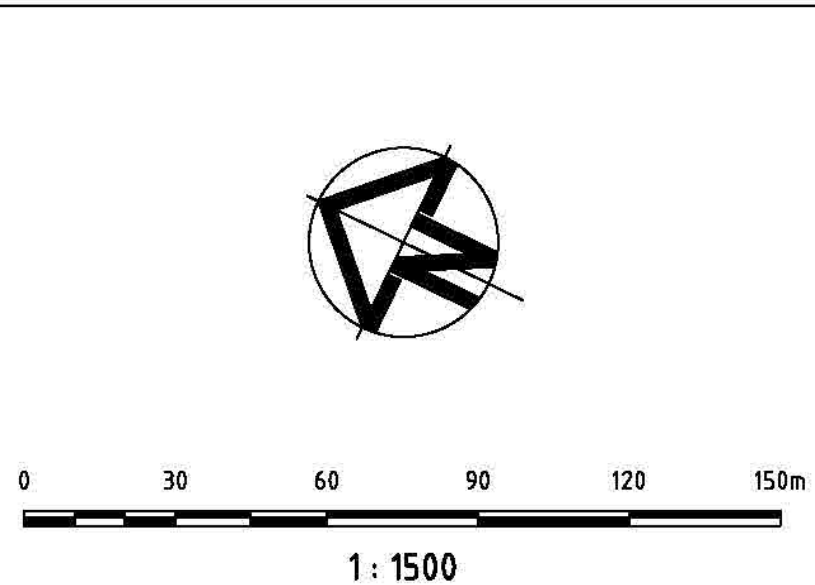
CONDUIT LABEL	CONDUIT DIMENSION (m)	SYDNEY WATER CHANNEL	LOCATION	Q (m³/s) ¹	V (m/s) ²	STORM DURATION (MIN)
A	3.6 x 2.1	300	HAY STREET	31.6	4.2	60
B	3.1 x 2.0	30P	HAY STREET	11.3	2.0	60
C	Ø1.5	30P	PIER STREET	2.6	1.5	25
D	3.7 x 2.2	30P	PIER STREET	13.5	1.6	60
E	1.5 x 1.5	30P	TUMBALONG PARK	4.3	4.6	25
F	3.9 x 2.2	30P	IMAX THEATRE	10.1	1.4	60
G	3.1 x 2.2	30P	IMAX THEATRE	9.0	1.6	60
H	4.3 x 2.4	300	HAY STREET	21.7	2.1	60
I	3.0 x 2.4	300	DARLING DRIVE (CARPARK)	11.3	1.6	60
J	3.0 x 2.4	300	DARLING DRIVE (CARPARK)	11.4	1.6	60
K	3.0 x 2.4	300	PIER STREET	11.4	1.6	60
L	3.0 x 2.4	300	PIER STREET	11.4	1.6	60
M	3.0 x 2.4	300	COCKLE BAY OUTLET	11.5	1.6	60
N	3.0 x 2.4	300	COCKLE BAY OUTLET	11.4	1.6	60
O	3.1 x 1.6	30A2	DARLING DRIVE	10.1	2.1	25
P	2.1 x 1.8	30A2	DARLING DRIVE	9.3	2.5	25
Q	3.0 x 2.4	30A2	COCKLE BAY OUTLET	15.9	2.3	25
R	3.1 x 1.6	30A	DARLING DRIVE	3.6	0.8	25
S	Ø0.9	30A	DARLING DRIVE	1.8	2.9	25
T	Ø1.1	30A	DARLING DRIVE	2.4	2.8	25
U	3.5 x 1.6	30A	COCKLE BAY OUTLET	8.4	2.2	25
V	2.1 x 0.9	30B	DARLING DRIVE	3.1	1.6	25
W	Ø1.8	30B	DARLING DRIVE	4.0	1.6	25
X	2.1 x 0.9	30BA	DARLING DRIVE	3.9	2.0	25
Y	2.7 x 1.8	30B	HARBOURSIDE	8.8	1.9	25

OVERLAND FLOW LABEL	LOCATION	Q (m³/s) ¹
1	HAY STREET	0.9
2	HARBOUR STREET	0.7
3	HAY STREET	0.0
4	QUAY STREET	0.8
5	DARLING DRIVE (SOUTH)	0.7
6	BETWEEN EC AND CAR PARK/THE BOULEVARD	0.1
7	HARBOUR STREET	0.2
8	LITTLE PIER STREET	0.0
9	HARBOUR STREET	0.1
10	CHINESE GARDENS	0.0
11	EC CAR PARK FLOW PATH	0.0
12	EC CAR PARK FLOW PATH	0.0
13	PIER STREET	0.0
14	PIER STREET	0.0
15	DARLING DRIVE	0.2
16	DARLING DRIVE (NORTH)	0.0
17	DARLING QUARTER	0.0

TABLE NOTES	
¹ FLOW IS PEAK FOR MODELLED DESIGN CONDITION	
² VELOCITY IS AT CORRESPONDING DESIGN FLOW	



DARLING HARBOUR LIVE



- NOTES:
- ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 - ALL COORDINATES TO MGA. ALL LEVELS TO AHD.
 - THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.
 - PRECINCT BOUNDARIES ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE.

REV	DESCRIPTION	DATE
01	ISSUE FOR DEVELOPMENT APPLICATION	11/03/2013

CLIENT



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PROJECT
SICEEP
DARLING HARBOUR
PROJECT PRECINCT

DRAWING TITLE
20 YEAR ARI
EXISTING CONDITIONS
FLOOD DEPTH AND LEVEL CONTOURS

STATUS

PRELIMINARY ONLY

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:1500	RD	CM	BC	JH
PROJECT NUMBER	DRAWING NUMBER	REV		
AA004399	WP-FL-0102	01		

